

QUARTERLY NOISE REPORT

For:
California Department of Transportation

3rd Quarter 2016
July 1– September 30, 2016



SAN DIEGO
INTERNATIONAL AIRPORT

LET'S **GO.**

Airport Noise Mitigation

November 14, 2016



QUARTERLY NOISE REPORT
For the Period
July 1 through September 30, 2016

The California Department of Transportation, Division of Aeronautics, granted a Variance from the requirements of Section 5012, Chapter 2.5, Subchapter 6, Title 21, of the California Administrative Code to the San Diego County Regional Airport Authority for the operation of San Diego International Airport on May 8th, 2012.

This Quarterly Report for the 3rd Quarter of 2016 was prepared by Airport Noise Mitigation at San Diego International Airport, in accordance with the Airport Noise Standards, State of California.

A handwritten signature in blue ink, appearing to read "Keith Wilschetz", written over a horizontal line.

Keith Wilschetz
Director, Airport Planning & Noise Mitigation

A handwritten signature in blue ink, appearing to read "Thella F. Bowens", written over a horizontal line.

Thella F. Bowens
President / CEO

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Summary of Statistical Information for the 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):
Noise Impact Area = 0.734 sq. miles; Military Noise Impact Area = 0.108 sq. miles

2. Estimated number of dwelling units included in the Noise Impact Area as defined in the Noise Standards:
9,612* (QHP Insulated = 3,453)

3. Estimated number of people residing within the Noise Impact Area as defined in the Noise Standards:
19,406* (QHP Insulated = 8,633)

4. Identification of the aircraft type having the highest takeoff noise level operating at SDIA, together with the estimated number of operations by this aircraft type during the calendar quarter reporting period:
Boeing 747-400: 180

5. Total number of aircraft operations during the calendar quarter:
52,257

6. Number of Air Carrier operations by aircraft certified under Federal Aviation Regulations (FAR) Part 36:
44,774

7. Percentage of Air Carrier operations by aircraft certificated under FAR Part 36, Stage III:
100%

8. Estimated number of operations by Commuter aircraft during the calendar quarter:
4,434

9. Estimated number of operations by General Aviation aircraft during the calendar quarter:
2,804

10. Estimated number of operations by Military aircraft during the calendar quarter:
245

Form DOA 617, 10/89

* Population and dwelling unit calculations are based upon 2010 Census Block Boundary Data, which is an update to the calculations done since the publication of the 3rd Quarter 2015 Report that are based upon 2000 Census Tract Data.

Aircraft Noise Measurements

Using data generated from the Airport Noise and Operations Monitoring System (ANOMS) and Geographic Information System (GIS), Airport Noise Mitigation determined that the Noise Impact Area (N.I.A.) and the Federal Military Impact Area (M.I.A.) within the 65 dB Community Noise Equivalent Level (CNEL) contour for the period between October 1, 2015 to September 30, 2016 to be 0.734 square miles (469.8 acres) and 0.108 square miles (69.1 acres), respectively. As compared to the period between October 1, 2014 to September 30, 2015, the Noise Impact Area increased by 0.154 square miles and the Federal Military Noise Impact Area decreased by 0.008 square miles.

Table 1

Change in N.I.A. and M.I.A.

October 1, 2015 to September 30, 2016	October 1, 2014 to September 30, 2015	Change
0.734	0.580	0.154
0.108	0.116	-0.008

A summary of the quarterly and annual CNEL data is shown on the following page within Table 2. Appendix A: Aircraft Noise Monitoring System contains Remote Monitoring Terminals (RMTs) thresholds and Daily/Monthly CNEL Logs.

The contours were prepared using Harris Miller Miller & Hanson Inc.'s (HMMH) RealContours software. The N.I.A. & M.I.A. were determined using GIS analysis. Use of GIS technology allowed direct counting of individual parcels within the N.I.A. The modeling methodology fulfills the requirements of the State of California, Title 21, California Noise Standards. A review of measured and modeled noise levels indicate good agreement between several key measurement locations.

Additionally, the 65 dB Community Noise Equivalent Level (CNEL) contours for the period between October 1, 2015 to September 30, 2016 compared to the period between October 1, 2014 to September 30, 2015 accompanies this report as an attachment.

Table 2**Quarterly and Annual CNEL Data**

RMT #	Annual CNEL (dB)¹	Quarter CNEL (dB)²
1	71.0	70.8
2	66.6	66.4
3	*	*
4	66.1	65.8
6	69.0	69.4
7	75.1	75.2
9	68.0	67.8
10	64.1	64.8
11	71.7	72.1
12	62.5	62.8
13	65.5	66.4
14	65.6	65.3
16	65.1	64.6
17	65.3	65.4
18	61.3	60.0
19	62.6	61.4
20	61.6	61.3
21	58.2	57.8
22	65.2	65.4
23	63.9	63.7
24	64.5	64.4
25	62.9	63.3
26	64.7	63.6

¹ = For the period October 1, 2015 to September 30, 2016

² = For the period July 1, 2016 through September 30, 2016

Note 1: RMTs #5, #8 and #15 are no longer operational since the noise impact boundary has decreased in size.

Note 2: RMT #3 was offline during this time period due to mechanical, electrical and/or communication issues.

Aircraft Operations

The following table contains statistics of aircraft operations based upon the Federal Aviation Administration (FAA) Air Traffic Control Tower (ATCT) counts at San Diego International Airport (SAN).

Table 3

SAN ATCT Counts

Operations	3rd Quarter 2016	3rd Quarter 2015	Increase / Decrease	Percent Change
Air Carrier	44,774	43,058	1,716	3.99%
Air Taxi	4,434	4,588	-154	-3.36%
General Aviation	2,804	2,514	290	11.54%
Military	245	227	18	7.93%
Total	52,257	50,387	1,870	3.71%

Quarterly Operations Survey Report

The Quarterly Operations Survey Report for San Diego International Airport (SDIA) encompasses the 3rd Quarter of 2016. The data used to compile this report was gathered during 24-hour periods on August 16-18, 2016.

Table 5, Quarterly Operations Survey - Arrivals, identifies the loudest 25% of the aircraft arriving at SDIA, as measured at Remote Monitoring Terminal (RMT) #1, which is located approximately one (1.0) mile from the arrival end of Runway 27. During the 3rd Quarter 2016 Operations Survey, an average of 255 daily air carrier arrival operations was conducted. Therefore, the loudest 25% of these arrivals totaled approximately 64. These commercial service jet aircraft are listed by Aircraft Type, Single Event Noise Exposure Level (SENEL), Airport Origin, Flight Number and Date/Time.

Table 6, Quarterly Operations Survey - Departures, identifies the loudest 25% of the aircraft departing from SDIA, as measured at Remote Monitoring Terminal (RMT) #7, which is located approximately one-half (0.5) mile from the departure end of Runway 27. During the 3rd Quarter 2016 Operations Survey, an average of 255 daily air carrier departure operations was conducted. Therefore, the loudest 25% of these departures totaled approximately 64. These commercial service jet aircraft are listed by Aircraft Type, Single Event Noise Exposure Level (SENEL), Airport Destination, Flight Number and Date/Time.

The average Single Event Noise Exposure Level (SENEL) of the loudest 25% of the 3rd Quarter 2016 Operations Survey is as follows:

Table 4

Single Event Noise Exposure Level (SENEL) Comparison

	August 16-18, 2016	August 11-13, 2015	Change (dB)
Departures	99.8	100.1	-0.3
Arrivals	94.9	94.9	0.0

Table 7, Air Carrier Operations Mix by Time of Day and Runway Use, represents the 511 daily operations, which is greater than the 448 daily operations recorded during the 3rd Quarter of 2015.

Table 5**Quarterly Operations Survey - Arrivals (RMT #1 from August 16-18, 2016)**

* = Missed Approach

Aircraft Type	SENEL (dB)	Arriving From	Flight Number	Date and Time
B737	101.3	LAS	SWA2724	8/17/2016 9:35 AM
B744	100.5	EGLL	BAW44N	8/16/2016 6:27 PM
B744	100.2	EGLL	BAW44N	8/18/2016 6:47 PM
A332*	99.3	PHNL	HAL16	8/18/2016 10:56 PM
B744	98.3	EGLL	BAW44N	8/17/2016 6:28 PM
B763	97.2	IND	FDX3713	8/18/2016 4:53 PM
B762	96.9	PHX	GTI505	8/18/2016 8:37 AM
B762	96.6	PHX	GTI505	8/17/2016 7:36 AM
B763	96.5	IND	FDX1754	8/18/2016 4:58 AM
MD83	96.5	ELP	AAY420	8/18/2016 12:07 PM
B733	96.0	HOU	SWA1670	8/17/2016 8:54 AM
B763	95.7	ATL	DAL1692	8/16/2016 9:21 AM
B763	95.5	ATL	DAL1567	8/16/2016 5:57 PM
DC10	95.4	OAK	FDX1387	8/18/2016 6:57 PM
B763	95.3	IND	FDX1754	8/17/2016 4:54 AM
B737	95.0	DEN	SWA1426	8/17/2016 9:40 AM
B734	95.0	PDX	ASA582	8/18/2016 8:52 AM
B763	95.0	SDF	UPS2922	8/18/2016 5:23 PM
B763	95.0	ATL	DAL1567	8/18/2016 6:02 PM
B763	94.9	SDF	UPS922	8/16/2016 4:52 AM
A306	94.9	MEM	FDX906	8/16/2016 5:18 PM
B738	94.8	EWR	UAL1593	8/17/2016 10:14 AM
B753	94.6	ATL	DAL1692	8/17/2016 9:31 AM
B763	94.5	ATL	DAL1567	8/17/2016 6:03 PM
B753	94.5	ATL	DAL1692	8/18/2016 9:24 AM
A306	94.5	MEM	FDX906	8/18/2016 8:12 PM
B733	94.5	LAS	SWA1993	8/18/2016 11:20 PM
B733	94.4	OAK	SWA3083	8/16/2016 9:02 AM
B763	94.4	MEM	FDX1422	8/17/2016 5:29 AM
B737	94.4	SJC	SWA179	8/17/2016 10:52 AM
B763	94.4	SDF	UPS922	8/18/2016 5:09 AM
B763	94.3	SDF	UPS922	8/17/2016 4:46 AM
B763	94.3	MEM	FDX1422	8/18/2016 6:22 AM
B753	94.3	ATL	DAL15	8/18/2016 9:06 PM
R44B	94.2	SEE	N404GG	8/16/2016 7:23 PM
B733	94.1	SFO	SWA3229	8/17/2016 7:13 AM
B753	94.1	ATL	DAL514	8/18/2016 10:44 AM
B738	94.1	PHX	AAL2378	8/18/2016 11:28 AM
B733	94.1	LAS	SWA2852	8/18/2016 8:00 PM

Table 5 Continued

Quarterly Operations Survey - Arrivals (RMT #1 from August 16-18, 2016)

Aircraft Type	SENEL (dB)	Arriving From	Flight Number	Date and Time
B738	94.0	ORD	AAL2528	8/17/2016 8:56 AM
H25B	94.0	SNA	EJA877	8/17/2016 9:08 AM
B733	94	PHX	SWA1672	8/17/2016 7:24 PM
B738	94	SEA	ASA492	8/17/2016 8:15 PM
B763	93.9	IND	FDX1754	8/16/2016 5:07 AM
B763	93.9	IND	FDX1754	8/17/2016 4:54 AM
B737	93.9	TUS	SWA1408	8/17/2016 10:27 AM
B733	93.9	SFO	SWA2548	8/17/2016 7:21 PM
B733	93.9	LAS	SWA1073	8/18/2016 12:57 PM
B733	93.9	SFO	SWA183	8/18/2016 2:22 PM
B763	93.8	MEM	FDX1422	8/16/2016 6:32 AM
E75L	93.8	LAX	SKW5675	8/17/2016 6:50 AM
B733	93.8	SJC	SWA1416	8/17/2016 11:53 AM
B737	93.8	SJC	SWA2145	8/18/2016 6:33 PM
B738	93.7	PHX	AAL2378	8/17/2016 1:16 PM
B738	93.7	SMF	SWA378	8/18/2016 12:24 PM
B739	93.7	SLC	DAL2078	8/18/2016 3:39 PM
B738	93.6	ORD	AAL2528	8/17/2016 8:56 AM
B738	93.6	ATL	DAL1792	8/18/2016 2:04 PM
B737	93.6	PHX	SWA1411	8/18/2016 2:15 PM
B739	93.5	SEA	ASA496	8/18/2016 10:04 PM
B752	93.4	OAK	FDX1889	8/17/2016 4:02 AM
B738	93.4	ORD	AAL2204	8/18/2016 1:05 PM
B738	93.4	SEA	SWA2813	8/18/2016 2:29 PM
B762	93.3	PHX	GTI505	8/16/2016 7:50 AM

Table 6

Quarterly Operations Survey - Departures (RMT #7 from August 16-18, 2016)

Aircraft Type	SENEL (dB)	Departing To	Flight Number	Date and Time
B744	107.6	EGLL	BAW72A	8/16/2016 9:02 PM
B744	106.7	EGLL	BAW72A	8/17/2016 9:22 PM
B744	106.6	EGLL	BAW72A	8/18/2016 9:10 PM
MD83	104.8	ELP	AAY421	8/18/2016 1:16 PM
B763	101.7	ATL	DAL1592	8/17/2016 6:47 AM
MD10	101.5	MEM	FDX1387	8/18/2016 8:02 PM
A321	100.60	CLT	AAL579	8/17/2016 10:44 PM
A332	100.30	PHNL	HAL15	8/18/2016 10:32 AM
A321	100.2	CLT	AAL487	8/17/2016 11:18 AM
A321	100.1	CLT	AAL579	8/16/2016 10:53 PM
A321	100.0	PHL	AAL754	8/17/2016 8:54 AM
B738	100.0	EWR	UAL1827	8/17/2016 10:04 PM
A321	100	CLT	AAL579	8/18/2016 11:02 PM
A321	99.9	CLT	AAL458	8/17/2016 7:40 AM
B739	99.9	EWR	UAL1964	8/18/2016 6:55 AM
B738	99.8	IAD	UAL546	8/18/2016 7:09 AM
B739	99.8	ORD	UAL307	8/18/2016 7:22 AM
A321	99.8	PHL	AAL2019	8/18/2016 11:54 AM
B739	99.7	IAD	UAL546	8/16/2016 7:06 AM
B739	99.7	MSP	DAL263	8/16/2016 1:25 PM
B737	99.7	SJC	SWA1992	8/17/2016 1:45 PM
A321	99.7	PHL	AAL648	8/18/2016 10:11 PM
B763	99.6	ATL	DAL1692	8/16/2016 10:41 AM
B739	99.6	EWR	UAL1150	8/16/2016 12:24 PM
B738	99.60	JFK	AAL225	8/17/2016 9:52 PM
A321	99.6	CLT	AAL487	8/18/2016 11:10 AM
A321	99.5	CLT	AAL458	8/16/2016 7:50 AM
A332	99.5	PHNL	HAL15	8/17/2016 10:35 AM
A321	99.5	CLT	AAL458	8/18/2016 8:41 AM
A332	99.4	PHNL	HAL15	8/16/2016 10:17 AM
A321	99.4	PHL	AAL2019	8/17/2016 11:33 AM
B753	99.4	ATL	DAL1692	8/18/2016 11:02 AM
B739	99.4	EWR	UAL1827	8/18/2016 9:51 PM
B739	99.3	IAD	UAL1590	8/16/2016 1:02 PM
B738	99.3	BOS	ASA798	8/17/2016 8:37 AM
B739	99.3	IAD	UAL1590	8/18/2016 1:08 PM
B753	99.3	ATL	DAL102	8/18/2016 10:44 PM
B763	99.2	ATL	DAL1592	8/16/2016 6:47 AM
A321	99.2	IAH	NKS858	8/16/2016 7:41 AM

Table 6 Continued

Quarterly Operations Survey - Departures (RMT #7 from August 16-18, 2016)

Aircraft Type	SENEL (dB)	Departing To	Flight Number	Date and Time
B739	99.2	ORD	UAL1900	8/18/2016 2:37 PM
DA40	99.1	POC	N888YW	8/17/2016 1:09 PM
A321	99.1	PHL	AAL754	8/18/2016 9:27 AM
B738	99.0	PHKO	ASA865	8/16/2016 7:16 AM
B763	99.0	MEM	FDX821	8/16/2016 7:57 AM
B739	99.0	ORD	UAL8100	8/16/2016 1:51 PM
B739	99.0	ATL	DAL102	8/17/2016 10:35 PM
B738	99.0	ORD	AAL122	8/18/2016 11:17 PM
B738	98.9	BOS	ASA798	8/16/2016 8:37 AM
B739	98.8	ORD	UAL1900	8/17/2016 2:05 PM
B738	98.7	JFK	AAL94	8/16/2016 7:54 AM
B753	98.7	ATL	DAL1692	8/17/2016 11:03 AM
B737	98.7	RNO	SWA1948	8/17/2016 1:01 PM
B738	98.7	BWI	SWA2950	8/17/2016 1:25 PM
B738	98.7	BWI	SWA987	8/18/2016 6:33 AM
MD90	98.7	MSP	DAL1864	8/18/2016 6:57 AM
B739	98.6	DTW	DAL2628	8/17/2016 7:10 AM
B738	98.6	JFK	AAL94	8/17/2016 7:55 AM
B738	98.6	ORD	UAL240	8/18/2016 10:45 PM
B739	98.5	EWR	UAL1964	8/17/2016 6:31 AM
B738	98.5	PHNL	ASA895	8/17/2016 10:07 AM
B738	98.5	PHLI	ASA857	8/17/2016 10:41 AM
A321	98.5	DFW	AAL606	8/17/2016 1:11 PM
B739	98.5	DTW	DAL2628	8/18/2016 7:13 AM
B739	98.4	DTW	DAL2628	8/16/2016 7:14 AM

Table 7**Air Carrier Operations Mix by Time of Day and Runway Use**

These numbers are the averages for operations for August 16-18, 2016

Aircraft Type	Runway 27						Runway 09						Total
	Arrivals			Departures			Arrivals			Departures			
	700	1900	2200	700	1900	2200	700	1900	2200	700	1900	2200	
	--	--	--	--	--	--	--	--	--	--	--	--	
	1859	2159	659	1859	2159	659	1859	2159	659	1859	2159	659	
A306	1				1								2
A319	10	2	1	9	1	2							26
A320+	27	7	6	28	4	8							80
A330+			1	1									2
B712			1			1							2
B737+	108	30	22	119	23	18							319
B747+	1				1								2
B757+	3	2	2	4	2	1							13
B767+	4		3	3	2	3							15
B787+	1			1									2
DH8D	3			3									6
E170/175/190	10	2	1	12		1							26
MD90+		1				1							2
RJ+	7		1	7	1								16
Total	175	44	37	187	34	34	0	0	0	0	0	0	511

Note 1: The use of a "+" sign after an aircraft model designation means "and all succeeding series aircraft." The designation of "Q" signifies a hush kitted aircraft. RJ+ = All forms/types of Regional Jets operated as "commercial service" flights; Includes CRJ2/7/9, E120/35/40/45

Aircraft Noise Complaints

During the 3rd Quarter of 2016, Airport Noise Mitigation received a total of 7,514 complaints. Where possible, each complaint is correlated with a specific flight and examined for its validity. Those flights that indicate a possible violation of the Airport Use Regulations, Time of Day Restrictions, are investigated and appropriate enforcement action is taken.

The 7,514 complaints recorded during the 3rd Quarter of 2016 reflects an increase of 7,263 from the 251 recorded during the 3rd Quarter of 2015.

Enforcement Actions

The Airport Use Regulations at San Diego International Airport establish Time of Day Restrictions for all operators. Airport Noise Mitigation monitors operator compliance with these Airport Use Regulations. Any infraction is reported to the Curfew Violation Review Panel (Panel), which is a separate body. The Panel examines data and documentation collected regarding alleged violations of the Time of Day (Noise Curfew) Restrictions, and makes recommendations to the Director, Airport Noise Mitigation, for the disposition of incidents.

During the 3rd Quarter of 2016, there were a total of 29 curfew violations. The 29 curfew violations recorded during the 3rd Quarter of 2016 reflects an increase of 22 from the 7 curfew violations recorded during the 3rd Quarter of 2015.

Residential Sound Insulation Program

Per the requirements of San Diego International Airport's Variance agreement, the following figure is provided to serve as an update on the Residential Sound Insulation Program (RSIP), also known as the Quieter Home Program (QHP), the Airport sponsored sound insulation program. To date, the Quieter Home Program has established eight eligibility boundaries. The eight boundaries are the Pilot/Phase 1A Boundary, the Phase 1B Boundary, the Phase 1C Boundary, the Supplemental Expansion Boundaries 1, 2, & 3, the 2014 NEM 68 dB CNEL boundary, and the 2014 NEM 67 dB CNEL boundary. Within each boundary there have been subsets, called phases and groups.

Airport Noise Advisory Committee (ANAC)

The San Diego County Regional Airport Authority recognizes that neighborhoods surrounding San Diego International Airport are affected by noise from aircraft operations. An Airport Noise Advisory Committee (ANAC) (Committee), consisting of individuals from various organizations, residential areas, and professional associations, was formed in 1981 under the San Diego Unified Port District, previous operator of San Diego International Airport. The Airport Noise Advisory Committee is formally adopted as Airport Authority Policy 9.20.

The information regarding the Airport Noise Advisory Committee (ANAC) can be found on the San Diego County Regional Airport Authority's website: <http://www.SAN.org/Airport-Noise/Initiatives>.

Appendix A

Airport Noise Monitoring System

Appendix A1

Remote Noise Monitoring Terminal (RMTs) Thresholds

RMT #	SENEL Day Threshold (dB)	Duration (sec)	SENEL Evening Threshold (dB)	Duration (sec)	SENEL Night Threshold (dB)	Duration (sec)
1	73*	9	73	9	72*	10
2	63	10	60	12	58	14
3	74*	9	73	10	72*	10
4	64*	10	63	12	60*	12
6	68*	8	67	9	65*	10
7	65	12	63	12	62	15
9	68*	8	67	9	65*	10
10	65*	8	62	12	60*	13
11	65*	12	63	13	60*	15
12	64*	10	62	12	60*	14
13	65*	8	62	12	60*	13
14	65*	10	62	12	60*	13
16	67*	8	66	9	65*	10
17	64	9	62	12	58	15
18	65	8	65	8	62	12
19	64*	8	64	8	63*	8
20	62	11	62	11	60	13
21	60	10	58	12	55	18
22	65	8	63	10	60	12
23	65*	8	63	10	60*	12
24	65*	8	65	8	63*	10
25	65*	10	62	10	60*	12
26	65*	10	64	12	62*	14

KEY:

Day	=	From 7:00 a.m. to 6:59 p.m. (* = change occurs at 0500L)
Evening	=	From 7:00 p.m. to 9:59 p.m.
Night	=	From 10:00 p.m. to 6:59 a.m. (* = change occurs at 0500L)

Note 1: RMTs #1 and #3 high threshold levels are due to high freeway and/or construction noise.

Note 2: Noise monitors comply with all applicable settings as specified in the California Noise Standards (Title 21). Noise events must meet both threshold criteria to be considered for further review.

Appendix A2

Daily/Monthly CNEL Levels – July 2016

* Not in Service

Day	RMT 1	RMT 2	RMT 3	RMT 4	RMT 6	RMT 7	RMT 9	RMT 10	RMT 11	RMT 12	RMT 13
1	71.2	67.1	*	67.3	70.0	76.2	68.8	64.4	72.4	63.1	66.0
2	71.1	67.6	*	67.1	68.9	74.9	67.6	63.7	71.5	62.6	66.2
3	70.1	65.2	*	65.2	68.0	74.8	66.8	62.9	71.9	61.7	66.6
4	69.7	65.4	*	50.8	68.6	74.3	66.5	63.2	70.8	62.2	65.4
5	69.7	65.7	*	*	69.3	75.2	68.1	64.3	71.5	62.6	66.8
6	71.0	66.7	*	*	69.1	74.9	67.3	63.8	71.3	63.2	66.3
7	70.8	66.7	*	*	69.6	74.9	67.6	64.1	71.4	62.8	66.1
8	71.1	66.7	*	*	69.1	75.5	67.6	63.9	71.6	63.2	66.5
9	70.8	66.7	*	65.0	68.7	75.7	68.0	63.5	72.4	62.0	66.8
10	69.7	66.2	*	65.8	68.9	75.7	67.4	63.7	72.3	62.5	66.5
11	70.2	66.3	*	66.0	69.2	75.4	68.1	63.8	71.7	62.8	66.1
12	70.8	67.0	*	66.4	69.8	75.7	68.2	64.4	72.2	63.5	66.8
13	70.8	66.6	*	66.6	70.0	75.8	68.5	64.3	72.5	64.2	66.4
14	71.1	66.8	*	67.8	69.3	75.8	68.3	64.0	72.0	62.6	65.7
15	71.5	66.8	*	66.6	69.2	*	67.9	64.0	72.3	63.3	66.5
16	77.2	66.4	*	56.2	68.7	*	67.1	63.5	71.8	62.2	66.2
17	74.0	65.9	*	*	68.7	*	67.7	63.6	71.9	62.1	66.3
18	69.9	65.9	*	*	69.5	*	67.0	64.5	72.6	62.8	66.9
19	70.6	66.8	*	64.4	69.0	*	66.5	64.3	71.5	62.2	65.7
20	70.6	66.3	*	67.4	69.0	*	66.8	63.3	72.4	63.5	66.0
21	69.7	65.6	*	65.7	69.1	*	67.8	63.0	71.8	61.8	65.3
22	68.7	65.2	*	65.1	68.9	*	68.1	62.5	72.5	62.4	65.5
23	69.3	65.3	*	66.4	68.6	74.1	67.6	62.9	72.9	61.9	65.9
24	68.6	65.3	*	64.6	68.3	75.8	67.5	62.4	72.1	62.2	66.3
25	69.3	65.8	*	65.3	68.4	75.4	67.5	62.9	72.3	61.5	66.1
26	70.4	66.9	*	66.8	68.8	75.0	67.0	63.3	71.3	62.5	65.0
27	69.8	66.7	*	66.0	68.9	75.3	67.8	63.3	71.5	62.2	64.6
28	70.8	66.9	*	66.1	69.6	75.3	67.4	63.8	71.4	61.9	65.6
29	70.8	66.7	*	66.3	68.8	75.6	67.4	64.1	71.9	63.8	66.2
30	70.7	66.8	*	66.6	68.9	75.9	67.8	63.4	72.1	63.4	66.4
31	69.8	66.0	*	66.1	68.4	75.8	67.7	63.4	72.3	62.4	66.5
Month	71.5	66.9	*	65.4	69.5	74.6	68.1	64.2	72.5	63.2	66.6

Appendix A2 Continued

Daily/Monthly CNEL Levels – July 2016

* Not in Service

Day	RMT 14	RMT 16	RMT 17	RMT 18	RMT 19	RMT 20	RMT 21	RMT 22	RMT 23	RMT 24	RMT 25	RMT 26
1	*	65.6	65.4	60.1	64.3	61.1	56.5	64.5	64.0	64.5	62.4	64.0
2	*	66.0	65.8	59.4	62.8	60.9	57.7	64.9	64.3	64.0	62.6	64.8
3	*	63.2	64.3	57.9	59.1	61.2	57.7	65.4	63.4	64.1	62.7	62.5
4	*	63.4	64.2	59.8	58.9	60.9	57.6	64.5	63.3	63.8	62.5	62.5
5	*	63.8	64.7	60.0	61.4	61.6	58.3	66.8	64.0	64.9	63.8	63.3
6	*	65.0	65.4	60.2	61.2	61.2	58.2	65.1	63.5	64.5	64.7	64.2
7	*	65.0	65.2	59.6	63.3	60.8	58.1	64.9	64.7	64.6	63.8	63.6
8	*	64.8	65.3	58.4	60.4	61.1	57.8	65.2	64.0	64.8	63.7	63.9
9	*	64.6	65.0	60.1	61.7	61.4	57.4	65.6	64.7	65.1	62.2	63.4
10	*	64.4	64.8	59.3	62.1	60.9	56.4	65.0	63.9	64.8	61.8	63.5
11	*	65.2	64.9	59.0	63.3	60.9	58.1	66.4	63.5	64.6	68.9	63.4
12	*	65.1	65.5	59.5	61.5	61.3	58.5	65.7	64.3	65.1	64.6	64.1
13	*	65.0	65.4	58.7	61.3	61.5	57.3	65.0	63.5	64.6	65.2	64.0
14	*	64.8	65.6	58.4	59.6	61.4	57.6	64.3	62.9	64.3	64.6	63.9
15	*	65.0	65.6	59.5	62.1	61.2	57.6	65.3	63.9	64.7	65.6	63.7
16	*	64.3	65.3	58.6	59.6	61.1	57.8	65.3	63.7	63.9	62.6	63.4
17	*	64.1	64.5	58.9	62.0	61.3	57.1	64.9	63.7	64.5	62.2	63.6
18	*	63.8	64.6	59.3	60.3	61.9	58.0	67.4	64.1	66.8	64.8	63.3
19	*	64.7	65.6	59.5	59.6	60.7	57.0	64.2	62.7	63.9	63.8	63.4
20	*	64.1	65.1	57.9	58.8	61.2	56.5	65.2	62.6	63.9	61.9	62.9
21	*	63.4	64.7	58.1	59.6	60.8	56.9	63.9	62.1	63.3	61.8	62.1
22	*	63.0	64.2	57.7	59.2	60.1	54.1	64.1	63.8	63.4	60.9	62.8
23	*	64.1	64.0	64.0	62.4	59.9	62.0	64.5	63.8	63.8	60.9	63.2
24	*	63.8	63.7	58.4	62.7	59.4	54.9	64.9	64.3	64.7	60.1	62.8
25	*	63.7	64.5	58.4	61.4	61.2	58.0	66.9	64.2	64.3	62.2	63.0
26	*	64.6	65.8	58.5	58.8	60.2	55.6	63.6	61.8	63.3	60.6	64.0
27	*	64.1	65.0	57.5	60.3	60.2	56.2	63.2	61.2	62.5	62.2	63.0
28	*	64.7	65.5	61.0	59.8	61.4	58.9	64.3	62.7	63.7	62.6	63.1
29	*	65.1	65.3	59.1	61.5	60.8	57.3	64.8	63.6	64.5	62.8	64.0
30	*	65.3	65.1	59.2	63.0	60.7	57.1	65.1	64.2	64.7	62.0	63.5
31	*	64.1	64.9	60.5	62.5	60.8	57.0	64.9	64.1	64.7	62.1	63.2
Month	*	65.0	65.5	59.9	61.9	61.5	58.1	65.6	64.1	64.9	63.9	64.0

Appendix A3

Daily/Monthly CNEL Levels - August 2016

* Not in Service

Day	RMT 1	RMT 2	RMT 3	RMT 4	RMT 6	RMT 7	RMT 9	RMT 10	RMT 11	RMT 12	RMT 13
1	70.4	66.3	*	57.9	69.0	76.2	67.2	64.2	72.8	62.9	67.2
2	70.4	66.5	*	64.7	69.8	75.9	67.9	64.4	72.1	62.6	66.6
3	70.7	66.6	*	67.2	69.1	75.5	67.6	64.0	71.9	62.5	66.3
4	70.4	66.3	*	66.2	70.4	75.5	68.1	64.2	71.8	63.0	66.4
5	70.8	66.4	*	66.2	68.9	75.4	68.0	63.8	71.7	62.6	65.9
6	69.9	65.9	*	65.9	68.8	75.3	68.0	63.3	71.7	63.0	66.3
7	69.3	65.8	*	65.6	68.6	75.2	67.9	63.5	71.7	61.8	65.8
8	70.3	*	*	66.0	69.1	75.6	67.6	*	72.2	62.4	65.8
9	70.5	66.2	*	*	69.1	75.4	67.8	63.9	72.0	62.6	66.5
10	70.7	66.7	*	65.4	69.5	75.4	67.8	64.6	71.7	64.3	66.6
11	70.5	67.4	*	66.1	70.0	75.8	67.8	64.0	72.2	62.9	66.7
12	70.5	66.1	*	65.6	69.6	75.4	66.6	63.7	71.5	62.5	66.2
13	70.5	65.0	*	64.5	68.4	75.0	66.5	63.8	71.1	63.3	65.7
14	68.8	65.6	*	65.3	69.0	75.6	68.1	66.4	72.0	61.7	65.7
15	70.0	65.8	*	65.6	68.9	74.8	66.2	67.8	70.4	59.5	63.8
16	68.9	65.2	*	65.7	68.6	74.4	65.1	68.4	70.0	59.8	63.4
17	69.6	65.8	*	66.1	68.9	75.3	66.8	69.8	71.2	60.6	63.7
18	71.3	66.5	*	69.2	70.9	75.5	68.1	65.8	72.2	62.7	66.3
19	70.6	66.0	*	65.7	69.9	75.6	68.0	67.9	71.8	62.7	66.1
20	69.4	65.4	*	65.1	68.4	74.4	66.6	64.5	70.7	62.8	65.3
21	69.3	65.4	*	65.0	69.3	75.2	67.3	65.2	71.6	62.4	66.4
22	72.3	65.9	*	66.0	69.5	74.8	67.2	64.8	71.2	62.5	66.3
23	70.5	65.6	*	65.4	68.5	75.9	68.2	63.4	72.5	61.9	66.5
24	70.0	65.8	*	66.0	68.9	75.3	67.1	64.2	71.4	61.9	65.7
25	70.5	66.3	*	65.9	70.0	75.5	67.6	64.3	72.0	62.8	66.5
26	72.0	66.5	*	66.8	69.6	75.3	67.7	64.3	71.5	62.4	66.3
27	69.3	64.7	*	66.2	67.7	74.2	67.0	63.6	70.7	61.5	65.5
28	69.1	65.7	*	65.2	69.0	75.0	66.2	64.5	71.8	61.6	65.9
29	68.7	65.0	*	65.7	69.1	75.0	67.6	64.9	71.2	61.7	65.6
30	68.1	64.8	*	64.2	68.5	75.6	66.8	62.7	71.8	60.6	64.9
31	69.5	65.6	*	66.3	68.9	75.4	67.8	63.6	71.9	65.6	65.4
Month	70.7	66.4	*	66.2	69.7	75.8	67.9	65.7	72.2	62.9	66.4

Appendix A3 Continued

Daily/Monthly CNEL Log – August 2016

* Not in Service

Day	RMT 14	RMT 16	RMT 17	RMT 18	RMT 19	RMT 20	RMT 21	RMT 22	RMT 23	RMT 24	RMT 25	RMT 26
1	*	64.0	65.3	59.4	60.3	61.4	59.1	68.2	64.2	65.0	63.3	63.3
2	*	64.6	65.3	59.4	61.6	61.5	58.2	65.6	64.1	64.9	62.2	63.7
3	*	65.0	65.2	59.6	62.4	61.0	57.5	65.0	64.3	64.6	62.8	64.6
4	*	64.4	65.1	59.9	62.6	61.0	57.6	65.1	64.0	64.9	63.2	63.5
5	*	64.8	65.4	60.1	62.0	61.2	57.4	64.7	63.9	64.3	62.6	64.1
6	*	64.2	64.8	60.1	61.7	61.3	57.5	64.8	63.6	64.3	62.5	63.7
7	*	64.1	64.5	59.7	61.8	61.0	56.5	64.2	62.6	64.0	62.0	63.7
8	*	64.8	64.9	58.2	*	*	*	*	*	*	61.8	63.6
9	*	64.5	66.5	58.9	60.4	61.3	57.9	65.6	63.9	64.8	62.8	63.5
10	*	65.0	65.4	60.2	61.6	61.3	58.1	65.3	63.7	64.8	63.1	64.6
11	*	64.3	65.5	60.1	60.7	61.9	58.2	65.5	63.6	64.9	62.6	63.7
12	*	63.9	65.7	59.5	58.4	61.4	58.1	64.8	62.9	64.2	63.5	63.2
13	58.2	62.9	65.5	59.0	57.6	60.7	57.4	64.4	62.7	63.4	62.2	62.4
14	63.0	63.4	64.6	60.1	60.4	61.2	57.8	64.6	62.8	63.6	62.3	62.6
15	61.5	63.3	65.3	57.8	55.6	60.0	55.1	65.8	60.5	61.3	60.1	62.3
16	60.2	62.4	64.7	57.4	54.3	60.2	54.2	62.0	60.3	61.6	60.8	60.7
17	61.2	63.2	64.8	58.5	58.1	60.2	54.3	62.2	60.5	61.8	60.4	61.8
18	62.1	64.5	65.2	62.2	61.6	61.1	57.2	64.8	63.6	64.6	62.3	63.7
19	62.6	63.8	64.8	60.1	60.2	61.4	57.3	64.7	63.9	64.3	62.3	63.0
20	61.6	63.1	64.2	58.1	57.5	60.5	56.8	63.8	62.1	63.3	61.6	62.5
21	62.6	63.4	64.3	60.3	59.0	63.3	57.7	65.0	63.5	64.4	62.4	62.4
22	62.2	63.9	65.2	60.0	59.3	60.8	57.5	65.9	63.9	64.6	62.3	63.2
23	63.5	63.6	64.9	59.1	62.2	60.5	56.8	65.1	63.2	64.2	62.3	63.1
24	64.8	63.9	64.6	59.8	60.2	61.1	57.5	64.4	62.3	63.6	62.8	63.2
25	66.4	64.7	64.7	59.0	60.7	61.8	58.1	65.1	63.8	64.8	62.9	63.6
26	66.3	64.5	65.4	59.3	62.5	61.3	58.2	65.3	63.5	64.3	63.2	63.6
27	66.0	62.6	63.4	59.5	57.6	60.5	57.7	64.7	62.9	63.1	62.5	62.6
28	66.0	63.6	64.6	59.1	58.9	61.6	57.2	64.7	62.7	64.0	62.3	63.7
29	65.5	63.0	63.9	59.1	59.9	60.7	56.7	66.8	62.7	63.8	61.7	62.4
30	66.0	63.2	63.3	57.2	60.6	59.6	55.8	63.3	61.5	62.6	61.9	61.7
31	65.3	64.0	64.3	59.0	62.1	60.1	55.8	63.9	62.2	63.6	62.4	63.0
Month	64.5	64.4	65.4	60.0	61.0	61.6	57.8	65.5	63.6	64.5	62.9	63.7

Appendix A4

Daily/Monthly CNEL Levels – September 2016

* Not in Service

Day	RMT 1	RMT 2	RMT 3	RMT 4	RMT 6	RMT 7	RMT 9	RMT 10	RMT 11	RMT 12	RMT 13
1	70.8	66.3	*	66.7	69.6	76.0	67.9	63.4	72.0	61.7	66.0
2	70.8	66.7	*	66.1	69.1	75.7	67.6	63.8	71.9	63.5	65.9
3	68.4	64.3	*	63.3	67.5	74.1	66.1	61.8	70.5	61.0	65.3
4	68.8	64.6	*	64.2	68.1	74.1	66.0	62.9	70.4	61.0	65.2
5	69.7	65.7	*	66.2	68.3	75.1	68.3	63.5	71.6	62.1	66.4
6	72.0	65.5	*	67.6	69.1	76.2	66.2	64.4	72.5	63.6	67.3
7	70.5	66.0	*	65.9	68.6	75.5	66.7	63.2	71.8	61.4	65.7
8	70.8	66.0	*	65.6	68.7	73.9	66.5	64.7	70.8	61.9	65.6
9	70.6	65.6	*	65.7	68.6	74.5	71.2	66.3	71.0	62.2	66.8
10	68.0	63.6	*	63.2	67.0	73.3	64.4	64.3	69.4	59.4	62.9
11	69.9	65.7	*	65.1	68.4	74.9	65.7	65.3	71.1	61.6	66.2
12	69.9	66.6	*	65.2	69.2	75.0	66.9	63.5	71.6	62.4	66.5
13	69.9	66.1	*	65.0	68.6	73.6	66.4	63.7	70.2	61.7	65.2
14	71.0	66.3	*	66.3	68.3	74.3	64.0	66.3	70.5	62.1	65.4
15	72.3	66.7	*	66.1	69.6	75.7	68.6	66.0	72.2	63.2	66.9
16	71.2	66.5	*	66.3	69.1	75.1	69.5	64.1	71.5	63.3	66.7
17	69.4	64.6	*	64.4	67.4	73.6	66.5	63.3	69.6	60.9	64.4
18	67.9	64.0	*	64.7	67.9	75.2	67.8	62.2	72.1	60.2	64.3
19	67.7	64.7	*	65.3	68.7	75.5	66.1	62.8	72.2	61.4	64.6
20	68.6	64.7	*	66.2	68.1	75.1	65.4	62.7	72.1	61.5	65.5
21	70.0	65.9	*	65.5	68.5	75.0	67.3	63.5	71.7	61.4	65.4
22	70.4	66.2	*	65.5	69.4	75.3	68.1	64.3	71.9	62.3	*
23	70.5	65.7	*	65.4	69.1	75.5	65.4	65.0	72.1	63.1	*
24	66.5	62.6	*	62.4	67.1	74.0	65.1	62.8	70.1	60.6	*
25	66.6	63.8	*	64.2	68.4	74.6	68.4	64.0	70.6	59.6	*
26	65.5	62.4	*	66.8	67.8	74.0	62.7	63.8	70.9	60.6	*
27	67.4	64.1	*	64.0	67.8	74.0	65.5	61.5	70.8	60.9	*
28	68.2	64.5	*	64.5	65.8	71.7	64.7	62.8	68.2	58.7	*
29	69.7	65.1	*	65.5	70.2	75.2	67.7	64.0	71.6	61.8	*
30	70.2	66.7	*	65.8	68.7	75.2	67.1	64.9	71.6	62.2	*
Month	70.2	65.9	*	65.9	69.0	75.3	67.5	64.5	71.8	62.2	66.2

Appendix A4 Continued

Daily/Monthly CNEL Log – September 2016

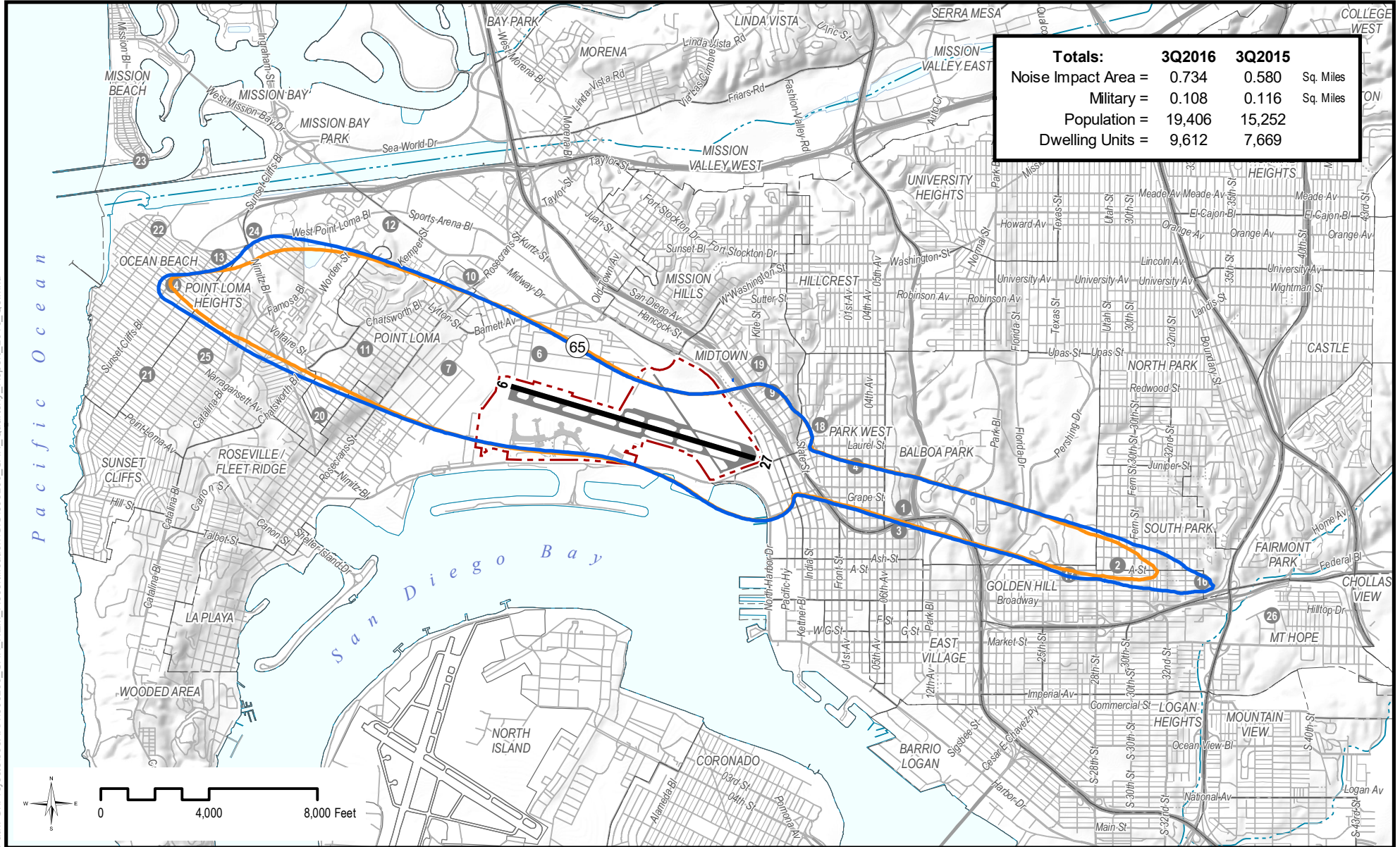
* Not in Service

Day	RMT 14	RMT 16	RMT 17	RMT 18	RMT 19	RMT 20	RMT 21	RMT 22	RMT 23	RMT 24	RMT 25	RMT 26
1	65.7	67.6	65.0	59.5	63.1	60.0	56.5	64.6	63.5	64.2	61.2	63.2
2	66.0	65.2	65.2	59.0	62.5	61.2	56.7	64.3	66.9	63.9	62.7	63.9
3	65.2	62.6	62.4	61.1	61.6	59.9	56.8	64.2	62.7	63.2	61.4	61.4
4	65.2	62.8	63.4	57.6	60.2	60.1	57.2	64.5	62.0	63.0	61.8	61.9
5	65.8	64.1	64.8	62.8	63.0	61.2	57.7	65.5	63.9	64.7	62.2	63.1
6	66.8	63.4	64.6	58.4	57.5	62.0	59.3	68.2	65.0	65.0	63.3	62.6
7	64.9	64.6	66.1	58.4	60.5	60.1	57.1	64.6	62.7	63.7	61.0	64.7
8	65.9	64.1	67.9	58.9	60.2	61.0	57.7	64.2	62.3	63.6	62.6	63.9
9	65.8	63.6	66.8	57.9	54.4	61.6	57.6	65.6	63.4	63.8	63.2	62.7
10	63.7	61.6	62.6	56.3	55.2	57.5	53.2	61.5	60.5	60.8	58.5	60.9
11	65.2	63.5	64.8	59.1	57.8	60.2	55.8	64.7	63.2	64.1	60.8	62.8
12	65.7	64.7	65.4	58.1	62.0	60.7	57.7	65.4	63.6	64.6	62.6	63.1
13	65.7	64.5	65.9	57.3	60.4	60.1	57.9	64.1	62.3	63.3	62.3	63.3
14	65.5	64.3	65.5	59.9	54.7	61.2	57.6	64.4	62.3	63.4	62.6	63.8
15	66.7	64.9	66.0	58.7	63.1	61.5	58.7	66.0	63.6	64.7	62.9	64.0
16	66.8	64.6	65.7	61.1	63.7	61.2	58.2	65.3	63.3	64.4	63.5	63.7
17	64.7	62.6	63.7	55.9	57.8	58.9	55.7	63.1	61.8	62.1	60.7	61.7
18	65.1	62.0	63.4	59.5	60.6	60.1	53.8	62.6	61.4	62.3	59.8	61.1
19	65.8	63.0	64.6	57.5	62.7	59.4	56.2	63.3	61.1	62.2	63.2	58.1
20	66.1	62.9	63.9	55.1	59.8	59.8	56.4	64.2	62.0	63.3	61.3	*
21	65.8	64.0	64.9	58.5	62.2	60.1	56.3	64.2	62.1	63.5	62.0	59.8
22	66.1	65.1	65.0	59.7	63.7	61.0	57.9	64.9	63.7	64.6	64.0	64.2
23	66.7	64.4	64.9	59.8	60.0	61.3	58.2	64.9	62.9	63.9	66.0	63.1
24	64.3	61.0	62.0	59.5	62.4	59.3	56.5	62.3	60.5	61.1	60.2	59.5
25	65.0	62.1	63.2	66.0	63.8	59.5	55.2	63.4	61.3	61.9	60.9	61.4
26	65.4	61.7	62.5	62.1	56.0	61.4	56.3	63.2	59.9	60.7	59.7	61.0
27	64.9	62.8	62.9	54.4	59.7	61.2	56.5	63.0	61.2	62.0	60.0	61.6
28	62.2	62.9	64.0	59.0	58.3	57.7	54.0	61.2	59.0	60.3	58.9	63.0
29	66.0	63.5	64.8	62.2	61.8	60.7	57.6	64.6	62.4	63.6	62.0	62.9
30	66.0	64.4	66.0	57.5	58.0	61.1	58.4	64.9	64.3	64.0	69.9	63.8
Month	66.1	64.3	65.3	60.2	61.5	61.0	57.5	64.9	63.3	63.9	63.2	63.0

Appendix B

ANOMS Commercial Flight Operations Mix - 3rd Quarter 2016

Aircraft Type	Air Canada	Alaska	Allegiant	American	British Airways	Delta Air Lines	Frontier	Hawaiian	Japan	jetBlue	SkyWest	Southwest	Spirit	Sun Country	United	Virgin America	Volaris	WestJet	Airborne/Atlas	FedEx	UPS	Total Arrivals	Total Operations
A306																				41		41	82
A319	256		53			2	123						139		294	80	1					948	1896
A320				37		319	144			438			281		481	426	30					2156	4312
A321	1			1193						3			177									1374	2748
A332								89														89	178
B712						85																85	170
B733												1229										1229	2458
B734		78																				78	156
B736																		3				3	6
B737		76										5529	67	86				54				5812	11624
B738		988		1130		353						1826	22	648				45				5012	10024
B739		569				383									844							1796	3592
B744					90																	90	180
B752				6		443														66	1	516	1032
B753						52									1							53	106
B762																		65				65	130
B763				2		136														165	99	402	804
B764						2									1							3	6
B788								91														91	182
CRJ2											157											157	314
CRJ7											531											531	1062
CRJ9											101											101	202
DC10																				25		25	50
E175						390					293											683	1366
MD10																				4		4	8
MD80+			31	1																		32	64
MD90+						149																149	298
Total	257	1711	84	2369	90	2314	267	89	91	441	1082	8584	597	89	2355	506	31	102	65	301	100	21525	43050
BE99																			67			67	134
C208																				225		225	450
DH8D		241																				241	482
SW3/4																					57	57	114
Total	257	1952	84	2369	90	2314	267	89	91	441	1082	8584	597	89	2355	506	31	102	132	526	157	590	1180



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- 2016 3rd Quarter 65 dB CNEL Contour
- 2015 3rd Quarter 65 dB CNEL Contour
- Airport Property
- Runway
- RMT Site Location
- Roads
- - - River / Stream

Comparison of the 2015 and 2016 Third Quarter 65 dB Community Noise Equivalent Level (CNEL) Contours