

**JOHN WAYNE AIRPORT
ORANGE COUNTY**



NOISE ABATEMENT PROGRAM QUARTERLY REPORT

**For the period:
April 1, 2021 through June 30, 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 blue ink, appearing to read "Barry A. Rondinella".

**Barry A. Rondinella, A.A.E./C.A.E.
Airport Director
John Wayne Airport, Orange County**

INTRODUCTION

This is the 194th 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:

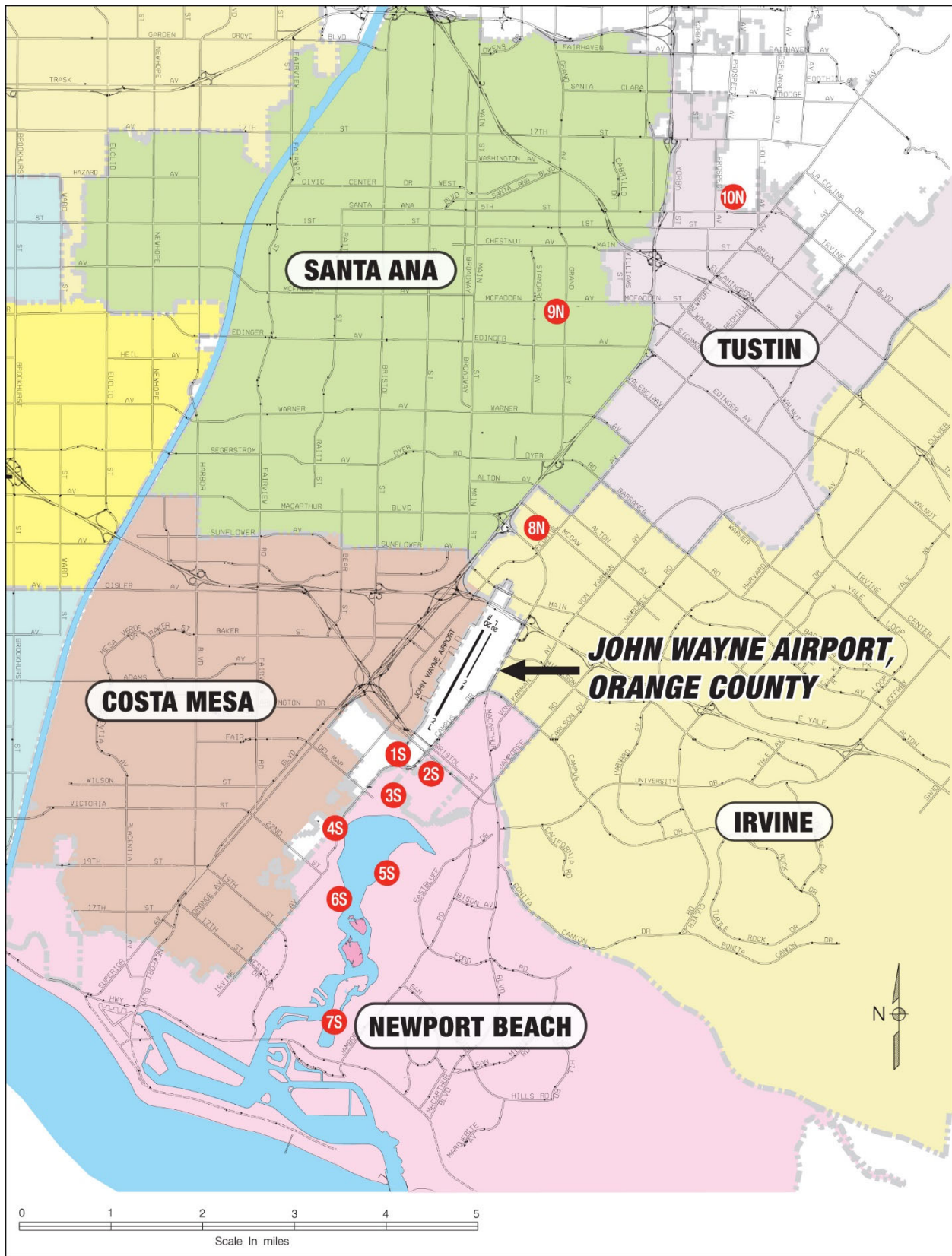
MONITOR STATIONS

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

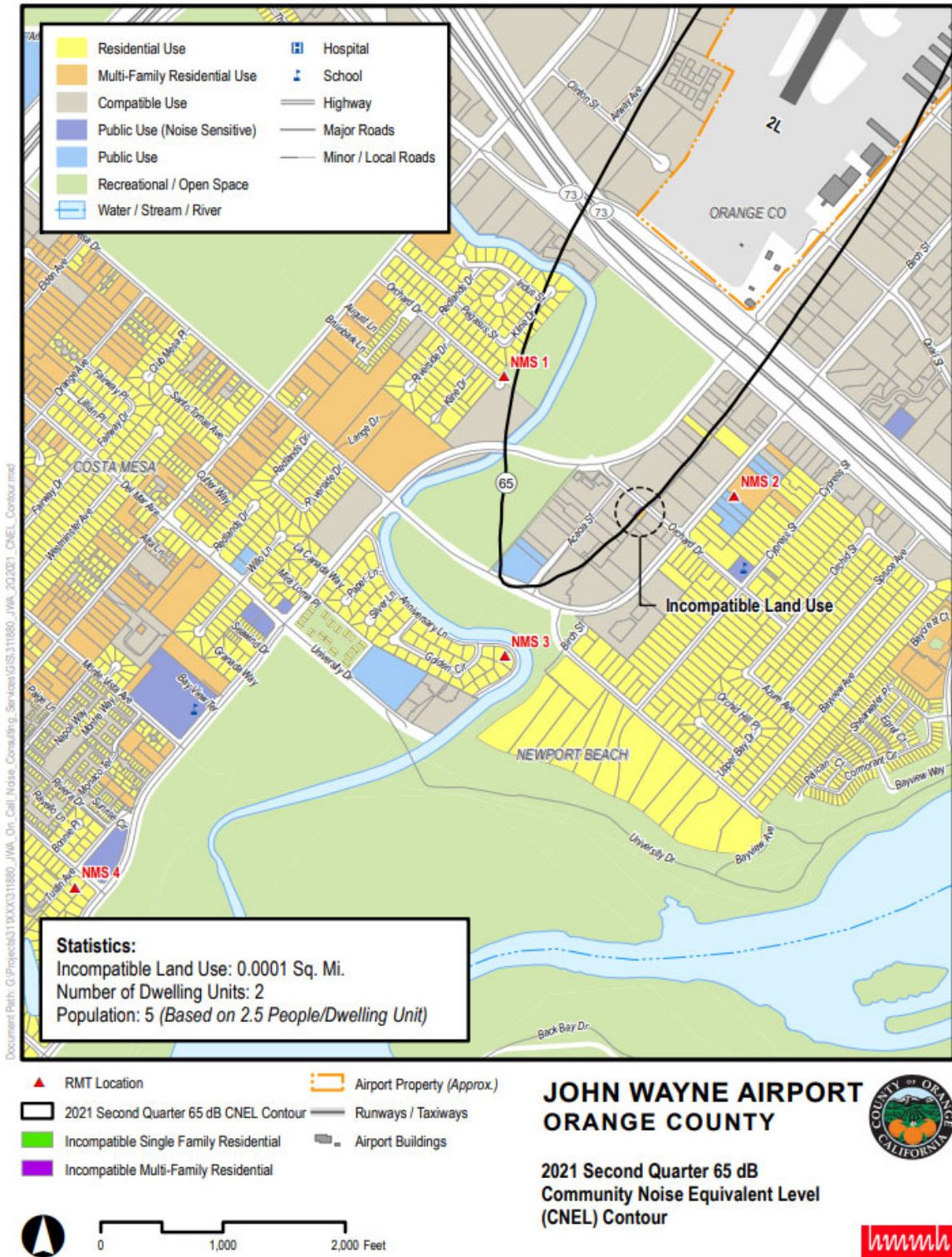
The map in Figure 1 shows the general location of each permanent remote monitor station.

Figure 2 shows the Airport's "Noise Impact Area" for the previous year (July 1, 2020 - June 30, 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
Noise Impact Area Map**



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
 April - June 2021

| Period | Air Carriers | | GA Jet (1) | Total Operations (2) | Average Daily Jet Operations |
|--------------------------------------|--------------|------|------------|----------------------|------------------------------|
| | Jet | Prop | | | |
| April | 5,822 | 0 | 3,555 | 26,798 | 313 |
| May | 6,112 | 0 | 3,839 | 27,591 | 321 |
| June | 6,924 | 0 | 4,175 | 29,153 | 370 |
| Second Quarter | 18,858 | 0 | 11,569 | 83,542 | 335 |
| Twelve Months 07/01/20 - 06/30/21 | 57,682 | 0 | 38,832 | 278,258 | 264 |

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.

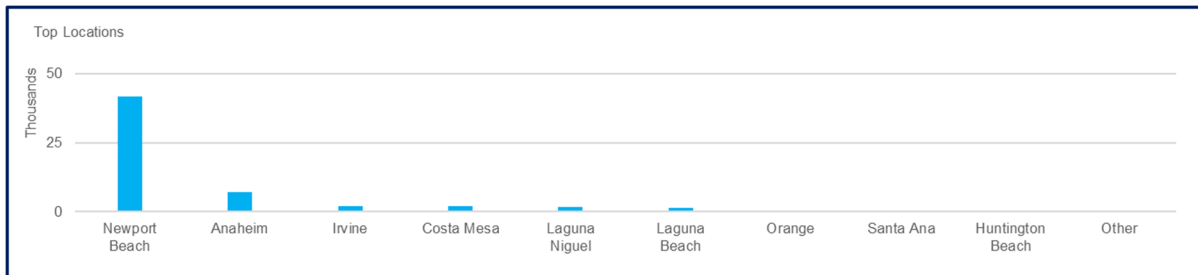
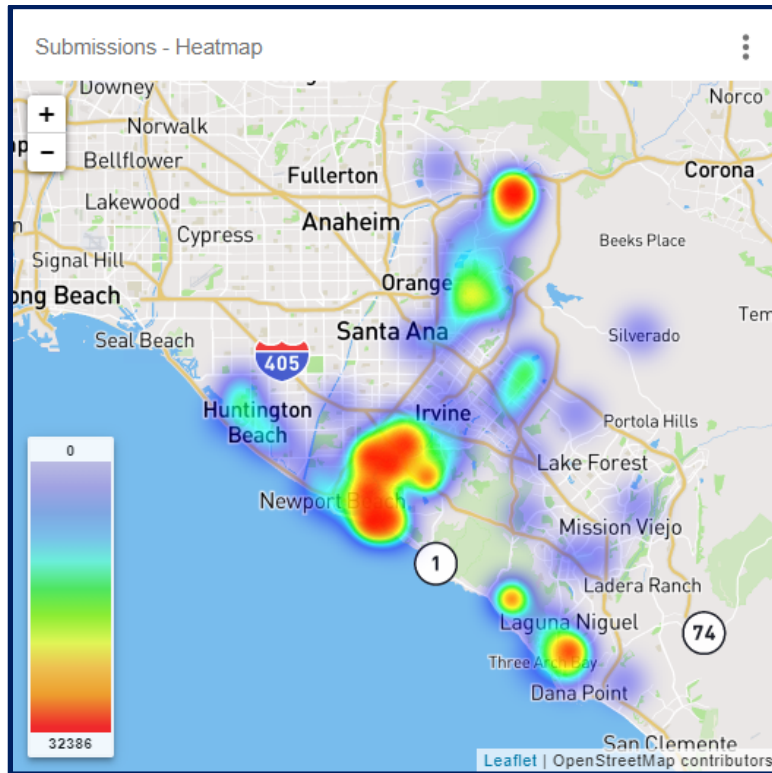
ACOUSTICAL INSULATION PROGRAM

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. Two dwelling units in Santa Ana Heights remain in the “Noise Impacted Area” (within 65 dB CNEL contour).

COMPLAINT TOTALS (April 1, 2021 - June 30, 2021)

The Airport's Access and Noise Office receives and investigates noise complaints from local citizens and all other sources. During the April 1, 2021 through June 30, 2021, the Office received 57,197 complaints from local citizens. This is a 141.3% increase from the 23,699 complaints received last quarter. It is a 200.8% increase from the 19,018 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:

- Newport Beach – 41,778 submissions from 50 different points of contact.
- Anaheim – 7,167 submissions from 17 different points of contact.
- Irvine – 1,938 submissions from 17 different points of contact.
- Costa Mesa – 1,919 submissions from 12 different points of contact.
- Laguna Niguel – 1,650 submissions from 4 different points of contact.
- Laguna Beach – 1,323 submissions from 2 different points of contact.
- Orange – 423 submissions from 8 different points of contact.
- Santa Ana – 393 submissions from 7 different points of contact.
- Huntington Beach – 310 submissions from 10 different points of contact.
- Other – 296 submissions from 17 different points of contact.
- 24% of submissions were from a complaint subscription service.

TABLE 2
LONG TERM MEASURED LEVELS
Aircraft CNEL from 07/01/20 through 06/30/21
Values in dB at Each Site

| Period | NMS Site | | | | | | | | | |
|-----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 1S | 2S | 3S | 4S | 5S | 6S | 7S | 8N | 9N | 10N |
| Jul 2020 | 63.3 | 63.0 | 62.1 | 55.8 | 54.7 | 56.0 | 51.4 | 64.2 | 40.4 | 52.2 |
| # Days | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 25 | 31 |
| Aug 2020 | 63.7 | 63.3 | 62.6 | 55.7 | 54.8 | 56.3 | 52.1 | 64.5 | 42.2 | 52.5 |
| # Days | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 22 | 31 |
| Sep 2020 | 63.7 | 63.3 | 62.8 | 55.1 | 54.2 | 55.6 | 51.2 | 64.0 | 39.4 | 51.9 |
| # Days | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 27 | 30 |
| Q-3 2020 | 63.6 | 63.2 | 62.5 | 55.5 | 54.6 | 56.0 | 51.6 | 64.2 | 40.7 | 52.2 |
| # Days | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 74 | 92 |
| Oct 2020 | 63.7 | 63.1 | 63.1 | 55.5 | 54.7 | 56.3 | 52.5 | 64.2 | 43.7 | 52.6 |
| # Days | 31 | 31 | 31 | 31 | 31 | 31 | 30 | 31 | 21 | 31 |
| Nov 2020 | 63.5 | 63.3 | 62.5 | 56.1 | 55.2 | 56.1 | 52.6 | 64.3 | 41.1 | 52.0 |
| # Days | 30 | 30 | 28 | 30 | 30 | 30 | 30 | 30 | 23 | 30 |
| Dec 2020 | 62.9 | 62.6 | 62.4 | 55.7 | 54.4 | 56.4 | 51.9 | 63.4 | 43.0 | 51.5 |
| # Days | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 29 | 27 | 31 |
| Q-4 2020 | 63.4 | 63.0 | 62.7 | 55.8 | 54.8 | 56.3 | 52.3 | 64.0 | 42.7 | 52.1 |
| # Days | 92 | 92 | 90 | 92 | 92 | 92 | 91 | 90 | 71 | 92 |
| 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 |
| Q-3 2020 thru Q-2 2021 | | | | | | | | | | |
| Total | 64.4 | 62.7 | 63.5 | 56.9 | 56.0 | 57.2 | 53.1 | 65.0 | 42.2 | 54.0 |
| # Days | 365 | 365 | 363 | 365 | 365 | 365 | 363 | 356 | 279 | 364 |
| Q-2 2020 thru Q-1 2021 (Previous 4 Quarters) | | | | | | | | | | |
| Total | 62.9 | 62.1 | 62.0 | 55.5 | 54.5 | 55.8 | 51.8 | 63.7 | 42.4 | 52.1 |
| # Days | 365 | 365 | 363 | 365 | 365 | 365 | 363 | 356 | 281 | 364 |
| Change from Previous 4 Quarters | | | | | | | | | | |
| | 1.5 | 0.6 | 1.5 | 1.4 | 1.5 | 1.4 | 1.3 | 1.3 | -0.2 | 1.9 |

TABLE 3
DAILY CNEL VALUES AT EACH MONITOR STATION
April 2021

| Date | NMS Site | | | | | | | | | |
|---------|----------|------|------|------|------|------|------|------|-------|------|
| | 1S | 2S | 3S | 4S | 5S | 6S | 7S | 8N | 9N | 10N |
| 1 | 64.4 | 60.8 | 62.8 | 54.4 | 54.0 | 54.1 | 49.5 | 65.2 | *#N/A | 52.3 |
| 2 | 66.7 | 63.0 | 65.3 | 59.6 | 57.5 | 58.8 | 54.3 | 67.1 | 28.0 | 57.0 |
| 3 | 65.2 | 61.3 | 63.7 | 56.5 | 55.8 | 56.7 | 51.5 | 65.3 | 40.7 | 54.4 |
| 4 | 65.9 | 61.9 | 64.6 | 58.1 | 57.3 | 57.6 | 54.0 | 66.8 | 41.2 | 56.1 |
| 5 | 66.9 | 62.8 | 65.8 | 59.7 | 58.9 | 59.5 | 55.9 | 67.0 | 35.9 | 57.3 |
| 6 | 65.9 | 62.2 | 64.8 | 58.6 | 57.9 | 58.6 | 55.3 | 66.0 | 40.4 | 55.9 |
| 7 | 65.6 | 62.2 | 64.7 | 58.6 | 57.5 | 58.1 | 54.7 | 65.8 | 47.5 | 55.4 |
| 8 | 66.2 | 62.7 | 65.1 | 59.1 | 58.2 | 59.0 | 55.5 | 67.1 | *#N/A | 56.2 |
| 9 | 66.4 | 63.2 | 64.9 | 59.5 | 58.6 | 59.2 | 55.6 | 67.0 | *#N/A | 56.5 |
| 10 | 65.2 | 62.0 | 64.1 | 58.0 | 56.9 | 58.0 | 54.4 | 66.0 | *#N/A | 55.6 |
| 11 | 67.1 | 63.3 | 66.0 | 59.9 | 58.4 | 59.6 | 56.3 | 67.6 | 38.5 | 57.4 |
| 12 | 66.3 | 62.5 | 65.3 | 59.3 | 58.1 | 58.8 | 54.8 | 66.8 | 30.3 | 56.5 |
| 13 | 64.4 | 61.2 | 63.6 | 58.6 | 57.1 | 57.9 | 54.4 | 65.5 | 45.2 | 55.3 |
| 14 | 65.4 | 61.9 | 64.0 | 59.3 | 57.3 | 57.6 | 55.0 | 65.8 | 40.9 | 56.0 |
| 15 | 66.2 | 63.0 | 65.0 | 58.7 | 58.4 | 58.0 | 55.7 | 66.1 | 40.3 | 56.8 |
| 16 | 66.3 | 62.9 | 65.3 | 59.1 | 58.4 | 58.6 | 55.7 | 66.7 | 34.3 | 56.0 |
| 17 | 65.0 | 61.6 | 63.5 | 57.8 | 57.0 | 57.2 | 52.4 | 65.1 | 34.7 | 55.2 |
| 18 | 62.8 | 59.1 | 63.1 | 54.3 | 53.8 | 57.5 | 46.4 | 64.1 | 45.5 | 52.5 |
| 19 | 65.4 | 62.0 | 62.4 | 57.0 | 56.6 | 56.1 | 52.5 | 66.3 | 32.7 | 55.2 |
| 20 | 65.0 | 61.4 | 63.7 | 59.0 | 56.7 | 58.2 | 53.6 | 65.0 | 29.4 | 55.6 |
| 21 | 65.4 | 62.0 | 64.3 | 58.8 | 57.5 | 57.9 | 55.3 | 65.6 | 35.9 | 55.7 |
| 22 | 65.9 | 62.8 | 64.8 | 58.8 | 58.3 | 58.3 | 55.6 | 65.9 | *#N/A | 56.3 |
| 23 | 66.4 | 62.9 | 65.1 | 59.1 | 57.8 | 58.8 | 55.6 | 66.5 | 36.8 | 56.3 |
| 24 | 64.6 | 61.5 | 63.3 | 57.5 | 57.0 | 56.7 | 53.6 | 65.3 | 27.8 | 55.3 |
| 25 | 66.1 | 62.8 | 64.9 | 58.8 | 58.3 | 58.6 | 55.6 | 67.2 | 33.0 | 56.6 |
| 26 | 65.6 | 62.6 | 64.2 | 58.4 | 58.4 | 58.6 | 56.0 | 66.3 | 44.9 | 56.5 |
| 27 | 65.0 | 61.6 | 63.5 | 57.4 | 57.3 | 57.3 | 54.6 | 65.1 | 42.1 | 54.5 |
| 28 | 65.1 | 61.9 | 64.1 | 57.1 | 56.9 | 57.1 | 53.7 | 64.2 | 44.9 | 53.2 |
| 29 | 66.5 | 63.2 | 65.6 | 57.5 | 57.2 | 57.9 | 52.8 | 65.0 | 31.4 | 53.7 |
| 30 | 65.7 | 62.3 | 64.5 | 56.9 | 56.1 | 56.8 | 52.9 | 65.4 | 44.2 | 55.0 |
| Days | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 25 | 30 |
| En. Avg | 65.7 | 62.2 | 64.5 | 58.4 | 57.4 | 58.0 | 54.5 | 66.0 | 41.1 | 55.7 |

#N/A indicates insufficient data.

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

TABLE 4
DAILY CNEL VALUES AT EACH MONITOR STATION
May 2021

| Date | NMS Site | | | | | | | | | |
|---------|----------|------|------|------|------|------|------|------|-------|------|
| | 1S | 2S | 3S | 4S | 5S | 6S | 7S | 8N | 9N | 10N |
| 1 | 64.6 | 60.9 | 63.3 | 57.7 | 55.4 | 56.4 | 52.5 | 64.9 | 28.9 | 55.3 |
| 2 | 66.0 | 62.4 | 64.5 | 59.0 | 57.1 | 58.3 | 55.2 | 66.8 | 40.4 | 56.2 |
| 3 | 65.8 | 62.7 | 64.7 | 58.5 | 58.0 | 58.0 | 55.6 | 65.8 | 46.2 | 55.7 |
| 4 | 65.0 | 61.6 | 64.1 | 56.9 | 56.7 | 57.3 | 52.9 | 65.4 | 45.0 | 54.9 |
| 5 | 65.0 | 61.9 | 64.3 | 57.8 | 56.5 | 56.7 | 53.0 | 65.3 | 37.9 | 55.6 |
| 6 | 66.2 | 62.7 | 65.1 | 59.0 | 57.7 | 58.6 | 54.8 | 66.6 | 34.3 | 56.5 |
| 7 | 66.6 | 63.3 | 65.6 | 59.1 | 58.2 | 59.0 | 54.2 | 67.3 | *#N/A | 56.8 |
| 8 | 64.9 | 61.2 | 63.2 | 58.2 | 56.6 | 56.9 | 54.0 | 65.2 | 41.3 | 54.4 |
| 9 | 66.1 | 62.6 | 64.8 | 59.0 | 57.9 | 58.8 | 53.9 | 67.5 | 29.0 | 57.3 |
| 10 | 66.6 | 62.5 | 65.2 | 59.8 | 58.4 | 59.6 | 55.5 | 67.3 | 33.7 | 56.4 |
| 11 | 65.3 | 62.4 | 64.6 | 60.5 | 57.2 | 57.5 | 52.8 | 66.1 | 39.4 | 55.5 |
| 12 | 65.5 | 62.6 | 65.1 | 58.6 | 57.7 | 58.6 | 54.5 | 65.2 | 42.4 | 55.4 |
| 13 | 66.8 | 63.6 | 65.7 | 58.7 | 58.2 | 59.0 | 54.0 | 66.6 | *#N/A | 56.5 |
| 14 | 66.6 | 63.2 | 65.5 | 59.4 | 58.6 | 59.8 | 55.5 | 67.2 | 37.3 | 56.9 |
| 15 | 65.0 | 61.4 | 63.3 | 57.9 | 57.0 | 57.8 | 54.3 | 65.3 | 44.4 | 54.8 |
| 16 | 67.2 | 63.6 | 66.0 | 60.3 | 59.1 | 59.9 | 56.2 | 67.7 | 38.0 | 57.3 |
| 17 | 66.5 | 63.1 | 64.9 | 58.4 | 57.9 | 58.9 | 55.2 | 67.1 | 47.2 | 56.9 |
| 18 | 66.2 | 62.6 | 65.1 | 58.6 | 57.9 | 58.3 | 55.2 | 65.8 | 45.2 | 55.1 |
| 19 | 66.4 | 62.7 | 64.9 | 59.0 | 58.0 | 59.1 | 55.1 | 66.3 | 38.7 | 56.3 |
| 20 | 67.4 | 63.5 | 66.2 | 60.6 | 58.7 | 60.8 | 56.7 | 68.3 | 45.1 | 57.7 |
| 21 | 66.9 | 63.6 | 65.5 | 59.7 | 58.7 | 59.8 | 56.4 | 67.2 | 38.9 | 57.0 |
| 22 | 65.4 | 61.7 | 63.9 | 58.0 | 56.9 | 58.0 | 55.0 | 65.4 | *#N/A | 55.1 |
| 23 | 66.7 | 63.3 | 65.5 | 58.8 | 58.3 | 59.1 | 55.3 | 67.5 | 42.0 | 57.0 |
| 24 | 66.7 | 63.2 | 65.6 | 57.8 | 57.5 | 58.6 | 54.8 | 66.3 | *#N/A | 55.0 |
| 25 | 65.9 | 62.3 | 64.7 | 58.0 | 56.8 | 58.2 | 54.4 | 65.9 | 34.5 | 55.2 |
| 26 | 66.5 | 62.6 | 65.1 | 59.4 | 57.2 | 58.6 | 54.8 | 66.5 | 32.2 | 56.6 |
| 27 | 67.2 | 63.9 | 66.1 | 59.9 | 58.6 | 60.0 | 56.0 | 67.7 | 34.9 | 57.5 |
| 28 | 67.4 | 63.8 | 66.3 | 59.9 | 58.7 | 60.2 | 56.3 | 68.4 | 43.6 | 57.9 |
| 29 | 65.6 | 61.6 | 64.6 | 58.4 | 56.7 | 58.1 | 52.6 | 65.5 | 40.8 | 55.8 |
| 30 | 65.5 | 62.1 | 64.5 | 58.5 | 57.1 | 58.1 | 53.7 | 67.1 | 36.4 | 57.2 |
| 31 | 67.3 | 63.6 | 66.5 | 59.7 | 58.1 | 59.8 | 54.7 | 67.9 | 44.0 | 57.2 |
| Days | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 27 | 31 |
| En. Avg | 66.2 | 62.7 | 65.1 | 59.0 | 57.7 | 58.8 | 54.8 | 66.7 | 41.7 | 56.3 |

#N/A indicates insufficient data.

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

TABLE 5
DAILY CNEL VALUES AT EACH MONITOR STATION
June 2021

| Date | NMS Site | | | | | | | | | |
|---------|----------|------|------|------|------|------|------|------|-------|------|
| | 1S | 2S | 3S | 4S | 5S | 6S | 7S | 8N | 9N | 10N |
| 1 | 66.6 | 62.9 | 65.2 | 58.0 | 57.0 | 58.3 | 53.1 | 66.6 | 35.7 | 55.5 |
| 2 | 66.0 | 62.6 | 64.8 | 57.6 | 56.7 | 58.0 | 52.5 | 66.5 | *#N/A | 55.6 |
| 3 | 66.6 | 63.2 | 65.6 | 59.4 | 57.9 | 59.2 | 54.2 | 66.7 | 33.3 | 56.5 |
| 4 | 67.0 | 63.4 | 66.4 | 59.8 | 58.9 | 60.2 | 55.7 | 66.8 | 41.7 | 57.2 |
| 5 | 65.8 | 62.3 | 64.5 | 57.5 | 56.1 | 56.9 | 51.7 | 65.6 | 39.2 | 55.4 |
| 6 | 67.1 | 63.5 | 66.0 | 60.7 | 58.9 | 60.3 | 56.3 | 68.3 | 53.4 | 58.0 |
| 7 | 67.5 | 63.6 | 66.3 | 60.9 | 59.0 | 60.5 | 57.5 | 68.3 | *#N/A | 58.6 |
| 8 | 66.1 | 62.4 | 64.7 | 59.0 | 58.1 | 58.8 | 56.0 | 66.6 | 40.5 | 56.8 |
| 9 | 66.3 | 63.3 | 65.2 | 59.0 | 58.8 | 59.1 | 56.1 | 67.1 | 41.1 | 57.1 |
| 10 | 67.2 | 63.9 | 65.8 | 59.4 | 58.7 | 59.7 | 55.7 | 67.4 | 34.3 | 56.9 |
| 11 | 67.4 | 63.9 | 66.0 | 59.7 | 59.0 | 59.9 | 55.7 | 68.2 | 42.6 | 57.6 |
| 12 | 66.0 | 62.5 | 65.0 | 58.3 | 56.8 | 58.1 | 53.5 | 66.5 | 27.4 | 55.7 |
| 13 | 67.3 | 64.0 | 66.1 | 58.7 | 57.9 | 59.2 | 54.4 | 68.1 | 42.2 | 57.6 |
| 14 | 67.6 | 64.1 | 66.8 | 59.6 | 59.0 | 60.3 | 55.8 | 66.9 | 35.7 | 56.1 |
| 15 | 66.9 | 63.0 | 65.6 | 57.3 | 57.1 | 58.0 | 54.2 | 66.8 | 48.1 | 55.7 |
| 16 | 67.3 | 63.5 | 65.7 | 59.6 | 58.1 | 59.9 | 55.2 | 67.7 | 35.9 | 57.2 |
| 17 | 67.4 | 63.9 | 66.3 | 59.6 | 58.5 | 59.9 | 54.9 | 68.0 | 45.1 | 57.3 |
| 18 | 67.5 | 64.0 | 66.3 | 59.5 | 58.3 | 59.6 | 55.3 | 67.9 | 49.0 | 58.4 |
| 19 | 66.1 | 62.9 | 65.0 | 58.0 | 57.7 | 58.8 | 53.3 | 66.9 | 47.4 | 56.2 |
| 20 | 67.4 | 63.9 | 66.0 | 58.7 | 57.8 | 59.4 | 55.0 | 69.0 | 44.9 | 58.1 |
| 21 | 68.1 | 64.7 | 67.1 | 60.7 | 60.2 | 61.2 | 56.3 | 68.0 | 39.9 | 57.7 |
| 22 | 66.8 | 63.8 | 66.0 | 58.6 | 59.0 | 59.7 | 55.2 | 67.6 | *#N/A | 57.3 |
| 23 | 67.1 | 63.8 | 66.4 | 59.6 | 59.2 | 60.3 | 56.3 | 64.5 | 42.7 | 57.3 |
| 24 | 67.8 | 64.6 | 66.6 | 59.3 | 59.7 | 60.6 | 56.3 | 68.3 | *#N/A | 57.4 |
| 25 | 68.0 | 64.7 | 66.9 | 60.1 | 59.7 | 60.8 | 57.1 | 67.6 | *#N/A | 58.0 |
| 26 | 66.5 | 62.8 | 65.3 | 57.8 | 57.0 | 58.6 | 54.8 | 66.8 | 42.5 | 56.5 |
| 27 | 67.2 | 63.6 | 66.5 | 59.6 | 58.4 | 60.4 | 55.1 | 68.2 | 38.4 | 57.8 |
| 28 | 67.6 | 64.1 | 66.6 | 59.6 | 59.0 | 60.2 | 55.1 | 68.5 | *#N/A | 57.9 |
| 29 | 67.7 | 64.0 | 66.7 | 60.0 | 58.2 | 59.8 | 55.2 | 67.6 | *#N/A | 57.7 |
| 30 | 68.0 | 64.4 | 66.8 | 59.6 | 58.7 | 60.7 | 55.1 | 68.2 | *#N/A | 57.3 |
| Days | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 22 | 30 |
| En. Avg | 67.1 | 63.6 | 66.0 | 59.3 | 58.4 | 59.7 | 55.3 | 67.5 | 44.6 | 57.2 |

#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 | April – June 2021

| Carrier | AC Type | # Deps | | NMS Site | | | | | | | | | |
|----------------------|---------|--------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------|-------------|-------------|
| | | | | 1S | 2S | 3S | 4S | 5S | 6S | 7S | 8N | 9N | 10N |
| Alaska Air | A320 | 644 | Average Count | 95.1 (637) | 91.9 (621) | 93.5 (626) | 87.4 (630) | 85.3 (627) | 86.7 (587) | 83.7 (607) | 87.2 (1) | #N/A (0) | #N/A (0) |
| | B737 | 5 | Average Count | 94.0 (5) | 90.5 (5) | 93.0 (5) | 86.5 (4) | 87.4 (5) | 87.7 (4) | 83.9 (5) | #N/A (0) | #N/A (0) | #N/A (0) |
| | B738 | 43 | Average Count | 96.4 (42) | 92.8 (42) | 94.5 (43) | 88.5 (42) | 88.5 (42) | 89.5 (39) | 85.7 (42) | #N/A (0) | #N/A (0) | #N/A (0) |
| Allegiant | A319 | 164 | Average Count | 92.5 (158) | 88.8 (157) | 91.7 (159) | 86.9 (156) | 85.1 (155) | 86.1 (141) | 80.5 (123) | 85.6 (1) | #N/A (0) | #N/A (0) |
| | A320 | 54 | Average Count | 94.1 (54) | 90.5 (54) | 92.5 (54) | 87.7 (54) | 86.2 (52) | 87.1 (49) | 82.4 (54) | #N/A (0) | #N/A (0) | #N/A (0) |
| American | A21N | 29 | Average Count | 89.5 (29) | 86.6 (29) | 88.3 (29) | 82.0 (26) | 80.5 (25) | 81.0 (25) | 78.3 (1) | #N/A (0) | #N/A (0) | #N/A (0) |
| | A319 | 70 | Average Count | 93.8 (67) | 90.7 (70) | 92.5 (69) | 86.7 (68) | 85.3 (68) | 85.6 (64) | 81.1 (54) | #N/A (0) | #N/A (0) | #N/A (0) |
| | A320 | 58 | Average Count | 95.1 (56) | 91.9 (56) | 93.8 (54) | 86.8 (55) | 85.1 (53) | 85.4 (50) | 81.6 (42) | #N/A (0) | #N/A (0) | #N/A (0) |
| | A321 | 129 | Average Count | 98.6 (126) | 95.5 (127) | 97.5 (127) | 89.9 (123) | 88.1 (123) | 88.0 (113) | 83.5 (118) | #N/A (0) | #N/A (0) | #N/A (0) |
| | B38M | 2 | Average Count | 91.6 (2) | 88.3 (2) | 90.7 (2) | 84.2 (2) | 84.4 (2) | 85.1 (2) | 83.2 (1) | #N/A (0) | #N/A (0) | #N/A (0) |
| | B738 | 1019 | Average Count | 98.5 (994) | 94.9 (962) | 97.1 (981) | 90.2 (979) | 89.7 (965) | 90.4 (891) | 86.7 (939) | 96.3 (5) | 88.6 (7) | 81.0 (4) |
| Delta | A220 | 459 | Average Count | 88.1 (454) | 85.4 (444) | 87.1 (448) | 80.8 (403) | 79.3 (251) | 80.1 (307) | 79.7 (17) | #N/A (0) | 80.1 (1) | #N/A (0) |
| | A319 | 65 | Average Count | 96.2 (63) | 92.7 (63) | 95.7 (63) | 89.3 (63) | 87.6 (62) | 87.9 (57) | 82.8 (59) | 95.0 (1) | 87.7 (1) | #N/A (0) |
| | B752 | 150 | Average Count | 96.4 (142) | 93.1 (139) | 96.0 (141) | 89.0 (143) | 87.8 (144) | 88.3 (132) | 83.5 (136) | 94.9 (4) | 85.5 (3) | 81.1 (1) |
| FedEx | A306 | 64 | Average Count | 96.7 (64) | 93.9 (64) | 94.4 (63) | 89.1 (64) | 88.4 (64) | 89.7 (61) | 85.7 (63) | #N/A (0) | #N/A (0) | #N/A (0) |
| Frontier Airlines | A20N | 171 | Average Count | 88.2 (168) | 85.3 (167) | 87.6 (166) | 81.9 (152) | 79.8 (109) | 82.1 (149) | 79.0 (44) | 81.1 (1) | #N/A (0) | #N/A (0) |
| | A319 | 22 | Average Count | 94.3 (22) | 91.0 (22) | 92.8 (21) | 87.4 (22) | 86.0 (21) | 87.7 (21) | 84.2 (21) | #N/A (0) | #N/A (0) | #N/A (0) |
| | A320 | 36 | Average Count | 94.7 (36) | 91.6 (34) | 92.3 (35) | 86.6 (36) | 84.9 (36) | 86.9 (34) | 83.8 (35) | #N/A (0) | #N/A (0) | #N/A (0) |
| Horizon Air | E175 | 526 | Average Count | 92.6 (521) | 89.1 (508) | 90.3 (503) | 85.6 (514) | 84.8 (518) | 86.9 (484) | 83.4 (489) | #N/A (0) | #N/A (0) | #N/A (0) |
| Southwest | B38M | 49 | Average Count | 90.0 (47) | 86.5 (45) | 88.3 (48) | 80.9 (44) | 81.7 (40) | 83.7 (46) | 80.1 (27) | #N/A (0) | #N/A (0) | #N/A (0) |
| | B737 | 1203 | Average Count | 93.0 (1184) | 89.7 (1176) | 90.9 (1156) | 85.6 (1174) | 85.5 (1167) | 86.5 (1076) | 83.2 (1099) | 90.8 (5) | #N/A (0) | #N/A (0) |
| | B738 | 416 | Average Count | 93.0 (410) | 89.8 (404) | 90.1 (399) | 84.6 (408) | 84.9 (412) | 85.8 (381) | 82.8 (379) | #N/A (0) | #N/A (0) | #N/A (0) |
| Spirit | A20N | 64 | Average Count | 88.1 (64) | 85.1 (61) | 87.9 (60) | 82.4 (62) | 80.7 (50) | 82.1 (59) | 78.8 (23) | #N/A (0) | #N/A (0) | #N/A (0) |
| | A320 | 41 | Average Count | 91.5 (41) | 88.8 (41) | 90.0 (39) | 85.1 (39) | 83.4 (38) | 84.9 (37) | 81.0 (27) | #N/A (0) | #N/A (0) | #N/A (0) |
| Sun Country Airlines | B737 | 26 | Average Count | 95.6 (25) | 92.1 (26) | 95.1 (26) | 89.9 (25) | 89.4 (24) | 89.8 (25) | 84.7 (26) | #N/A (0) | #N/A (0) | #N/A (0) |
| United | A319 | 146 | Average Count | 94.5 (144) | 90.8 (137) | 93.3 (139) | 86.9 (142) | 85.6 (139) | 86.6 (124) | 82.2 (128) | #N/A (0) | #N/A (0) | #N/A (0) |
| | A320 | 49 | Average Count | 95.3 (48) | 92.0 (46) | 94.0 (48) | 86.9 (48) | 85.8 (45) | 86.5 (43) | 82.3 (47) | 91.8 (1) | #N/A (0) | #N/A (0) |
| | B737 | 201 | Average Count | 96.7 (198) | 92.6 (193) | 96.6 (191) | 90.6 (193) | 90.3 (195) | 90.8 (175) | 86.0 (188) | 95.5 (1) | 88.0 (2) | 82.1 (2) |
| | B738 | 217 | Average Count | 98.8 (210) | 94.8 (202) | 98.2 (211) | 90.2 (208) | 89.9 (206) | 90.3 (184) | 86.7 (200) | 93.5 (2) | 89.2 (2) | 81.2 (1) |
| UPS | B752 | 51 | Average Count | 95.0 (50) | 92.3 (50) | 93.4 (51) | 87.1 (51) | 86.7 (51) | 87.6 (48) | 82.3 (49) | #N/A (0) | #N/A (0) | #N/A (0) |

TABLE 7
MEASURED AVERAGE SINGLE EVENT NOISE EXPOSURE LEVELS
Commercial Class E
April - June 2021

| Carrier | AC Type | # Deps | | NMS Site | | | | | | | | | |
|---------------|---------|--------|------------------|----------------|---------------|---------------|----------------|----------------|---------------|---------------|-------------|-------------|-------------|
| | | | | 1S | 2S | 3S | 4S | 5S | 6S | 7S | 8N | 9N | 10N |
| SkyWest Coml. | E175 | 515 | Average Count | 90.7 (508) | 87.6 (501) | 89.6 (498) | 85.4 (506) | 84.4 (499) | 85.9 (463) | 82.7 (475) | 87.4 (2) | #N/A (0) | #N/A (0) |
| Southwest | B38M | 85 | Average Count | 88.6 (83) | 85.5 (79) | 87.3 (80) | 81.1 (69) | 81.4 (73) | 83.4 (75) | 79.6 (49) | #N/A (0) | #N/A (0) | #N/A (0) |
| | B737 | 1025 | Average Count | 91.6 (1014) | 88.6 (997) | 89.8 (990) | 85.1 (1002) | 84.7 (1002) | 85.7 (941) | 82.2 (963) | 92.4 (4) | #N/A (0) | 81.7 (2) |
| | B738 | 743 | Average Count | 91.8 (728) | 88.8 (705) | 89.4 (717) | 84.5 (727) | 84.6 (726) | 85.4 (652) | 82.6 (707) | 89.9 (2) | #N/A (0) | #N/A (0) |

TABLE 8
MEASURED AVERAGE SINGLE EVENT NOISE EXPOSURE LEVELS
Commuter
April - June 2021

| Carrier | AC Type | # Deps | | NMS Site | | | | | | | | | |
|--------------------------|---------|--------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|-------------|-------------|-------------|
| | | | | 1S | 2S | 3S | 4S | 5S | 6S | 7S | 8N | 9N | 10N |
| Delux Public Charters | E135 | 507 | Average Count | 85.3 (499) | 82.7 (488) | 86.1 (488) | 80.1 (389) | 78.6 (100) | 80.0 (323) | 79.5 (1) | #N/A (0) | #N/A (0) | #N/A (0) |
| | E145 | 101 | Average Count | 85.6 (98) | 83.2 (94) | 86.4 (99) | 79.7 (74) | 78.5 (18) | 79.8 (67) | #N/A (0) | 82.9 (1) | #N/A (0) | #N/A (0) |
| SkyWest | CRJ7 | 55 | Average Count | 87.7 (53) | 84.6 (50) | 87.2 (54) | 80.4 (30) | 80.8 (40) | 82.2 (52) | 80.3 (45) | #N/A (0) | #N/A (0) | #N/A (0) |
| | E175 | 36 | Average Count | 90.5 (36) | 87.4 (35) | 89.2 (34) | 85.6 (33) | 84.3 (34) | 85.8 (29) | 83.2 (33) | #N/A (0) | #N/A (0) | #N/A (0) |

TABLE 8-GA
MEASURED AVERAGE SINGLE EVENT NOISE EXPOSURE LEVELS
General Aviation
April - June 2021

| Carrier | AC Type | # Deps | | NMS Site | | | | | | | | | |
|------------------|---------|--------|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|-------------|-------------|
| | | | | 1S | 2S | 3S | 4S | 5S | 6S | 7S | 8N | 9N | 10N |
| General Aviation | Jet | 5509 | Average Count | 88.3 (5258) | 85.3 (4514) | 89.3 (5094) | 83.0 (3207) | 82.4 (2380) | 83.7 (3193) | 81.7 (1180) | 85.3 (22) | 81.6 (8) | 79.5 (2) |

TABLE 9
AIR CARRIER OPERATIONAL HISTORY

| Carrier | AC Type | Year | | | | | |
|----------------------|---------|-------|--------|--------|--------|--------|--------|
| | | 2017 | 2018 | 2019 | 2020 | 2021 | |
| Alaska Air | AS | A319 | | 64 | 244 | 314 | |
| | | A320 | | 262 | 3,403 | 1,733 | 2,337 |
| | | B734 | 24 | | | | |
| | | B737 | 1,233 | 384 | 160 | 14 | 10 |
| | | B738 | 6,420 | 8,260 | 5,247 | 767 | 110 |
| Allegiant | G4 | A319 | | | | | 482 |
| | | A320 | | | | | 162 |
| American | AA | A21N | | | 2 | 2 | 64 |
| | | A319 | 332 | 722 | 432 | 474 | 204 |
| | | A320 | 266 | 78 | 634 | 488 | 337 |
| | | A321 | 56 | 4 | 214 | 571 | 502 |
| | | B38M | | | | | 4 |
| | | B738 | 11,556 | 11,457 | 10,972 | 5,201 | 3,195 |
| | | B752 | 4 | 4 | 36 | | |
| Compass | CP | E170 | 78 | | | | |
| | | E175 | 2,726 | 3,188 | 3,150 | 656 | |
| Delta | DL | A220 | | | 851 | 1,954 | 1,673 |
| | | A223 | | | | | 4 |
| | | A319 | 2,053 | 1,979 | 1,987 | 828 | 293 |
| | | A320 | 94 | 12 | 11 | 8 | 1 |
| | | B712 | 3,267 | 3,379 | 2,495 | | |
| | | B737 | 146 | 188 | 8 | 24 | |
| | | B738 | 40 | 18 | 40 | 2 | |
| | | B739 | | 2 | | | |
| | | B752 | 2,137 | 2,889 | 2,889 | 1,065 | 583 |
| | MD90 | | 2 | | | | |
| FedEx | FM | A306 | 506 | 508 | 510 | 512 | 248 |
| Frontier Airlines | F9 | A20N* | | 600 | 900 | 550 | 511 |
| | | A319 | 356 | 190 | 100 | 2 | 80 |
| | | A320 | 628 | 654 | 428 | 392 | 145 |
| | | A32N* | 438 | | | | |
| Horizon Air | QX | DH8D | 1,456 | 728 | 12 | | |
| | | E175 | 339 | 2,716 | 4,257 | 2,986 | 1,807 |
| SkyWest Coml. | SC | CRJ9 | 1,440 | 6 | | 2 | |
| | | E175 | 4,761 | 6,960 | 7,686 | 3,535 | 1,814 |
| Southwest | WN | B38M | 2 | 14 | 10 | | 265 |
| | | B737 | 35,971 | 32,380 | 29,360 | 14,268 | 7,401 |
| | | B738 | 58 | 64 | 134 | 3,780 | 5,315 |
| Spirit | NK | A20N* | | | | 180 | 413 |
| | | A320 | | | | 19 | 161 |
| Sun Country Airlines | SY | B737 | | | | | 52 |
| United | UA | A319 | 1,470 | 999 | 1,216 | 590 | 453 |
| | | A320 | 3,957 | 3,927 | 3,151 | 1,227 | 306 |
| | | B737 | 4,044 | 2,987 | 2,816 | 999 | 584 |
| | | B738 | 3,302 | 5,154 | 5,627 | 2,645 | 912 |
| | | B752 | 2 | 4 | | | |
| UPS | 5X | A306 | 45 | 22 | 12 | 18 | |
| | | B752 | 369 | 394 | 404 | 404 | 200 |
| WestJet | WS | B736 | 30 | 10 | 58 | 34 | |
| | | B737 | 644 | 666 | 618 | 126 | |
| Total | | | 90,250 | 91,875 | 90,074 | 46,370 | 30,628 |

*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 | 924 |
| A21N | | | 2 | 2 | 64 |
| A220 | | | 851 | 1,954 | 1,673 |
| A223 | | | | | 4 |
| A306 | 551 | 530 | 522 | 530 | 248 |
| A319 | 4,211 | 3,954 | 3,979 | 2,208 | 1,512 |
| A320 | 4,945 | 4,933 | 7,627 | 3,867 | 3,449 |
| A321 | 56 | 4 | 214 | 571 | 502 |
| A32N* | 438 | | | | |
| B38M | 2 | 14 | 10 | | 269 |
| B712 | 3,267 | 3,379 | 2,495 | | |
| B734 | 24 | | | | |
| B736 | 30 | 10 | 58 | 34 | |
| B737 | 42,038 | 36,605 | 32,962 | 15,431 | 8,047 |
| B738 | 21,376 | 24,953 | 22,020 | 12,395 | 9,532 |
| B739 | | 2 | | | |
| B752 | 2,512 | 3,291 | 3,329 | 1,469 | 783 |
| CRJ9 | 1,440 | 6 | | 2 | |
| DH8D | 1,456 | 728 | 12 | | |
| E170 | 78 | | | | |
| E175 | 7,826 | 12,864 | 15,093 | 7,177 | 3,621 |
| MD90 | | 2 | | | |
| Total | 90,250 | 91,875 | 90,074 | 46,370 | 30,628 |

*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 | AC Type | Year | | | | |
|----------------------|---------|---------|---------|---------|---------|--------|--------|
| | | | 2017 | 2018 | 2019 | 2020 | 2021 |
| Alaska Air | AS | A319 | | .088 | .334 | .432 | |
| | | A320 | | .359 | 4.660 | 2.363 | 3.200 |
| | | B734 | .033 | | | | |
| | | B737 | 1.693 | .526 | .219 | .022 | .014 |
| | | B738 | 8.789 | 11.315 | 7.189 | 1.046 | .151 |
| Allegiant | G4 | A319 | | | | | .660 |
| | | A320 | | | | | .222 |
| American | AA | A21N | | | .003 | .003 | .088 |
| | | A319 | .455 | .989 | .592 | .648 | .274 |
| | | A320 | .364 | .107 | .868 | .664 | .471 |
| | | A321 | .077 | .005 | .293 | .779 | .685 |
| | | B38M | | | | | .005 |
| | | B738 | 15.827 | 15.696 | 15.030 | 7.107 | 4.375 |
| | | B752 | .005 | .005 | .049 | | |
| Compass | CP | E170 | .107 | | | | |
| | | E175 | 3.734 | 4.367 | 4.315 | .896 | |
| Delta | DL | A220 | | | 1.164 | 2.667 | 2.293 |
| | | A223 | | | | | .005 |
| | | A319 | 2.811 | 2.712 | 2.723 | 1.131 | .403 |
| | | A320 | .129 | .016 | .014 | .014 | |
| | | B712 | 4.471 | 4.627 | 3.419 | | |
| | | B737 | .200 | .258 | .011 | .033 | |
| | | B738 | .055 | .025 | .055 | .003 | |
| | | B739 | | .003 | | | |
| | | B752 | 2.926 | 3.959 | 3.956 | 1.454 | .797 |
| | | MD90 | | .003 | | | |
| FedEx | FM | A306 | .693 | .696 | .699 | .699 | .340 |
| Frontier Airlines | F9 | A20N* | | .822 | 1.233 | .751 | .699 |
| | | A319 | .488 | .260 | .137 | .003 | .110 |
| | | A320 | .860 | .896 | .586 | .536 | .200 |
| | | A32N* | .600 | | | | |
| Horizon Air | QX | DH8D | 1.995 | .997 | .016 | | |
| | | E175 | .466 | 3.721 | 5.830 | 4.079 | 2.474 |
| SkyWest Coml. | SC | CRJ9 | 1.975 | .008 | | .003 | |
| | | E175 | 6.523 | 9.534 | 10.529 | 4.833 | 2.485 |
| Southwest | WN | B38M | .003 | .019 | .014 | | .367 |
| | | B737 | 49.274 | 44.351 | 40.216 | 19.497 | 10.134 |
| | | B738 | .079 | .088 | .184 | 5.161 | 7.279 |
| Spirit | NK | A20N* | | | | .246 | .570 |
| | | A320 | | | | .025 | .216 |
| Sun Country Airlines | SY | B737 | | | | | .071 |
| United | UA | A319 | 2.014 | 1.373 | 1.666 | .806 | .622 |
| | | A320 | 5.422 | 5.375 | 4.315 | 1.675 | .419 |
| | | B737 | 5.534 | 4.093 | 3.855 | 1.366 | .800 |
| | | B738 | 4.526 | 7.058 | 7.712 | 3.612 | 1.247 |
| | | B752 | .003 | .005 | | | |
| UPS | 5X | A306 | .060 | .030 | .016 | .025 | |
| | | B752 | .507 | .540 | .553 | .552 | .274 |
| WestJet | WS | B736 | .041 | .014 | .079 | .046 | |
| | | B737 | .882 | .912 | .847 | .172 | |
| Total | | | 123.622 | 125.852 | 123.384 | 63.347 | 41.951 |

*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 |
| A310 | Airbus | 310-200 |
| 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 |

QUARTERLY NOISE MEETING

Date: June 22, 2021

Time: 2:00 PM

Place: Airport Commission Room/ Virtual Teleconference

ITEMS DISCUSSED

Nikolas Gaskins provided an update regarding the increase in passenger levels at JWA. Mr. Gaskins mentioned that in recent weeks, the passenger levels are nearing pre-pandemic levels (65%-70% of 2019 levels). Mr. Gaskins also provided a summary of the preliminary JWA airport statistics for May 2021.

Mr. Gaskins presented an update on commercial airline service. He stated there continues to be an increase in demand for leisure destinations at JWA as summer approaches. Mr. Gaskins added that overall business travel is down at JWA, but business travel demand could increase as pandemic-related restrictions are lifted. Mr. Gaskins discussed that Allegiant Air, Spirit Airlines, and Sun Country Airlines have all begun inaugural new entrant service in the past several months. Mr. Gaskins also added that American Airlines would be adding service to New York (JFK) on July 2nd and United Airlines began service to Honolulu (HNL) on May 6th.

Mr. Gaskins advised that the Access & Noise Office will begin working through the capacity allocation for Plan Year 2022, starting in August, and expect to send the Airport's recommendations to the Board of Supervisors in November. He also mentioned the Airport's ability to accept a new entrant for Plan Year 2022 will be dependent on capacity requests from the incumbent carriers.

Mr. Gaskins provided information highlighting the Access & Noise Office plans to consolidate and integrate ANOMS, Viewpoint, WebTrak, Detailed Noise Reports, and the ten Noise Monitoring Stations (NMS) into one contract. The contract will be sent to the Board of Supervisors for action in July.

David Asher, a resident along the approach path of JWA, asked if it was true that aircraft arriving into JWA had to be higher than a minimum of 1,000 ft. according to FAA regulations. Mr. Gaskins clarified that although aircraft have to fly above a minimum of 1,000 ft. over congested areas, this does not apply to aircraft that are taking off or landing.

Kellie Cookson, a resident of East Orange, discussed her issues with the amount of aircraft noise and the frequency of aircraft since before Covid-19. She asked if the arrival aircraft were abiding to the elevation limitations and if the curfew regulations were being enforced at JWA. Mr. Gaskins explained that the FAA has regulatory control of altitudes & flight paths, and the concentration of flights is a result of the FAA SoCal Metroplex. Mr. Gaskins reassured that JWA enforces the Settlement Agreement and curfew regulations.

Newport Beach Resident, Dennis Bress, had questions related to the Class E service, specifically, if the airlines are held accountable for exceeding the Class E Single Event Noise limits at JWA. Mr. Gaskins explained the Airport enforces what is outlined in the Access Plan and Settlement Agreement, and no commercial airline has exceeded the noise limits since 2004.

QUARTERLY NOISE MEETING

Mr. Bress also expressed concerns regarding as what he described as the high rate of velocity of some general aviation departures, and if the Airport could provide a report that includes the velocity of each departure at JWA. Mr. Gaskins explained the Airport cannot enforce aircraft velocity limits.

Newport Beach resident, Dr. Jim Mosher, asked how the passenger information in the JWA monthly Statistics Report is calculated. Mr. Gaskins stated the Statistics Report reflects both commercial and commuter carrier passengers, and not general aviation or military. Dr. Mosher also requested that the Quarterly Noise Report be published in a more timely fashion. Mr. Gaskins responded by stating that once our office is fully staffed, the Airport should be able to publish the Quarterly Report two weeks before the Quarterly Noise Meeting. Dr. Mosher also inquired if the CNEL data from the Quarterly Noise Report could be posted on a daily basis. Mr. Gaskins emphasized that the Noise Office has to go through the noise data daily to analyze events, which requires a delay in publishing reports and data. Lastly, Dr. Mosher expressed his concern with flights that operate under the 65 dB threshold that are not included in the CNEL data, thus making the CNEL data inaccurate. Mr. Gaskins responded by stating that operations that are under the 65 dB threshold do not fall under the Title 21 guidelines, and that the information is accurate under the Title 21 requirements.

Michael Venti, a resident of the North Tustin area, had concerns with what he described as an annoying noise that is coming from the Airbus A220 aircraft's engines. Mr. Gaskins stated the Airport is aware of the distinct noise from the Airbus A220, and that Airbus is aware of the issue and is working with the engine manufacture to identify a solution. Justin Cook, from HMMH, added that the tonal frequencies of the vortex generator is currently being retrofitted to mitigate the issue. Mr. Venti also suggested for a bank angle study to be conducted on the approach path at JWA to disperse the aircraft noise to other areas of the community. Mr. Venti stated that he works for NASA and can provide the Noise Office with new research papers from studies that NASA, Boeing, and Airbus are conducting. Mr. Gaskins said he could give Mr. Venti the information to contact Mel Beale, Airport Working Group President. Lastly, Mr. Venti asked if the monetary penalties from curfew violations go back to the community. Mr. Gaskins informed Mr. Venti that the monetary penalties from curfew violations are paid to the County, but does not know where the monies go from there.

Patricia Maas, a resident of East Orange, echoed the same concerns with the amount of aircraft noise and the frequency of aircraft on the approach path over the past several years. Ms. Mass also asked if the FAA have a contact to reach since the Airport does not have control of the flight paths. Mr. Gaskins responded by stating the FAA has recently created a noise portal on their website to address community concerns with aircraft noise, but not sure how community concerns are addressed.

Matt, a resident of the City of Orange, had concerns that the frequency of flights on the arrival path have increased, and that the noise is louder than before Covid started. Mr. Gaskins explained that the frequency of aircraft operations at JWA in 2019 was at its highest level on record. Mr. Gaskins added that there was a drastic decrease of operations in 2020 due to Covid, however, within the past several months there has been significant month-to-month increases in operations and these factors could contribute to the perception of increased aircraft noise.

QUARTERLY NOISE MEETING

Laurie Sherwood, a resident of North Tustin, expressed that the aircraft noise is louder since Metroplex was implemented and increasingly louder within the past year. Ms. Sherwood asked if there was a way to get the daily noise readings from NMS 10N and what are the noise limits. Mr. Gaskins replied by referring Ms. Sherwood to the Daily Noise Reports available on the JWA website. Mr. Gaskins explained that there are no noise limits on the approach path for commercial aircraft, but General Aviation has a nighttime noise limit of 86.9 dB at all three NMS on the approach path. Ms. Sherwood inquired if anybody from the City of Tustin is involved with the aircraft noise concerns with the Airport. Mr. Gaskins informed Ms. Sherwood that complaint information is sent to the City of Tustin at their request on a quarterly basis, and the information is then presented to their City Council.

QUARTERLY NOISE MEETING ROSTER

June 22, 2021

| <u>NAME</u> | <u>ORGANIZATION</u> |
|--------------------|---------------------------------|
| Joe August | Resident – Newport Beach |
| Dennis Bress | Resident – Newport Beach |
| Jim Mosher | Resident - Newport Beach |
| Kellie Cookson | Resident – East Orange / Tustin |
| Louisa Alvarez | Unknown |
| Lisa Champion | Unknown |
| Michael Venti | Resident – North Tustin |
| Robert Vusich | Unknown |
| Tracy Ettinger | Unknown |
| Patricia Maas | Resident - East Orange / Tustin |
| David Asher | Resident – Approach Path |
| Laurie Sherwood | Resident – North Tustin |
| Justin Cook | HMMH |
| Anthony Cangey | John Wayne Airport |
| Beatrice Siercke | John Wayne Airport |
| Cristina Magaña | John Wayne Airport |
| Nikolas Gaskins | John Wayne Airport |
| Call-in Line_2 | Unknown |
| Call-in Line_3 | Unknown |
| Call-in Line_4 | Unknown |
| Call-in Line_5 | Unknown |
| Call-in Line_6 | Unknown |
| Call-in Line_7 | Unknown |
| Call-in Line_8 | Unknown |

QUARTERLY NOISE MEETING ROSTER

June 22, 2021

| <u>NAME</u> | <u>ORGANIZATION</u> |
|------------------------|----------------------------|
| Call-in Line_9 | Unknown |
| Call-in Line_10 | Unknown |
| Call-in Line_11 | Unknown |
| Call-in Line_12 | Unknown |
| Call-in Line_13 (Matt) | Resident – Orange |
| Call-in Line_14 | Unknown |
| Call-in Line_15 | Unknown |
| Call-in Line_16 | Unknown |

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):
0.0001 Sq. Mi.
2. Estimated Number of dwelling units included in the Noise Impact Area as defined in the Noise Standards:
2
3. Estimated number of people residing within the Noise Impact Area as defined in the Noise Standards:
5 (Based on 2.5 People/Dwelling Unit)
4. Identification of aircraft 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 – 4,878 (Arrivals+Departures)
5. Total number of aircraft operations during the calendar quarter:
83,542
6. Number of Air Carrier operations during the calendar quarter:
(Not mandatory)
18,858
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)
64,581
9. Estimated number of operations by Military aircraft during the calendar quarter:
(Not mandatory)
103