NOISE ABATEMENT PROGRAM

QUARTERLY REPORT

For the period:
July 1, 2018 through September 30, 2018

Prepared in accordance with:

AIRPORT NOISE STANDARD

STATE OF CALIFORNIA

California Administrative Code Title 21,
Chapter 2.5, SubChapter 6:
Division of Aeronautics
Noise Standards

Submitted by:

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John Wayne Airport, Orange County

INTRODUCTION

This is the 183rd Quarterly Report submitted by the County of Orange in accordance with the requirements of the California Airport Noise Standards (California Administrative Code Title 21, Chapter 2.5, SubChapter 6: Division of Aeronautics 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 NMS.

Figure 2 shows the Airport's "Noise Impact Area" for the previous year (October 1, 2017 - September 30, 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

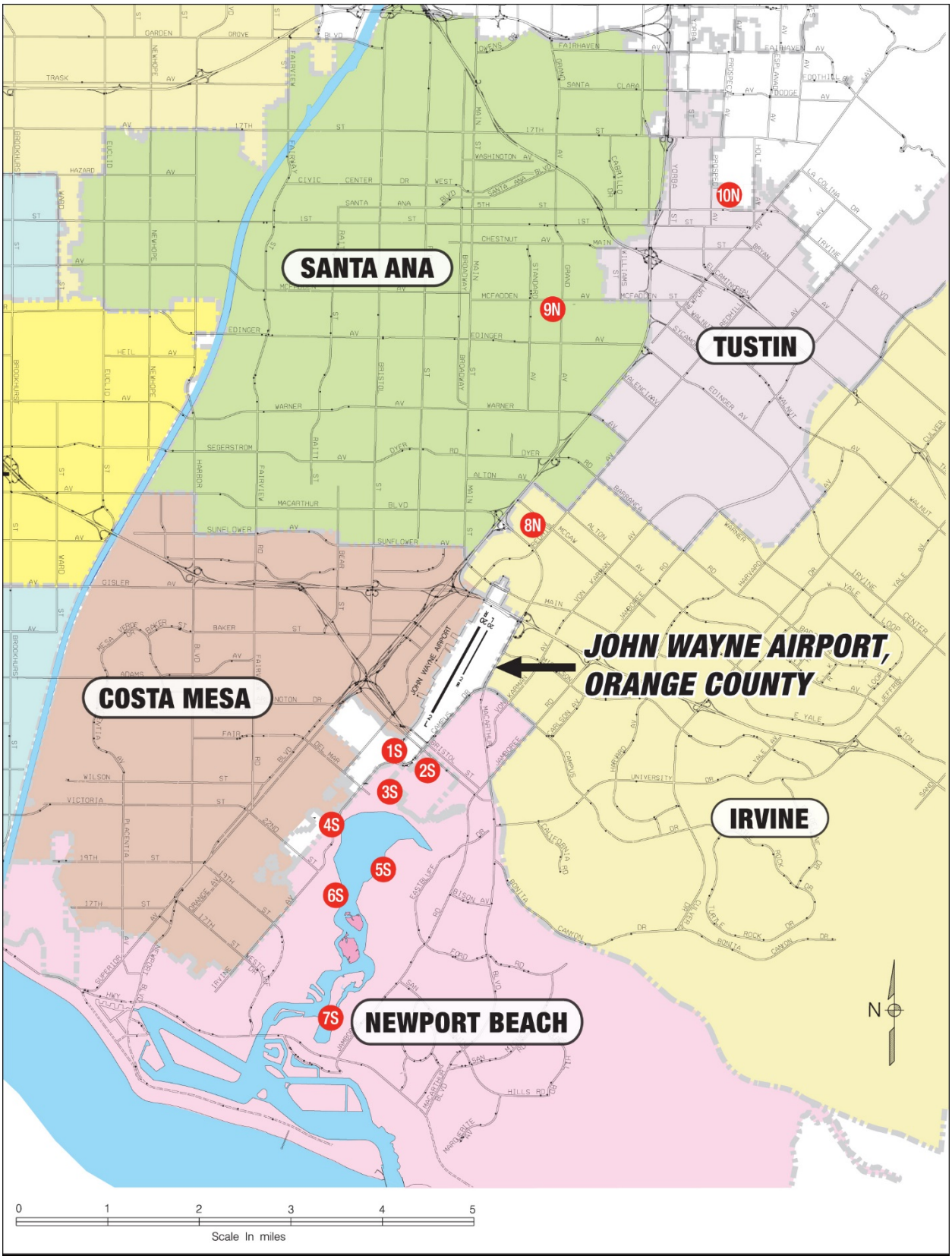


FIGURE 2


N
Bristol Street
Irvine Avenue
Anniversary Lane
1
2
3
0
350
700feet
Noise Monitors
65 dB CNEL Contours
Single-Family Residential
Multi-Family Residential
STATISTICS:
Incompatible Land Use: 8.35 Acres or .013 square miles
Number of Dwellings: 77
Number of People: 193 (based on 2.5 people per dwelling unit)
JOHN WAYNE AIRPORT
65 dB CNEL Impact Area
October 2017 - September 2018
Landrum & Brown

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
July - September 2018

Period	Air Carriers		GA Jet (1)	Total	Average Daily
	Jet	Prop		Operations (2)	Jet Operations
July	8,274	62	3,150	28,466	369
August	8,403	62	3,305	30,621	378
September	7,781	60	3,156	27,987	365
Third Quarter	24,458	184	9,611	87,074	370
Twelve Months 10/01/17 - 09/30/18	92,427	918	35,968	312,917	352

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.

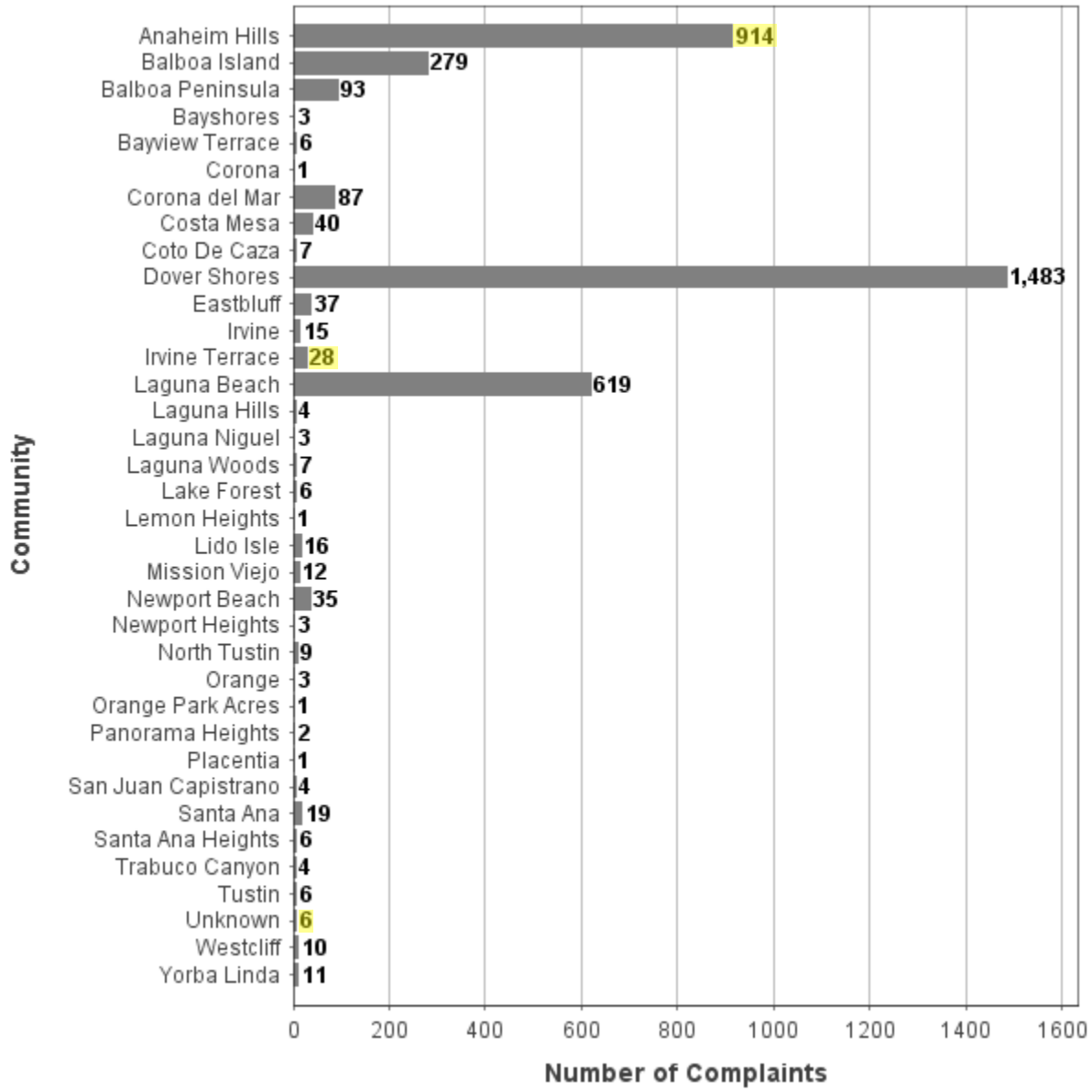
ACOUSTICAL INSULATION PROGRAM

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 (July 1, 2018 - September 30, 2018) (Revised)

The Airport's Access and Noise Office receives and investigates noise complaints from local citizens and all other sources. During the July 1, 2018 through September 30, 2018, the Office received 3,781 complaints from local citizens. This is a 638.5% increase from the 512 complaints received last quarter. It is a 462.6% increase from the 672 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 (Revised)



Note:

- City of Newport Beach – 2,080 total number of complaints.
- 98% of complaints from "Anaheim Hills" category were from one community group.
- 86% of complaints from "Balboa Island" category were from one household.
- 97% of complaints from "Corona Del Mar" category were from one household.
- 99% of complaints from "Dover Shores" category were from one household.
- 99% of complaints from "Laguna Beach" category were from one household.
- 63% of all complaints were from a complaint form subscription service.

TABLE 2
LONG TERM MEASURED LEVELS
Aircraft CNEL from 10/01/17 through 09/30/18
Values in dB at Each Site

Period	NMS Site									
	1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
Oct 2017	68.1	67.0	66.8	59.6	59.2	60.7	56.7	68.0	45.0	55.8
# Days	31	31	31	31	26	31	30	31	26	31
Nov 2017	68.4	67.4	67.0	60.1	59.4	60.7	56.9	68.0	43.4	56.4
# Days	30	30	30	30	30	30	22	30	30	30
Dec 2017	66.7	65.7	66.3	57.9	57.3	60.6	54.4	66.7	43.4	54.5
# Days	31	31	31	31	31	31	31	31	26	27
Q-4 2017	**67.8**	**66.8**	**66.7**	**59.3**	**58.7**	**60.7**	**56.0**	**67.6**	**44.0**	**55.7**
# Days	**92**	**92**	**92**	**92**	**87**	**92**	**83**	**92**	**82**	**88**
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**
Q-4 2017 thru Q-3 2018										
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**
Q-3 2017 thru Q-2 2018 (Previous 4 Quarters)										
Total	**68.1**	**67.1**	**66.6**	**59.8**	**59.4**	**60.6**	**56.8**	**68.0**	**44.4**	**56.2**
# Days	**361**	**364**	**365**	**365**	**357**	**365**	**356**	**365**	**332**	**361**
Change from Previous 4 Quarters										
	0.1	**0.1**	**0.0**	**0.2**	**0.1**	**0.1**	**0.1**	**0.0**	**0.1**	**0.3**

TABLE 3
DAILY CNEL VALUES AT EACH MONITOR STATION
July 2018

Date	NMS Site									
	1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
1	68.4	67.5	66.9	60.5	60.1	61.0	57.1	68.2	43.4	56.7
2	67.8	67.1	66.0	59.8	59.9	60.3	57.1	68.3	44.1	56.3
3	67.6	66.6	66.0	60.2	59.6	60.1	57.3	67.2	45.0	56.2
4	65.7	64.6	64.1	58.5	57.9	58.4	55.6	66.8	44.6	55.3
5	68.1	66.8	65.9	58.5	58.9	59.1	55.7	67.2	41.8	54.7
6	68.1	67.3	66.2	56.8	57.9	58.1	55.0	66.5	35.0	54.0
7	67.7	65.8	65.3	58.1	56.5	58.2	54.9	65.9	45.8	53.6
8	68.8	67.5	66.9	60.1	58.5	59.5	56.7	68.2	*#N/A	56.2
9	68.8	67.4	66.6	60.1	58.8	60.1	56.8	68.6	40.8	56.9
10	68.8	67.5	66.9	60.7	59.6	60.4	57.3	68.5	44.6	56.4
11	68.9	67.8	67.2	60.6	60.2	61.1	57.6	68.4	36.1	56.1
12	69.2	68.2	67.5	61.2	61.0	62.1	58.4	68.8	41.5	56.2
13	68.7	68.1	67.2	60.3	60.2	61.3	57.8	68.7	34.2	56.6
14	67.2	66.5	65.5	58.6	58.4	59.5	55.9	66.7	34.3	54.6
15	68.3	67.6	66.7	60.7	59.4	60.9	56.8	68.6	35.6	57.2
16	68.6	67.3	66.9	60.6	59.8	61.1	57.2	68.5	45.9	57.2
17	68.8	67.3	66.8	60.0	59.4	60.6	56.1	68.6	47.7	56.3
18	69.1	68.2	67.3	61.0	60.4	61.6	58.1	68.8	41.4	57.4
19	69.2	68.2	67.7	61.5	60.5	62.1	58.2	68.8	42.9	56.9
20	69.0	68.2	67.3	61.0	60.6	61.6	58.1	69.0	37.5	56.7
21	67.5	66.9	65.9	58.8	58.9	59.9	56.1	66.7	38.3	54.1
22	68.8	68.0	67.4	60.0	60.4	61.0	57.6	68.1	38.0	56.1
23	69.2	68.3	67.5	60.1	59.8	61.1	57.3	68.1	30.8	55.7
24	68.9	67.5	66.9	60.2	59.4	60.7	57.2	68.5	44.9	56.0
25	68.8	68.2	67.4	60.3	60.0	61.1	57.5	68.8	43.5	57.1
26	69.2	67.6	67.4	60.9	60.5	61.6	57.0	69.2	45.6	57.4
27	69.1	68.2	67.5	60.5	60.1	61.1	57.0	69.1	45.4	57.3
28	67.7	66.3	65.8	59.4	58.7	60.1	56.0	67.4	40.7	55.5
29	69.0	67.8	67.2	60.3	59.7	60.9	57.5	68.6	39.2	56.5
30	69.1	68.1	67.2	60.2	59.9	60.9	57.4	68.0	39.9	56.2
31	68.7	67.9	67.4	60.2	60.0	60.6	57.2	68.6	41.2	56.4
Days	31	31	31	31	31	31	31	31	30	31
En. Avg	68.5	67.5	66.8	60.1	59.6	60.6	57.0	68.2	42.6	56.2

#N/A indicates insufficient data.

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

TABLE 4
DAILY CNEL VALUES AT EACH MONITOR STATION
August 2018

Date	NMS Site									
	1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
1	68.7	67.8	67.0	59.9	59.8	60.7	57.1	68.3	43.6	57.0
2	68.7	67.9	66.9	60.6	60.1	60.9	57.6	68.9	42.3	57.2
3	69.0	68.1	67.2	60.6	59.7	60.8	57.1	70.1	41.7	56.9
4	67.3	66.2	65.3	59.2	57.6	59.0	54.9	66.8	42.5	55.1
5	69.0	68.2	67.4	60.0	59.7	60.9	57.3	68.2	34.7	56.5
6	68.9	67.8	67.4	59.7	59.5	60.7	56.8	67.6	35.6	55.3
7	68.9	67.7	67.1	59.6	58.9	60.4	56.8	68.5	36.3	56.9
8	68.5	67.1	66.6	59.8	58.8	60.3	56.6	69.0	50.8	56.7
9	69.1	68.2	67.1	59.5	59.5	60.5	57.1	68.6	46.9	56.9
10	68.4	67.4	66.4	59.7	59.2	60.4	57.2	68.0	47.4	56.5
11	67.7	66.7	65.8	58.6	58.8	59.7	56.3	66.9	47.4	55.1
12	68.9	67.9	67.2	60.3	59.8	61.0	57.4	68.8	40.1	57.3
13	69.0	67.8	67.1	60.3	60.2	60.8	57.0	68.8	*#N/A	57.4
14	68.7	67.6	66.9	60.6	60.4	61.3	58.0	68.6	38.9	57.7
15	68.8	67.7	67.2	61.2	60.3	61.7	58.2	68.4	35.2	57.1
16	69.2	68.0	67.6	61.4	60.3	61.7	57.8	68.9	37.5	57.8
17	68.7	67.6	67.2	60.4	60.0	61.2	57.0	68.4	44.0	56.7
18	67.7	66.4	65.5	59.2	58.2	59.3	52.6	66.6	44.1	54.8
19	69.1	68.4	67.2	60.6	60.1	61.4	56.4	68.6	41.8	57.1
20	69.9	68.8	68.0	61.5	60.4	62.0	56.9	68.7	44.2	57.5
21	68.8	67.2	66.8	60.6	59.9	61.0	56.9	68.7	44.4	57.6
22	68.9	67.6	67.2	60.9	60.4	61.8	57.4	67.7	31.7	56.2
23	68.6	69.5	67.1	60.7	60.4	61.4	58.0	68.7	38.9	57.1
24	68.8	67.4	67.1	60.7	60.4	61.6	58.3	68.1	46.6	56.5
25	67.3	66.2	65.4	58.9	58.5	59.6	56.0	65.4	40.6	54.5
26	69.0	68.0	67.2	60.4	60.4	61.3	57.8	68.2	36.7	56.6
27	69.0	68.1	67.1	60.9	60.5	61.6	57.9	68.0	44.1	57.2
28	68.4	67.0	66.3	60.3	59.9	60.9	57.1	68.0	28.4	56.8
29	68.7	66.8	67.1	60.5	60.3	61.2	57.6	67.6	42.0	55.7
30	69.0	68.3	67.5	60.5	60.1	61.2	56.4	68.1	40.2	56.7
31	69.0	68.0	67.3	60.8	60.2	61.4	58.0	68.6	42.2	57.0
Days	31	31	31	31	31	31	31	31	30	31
En. Avg	68.7	67.7	67.0	60.3	59.8	61.0	57.1	68.3	43.4	56.7

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

TABLE 5
DAILY CNEL VALUES AT EACH MONITOR STATION
September 2018

Date	NMS Site									
	1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
1	67.6	65.9	65.3	60.0	58.2	59.8	56.1	65.9	39.5	55.0
2	66.8	66.0	65.0	59.6	58.4	59.7	56.5	67.1	35.5	56.3
3	68.4	67.8	66.9	60.3	60.4	61.2	57.8	68.6	*#N/A	57.6
4	67.5	67.5	66.6	60.0	59.9	60.7	56.2	68.2	39.7	57.5
5	67.9	67.8	66.6	59.9	60.2	61.0	57.7	67.7	35.1	56.4
6	67.7	67.5	66.6	60.2	60.2	61.0	57.7	68.2	39.6	56.8
7	68.6	67.4	67.0	59.7	59.9	60.8	57.0	68.4	44.3	56.7
8	66.9	65.8	65.4	57.6	57.5	58.7	54.6	65.5	38.3	53.9
9	68.1	67.0	66.2	59.7	58.8	60.3	56.4	68.1	36.9	56.6
10	68.5	67.2	66.7	60.8	59.8	61.1	56.4	68.3	44.4	57.0
11	68.2	66.5	66.2	60.7	59.6	60.7	56.5	67.7	*#N/A	56.8
12	68.4	67.6	66.8	60.7	60.3	61.4	57.3	68.5	42.7	57.0
13	69.0	67.9	67.4	60.0	60.2	61.0	57.0	68.0	49.2	55.3
14	68.7	67.9	67.1	59.5	59.6	60.3	56.7	67.4	47.7	55.4
15	66.9	65.8	65.0	58.2	58.1	58.7	54.5	65.8	40.6	54.1
16	68.9	68.2	67.5	60.1	60.0	60.6	56.3	68.2	#N/A	56.1
17	68.5	67.7	66.7	59.6	59.6	60.1	55.8	67.8	38.4	56.5
18	66.8	67.4	66.5	60.0	59.7	60.4	54.9	67.7	37.4	55.7
19	68.9	68.0	67.0	60.3	60.3	61.2	57.1	67.9	47.8	55.8
20	69.3	68.0	67.3	61.4	60.1	61.8	57.9	68.6	46.8	57.0
21	68.8	67.7	67.0	60.8	60.6	61.7	57.1	68.5	45.7	56.9
22	66.9	65.9	65.4	58.4	58.4	58.8	54.4	66.4	40.4	53.7
23	68.7	67.9	67.0	60.4	60.0	61.3	57.2	68.9	30.7	56.0
24	68.6	67.5	66.9	60.9	60.2	61.0	56.8	68.3	*#N/A	57.9
25	68.2	67.3	66.6	60.0	60.0	60.9	56.7	68.5	40.1	57.8
26	69.3	68.2	67.6	60.2	60.4	61.6	57.6	68.5	44.7	57.2
27	69.1	67.9	67.5	59.6	60.0	61.2	57.1	68.4	43.8	57.3
28	68.8	67.7	67.4	60.5	59.8	61.4	56.8	68.2	46.2	57.3
29	67.5	66.1	65.8	59.6	58.7	60.0	56.0	66.3	*#N/A	55.1
30	68.5	67.6	66.8	60.0	59.5	60.5	56.5	68.8	38.9	57.4
Days	30	30	30	30	30	30	30	30	25	30
En. Avg	68.3	67.4	66.7	60.0	59.7	60.7	56.6	67.9	43.5	56.5

#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
July - September 2018

Carrier	AC Type	# Deps		NMS Site									
				1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
Alaska Air	A320	68	Average	96.2	94.9	95.2	88.1	86.1	87.2	84.1	#N/A	#N/A	#N/A
			Count	(63)	(64)	(68)	(65)	(68)	(65)	(65)	(0)	(0)	(0)
	B737	74	Average	95.1	94.5	93.6	88.7	88.0	88.7	83.9	#N/A	#N/A	#N/A
			Count	(72)	(68)	(73)	(74)	(72)	(72)	(69)	(0)	(0)	(0)
	B738	1008	Average	98.1	96.9	95.3	88.9	88.8	89.8	86.4	96.7	#N/A	#N/A
			Count	(992)	(954)	(994)	(996)	(997)	(974)	(967)	(1)	(0)	(0)
American	A320	104	Average	94.6	93.8	92.9	86.2	85.1	86.4	83.2	#N/A	#N/A	#N/A
			Count	(101)	(97)	(104)	(101)	(100)	(100)	(98)	(0)	(0)	(0)
	B738	1507	Average	99.1	97.8	97.3	89.4	88.8	89.7	86.2	96.9	88.7	80.1
			Count	(1479)	(1390)	(1490)	(1474)	(1482)	(1440)	(1446)	(7)	(7)	(1)
	B752	1	Average	97.1	#N/A	95.6	86.9	84.6	85.7	79.4	#N/A	#N/A	#N/A
			Count	(1)	(0)	(1)	(1)	(1)	(1)	(1)	(0)	(0)	(0)
Compass	E175	407	Average	95.4	94.6	96.0	89.2	88.9	89.7	84.7	#N/A	#N/A	#N/A
			Count	(402)	(394)	(402)	(402)	(403)	(388)	(389)	(0)	(0)	(0)
Delta	A319	260	Average	96.1	95.3	95.4	88.6	87.3	87.8	82.8	94.1	85.8	82.2
			Count	(234)	(220)	(237)	(231)	(232)	(226)	(227)	(23)	(20)	(4)
	B712	89	Average	93.2	93.2	89.7	81.3	80.4	82.3	79.2	#N/A	#N/A	#N/A
			Count	(87)	(80)	(88)	(73)	(56)	(85)	(48)	(0)	(0)	(0)
	B737	2	Average	95.1	93.7	92.0	86.7	86.1	88.0	84.9	#N/A	#N/A	#N/A
			Count	(2)	(2)	(2)	(1)	(2)	(2)	(2)	(0)	(0)	(0)
	B738	2	Average	94.7	94.0	92.6	86.5	86.7	88.6	84.8	#N/A	#N/A	#N/A
			Count	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(0)	(0)	(0)
	B739	1	Average	94.3	93.3	91.9	86.4	86.3	88.0	84.8	#N/A	#N/A	#N/A
			Count	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(0)	(0)	(0)
	B752	400	Average	96.7	96.2	96.2	88.9	87.8	87.9	83.5	94.8	85.7	81.7
			Count	(380)	(374)	(379)	(383)	(383)	(373)	(358)	(12)	(13)	(4)
FedEx	A306	62	Average	97.3	97.1	94.5	89.1	88.2	89.7	85.4	#N/A	#N/A	#N/A
			Count	(62)	(61)	(61)	(62)	(61)	(60)	(61)	(0)	(0)	(0)
Frontier Airlines	A20N	92	Average	89.2	89.1	88.4	82.2	79.9	83.0	79.1	#N/A	#N/A	#N/A
			Count	(90)	(88)	(87)	(90)	(76)	(86)	(54)	(0)	(0)	(0)
	A320	86	Average	95.9	95.3	93.6	86.7	85.7	87.5	85.0	#N/A	#N/A	#N/A
			Count	(83)	(81)	(84)	(84)	(85)	(86)	(80)	(0)	(0)	(0)
Horizon Air	E175	183	Average	91.3	90.7	88.9	84.9	83.9	85.6	82.0	#N/A	#N/A	#N/A
			Count	(180)	(173)	(181)	(178)	(179)	(174)	(168)	(0)	(0)	(0)
Southwest	B38M	3	Average	87.2	87.2	85.8	81.5	80.0	81.1	#N/A	#N/A	#N/A	#N/A
			Count	(3)	(3)	(3)	(2)	(2)	(3)	(0)	(0)	(0)	(0)
	B737	1637	Average	93.2	92.6	90.5	85.0	85.4	86.0	82.7	#N/A	#N/A	#N/A
			Count	(1616)	(1554)	(1623)	(1622)	(1614)	(1578)	(1550)	(0)	(0)	(0)
	B738	7	Average	93.8	93.5	90.0	84.6	85.5	86.1	83.7	#N/A	#N/A	#N/A
			Count	(7)	(7)	(6)	(7)	(7)	(7)	(7)	(0)	(0)	(0)
United	A320	909	Average	94.6	93.8	92.4	85.9	85.6	88.2	86.1	93.9	85.5	79.9
			Count	(853)	(803)	(865)	(851)	(869)	(843)	(844)	(33)	(29)	(3)
	B737	337	Average	97.3	95.7	96.5	89.6	89.8	90.8	86.3	95.3	89.1	#N/A
			Count	(329)	(317)	(330)	(327)	(332)	(326)	(328)	(3)	(3)	(0)
	B738	455	Average	98.3	97.0	95.8	89.1	89.3	90.4	86.7	95.4	89.2	#N/A
			Count	(438)	(428)	(448)	(446)	(444)	(435)	(436)	(5)	(3)	(0)
UPS	B752	50	Average	96.5	96.2	93.5	86.7	86.0	86.9	82.5	#N/A	#N/A	#N/A
			Count	(50)	(47)	(50)	(50)	(50)	(50)	(48)	(0)	(0)	(0)
WestJet	B737	92	Average	95.6	94.4	94.8	89.5	88.6	89.7	84.0	#N/A	#N/A	#N/A
			Count	(89)	(88)	(92)	(89)	(91)	(87)	(83)	(0)	(0)	(0)

TABLE 7
MEASURED AVERAGE SINGLE EVENT NOISE EXPOSURE LEVELS
Commercial Class E
July - September 2018

Carrier	AC Type	# Deps		NMS Site									
				1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
Delta	B712	339	Average	92.4	92.6	89.0	80.0	79.7	81.5	78.9	#N/A	#N/A	#N/A
			Count	(332)	(322)	(339)	(264)	(230)	(317)	(174)	(0)	(0)	(0)
Horizon Air	DH8D	92	Average	84.6	84.8	85.4	78.7	78.2	79.5	81.4	#N/A	#N/A	#N/A
			Count	(88)	(82)	(89)	(29)	(31)	(71)	(4)	(0)	(0)	(0)
	E175	185	Average	91.5	91.0	89.1	84.9	84.0	85.6	82.3	#N/A	#N/A	#N/A
			Count	(183)	(178)	(184)	(184)	(185)	(180)	(179)	(0)	(0)	(0)
SkyWest Coml.	CRJ9	1	Average	89.1	88.4	85.5	#N/A	83.3	78.4	#N/A	#N/A	#N/A	#N/A
			Count	(1)	(1)	(1)	(0)	(1)	(1)	(0)	(0)	(0)	(0)
	E175	848	Average	90.3	90.0	88.7	84.7	83.7	85.2	82.1	#N/A	#N/A	#N/A
			Count	(827)	(774)	(840)	(836)	(833)	(813)	(766)	(0)	(0)	(0)
Southwest	B737	2669	Average	91.9	91.5	89.4	84.7	84.5	85.3	81.8	#N/A	#N/A	#N/A
			Count	(2621)	(2489)	(2635)	(2645)	(2643)	(2579)	(2514)	(0)	(0)	(0)

TABLE 8
MEASURED AVERAGE SINGLE EVENT NOISE EXPOSURE LEVELS
Commuter
July - September 2018

Carrier	AC Type	# Deps		NMS Site									
				1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
Delux Public Charters	E135	233	Average	85.4	85.4	85.7	79.8	79.0	79.6	80.7	87.1	#N/A	#N/A
			Count	(226)	(219)	(229)	(146)	(21)	(91)	(3)	(1)	(0)	(0)
	E35L	1	Average	86.2	86.7	85.6	#N/A	#N/A	79.3	#N/A	#N/A	#N/A	#N/A
			Count	(1)	(1)	(1)	(0)	(0)	(1)	(0)	(0)	(0)	(0)
SkyWest	CRJ7	107	Average	88.6	88.4	87.1	80.8	80.9	81.7	79.5	#N/A	#N/A	#N/A
			Count	(105)	(104)	(107)	(45)	(82)	(103)	(77)	(0)	(0)	(0)

TABLE 8-GA
MEASURED AVERAGE SINGLE EVENT NOISE EXPOSURE LEVELS
General Aviation
July - September 2018

Carrier	AC Type	# Deps		NMS Site									
				1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
General Aviation	Jet	4577	Average	88.2	87.5	88.9	82.7	82.3	83.6	81.8	85.6	80.2	78.3
			Count	(4315)	(4028)	(4299)	(2235)	(1817)	(2533)	(817)	(21)	(6)	(3)

TABLE 9
AIR CARRIER OPERATIONAL HISTORY

Carrier		AC Type	Year				
			2014	2015	2016	2017	2018
Alaska Air	AS	A319					16
		A320					121
		B734	89	80	76	24	
		B737	4,381	2,666	3,258	1,233	364
		B738	2,486	4,590	4,439	6,420	6,259
American	AA	A319		42	178	332	546
		A320		344	868	266	48
		A321		326	563	56	
		B738	9,339	9,090	10,538	11,556	8,645
		B752	4	22	74	4	4
Compass	CP	E170			152	78	
		E175			1,669	2,726	2,406
Delta	DL	A319	3,290	3,352	3,444	2,053	1,499
		A320	142	162	160	94	8
		B712				3,267	2,551
		B737				146	60
		B738	4	4		40	14
		B739		2			2
		B752	2,196	2,130	2,128	2,137	2,199
		MD90					2
FedEx	FM	A306	508	508	510	506	380
		A310	2				
Frontier Airlines	F9	A20N*					414
		A319	2,381	1,497	646	356	190
		A320		154	740	628	472
		A321			2		
		A32N*			12	438	
Horizon Air	QX	DH8D			1,156	1,456	550
		E175				339	1,932
Interjet	4O	A320	428				
SkyWest Coml.	SC	CRJ9	2,007	1,922	1,899	1,440	6
		E175			3,554	4,761	4,934
Southwest	WN	B38M				2	10
		B733	2				
		B737	33,490	37,101	41,806	35,971	24,348
		B738	1,385	2,586	1,144	58	50
United	UA	A319	1,926	1,393	1,999	1,470	910
		A320	2,774	3,207	2,670	3,957	3,458
		B737	4,436	4,523	5,246	4,044	2,300
		B738	1,748	1,853	1,252	3,302	3,283
		B752	237	44		2	4
UPS	5X	A306		52	52	45	
		B752	414	366	370	369	306
US Airways	AW	A319	808	240			
		A320	1,426	1,476			
		A321	934	740			
		B752	46	98			
WestJet	WS	B736	4		32	30	4
		B737	728	718	642	644	508
Total			77,615	81,288	91,279	90,250	68,803

*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*					414
A306	508	560	562	551	380
A310	2				
A319	8,405	6,524	6,267	4,211	3,161
A320	4,770	5,343	4,438	4,945	4,107
A321	934	1,066	565	56	
A32N*			12	438	
B38M				2	10
B712				3,267	2,551
B733	2				
B734	89	80	76	24	
B736	4		32	30	4
B737	43,035	45,008	50,952	42,038	27,580
B738	14,962	18,123	17,373	21,376	18,251
B739		2			2
B752	2,897	2,660	2,572	2,512	2,513
CRJ9	2,007	1,922	1,899	1,440	6
DH8D			1,156	1,456	550
E170			152	78	
E175			5,223	7,826	9,272
MD90					2
Total	77,615	81,288	91,279	90,250	68,803

*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					.022
		A320					.164
		B734	.121	.110	.104	.033	
		B737	6.000	3.652	4.451	1.693	.499
		B738	3.408	6.288	6.066	8.789	8.575
American	AA	A319		.058	.243	.455	.748
		A320		.471	1.186	.364	.066
		A321		.447	.770	.077	
		B738	12.792	12.452	14.402	15.827	11.844
		B752	.005	.030	.101	.005	.005
Compass	CP	E170			.208	.107	
		E175			2.279	3.734	3.296
Delta	DL	A319	4.507	4.592	4.705	2.811	2.055
		A320	.195	.222	.219	.129	.011
		B712				4.471	3.493
		B737				.200	.082
		B738	.005	.005		.055	.019
		B739		.003			.003
		B752	3.008	2.918	2.910	2.926	3.014
		MD90					.003
FedEx	FM	A306	.696	.696	.697	.693	.521
		A310	.003				
Frontier Airlines	F9	A20N*					.567
		A319	3.260	2.052	.883	.488	.260
		A320		.211	1.011	.860	.647
		A321			.003		
		A32N*			.016	.600	
Horizon Air	QX	DH8D			1.579	1.995	.753
		E175				.466	2.647
Interjet	4O	A320	.586				
SkyWest Coml.	SC	CRJ9	2.748	2.633	2.593	1.975	.008
		E175			4.855	6.523	6.759
Southwest	WN	B38M				.003	.014
		B733	.003				
		B737	45.874	50.819	57.104	49.274	33.348
		B738	1.901	3.542	1.563	.079	.068
United	UA	A319	2.636	1.910	2.730	2.014	1.249
		A320	3.803	4.395	3.648	5.422	4.729
		B737	6.077	6.195	7.169	5.534	3.151
		B738	2.395	2.537	1.710	4.526	4.501
		B752	.326	.060		.003	.005
UPS	5X	A306		.071	.071	.060	
		B752	.567	.501	.505	.507	.419
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	.005
		B737	.997	.984	.877	.882	.696
Total			106.321	111.351	124.699	123.622	94.247

*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

Barry A. Rondinella
A.A.E./C.A.E.
Airport Director

Date: September 12, 2018

Time: 2:00 PM

Place: Airport Commission Room

ITEM DISCUSSED

A summary of the JWA airport statistics for the month of July 2018 was provided by Beatrice Siercke. Nikolas Gaskins presented an overview of the capacity allocation process. Attendees inquired about how airlines are selected to receive Supplemental Class A capacity and why one airline received less than the current year. Mr. Gaskins explained allocations are not based on noise and that other carriers requested more of their presumptive seats hence less supplemental capacity could be allocated.

A discussion of the Million Annual Passenger cap and its relation to noise occurred between Ms. Child and Mr. Gaskins. This was followed by a discussion between Ms. Martin and Mr. Gaskins concerning airspace authority, flight schools and general aviation operations that affect local residents. Mr. Gaskins discussed how the GANO regulates general aviation and provided contact information for the FAA Flight Standards District Office.

Mr. August requested a breakdown of the airlines' seat requests, and was directed to the Board Agenda Staff Report attachment on the Airport's website.

Mr. Macias and Ocampos voiced their concerns about arrival noise in the city of Tustin. Mr. Gaskins informed them operations may take place after curfew if the airline has obtained a curfew extension. The precision of the flight path due to Metroplex was also mentioned as a contributing factor.

Mr. Cook added that there have been several changes over recent years, such as the magnetic variance adjustment, changes to flight procedures, and the fact that planes have gotten quieter over the years in a way that permits them to meet the noise limits without performing the engine cutback procedure on departure.

Ms. Child stated that while Newport Beach has many rules to protect them, Tustin does not. Mr. Gaskins explained that the airport does have regulations which pertain to Tustin, such as the three noise monitors to the north, including the one at Columbus Tustin Middle School and curfew hours for arrivals.

Mr. Mosher inquired about how many other airports have regulated curfews, to which Mr. Gaskins responded Long Beach and San Diego, with a possibility of others on the East Coast. Burbank Airport's unsuccessful attempt to initiate a curfew was mentioned to emphasize how rare curfew regulations are and how difficult they can be to obtain. Mr. Mosher noted that Title 21 of the California Code requires an airport to issue quarterly reports by 75 days after the end of the quarter. He also suggested moving the date of quarterly meetings in order for the public to have more time reviewing the Quarterly Report which is presented in the meetings.

QUARTERLY NOISE MEETING ROSTER

SEPTEMBER 12, 2018

NAME	ORGANIZATION
Sally Peterson	Resident – Newport Beach
Diana Martin	Resident – Newport Beach
James Johnson	Resident – Tustin
Christine Child	Resident – Tustin
Joe August	Resident – Newport Beach
Jim Mosher	Resident – Newport Beach
Dave Cook	Resident – Newport Beach/ Aviation Committee
Jaime Macias	Resident – Tustin
Miguel Ocampo	Resident – Tustin
Nikolas Gaskins	John Wayne Airport
Anthony Cangey	John Wayne Airport
Bonnie Frisch	John Wayne Airport
Louie Ilustrisimo	John Wayne Airport
Beatrice Siercke	John Wayne Airport
Cristina Magaña	John Wayne Airport