

NOISE ABATEMENT PROGRAM QUARTERLY REPORT

**For the period:
October 1, 2018 through December 31, 2018**

Prepared in accordance with:

AIRPORT NOISE STANDARDS

STATE OF CALIFORNIA

California Code of Regulations

Airport Noise Standards

Title 21: Public Works

Division 2.5 Division of Aeronautics (Department of Transportation)

Chapter 6. Noise Standards

Submitted by:



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Airport Director

John Wayne Airport, Orange County



INTRODUCTION

This is the 184th 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-6S: 1912 Santiago, Newport Beach |
| NMS-2S: 20162 S.W. Birch St., Newport Beach | NMS-7S: 1131 Back Bay Drive, Newport Beach |
| NMS-3S: 2139 Anniversary Lane, Newport Beach | NMS-8N: 17372 Eastman Street, Irvine |
| NMS-4S: 2338 Tustin Ave., Newport Beach | NMS-9N: 1300 S. Grand Avenue, Santa Ana |
| NMS-5S: 324 ½ Vista Madera, Newport Beach | 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, 2018 - December 31, 2018). The Figure 2 information was developed by Landrum and Brown, 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

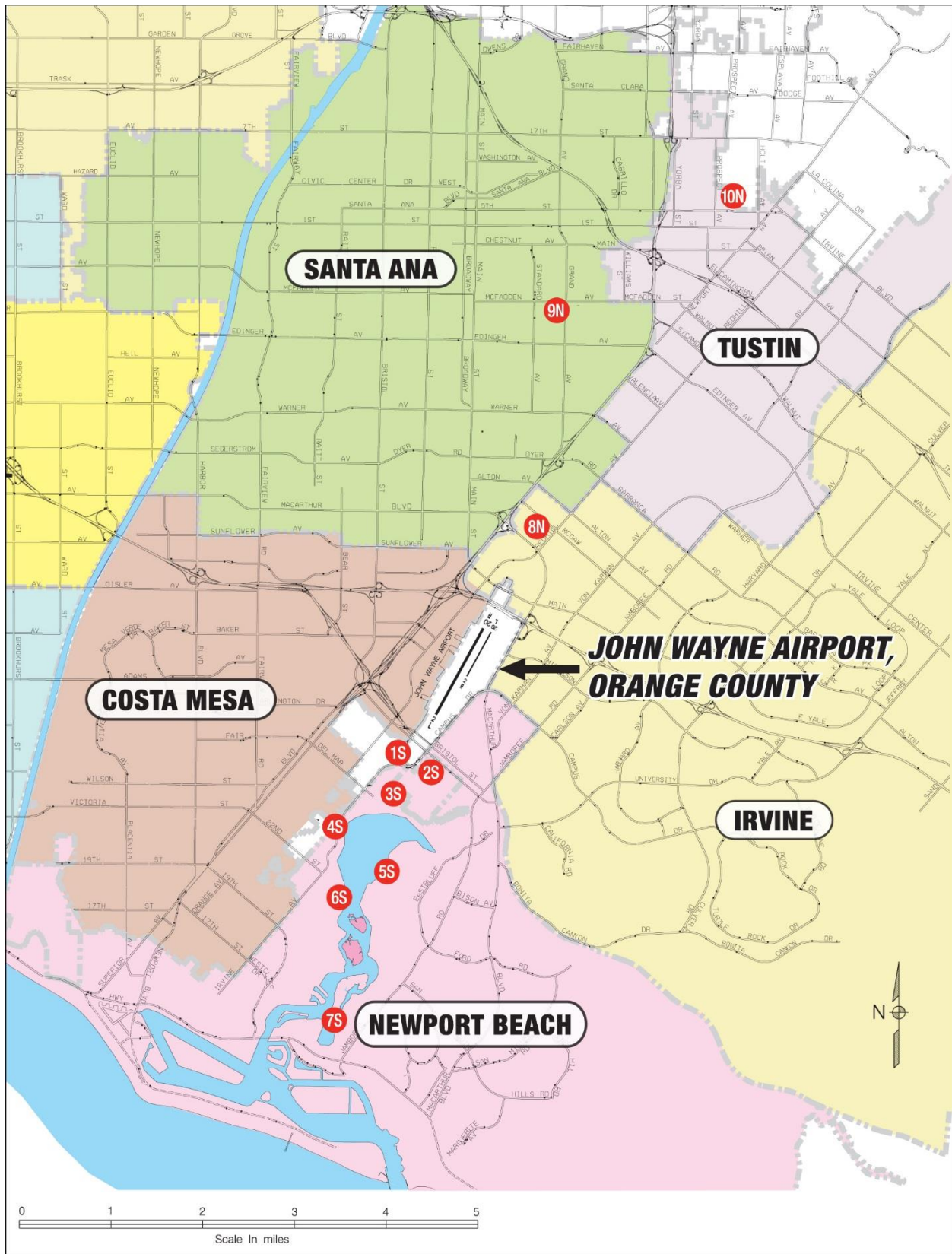


FIGURE 2



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 2018

Period	Air Carriers		GA Jet (1)	Total Operations (2)	Average Daily Jet Operations
	Jet	Prop			
October	8,179	60	3,045	26,926	362
November	7,663	56	3,018	26,182	356
December	7,831	62	2,703	24,579	340
Fourth Quarter	23,673	178	8,766	77,687	353
Twelve Months 01/01/18 - 12/31/18	92,932	728	36,272	316,783	354

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.

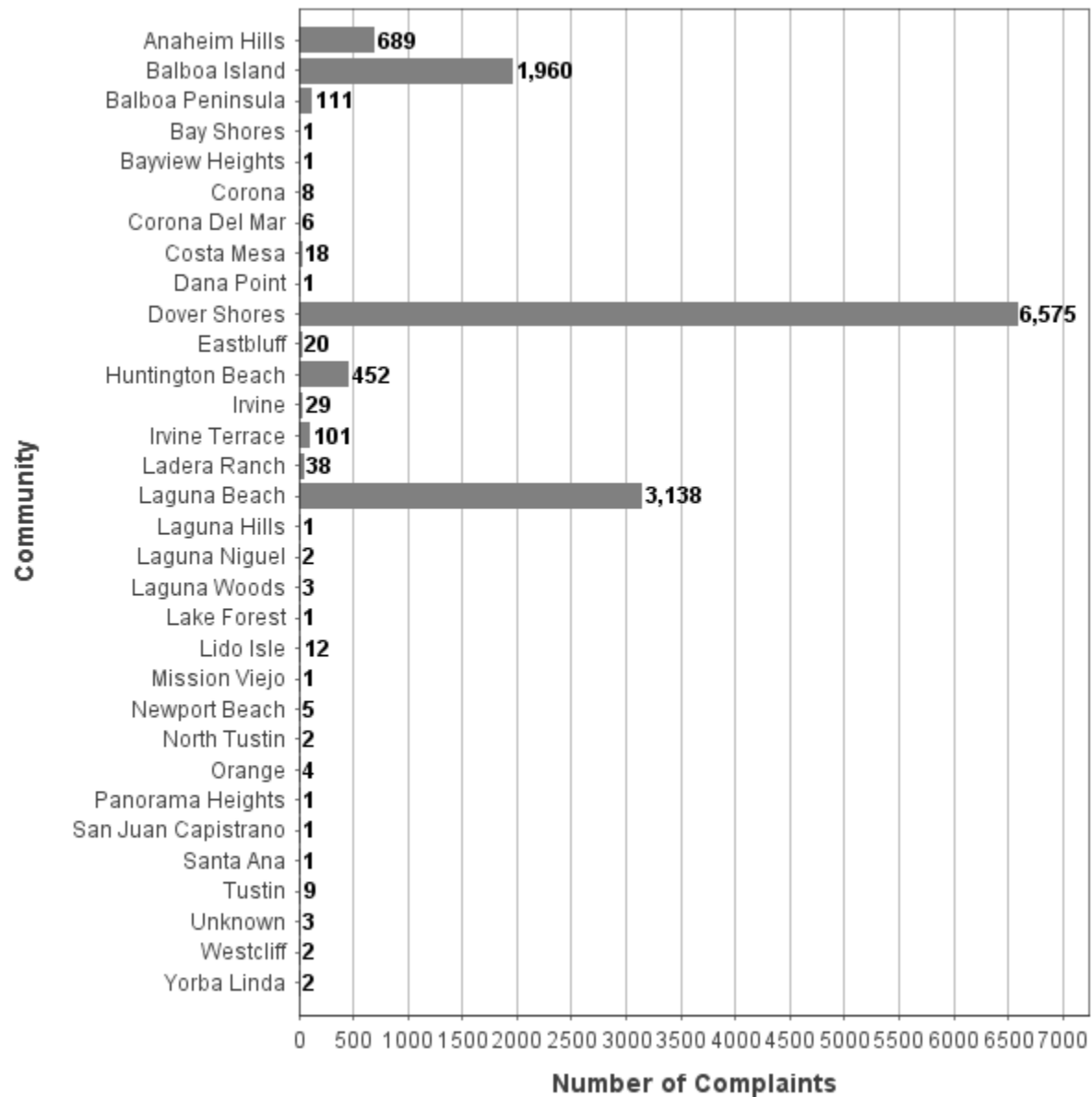
ACOUSTICAL INSULATION PROGRAM

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. Nine (9) residences opted for acoustical insulation only. 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 473 residences in the Santa Ana Heights area have been purchased or otherwise made compatible through the County’s Purchase Assurance and Acoustical Insulation Programs. Seventy-seven dwelling units in Santa Ana Heights remain in the “Noise Impacted Area” (within 65 dB CNEL contour).

COMPLAINT TOTALS (October 1, 2018 - December 31, 2018)

The Airport's Access and Noise Office receives and investigates noise complaints from local citizens and all other sources. During the October 1, 2018 through December 31, 2018, the Office received 13,198 complaints from local citizens. This is a 249.1% increase from the 3,781 complaints received last quarter. It is a 2,571.7% increase from the 494 complaints received during the same quarter last year. Figure 4 shows the distribution of the quarterly complaints from local communities.

FIGURE 3
HISTOGRAM BY COMMUNITY



Note:

- City of Newport Beach – 8,794 total number of complaints.
- 93% of complaints from “Anaheim Hills” category were from one point of contact.
- 84% of complaints from “Balboa Island” category were from one point of contact.
- 89% of complaints from “Dover Shores” category were from one point of contact.
- 58% of complaints from “Huntington Beach” category were from one point of contact.
- 99% of complaints from “Laguna Beach” category were from one point of contact.
- 92% of complaints were from a complaint form subscription service.

TABLE 2
LONG TERM MEASURED LEVELS
Aircraft CNEL from 01/01/18 through 12/31/18
Values in dB at Each Site

Period	NMS Site									
	1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
Jan 2018	67.8	66.8	66.3	59.6	59.2	60.5	56.4	67.5	44.0	55.6
# Days	31	31	31	31	31	31	31	31	31	31
Feb 2018	67.7	66.9	66.1	59.8	59.3	60.4	56.6	67.5	44.5	56.0
# Days	28	28	28	28	28	28	28	28	28	28
Mar 2018	68.2	67.4	66.5	60.3	59.8	60.7	57.4	68.3	43.2	57.0
# Days	31	30	31	31	31	31	31	31	29	31
Q-1 2018	67.9	67.0	66.3	59.9	59.4	60.6	56.9	67.8	43.9	56.3
# Days	90	89	90	90	90	90	90	90	88	90
Apr 2018	68.3	67.5	66.5	60.3	59.8	60.8	57.3	68.3	42.7	57.1
# Days	30	30	30	30	30	30	30	30	29	30
May 2018	68.5	67.6	66.7	60.9	60.1	60.9	57.5	68.7	49.4	57.8
# Days	31	31	31	31	31	31	31	31	25	31
Jun 2018	68.6	67.6	67.0	60.7	60.1	60.9	57.4	68.8	44.3	57.5
# Days	30	30	30	30	27	30	30	30	27	30
Q-2 2018	68.5	67.5	66.7	60.6	60.0	60.9	57.4	68.6	46.3	57.5
# Days	91	91	91	91	88	91	91	91	81	91
Jul 2018	68.5	67.5	66.8	60.1	59.6	60.6	57.0	68.2	42.6	56.2
# Days	31	31	31	31	31	31	31	31	30	31
Aug 2018	68.7	67.7	67.0	60.3	59.8	61.0	57.1	68.3	43.4	56.7
# Days	31	31	31	31	31	31	31	31	30	31
Sep 2018	68.3	67.4	66.7	60.0	59.7	60.7	56.6	67.9	43.5	56.5
# Days	30	30	30	30	30	30	30	30	25	30
Q-3 2018	68.5	67.5	66.8	60.1	59.7	60.8	56.9	68.1	43.2	56.5
# Days	92	92	92	92	92	92	92	92	85	92
Oct 2018	68.4	67.2	66.9	59.9	59.8	60.9	56.9	68.0	43.3	56.8
# Days	31	31	31	31	31	31	31	31	30	31
Nov 2018	67.5	66.4	66.4	59.5	59.0	60.7	56.7	67.3	44.8	55.8
# Days	30	30	30	29	30	30	28	30	28	30
Dec 2018	67.6	66.6	66.8	59.6	59.6	61.4	57.0	67.6	45.0	56.3
# Days	31	31	31	31	31	31	30	31	30	31
Q-4 2018	67.9	66.8	66.7	59.7	59.5	61.0	56.9	67.6	44.4	56.3
# Days	92	92	92	91	92	92	89	92	88	92
Q-1 2018 thru Q-4 2018										
Total	68.2	67.2	66.6	60.1	59.7	60.8	57.0	68.0	44.6	56.7
# Days	365	364	365	364	362	365	362	365	342	365
Q-4 2017 thru Q-3 2018 (Previous 4 Quarters)										
Total	68.2	67.2	66.6	60.0	59.5	60.7	56.9	68.0	44.5	56.5
# Days	365	364	365	365	357	365	356	365	336	361
Change from Previous 4 Quarters										
	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.1	0.2

TABLE 3
DAILY CNEL VALUES AT EACH MONITOR STATION
October 2018

Date	NMS Site									
	1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
1	68.7	67.7	67.0	59.4	59.6	60.5	57.0	67.2	28.6	55.4
2	68.6	67.4	67.0	60.9	60.0	61.2	57.5	67.7	*#N/A	56.6
3	68.7	67.5	66.7	61.1	60.1	61.3	58.0	69.1	44.4	58.2
4	69.4	68.5	67.8	60.9	61.0	61.9	58.5	68.9	42.5	58.4
5	68.8	67.8	67.2	60.6	60.8	61.6	58.1	68.9	46.9	58.2
6	67.5	66.0	65.3	59.8	58.4	59.6	55.7	66.3	45.7	55.6
7	68.6	67.5	66.9	60.6	60.0	61.3	57.5	68.7	43.9	58.3
8	69.2	67.8	67.4	60.8	60.4	61.4	58.0	68.9	46.9	57.6
9	68.6	67.7	66.8	60.4	59.9	61.2	57.7	68.8	43.7	58.3
10	68.6	67.5	66.9	60.5	60.4	61.0	57.9	68.6	38.3	58.1
11	69.2	68.2	67.6	60.5	60.2	61.5	58.2	68.9	45.6	57.7
12	68.9	67.9	67.4	60.6	60.7	61.7	57.9	68.5	29.4	57.3
13	68.1	66.8	66.3	59.5	59.7	60.2	56.5	66.6	39.4	55.6
14	69.2	68.1	67.7	60.3	61.0	61.6	57.6	69.0	42.0	57.9
15	56.1	52.5	66.6	42.8	41.8	60.9	48.2	61.8	48.0	51.1
16	63.9	63.4	64.1	54.1	55.3	59.1	51.0	66.9	28.5	53.8
17	68.4	66.9	66.5	59.3	59.3	59.8	55.9	67.9	40.8	55.8
18	68.2	67.0	66.9	59.4	60.0	60.7	46.1	67.5	39.9	55.1
19	68.4	67.1	66.9	59.3	58.9	60.8	55.4	67.7	41.1	55.0
20	66.9	65.8	65.3	58.5	57.9	58.7	54.8	65.8	40.4	53.6
21	68.9	67.9	67.1	60.6	60.2	61.1	56.7	68.6	43.0	57.7
22	69.4	67.7	67.8	61.6	61.4	62.4	59.4	68.3	29.6	57.3
23	69.3	68.0	67.7	60.8	61.1	61.8	58.2	68.4	39.9	57.7
24	69.1	68.0	67.3	60.6	60.4	61.6	57.9	69.1	43.4	57.4
25	69.3	68.1	67.8	60.3	60.4	61.3	57.4	68.9	46.1	57.3
26	69.2	68.1	67.7	59.6	59.8	60.8	57.1	68.0	44.2	56.0
27	66.8	66.1	65.5	58.0	57.7	58.7	54.6	66.1	38.5	54.3
28	68.8	67.8	66.9	59.5	59.6	60.4	56.5	68.1	43.2	57.2
29	68.4	67.2	66.6	60.6	59.9	61.0	57.3	68.5	32.1	57.8
30	68.1	66.8	66.5	60.6	60.0	61.0	57.8	68.1	47.5	57.2
31	67.1	66.0	65.7	58.6	58.6	59.6	55.7	65.8	44.3	54.3
Days	31	31	31	31	31	31	31	31	30	31
En. Avg	68.4	67.2	66.9	59.9	59.8	60.9	56.9	68.0	43.3	56.8

#N/A indicates insufficient data.

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

TABLE 4
DAILY CNEL VALUES AT EACH MONITOR STATION
November 2018

Date	NMS Site									
	1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
1	68.8	67.4	67.0	59.8	59.7	60.6	57.1	67.8	47.4	54.6
2	68.1	67.0	66.3	59.0	59.0	59.8	56.5	67.8	45.3	56.2
3	66.8	65.2	65.1	58.2	57.6	58.5	54.8	65.1	37.9	53.0
4	68.4	67.1	66.5	59.2	59.0	60.1	56.6	67.9	48.3	56.3
5	69.0	68.1	67.5	61.6	60.3	61.8	58.0	68.3	45.6	57.4
6	68.2	66.8	66.2	60.7	59.7	60.8	57.6	67.5	43.9	56.6
7	68.3	67.6	67.3	60.1	60.6	61.5	57.7	68.3	29.5	57.3
8	67.1	66.0	68.2	58.5	58.6	63.7	56.6	64.7	47.3	52.9
9	55.5	53.3	63.3	45.3	42.0	58.8	42.7	64.6	*#N/A	33.1
10	65.4	64.2	63.3	55.8	55.2	56.2	52.1	64.6	40.4	52.2
11	65.2	63.8	67.3	55.6	55.7	61.7	52.7	62.7	46.6	46.8
12	54.3	50.8	65.1	*#N/A	39.6	60.4	*#N/A	62.5	*#N/A	28.9
13	56.4	53.6	65.0	37.8	42.8	61.1	*#N/A	62.7	39.1	31.8
14	66.1	65.4	64.9	57.1	56.6	58.6	53.9	66.0	37.5	51.1
15	67.4	66.7	66.1	58.2	58.3	59.2	55.3	67.6	43.8	54.8
16	68.6	66.9	67.0	60.1	59.5	60.4	56.5	69.1	41.5	57.3
17	67.0	64.6	65.1	59.0	58.3	59.1	54.6	67.4	47.6	56.1
18	68.1	67.1	66.7	59.9	59.7	60.8	56.9	68.1	45.4	56.8
19	68.3	67.0	66.3	60.0	59.2	60.3	56.5	67.5	40.0	56.1
20	69.2	68.2	67.6	61.5	61.0	62.0	58.3	68.2	40.3	57.5
21	69.4	68.3	67.9	61.7	60.9	61.8	58.5	68.4	49.1	58.1
22	65.4	65.1	64.0	57.6	58.3	58.5	55.4	64.8	40.5	54.2
23	67.3	66.4	65.4	59.7	59.3	60.2	57.0	67.1	36.6	56.6
24	67.8	66.6	66.2	60.5	59.8	60.8	57.2	67.5	47.7	56.5
25	69.3	68.6	68.2	60.8	61.2	61.8	58.5	68.5	34.4	57.0
26	68.3	67.0	67.6	60.2	60.4	61.2	57.4	67.2	45.7	55.1
27	68.5	66.2	66.6	60.2	59.8	60.7	57.0	68.0	47.5	56.7
28	68.1	66.8	66.0	61.0	59.7	60.7	57.5	68.3	46.4	58.1
29	68.0	67.6	66.3	60.7	61.3	61.0	58.8	69.6	40.8	59.5
30	68.6	67.8	67.3	60.7	60.8	61.5	58.6	68.6	46.2	57.7
Days	30	30	30	29	30	30	28	30	28	30
En. Avg	67.5	66.4	66.4	59.5	59.0	60.7	56.7	67.3	44.8	55.8

#N/A indicates insufficient data.

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

TABLE 5
DAILY CNEL VALUES AT EACH MONITOR STATION
December 2018

Date	NMS Site									
	1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
1	65.6	65.6	64.8	58.8	59.0	59.3	56.2	66.2	47.4	55.2
2	67.4	66.9	66.0	59.4	60.0	60.4	57.5	67.9	38.2	57.3
3	67.8	66.7	66.7	60.5	60.0	60.7	57.4	67.6	38.3	56.4
4	67.1	65.6	65.9	60.1	59.0	60.0	56.7	67.0	44.7	56.0
5	64.7	62.5	68.8	56.0	56.6	64.8	51.8	67.3	48.8	51.2
6	64.5	60.7	67.6	55.6	57.3	63.6	52.9	69.5	52.3	56.7
7	69.4	68.2	68.1	61.2	61.3	61.8	58.5	68.1	44.4	57.0
8	66.5	65.5	64.2	58.8	58.9	59.5	56.4	65.2	44.7	53.8
9	68.4	67.5	66.8	59.7	60.3	60.8	57.2	67.7	40.9	55.9
10	68.6	67.7	67.4	61.3	60.8	61.5	58.2	68.0	43.5	57.2
11	68.2	66.3	66.6	61.0	60.5	61.2	57.7	67.4	42.5	56.7
12	68.4	67.4	66.9	61.4	60.4	61.5	58.2	68.1	44.2	57.0
13	68.3	67.2	66.4	59.5	58.8	59.8	56.1	67.4	44.2	55.1
14	69.0	67.9	67.5	59.8	59.9	60.4	56.7	67.6	35.7	55.2
15	66.5	65.5	64.8	56.9	57.7	57.9	53.3	65.2	35.1	53.0
16	67.5	67.3	66.5	59.9	60.1	60.7	56.9	67.9	42.9	57.0
17	68.3	67.6	67.3	60.7	61.0	61.9	58.4	67.8	41.8	57.3
18	68.3	67.7	67.3	60.4	60.6	61.3	58.2	68.0	44.5	57.7
19	68.6	67.5	67.2	60.7	60.7	61.4	57.7	67.9	42.4	57.0
20	69.0	68.1	66.6	60.4	60.6	61.2	57.3	68.8	49.9	57.7
21	68.9	68.5	68.0	61.3	61.1	61.9	58.4	69.0	40.0	58.4
22	67.8	67.0	66.7	59.6	59.8	60.6	57.3	68.1	44.5	57.5
23	68.2	67.6	67.0	59.7	59.9	60.6	57.4	68.5	47.3	57.2
24	66.6	65.7	65.0	59.0	58.9	59.5	56.5	67.2	36.1	56.7
25	67.4	67.0	65.5	58.6	59.7	59.9	57.0	66.5	*#N/A	56.3
26	69.2	67.9	67.5	61.6	61.1	61.9	58.7	68.7	37.7	58.1
27	69.4	68.0	69.2	61.2	61.1	64.2	58.5	67.2	42.8	55.7
28	57.9	54.2	66.8	43.6	49.5	63.2	44.9	63.7	42.8	48.8
29	64.4	63.0	64.6	55.6	56.2	59.6	50.7	66.6	32.0	53.8
30	68.0	66.6	66.1	60.9	59.7	60.6	57.9	68.8	41.7	58.3
31	57.2	54.5	66.2	46.8	49.5	62.9	*#N/A	64.3	49.7	49.1
Days	31	31	31	31	31	31	30	31	30	31
En. Avg	67.6	66.6	66.8	59.6	59.6	61.4	57.0	67.6	45.0	56.3

#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 2018

Carrier	AC Type	# Deps		NMS Site									
				1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
Alaska Air	A320	94	Average Count	95.9 (86)	94.8 (85)	95.0 (88)	88.0 (88)	86.3 (88)	87.3 (84)	84.4 (81)	88.5 (4)	83.5 (1)	#N/A (0)
	B737	10	Average Count	95.7 (10)	94.8 (10)	93.7 (10)	88.5 (9)	88.6 (9)	88.7 (10)	84.1 (9)	#N/A (0)	#N/A (0)	#N/A (0)
	B738	998	Average Count	98.2 (850)	96.9 (830)	95.6 (865)	89.0 (868)	89.3 (872)	90.0 (857)	86.8 (834)	92.1 (113)	83.5 (23)	82.1 (24)
American	A320	102	Average Count	94.4 (92)	93.5 (85)	92.6 (91)	85.9 (91)	85.3 (91)	86.6 (90)	83.9 (89)	89.2 (10)	#N/A (0)	#N/A (0)
	A321	2	Average Count	99.0 (1)	99.0 (1)	98.2 (1)	88.6 (1)	88.8 (1)	89.6 (1)	86.0 (1)	94.7 (1)	#N/A (0)	#N/A (0)
	B738	1405	Average Count	98.9 (1203)	97.5 (1131)	97.3 (1209)	89.6 (1197)	89.2 (1215)	89.9 (1202)	86.6 (1153)	93.1 (166)	84.8 (53)	82.9 (42)
Compass	E175	391	Average Count	95.4 (338)	94.7 (322)	96.2 (346)	89.3 (341)	89.3 (340)	89.9 (340)	85.5 (319)	92.3 (36)	81.4 (5)	82.9 (5)
Delta	A319	240	Average Count	96.0 (155)	95.2 (141)	95.0 (158)	88.2 (156)	87.6 (155)	88.1 (149)	84.0 (146)	93.4 (71)	86.4 (55)	81.9 (23)
	A320	2	Average Count	96.8 (1)	96.0 (1)	93.0 (1)	89.7 (1)	88.9 (1)	88.5 (1)	84.6 (1)	92.8 (1)	#N/A (0)	79.3 (1)
	B712	139	Average Count	92.8 (121)	92.9 (117)	88.6 (119)	80.2 (109)	80.2 (100)	82.1 (117)	79.5 (90)	85.3 (17)	#N/A (0)	83.2 (1)
	B737	64	Average Count	96.5 (53)	95.1 (52)	93.3 (55)	87.3 (54)	88.1 (54)	89.0 (55)	86.4 (54)	93.7 (8)	81.2 (2)	81.8 (1)
	B738	2	Average Count	96.1 (2)	95.2 (2)	93.3 (2)	87.8 (2)	87.9 (2)	88.8 (1)	86.6 (2)	#N/A (0)	#N/A (0)	#N/A (0)
	B752	345	Average Count	96.5 (274)	95.8 (271)	96.1 (279)	88.9 (280)	88.0 (276)	88.1 (278)	84.3 (264)	93.0 (58)	86.0 (26)	82.3 (16)
FedEx	A306	64	Average Count	97.6 (55)	97.3 (55)	94.8 (55)	88.8 (55)	88.5 (55)	89.5 (55)	85.9 (53)	93.7 (9)	82.2 (2)	83.3 (4)
Frontier Airlines	A20N	93	Average Count	89.8 (83)	89.0 (77)	88.8 (83)	82.4 (79)	80.6 (72)	83.4 (80)	80.1 (52)	85.0 (9)	#N/A (0)	#N/A (0)
	A320	91	Average Count	95.6 (80)	94.9 (75)	93.9 (78)	86.5 (80)	85.8 (80)	87.3 (77)	85.2 (76)	89.6 (11)	78.8 (1)	78.2 (2)
Horizon Air	E175	215	Average Count	93.0 (185)	92.2 (181)	90.1 (190)	85.4 (189)	84.8 (188)	86.5 (188)	83.4 (174)	90.5 (23)	80.6 (2)	79.5 (5)
Southwest	B737	1641	Average Count	92.6 (1408)	92.1 (1339)	90.0 (1432)	84.8 (1439)	85.1 (1453)	85.5 (1436)	82.9 (1335)	91.4 (163)	80.2 (30)	81.8 (21)
	B738	7	Average Count	92.0 (5)	91.2 (6)	88.5 (5)	83.6 (6)	84.2 (6)	84.5 (6)	81.8 (6)	91.1 (1)	#N/A (0)	#N/A (0)
United	A320	281	Average Count	94.7 (232)	93.8 (216)	92.3 (235)	85.8 (231)	85.9 (238)	88.4 (233)	86.5 (227)	91.5 (39)	85.8 (13)	81.9 (5)
	B737	344	Average Count	97.1 (288)	95.6 (274)	96.5 (291)	89.9 (293)	90.1 (293)	90.9 (289)	86.6 (279)	93.2 (41)	85.7 (12)	81.7 (9)
	B738	933	Average Count	98.3 (791)	96.9 (747)	96.2 (789)	89.4 (790)	89.8 (801)	90.6 (787)	87.0 (760)	93.4 (121)	85.6 (39)	82.8 (25)
UPS	A306	11	Average Count	98.8 (11)	98.3 (11)	98.7 (10)	91.3 (11)	90.3 (11)	90.4 (11)	87.1 (11)	#N/A (0)	#N/A (0)	#N/A (0)
	B752	44	Average Count	96.1 (37)	95.6 (36)	93.9 (37)	86.6 (37)	86.3 (37)	87.1 (37)	82.7 (36)	90.1 (7)	80.9 (1)	78.6 (1)
WestJet	B736	3	Average Count	94.2 (3)	92.3 (3)	94.0 (3)	87.9 (3)	87.8 (3)	87.8 (3)	82.9 (3)	#N/A (0)	#N/A (0)	#N/A (0)
	B737	79	Average Count	95.6 (69)	94.3 (67)	94.9 (70)	89.3 (66)	89.3 (70)	90.1 (70)	85.2 (66)	91.0 (9)	82.5 (2)	81.7 (1)

TABLE 7
MEASURED AVERAGE SINGLE EVENT NOISE EXPOSURE LEVELS
Commercial Class E
October - December 2018

Carrier	AC Type	# Deps		NMS Site									
				1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
Delta	B712	275	Average Count	92.4 (238)	92.6 (220)	88.4 (243)	80.4 (185)	80.2 (207)	81.9 (234)	79.3 (162)	85.1 (28)	84.6 (3)	78.5 (2)
Horizon Air	DH8D	89	Average Count	84.5 (75)	84.9 (72)	85.6 (77)	80.6 (27)	79.1 (39)	79.5 (58)	79.1 (1)	80.0 (5)	83.1 (2)	81.2 (1)
	E175	177	Average Count	91.8 (152)	91.4 (146)	89.5 (156)	85.4 (154)	84.6 (154)	85.9 (155)	83.3 (150)	88.7 (19)	#N/A (0)	81.4 (4)
SkyWest Coml.	E175	1013	Average Count	90.8 (888)	90.4 (825)	89.2 (893)	85.0 (886)	84.4 (888)	85.6 (890)	83.1 (822)	89.0 (104)	81.2 (1)	79.4 (9)
Southwest	B38M	2	Average Count	87.6 (2)	86.9 (1)	86.0 (2)	78.6 (2)	80.0 (2)	81.6 (2)	77.0 (1)	#N/A (0)	#N/A (0)	#N/A (0)
	B737	2365	Average Count	91.6 (2047)	91.4 (1943)	89.3 (2052)	84.5 (2051)	84.6 (2063)	85.0 (2049)	82.5 (1933)	91.2 (259)	81.4 (41)	83.7 (42)

TABLE 8
MEASURED AVERAGE SINGLE EVENT NOISE EXPOSURE LEVELS
Commuter
October - December 2018

Carrier	AC Type	# Deps		NMS Site									
				1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
Delux Public Charters	E135	288	Average Count	85.8 (247)	85.7 (237)	86.4 (252)	80.4 (215)	78.8 (93)	80.1 (202)	80.6 (3)	83.5 (31)	#N/A (0)	#N/A (0)
SkyWest	CRJ7	99	Average Count	88.3 (89)	88.1 (86)	86.9 (90)	79.8 (51)	81.1 (81)	81.7 (87)	80.2 (79)	87.8 (9)	#N/A (0)	#N/A (0)

TABLE 8-GA
MEASURED AVERAGE SINGLE EVENT NOISE EXPOSURE LEVELS
General Aviation
October - December 2018

Carrier	AC Type	# Deps		NMS Site									
				1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
General Aviation	Jet	4174	Average Count	88.6 (3549)	87.8 (3324)	89.3 (3552)	83.1 (2086)	83.0 (1687)	83.9 (2309)	82.3 (921)	86.8 (285)	82.4 (32)	86.8 (8)

TABLE 9
AIR CARRIER OPERATIONAL HISTORY

Carrier	AC Type	Year					
		2014	2015	2016	2017	2018	
Alaska Air	AS	A319					64
		A320					262
		B734	89	80	76	24	
		B737	4,381	2,666	3,258	1,233	384
		B738	2,486	4,590	4,439	6,420	8,260
American	AA	A319		42	178	332	722
		A320		344	868	266	78
		A321		326	563	56	4
		B738	9,339	9,090	10,538	11,556	11,457
		B752	4	22	74	4	4
Compass	CP	E170			152	78	
		E175			1,669	2,726	3,188
Delta	DL	A319	3,290	3,352	3,444	2,053	1,979
		A320	142	162	160	94	12
		B712				3,267	3,379
		B737				146	188
		B738	4	4		40	18
		B739		2			2
		B752	2,196	2,130	2,128	2,137	2,889
		MD90					2
FedEx	FM	A306	508	508	510	506	508
		A310	2				
Frontier Airlines	F9	A20N*					600
		A319	2,381	1,497	646	356	190
		A320		154	740	628	654
		A321			2		
Horizon Air	QX	DH8D			1,156	1,456	728
		E175				339	2,716
Interjet	4O	A320	428				
SkyWest Coml.	SC	CRJ9	2,007	1,922	1,899	1,440	6
		E175			3,554	4,761	6,960
Southwest	WN	B38M				2	14
		B733	2				
		B737	33,490	37,101	41,806	35,971	32,380
United	UA	B738	1,385	2,586	1,144	58	64
		A319	1,926	1,393	1,999	1,470	999
		A320	2,774	3,207	2,670	3,957	3,927
		B737	4,436	4,523	5,246	4,044	2,987
		B738	1,748	1,853	1,252	3,302	5,154
UPS	5X	B752	237	44		2	4
		A306		52	52	45	22
US Airways	AW	B752	414	366	370	369	394
		A319	808	240			
		A320	1,426	1,476			
		A321	934	740			
WestJet	WS	B736	4		32	30	10
		B737	728	718	642	644	666
Total			77,615	81,288	91,279	90,250	91,875

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

TABLE 10
AIRCRAFT OPERATIONAL HISTORY

Aircraft	Year				
	2014	2015	2016	2017	2018
A20N*					600
A306	508	560	562	551	530
A310	2				
A319	8,405	6,524	6,267	4,211	3,954
A320	4,770	5,343	4,438	4,945	4,933
A321	934	1,066	565	56	4
A32N*			12	438	
B38M				2	14
B712				3,267	3,379
B733	2				
B734	89	80	76	24	
B736	4		32	30	10
B737	43,035	45,008	50,952	42,038	36,605
B738	14,962	18,123	17,373	21,376	24,953
B739		2			2
B752	2,897	2,660	2,572	2,512	3,291
CRJ9	2,007	1,922	1,899	1,440	6
DH8D			1,156	1,456	728
E170			152	78	
E175			5,223	7,826	12,864
MD90					2
Total	77,615	81,288	91,279	90,250	91,875

*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					
		2014	2015	2016	2017	2018	
Alaska Air	AS	A319					.088
		A320					.359
		B734	.121	.110	.104	.033	
		B737	6.000	3.652	4.451	1.693	.526
		B738	3.408	6.288	6.066	8.789	11.315
American	AA	A319		.058	.243	.455	.989
		A320		.471	1.186	.364	.107
		A321		.447	.770	.077	.005
		B738	12.792	12.452	14.402	15.827	15.696
		B752	.005	.030	.101	.005	.005
Compass	CP	E170			.208	.107	
		E175			2.279	3.734	4.367
Delta	DL	A319	4.507	4.592	4.705	2.811	2.712
		A320	.195	.222	.219	.129	.016
		B712				4.471	4.627
		B737				.200	.258
		B738	.005	.005		.055	.025
		B739		.003			.003
		B752	3.008	2.918	2.910	2.926	3.959
		MD90					.003
FedEx	FM	A306	.696	.696	.697	.693	.696
		A310	.003				
Frontier Airlines	F9	A20N*					.822
		A319	3.260	2.052	.883	.488	.260
		A320		.211	1.011	.860	.896
		A321			.003		
		A32N*			.016	.600	
Horizon Air	QX	DH8D			1.579	1.995	.997
		E175				.466	3.721
Interjet	4O	A320	.586				
SkyWest Coml.	SC	CRJ9	2.748	2.633	2.593	1.975	.008
		E175			4.855	6.523	9.534
Southwest	WN	B38M				.003	.019
		B733	.003				
		B737	45.874	50.819	57.104	49.274	44.351
		B738	1.901	3.542	1.563	.079	.088
United	UA	A319	2.636	1.910	2.730	2.014	1.373
		A320	3.803	4.395	3.648	5.422	5.375
		B737	6.077	6.195	7.169	5.534	4.093
		B738	2.395	2.537	1.710	4.526	7.058
		B752	.326	.060		.003	.005
UPS	5X	A306		.071	.071	.060	.030
		B752	.567	.501	.505	.507	.540
US Airways	AW	A319	1.107	.329			
		A320	1.953	2.022			
		A321	1.279	1.014			
		B752	.063	.134			
WestJet	WS	B736	.005		.044	.041	.014
		B737	.997	.984	.877	.882	.912
Total			106.321	111.351	124.699	123.622	125.852

*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
A306	Airbus	300-600
A310	Airbus	310-200
A320	Airbus	320
A32N	Airbus	320-200 Neo
B38M	Boeing	737-800 Max
B712	Boeing	717-200
B733	Boeing	737-300
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
E170	Embraer	170
E175	Embraer	175
MD90	McDonnell Douglas	90

QUARTERLY NOISE MEETING

DECEMBER 19, 2018

No meeting was held as there were no attendees from the community.



**JOHN WAYNE AIRPORT
2018 ANNUAL 60-75 (5 dB intervals)
CNEL NOISE 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):
8.35 acres (or 0.013 square miles)
2. Estimated Number of dwelling units included in the Noise Impact Area as defined in the Noise Standards:
77
3. Estimated number of people residing within the Noise Impact Area as defined in the Noise Standards:
193 (based on 2.5 people per dwelling)
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:
6,702
5. Total number of aircraft operations during the calendar quarter:
77,687
6. Number of Air Carrier operations during the calendar quarter:
(Not mandatory)
23,851
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)
53,655
9. Estimated number of operations by Military aircraft during the calendar quarter:
(Not mandatory)
181