SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

AIRPORT NOISE ADVISORY COMMITTEE (ANAC)

MEETING AGENDA
Wednesday, April 18, 2018, 4:00 p.m.

NEW LOCATION: Holiday Inn Bayside
4875 N Harbor Drive, San Diego, CA 92106

---

1. Welcome and Introductions
2. Presentation Items
    a. Quieter Home Program Update
    b. Missed Approach Statistics
    c. Early Turn Statistics
    d. Curfew Violation Review Panel (CVRP) Statistics
    e. Noise Complaint Statistics
    f. 4th Qtr. 2017 Fly Quiet Report
    g. Update on ANAC Recommendations
        1. ANAC Policy Update
        2. Curfew Penalty Increase
        3. Part 150 Study Update
        4. Flight Procedure Analysis
    h. Part 150 TAC Update (Including Flight Procedure Evaluation)
    i. Recognition of ANAC Service – Jack Bewley and Kirk Hanson
3. Public Comment
4. Action Items
    a. Approval of February 21, 2018 meeting summary
5. Next Meeting: June 20, 2018
6. Adjourn

Please note: There is a free City Parking lot next to the hotel, we will not reimburse for parking at the hotel.

SAN DIEGO INTERNATIONAL AIRPORT
LET'S GO.

QUIETER HOME PROGRAM

Airport Noise Advisory Committee

April 18, 2018

PROGRAM STATISTICS	
Applicants / Homes on the Wait List	504/985
Homes Completed in Feb & March	42
Estimated Homes to Complete in CY 2018	300
Total Homes Completed (through March 31, 2018)	3,529

Updates

- **8.12** – Construction completion in April, 84 units.
- **9.1**, **8.10**, **8.11, 9.3, 9.4** construction contracts awarded.
- **Forecasted Construction Schedule**:

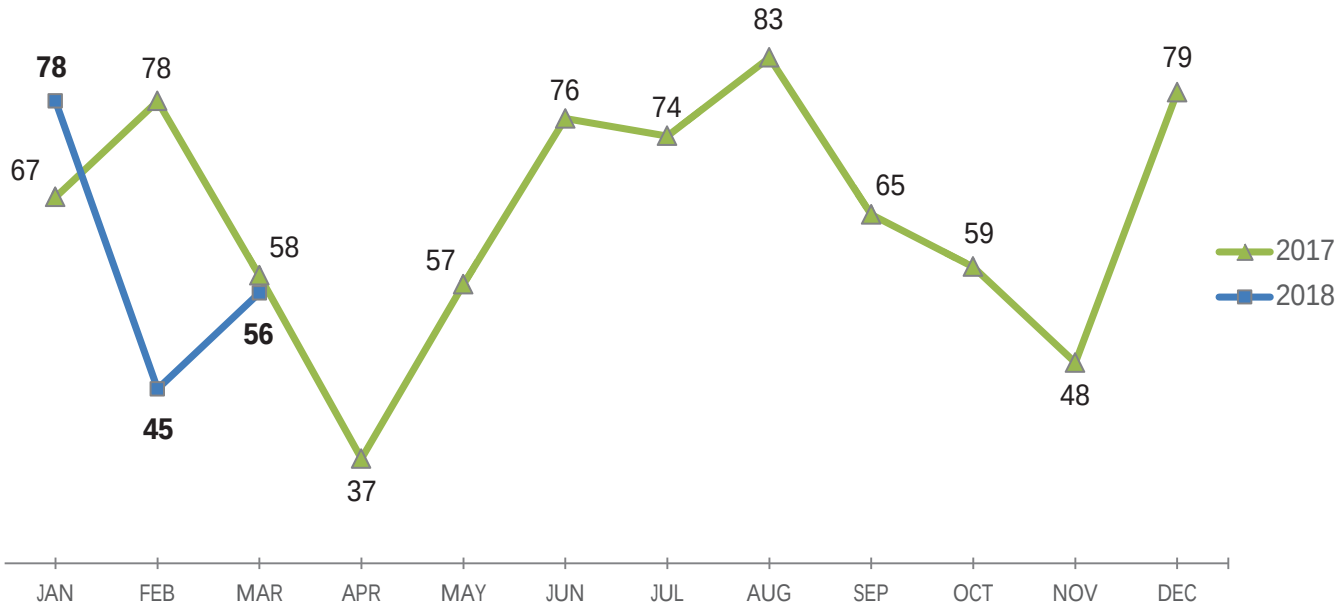
Project	# Units	Estimated Construction Start
8.10	12	April
8.11	39	April
9.1	35	April
9.2/3	68	July
9.4	34	August
9.5	16	September
9.6	41	November
9.7	23	January 2019
9.8	178	February 2019
9.9	134	February 2019
9.10	66	May 2019

MISSED APPROACH STATISTICS

Airport Noise Advisory Committee

April 18, 2018

Missed Approaches by Month



Missed Approaches by Year

Year	Total Missed Approaches	% Change	Total Arrivals	% Change	% of Total Arrivals that are Missed Approaches
2013	659	--	93,985	--	0.7
2014	637	(3.3%)	95,881	2%	0.7
2015	748	17.4%	96,856	1%	0.8
2016	771	3.1%	98,566	1.8%	0.8
2017	781	1.3%	104,725	6.2%	0.7
2018	179*	--	26,042	--	0.7

* Through March 31, 2018

MISSED APPROACH STATISTICS

Airport Noise Advisory Committee

April 18, 2018

Missed Approach Locations

Missed Approaches are safety-related operations and are not subject to FAA Noise Dot agreement

Date	Between 265 and ~~395~~ 295 Headings (Standard)	Left of 265	Right of 295	East of Airport	Day	Night
February 2018	42	3	0	1	38	7
March 2018	47	8	1	3	50	6

Missed Approaches by Location

Missed Approaches may fly through more than one location

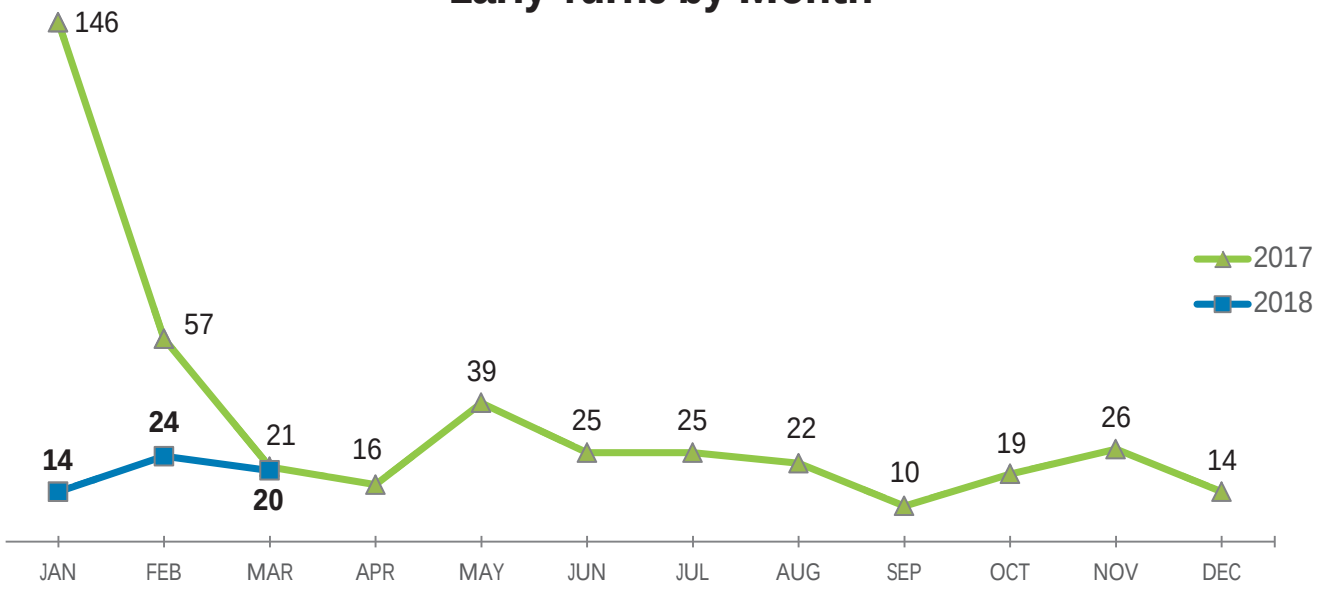
Date	Between ND #1 - ND #2	Between ND #2 - JETTI	Between JETTI – ND #3	Between ND #3 - ND #4
February, 2018	4	30	9	3
March, 2018	0	35	25	8

EARLY TURN STATISTICS

Airport Noise Advisory Committee

April 18, 2018

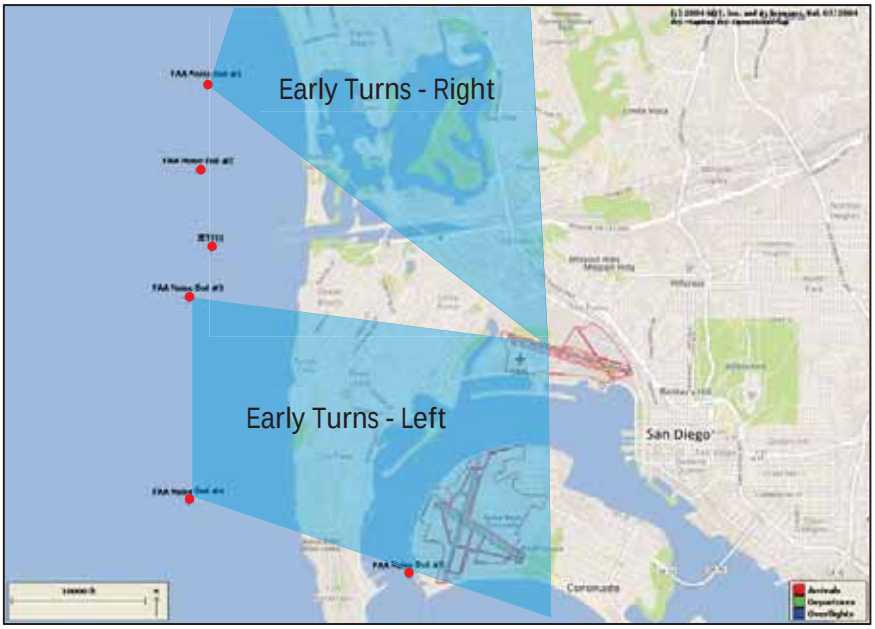
Early Turns by Month



Early Turns by Year

YEAR	Below 6,000 (ft.)	All altitudes
2013	200	829
2014	338	1,105
2015	467	1,293
2016	559	776
2017	327	420
2018	32*	58*

* Through March 31, 2018



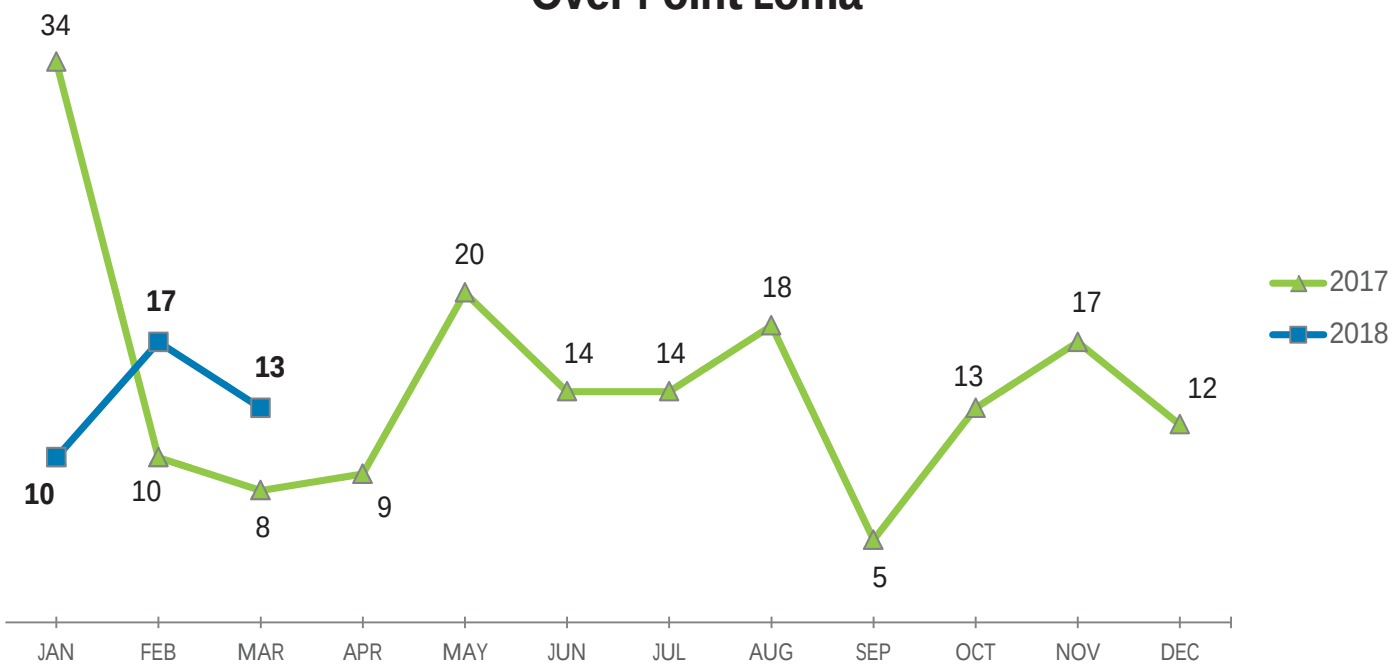
Departures that turn before reaching the FAA Noise Dots or turn back over the peninsula are considered Early Turns.

EARLY TURN STATISTICS

Airport Noise Advisory Committee

April 18, 2018

Over Point Loma



Early Turns by Operator (Feb – Mar 2018)

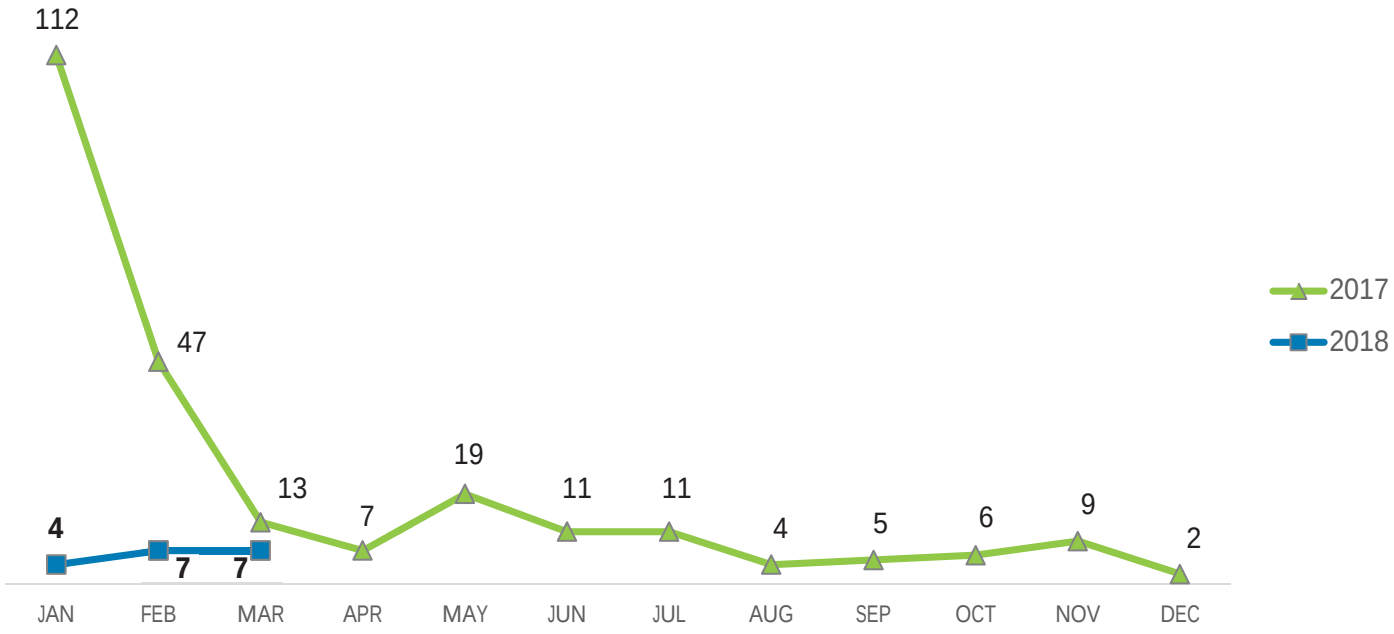
Count	Airline	Aircraft	Total Operator Departures
9	Southwest Airlines	B737, B738	5,913
7	General Aviation	--	1,358
4	United Airlines	B738, B739	1,490
3	American Airlines	A321, B738	1,409
2	Delta Air Lines	A321, B738	1,118
2	Frontier Airlines	A319, A320	204
2	jetBlue Airways	A321	297
1	Swift Air	B733	4

EARLY TURN STATISTICS

Airport Noise Advisory Committee

April 18, 2018

Over Mission Beach



Early Turns by Operator (Feb – Mar 2018)

Count	Airline	Aircraft	Total Operator Departures
10	General Aviation	--	1,358
2	SkyWest Airlines	CRJ7, E75L	1,752
1	jetBlue Airways	A320	297
1	Southwest Airlines	B737	5,913

EARLY TURN STATISTICS

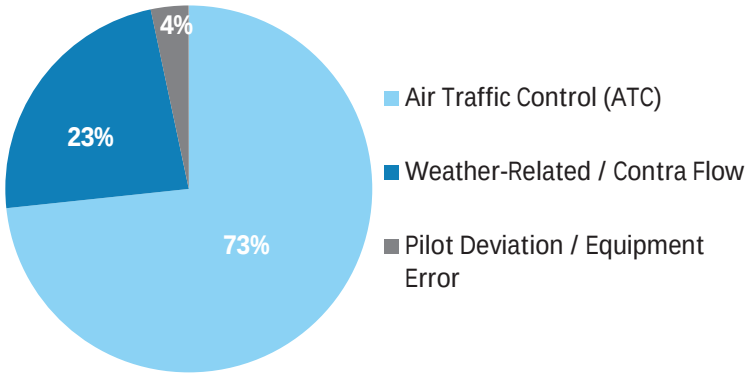
Airport Noise Advisory Committee

April 18, 2018

Over Point Loma (Early Turns Left)

Feb – Mar 2018

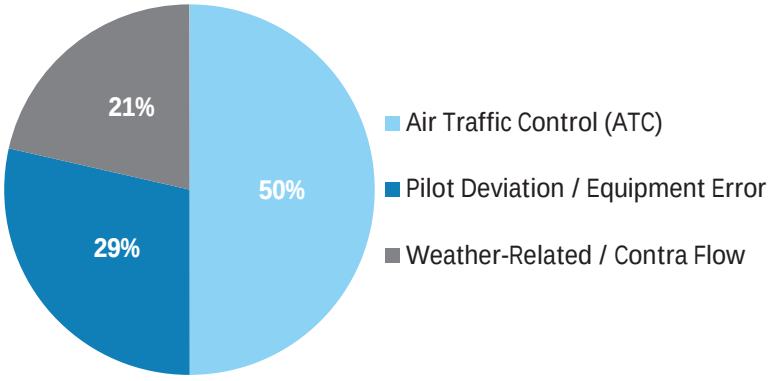
Reason	Count	%
Air Traffic Control (ATC)	22	73%
Weather-related / Contra Flow	7	23%
Pilot Deviation / Equipment Error	1	4%
TOTAL	**30**	**100%**



Over Mission Beach (Early Turns Right)

Feb – Mar 2018

Reason	Count	%
Air Traffic Control (ATC)	7	50%
Pilot Deviation / Equipment Error	4	29%
Weather-related / Contra Flow	3	21%
TOTAL	**14**	**100%**



Note: Cause breakdown is based on SDCRAA review of flight track replay and has not been confirmed by the Federal Aviation Administration.

SAN DIEGO INTERNATIONAL AIRPORT
LET'S GO.

FLIGHT INFO
PT. LOMA

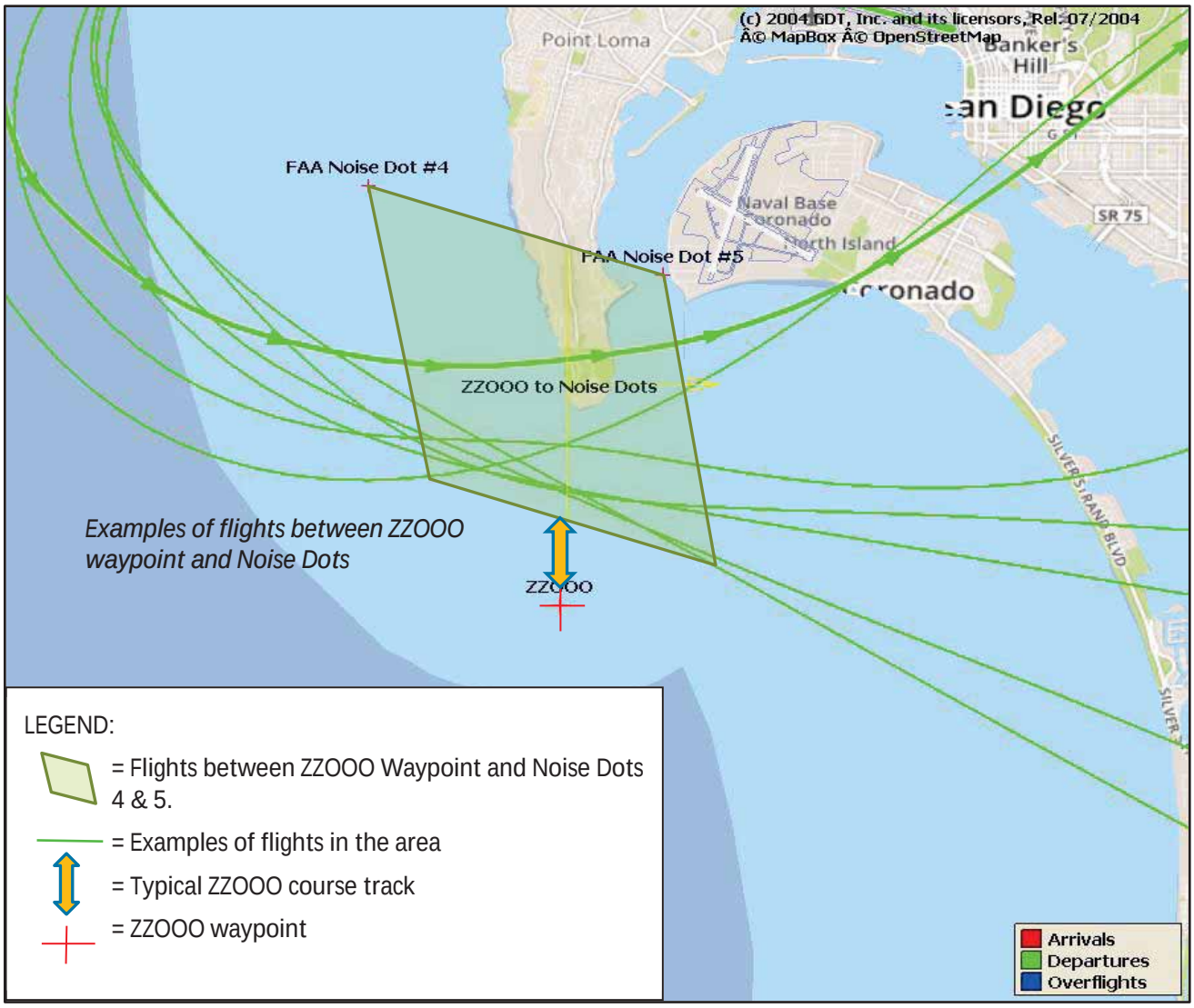
Airport Noise Advisory Committee

April 18, 2018

Flights Between ZZOOO Waypoint and Noise Dots

Note: These flights are all following published flight routes and are not off course

Date	Jets Turning Left	Between ZZOOO & Noise Dots	%
February, 2018	3,994	589	15%
March, 2018	4,643	657	14%



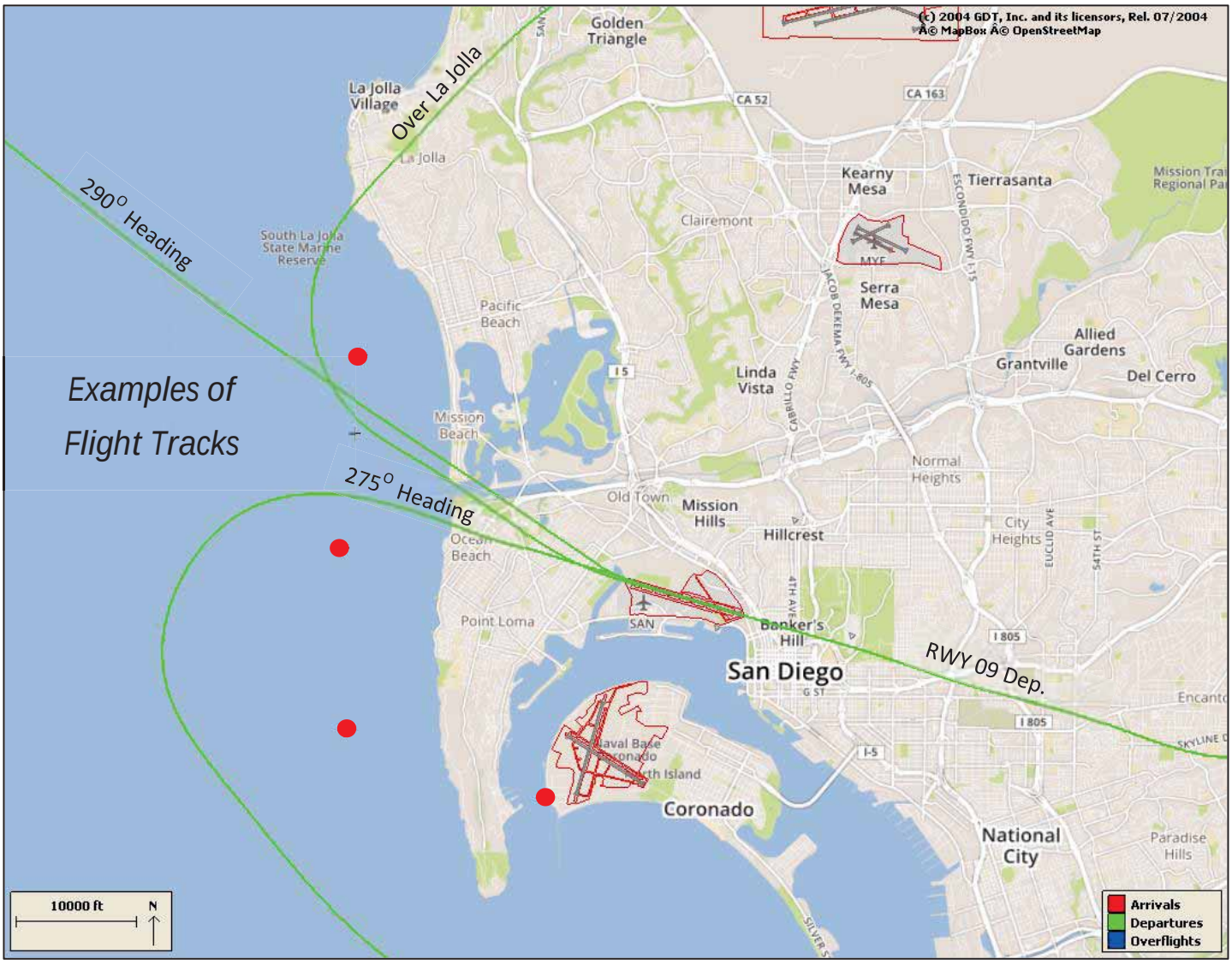
NIGHTTIME DEPARTURE STATISTICS

Airport Noise Advisory Committee

April 18, 2018

Nighttime Departures

Date	Runway Heading (275°)	Adhered to Nighttime Dep. (290°)	Runway 09 Dep.	Total (Jet)	Over La Jolla
February, 2018	4	257	--	261	12
March, 2018	8	460	6	474	12



CURFEW VIOLATION REVIEW PANEL

Airport Noise Advisory Committee

April 18, 2018

Curfew Violations for February - March 2018

Date	Time	Flight ID	Aircraft	Penalty Status
02/11/2018	01:11	jetBlue Airways 530	A320	Local Mechanical
02/12/2018	23:34	jetBlue Airways 530	A320	$20,000
02/16/2018	23:54	Frontier Airlines 1746	A320	$2,000
02/25/2018	23:39	Alaska Airlines 785	B738	Local Mechanical
02/27/2018	00:04	United Airlines 1916	B738	Local Mechanical
03/03/2018	23:54	jetBlue Airways 90	A321	$20,000
03/22/2018	23:57	American Airlines 726	A321	Penalty to be determined on 6/6/18

Annual Curfew Violations

Year	Total Curfew Violations
2014	47
2015	55
2016	84
2017	72
2018	12*

*Through March 31, 2018

Annual Fines Assessed

Year	Fines Assessed
2014	$ 178,000
2015	$ 152,165
2016	$ 564,000
2017	$ 376,000
2018	$ 60,000*

*Through March 31, 2018

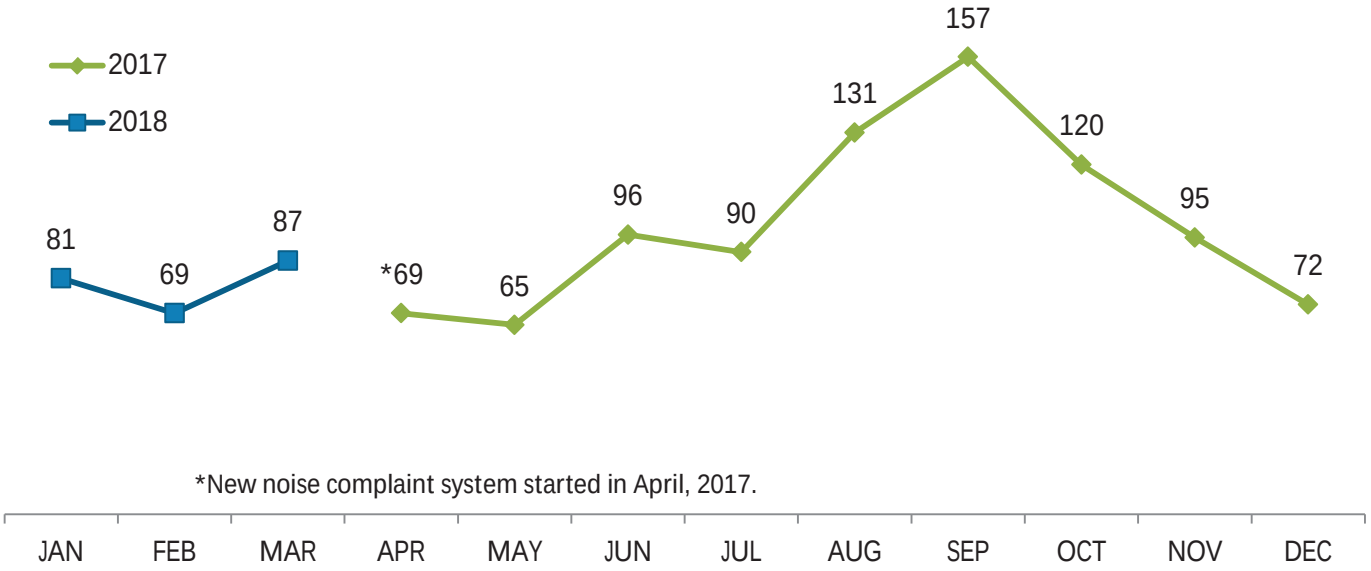
NOISE COMPLAINT STATISTICS

Airport Noise Advisory Committee

April 18, 2018

Household Complaints

Through March 31, 2018



Complaint Locations (February – March 2018)

Neighborhood	Number of Households
La Jolla – 92037	39
Pt. Loma – 92106	21
OB/Sunset Cliffs – 92107	19
Mission Beach/PB 92109	5
North Park - 92104	3
Encanto - 92114	3
Other (less than 2 Households)	14
Total	**104**

NOISE COMPLAINT STATISTICS

Airport Noise Advisory Committee

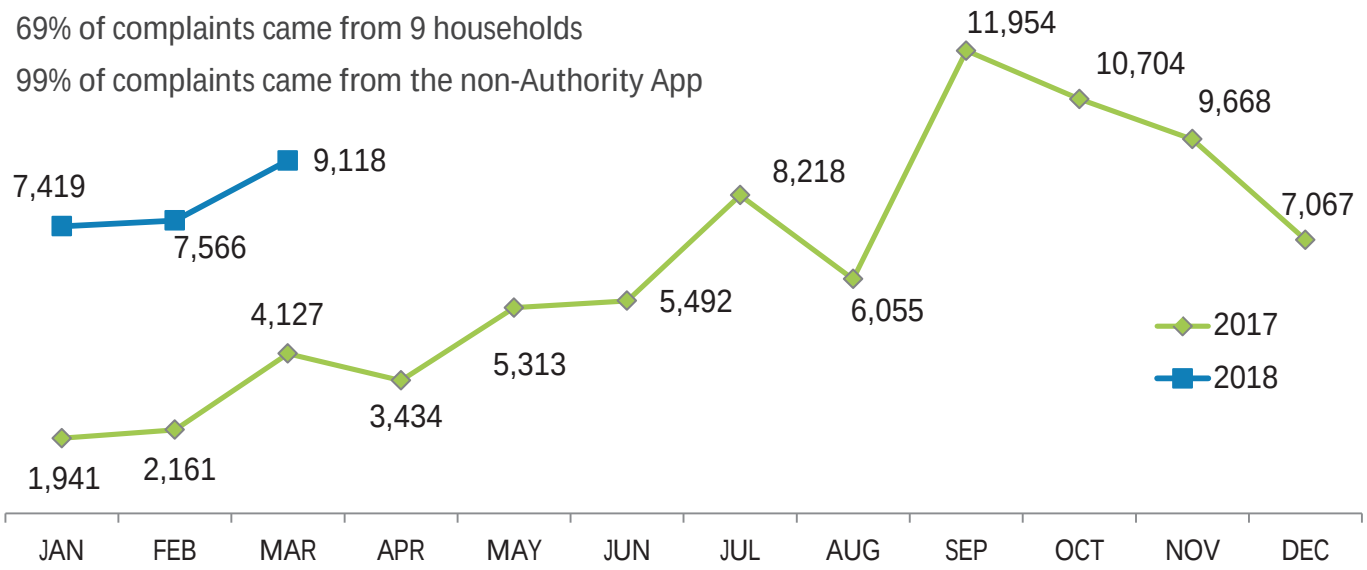
April 18, 2018

Total Complaints

Through March 31, 2018

February - March 2018:

- 69% of complaints came from 9 households
- 99% of complaints came from the non-Authority App



Complaint Reason Breakdown
February – March 2018

Reason	Number of Complaints	Percentage
Loud Aircraft	16,537	99.12%
Curfew Violation	11	0.06%
Suspected Off-Course	28	0.16%
Low Flying	63	0.38%
Increased Flight Volume	16	0.10%
Early Turn	15	0.09%
Missed Approach	11	0.07%
Other	3	0.02%

SAN DIEGO INTERNATIONAL AIRPORT
AIRPORT NOISE MITIGATION

February 14, 2018

Fly Quiet Report

4th Quarter 2017

Prepared by:

Sjohnna Knack
Program Manager, Airport Noise Mitigation
Planning & Environmental Affairs
San Diego County Regional Airport Authority

1.0 Summary of 4th Quarter 2017 Report

Each quarter, the Airport Noise Mitigation Office will publish this report that will outline the trends on how quietly each operator is flying in and out of San Diego International Airport (SDIA). In Section 2.0 you will find a detailed description of the elements within the Fly Quiet Program.

Specific trends that were observed in this report include:

- Overall, the total scores in the summary report stayed the same compared to 3rd Quarter 2017.
- Jazz Aviation and Delta Air Lines had fewer curfew violations and increased their curfew violations score by 2 points.
- American Airlines, Alaska Airlines, Allegiant Air and Spirit Airlines decreased their overall score by having more curfew violations than the previous quarter.
- United Airlines increased their overall score by having fewer early turns and by incorporating quieter aircraft into their fleet.
- Delta Air Lines and Southwest Airlines decreased their overall score by having more early turns than the previous quarter.

2.0 Fly Quiet Program Description

The purpose of the San Diego International Airport's (SDIA) Fly Quiet Program is to encourage individual commercial operators to operate as quietly as possible in the San Diego area by acknowledging those operators that attempt to follow the noise abatement goals of the airport. The program creates a participatory atmosphere of the operators working with the airport and community to actively reduce noise by grading an operator's performance and by making the scores available to the public.

The Fly Quiet Program offers a dynamic venue for reviewing noise abatement initiatives by praising and publicizing active participation rather than a system that admonishes violations from essentially voluntary procedures.

2.1 Goals

The overall goal of the Fly Quiet Program is to influence commercial operators to operate as quietly as possible in the San Diego area by acknowledging those operators that make the greatest effort. Monitoring, collecting, and analyzing comprehensive amounts of operational and noise data highlights both airport trends and individual operator performance on specific noise abatement programs. Fly Quiet Program data is quantified and translated into quarterly reports for each operator rated in the Fly Quiet Program at SDIA.

2.2 Reports

Fly Quiet reports communicate results in a clear, understandable format on a scale of 0-10, zero being poor and ten being the best. (*Note: an operator can have a score higher than 10 in the Curfew Violations element only, if they had no violations and also cancelled flights to avoid a Curfew Violation*). This allows for an easy comparison between operators over time. Individual operator scores are computed and reports are generated each quarter. These quantitative scores allow operator management and flight personnel to measure exactly how they stand compared to other operators and how their proactive involvement can positively reduce noise in the San Diego area. The overall airport score is tracked to measure the overall improvement over time.

2.3 Elements

Currently the Fly Quiet Program scores commercial operators on the following three elements that will be described in detail in the next section.

- Curfew Violations
- Early Turns
- Fleet Noise Quality

2.3.1 Curfew Violations

SDIA has an existing curfew violations system in place as part of the Airport Use Regulations that may result in a monetary fine if an operator violates the curfew. All departures are restricted from 11:30 p.m. to 6:30 a.m. Stage 2 aircraft departures are restricted from 10:00 p.m. to 7:00 a.m. Any aircraft may arrive at SDIA 24 hours a day.

While the authority to control aircraft in flight at airports lies solely with the FAA, prior to 1990 airports could adopt regulations to restrict hours of operations for certain aircraft types or for the airport as a whole. SDIA's curfew violations system was developed in 1989. The program is mandatory; however, there are exemptions for lifeguard and emergency flights; compliance is at the discretion of the pilot or operator. Penalties may be waived if there are local issues impacting safety (such as weather or maintenance of the aircraft).

The curfew violations system includes administrative fines: $2,000 for the first violation by a particular operator in a compliance period; $6,000 for the second violation in a compliance period, and, $10,000 for the third violation in a compliance period. Additionally, a multiplier is added to reflect the number of violations from the previous compliance period. Each compliance period six (6) calendar months, starting in January and July. The Fly Quiet Program will formalize working with the operators to reduce the number of curfew violations of departing aircraft. The airport's noise monitoring system documents which operator and aircraft type depart between the curfew times, so the point value can be accurately assigned for each operation.

Calculation of Rating

An operator that does not log any curfew violations during the time period is automatically assigned a score of 10 points. Every operator starts with a score of 10 points. Scores are then adjusted based upon the following:

Number of Curfew Violations that are Penalized (Fined):

> If the Airport's Curfew Violation Review Panel (CVRP) determines that a flight violated curfew and will be penalized, the score will be adjusted by subtracting 2 points.

Number of Curfew Violations that are Not Penalized (Fined):

> If the Airport's Curfew Violation Review Panel (CVRP) determines that a flight violated curfew and will not be penalized, the score will be adjusted by subtracting 1 point.

Additionally, 1 point will be added to any operator's score that cancelled a flight in order to avoid violating curfew.

2.3.2 Early Turns (FAA Noise Dots)

Aircraft departing SDIA using Runway 27 are asked to fly runway heading until reaching a defined distance in an attempt to keep aircraft from making extraneous noise, over residential areas, while turning. These areas are defined as the FAA Noise Dots. A corridor/gate was established based on the FAA Noise Dots and departing aircraft that do not pass through that corridor/gate, regardless of the time of day, are defined as turning early. The Fly Quiet Program will formalize working with the operators to reduce the number of early turns of departing aircraft.

Calculation of Rating

An operator that does not log any early turns during the time period is automatically assigned a score of 10 points. Every operator starts with a score of 10 points. Scores are then normalized based upon the number of early turns within 1,500 feet and greater than 1,500 feet from any noise dot and the percent of total operations by airline and then adjusted based upon the following.

- Subtract 0.5 Point Per Early Turn Within 1,500 Feet from Any Noise Dot
- Subtract 1.0 Point Per Early Turn Greater Than 1,500 Feet from Any Noise Dot

Missed approaches are not to be counted as early turns as 1) they are not departures; and 2) the pilots are being given specific instructions by ATC that must be followed for safety reasons. Early turns because of specific instructions given by ATC (such as being provided in certain weather conditions) are not to be counted as early turns as the pilots are following them for safety reasons.

2.3.3 Fleet Noise Quality

The Fleet Noise Quality score evaluates the noise contribution of each operator's fleet as it actually operates at SDIA. Operators generally own a variety of aircraft types and schedule them according to both operational and marketing considerations. The Fly Quiet Program assigns a higher rating or grade to operators operating quieter, new generation aircraft, while operators operating older, louder technology aircraft would rate lower. The goal of this measurement is to fairly compare operators – not just by the fleet they own, but by the frequency that they schedule and fly particular aircraft into SDIA.

Historically airports have rated fleet noise quality by the relative percentage of Stage 2 vs. Stage 3 operations[1]. Since the completion of the phase out of Stage 2 aircraft mandated by the Airport Noise and Capacity Act (ANCA) of 1990, all aircraft in the U.S. over 75,000 pounds meet the more stringent Stage 3 standards. However, within the allowable Stage 3 criteria, there is a wide range of noise levels, and the Federal Aviation Administration (FAA) does not distinguish between these aircraft types. There is a Stage 4 aircraft type, applicable to aircraft with a type certification issued after January 1, 2006; all aircraft manufactured today that are over 12,500 pounds meet these Stage 4 standards. The majority of the commercial aircraft fleet remains Stage 3.

The method used here bases an operator's Fleet Noise Quality Rating on aircraft manufacturer noise certification data. For each aircraft type, 14 CFR Part 36 specifies allowable noise levels at three measurement locations: approach, departure, and sideline[2]. 14 CFR Part 36 allowable noise limits

[1] Stages 1-4 were established by a Federal Aviation Regulation called 14 CFR Part 36 which mandated the allowable noise levels for the manufacture of aircraft. Over time both Stage 1 and Stage 2 aircraft have been phased out of operation in the U.S. as a result of subsequent federal regulations.

[2] 14 CFR Part 36 standards are measured in terms of the single event metric Effective Perceived Noise Level (EPNdB), which accounts for different frequency characteristics of noise, such as low frequency.

increase with weight, so that larger aircraft, serving more passengers, are not penalized as compared to smaller types.

The rating method for the Fleet Noise Quality rating totals the difference between each aircraft's certified noise levels at all three measuring points and the Stage 3 standard for that weight and number of engines. Aircraft with the greatest number of decibels below Stage 3 threshold are rated the best.

Similar to and consistent with 14 CFR Part 36, the Fleet Noise Quality Rating allows for higher noise levels for larger aircraft. It is important to credit larger aircraft serving more passengers, because they offer more air service in fewer flights and fewer total noise than multiple operations in smaller aircraft types.

Calculation of Rating

The Fleet Noise Quality rating calculation takes the takeoff, approach and sideline noise difference of the allowable Part 36 Stage 3 limit from the Part 36 certification level and then produces a total. Table 1 demonstrates this methodology for a B737-700 aircraft where the difference between the Stage 3 limit and certificated value is 4.1 dB on takeoff, 3.8 dB on approach and 6.8 dB for sideline noise; for a total difference of 14.7 dB.

Table 1 – B737-700 Aircraft Example

B737-700 Aircraft	Takeoff (EPNdB)	Approach (EPNdB)	Sideline (EPNdB)	Total dB Below Stage 3 Limits
Part 36 Stage 3 Limit	91.2	99.7	96.6	-
Part 36 Certification Level	87.1	95.9	89.8	-
Difference	4.1	3.8	6.8	**14.7**

The Part 36 certification database for commercial aircraft is very extensive in listing many different noise values for variations on the same aircraft type depending on weight, flap settings, engine types, and other specifications. The Fleet Noise Quality rating methodology looks at each operator at SDIA and their specific aircraft fleet. Certifications values for each aircraft type are averaged together per operator.

Table 2 provides an example for commuting the Fleet Noise Quality Sub Score. Airline A has four different aircraft types in their fleet that operate at SDIA. The percent of total operations for each aircraft type is calculated based upon the total quarterly operations per aircraft type and the total number of operations for Operator A. The average certification values for each aircraft type are calculated from the Part 36 certification database for commercial aircraft and the resulting values are then calculated per aircraft type. The Fleet Noise Quality Sub Score is calculated by summing all of the resulting values per aircraft type.

Table 2 – Example for Computing the Fleet Noise Quality Sub Score

Operator A - Aircraft Types	Total Quarterly Operations	Percent of Total Operations	Average Total dB Below Stage 3 Limits	Resulting Value
B733	3066	21.1%	9.4	21.1% * 9.4 = 1.99
B735	14	0.1%	11.3	0.1% * 11.3 = 0.01
B737	10046	69.2%	13.9	69.2% * 13.9 = 9.62
B738	1386	9.6%	12.5	9.6% * 12.5 = 1.19
Total	14512	100%	**Fleet Noise Quality Sub Score**	**12.8**

The Fleet Noise Quality Score for each operator is determined based upon what range the sub score falls under. The following is a list of the Fleet Noise Quality Scores and corresponding sub score ranges.

- 0 Points; Sub Score between 0 and 5.
- 1 Point; Sub Score between 5 and 10.
- 2 Points; Sub Score between 10 and 11.
- 3 Points; Sub Score between 11 and 12.
- 4 Points; Sub Score between 12 and 13.
- 5 Points; Sub Score between 13 and 14.
- 6 Points; Sub Score between 14 and 15.
- 7 Points; Sub Score between 15 and 16.
- 8 Points; Sub Score between 16 and 17.
- 9 Points; Sub Score between 17 and 18.
- 10 Points; Sub Score 18 or Greater.

In the example of Table 2, the sub score is 12.8 and therefore the operator's final Fleet Noise Quality score would be 4.

3.0 Reports

The following pages contain the individual element reports and summary report for the 4th Quarter of 2017. The Fly Quiet Summary Report contains the total Fly Quiet score and ranking of the commercial operators.

Curfew Violations Report

San Diego International Airport's Fly Quiet Program
4th Quarter 2017 (October 1, 2017 - December 31, 2017)

Higher Number=Higher Score

Airline Code		Number of Operations	Percent of Total Operations	Number of Curfew	Number of Curfew Violations Not	Number of Cancellations	Curfew Violations
SWA	Southwest	18,336	38.2%	0	2	3	11.0
FFT	FRONTIER	680	1.4%	0	0	1	11.0
JAL	JAPAN AIRLINES	184	0.4%	0	0	0	10.0
HAL	HAWAIIAN	188	0.4%	0	0	0	10.0
ROU	rouge	170	0.4%	0	0	0	10.0
WJA	WESTJET	136	0.3%	0	0	0	10.0
AAY	allegiant air	222	0.5%	1	0	0	8.0
AAL	American Airlines	4,474	9.3%	0	6	0	4.0
NKS	spirit	998	2.1%	1	0	0	8.0
UAL	UNITED	5,198	10.8%	0	1	2	11.0
DAL	DELTA	3,232	6.7%	0	1	3	12.0
ASA	Alaska	4,244	8.8%	1	3	0	5.0
VRD	america	1,028	2.1%	0	1	0	9.0
BAW	BRITISH AIRWAYS	172	0.4%	0	0	0	10.0
SCX	suncountry airlines	212	0.4%	0	0	0	10.0
JBU	jetBlue AIRWAYS	846	1.8%	1	1	0	7.0
FDX	FedEx	666	1.4%	0	0	0	10.0
UPS	ups	250	0.5%	0	0	0	10.0
CPZ	Compass Airlines	1,930	4.0%	0	0	0	10.0
SKW	SkyWest	4,368	9.1%	0	0	0	10.0
GTI		128	0.3%	0	0	0	10.0
JZA	Jazz	332	0.7%	0	0	0	10.0
CFG	Condor	4	0.0%	0	0	0	10.0
Non Scheduled Operators				3	0	0	-
Total		47,998	100%	7	15	9	-
Average		-	-	-	-	-	9.4

Early Turns Report

San Diego International Airport's Fly Quiet Program
4th Quarter 2017 (October 1, 2017 - December 31, 2017)

Higher Number=Higher Score

Airline Code		Number of Operations	Percent of Total Operations	Number of Early Turns	Percent of Early Turns from Number of Departures	Early Turns Score
SWA	Southwest	18,336	38.2%	11	0.1%	4.5
FFT	FRONTIER	680	1.4%	1	0.3%	9.5
JAL	JAPAN AIRLINES	184	0.4%	0	0.0%	10.0
HAL	HAWAIIAN AIRLINES	188	0.4%	0	0.0%	10.0
ROU	rouge	170	0.4%	0	0.0%	10.0
WJA	WESTJET	136	0.3%	0	0.0%	10.0
AAY	allegiant air	222	0.5%	0	0.0%	10.0
AAL	American Airlines	4,474	9.3%	6	0.3%	6.5
NKS	spirit	998	2.1%	1	0.2%	9.5
UAL	UNITED	5,198	10.8%	2	0.1%	9.0
DAL	DELTA	3,232	6.7%	8	0.5%	5.0
ASA	Alaska	4,244	8.8%	3	0.1%	8.5
VRD	Virgin america	1,028	2.1%	0	0.0%	10.0
BAW	BRITISH AIRWAYS	172	0.4%	0	0.0%	10.0
SCX	sun country airlines	212	0.4%	0	0.0%	10.0
JBU	jetBlue AIRWAYS	846	1.8%	0	0.0%	10.0
FDX	FedEx	666	1.4%	1	0.3%	9.0
UPS	ups	250	0.5%	1	0.8%	9.0
CPZ	Compass Airlines	1,930	4.0%	0	0.0%	10.0
SKW	SkyWest AIRLINES	4,368	9.1%	1	0.0%	9.5
GTI	ATLAS AIR	128	0.3%	0	0.0%	10.0
JZA	Jazz	332	0.7%	2	1.2%	9.0
CFG	Condor	4	0.0%	0	0.0%	10.0
Non Scheduled Operators				22	-	-
Total		47,998	100%	59	-	-
Average		-	-	-	-	9.1

Fleet Noise Quality Report

San Diego International Airport's Fly Quiet Program

4th Quarter 2017 (October 1, 2017 - December 31, 2017)

Higher Number=Higher Score

Airline Code		Number of Operations	Percent of Total Operations	Sub Score	Fleet Noise Quality Score
SWA	Southwest	18,336	38.2%	14.1	6.0
FFT	FRONTIER	680	1.4%	16.3	8.0
JAL	JAPAN AIRLINES	184	0.4%	27.7	10.0
HAL	HAWAIIAN AIRLINES	188	0.4%	17.4	9.0
ROU	rouge	170	0.4%	11.2	3.0
WJA	WESTJET	136	0.3%	14.1	6.0
AAY	allegiant air	222	0.5%	16.6	8.0
AAL	American Airlines	4,474	9.3%	11.2	3.0
NKS	spirit	998	2.1%	16.5	8.0
UAL	UNITED	5,198	10.8%	15.0	7.0
DAL	DELTA	3,232	6.7%	13.3	5.0
ASA	Alaska	4,244	8.8%	13.0	5.0
VRD	virgin america	1,028	2.1%	16.1	8.0
BAW	BRITISH AIRWAYS	172	0.4%	15.1	7.0
SCX	sun country airlines	212	0.4%	13.2	5.0
JBU	jetBlue AIRWAYS	846	1.8%	16.6	8.0
FDX	FedEx	666	1.4%	14.2	6.0
UPS	ups	250	0.5%	16.0	8.0
CPZ	Compass Airlines	1,930	4.0%	9.4	1.0
SKW	SkyWest AIRLINES	4,368	9.1%	11.4	3.0
GTI	Atlas Air	128	0.3%	14.3	6.0
JZA	Jazz	332	0.7%	14.2	6.0
CFG	Condor	4	0.0%	13.7	5.0
Total		47,998	100%	-	-
Average		-	-	14.8	6.1

Higher Number=Higher Score
Summary Report Ranks by "Quietest" to "Loudest" Operator

Summary Report
San Diego International Airport's Fly Quiet Program
4th Quarter 2017 (October 1, 2017 - December 31, 2017)

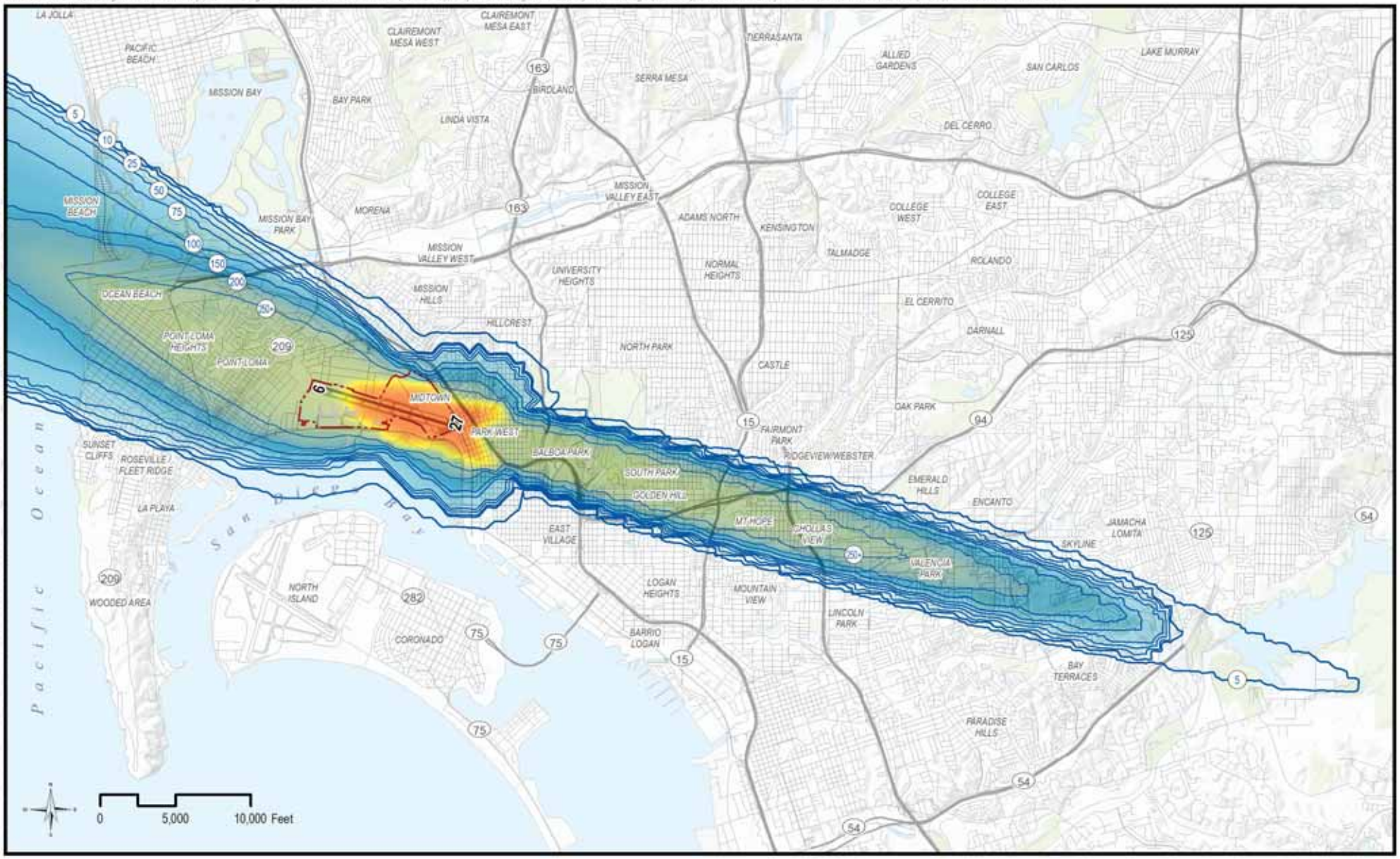
Airline Code		Number of Operations	Percent of Total Operations	Curfew Violations Score	Early Turns Score	Fleet Noise Quality Score	Total Fly Quiet Score	Ranking
JAL	Japan Airlines	184	0.4%	10.0	10.0	10.0	30.0	1
HAL	Hawaiian	188	0.4%	10.0	10.0	9.0	29.0	2
FFT	Frontier	680	1.4%	11.0	9.5	8.0	28.5	3
UAL	United	5,198	10.8%	11.0	9.0	7.0	27.0	4
VRD	Virgin America	1,028	2.1%	9.0	10.0	8.0	27.0	4
UPS	UPS	250	0.5%	10.0	9.0	8.0	27.0	4
BAW	British Airways	172	0.4%	10.0	10.0	7.0	27.0	4
AAY	Allegiant Air	222	0.5%	8.0	10.0	8.0	26.0	8
WJA	WestJet	136	0.3%	10.0	10.0	6.0	26.0	8
GTI	Atlas Air	128	0.3%	10.0	10.0	6.0	26.0	8
NKS	Spirit	998	2.1%	8.0	9.5	8.0	25.5	11
JBU	JetBlue Airways	846	1.8%	7.0	10.0	8.0	25.0	12
FDX	FedEx	666	1.4%	10.0	9.0	6.0	25.0	12
JZA	Jazz	332	0.7%	10.0	9.0	6.0	25.0	12
SCX	Sun Country Airlines	212	0.4%	10.0	10.0	5.0	25.0	12
CFG	Condor	4	0.0%	10.0	10.0	5.0	25.0	12
ROU	Air Canada Rouge	170	0.4%	10.0	10.0	3.0	23.0	17
SKW	SkyWest	4,368	9.1%	10.0	9.5	3.0	22.5	18
DAL	Delta	3,232	6.7%	12.0	5.0	5.0	22.0	21
SWA	Southwest	18,336	38.2%	11.0	4.5	6.0	21.5	20
CPZ	Compass Airlines	1,930	4.0%	10.0	10.0	1.0	21.0	19
ASA	Alaska	4,244	8.8%	5.0	8.5	5.0	18.5	22
AAL	American Airlines	4,474	9.3%	4.0	6.5	3.0	13.5	23

Attached are two final items requested in ANAC Recommendation #12:

- Number of Events Above (NA) Contours (NA 65 and NA 70)
- 55 dB Contours (4th Qtr. 2017)

Should anyone have any questions regarding these two graphics, please contact our offices at (619) 400-2309.

Data Sources: San Diego International Airport; San Diego Association of Governments (SANDAG); City of San Diego and County of San Diego (SanGIS); Environmental Systems Research Institute, Inc. (ESRI); U.S. Census Blocks 2010



SAN DIEGO INTERNATIONAL AIRPORT
LET'S GO.

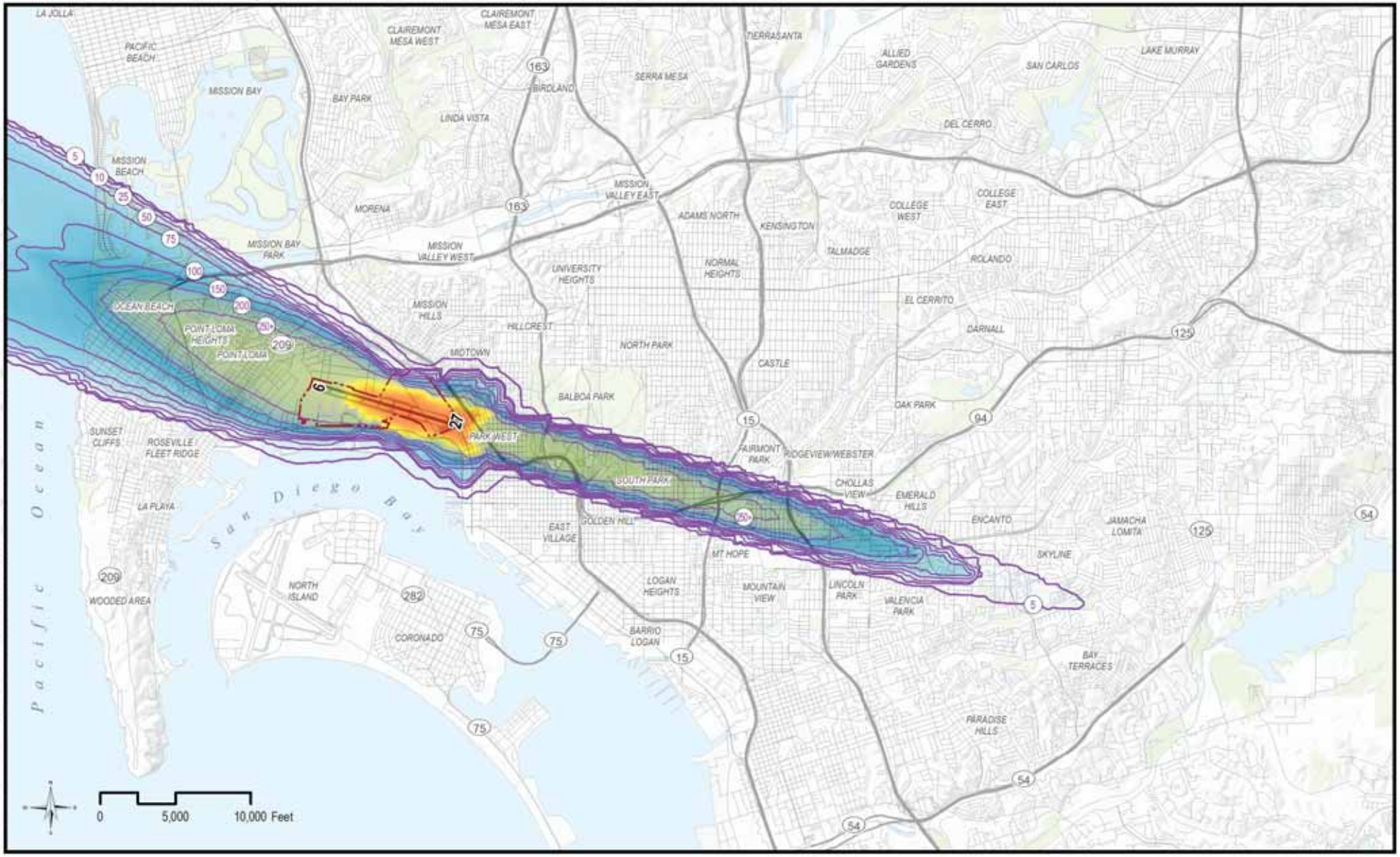
NA65 Contours
Note: NA – Number Above the Specified Lmax Level
Airport Property
Runway
Roads
River / Stream

NA Value
0
280
560

2017 SAN NA65 Contours

Based on Annual Average Day

Data Sources: San Diego International Airport; San Diego Association of Governments (SANDAG); City of San Diego and County of San Diego (SanGIS); Environmental Systems Research Institute, Inc. (ESRI); U.S. Census Blocks 2010



SAN DIEGO INTERNATIONAL AIRPORT
LET'S GO.

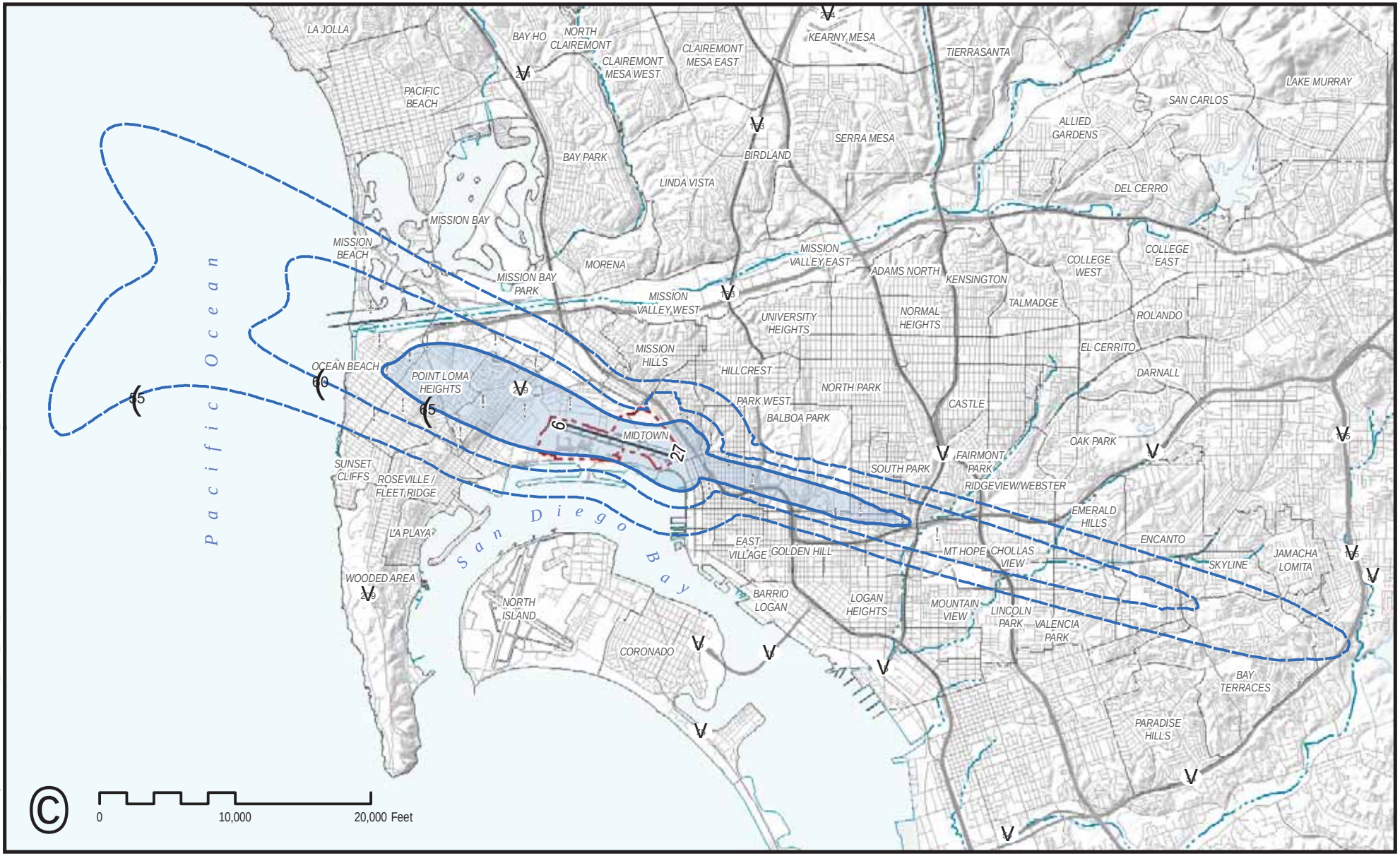
NA70 Contours
Note: NA – Number Above the Specified Lmax Level
Airport Property
Runway
Roads
River / Stream

NA Value
0 280 560

2017 SAN NA70 Contours

Based on Annual Average Day

Data Sources: San Diego International Airport; San Diego Association of Governments (SANDAG); City of San Diego and County of San Diego (SanGIS); Environmental Systems Research Institute, Inc. (ESRI); U.S. Census Blocks 2010



Path: G:\Projects\308XX\308200_SAN_NEM_Recertification\GIS\308970_002_003_SAN_2017Q4_55dB_CNEL_Contour.mxd

SAN DIEGO INTERNATIONAL AIRPORT
LET'S GO.

- CNEL Contours (65 dB)
  The FAA Only Considers the 65 CNEL as a "Significant Impact"
- CNEL Contours (55-60 dB)
- Area Inside 65 dB CNEL Contour
- Airport Property
- Runway
- RMT Site Location
- Roads
- River / Stream

2017 Fourth Quarter
Community Noise Equivalent Level (CNEL) Contours

hmmh

MEETING SUMMARY

Airport Noise Advisory Committee

Date|Time 02/21/2018 4:00 p.m.

Meeting called to order by: Heidi Gantwerk

In Attendance

Name	Affiliation	In Attendance
Captain (Ret.) Jack Bewley	Airline Pilot (Retired)	Yes
Jessica Mier	Representative for Congresswoman Susan Davis	Yes
Jessica Turner	County of San Diego Airports	Yes
Bruce Williams	Representative for San Diego City Council, District 2	Yes
Carl "Rick" Huenefeld	MCRD	No*
Susan Ranft	Downtown Community Planning Council	Yes
Kirk Hansen	Community at Large	Yes
David Swarens	Greater Golden Hill Planning Committee	Yes
Deborah Watkins	Mission Beach Precise Planning Board	Yes
Fred Kosmo	Peninsula Community Planning Board	Yes
Tom Gawronski	Ocean Beach Planning Board	Yes
Victoria White	City of San Diego, Planning Department	Yes
Richard Sullivan/ Tracey Johnson	FAA	No*
Kiera Galloway	Representative for Congressman Scott Peters	Yes
Chris Cole	Uptown Planners	Yes
Justin Cook	Acoustical Engineer	Yes
Vacant	Commercial Airline Pilot Representative	No
Danny Melgoza	Representative for San Diego County Supervisor Greg Cox	Yes
Randall LaRocco	Midway/Pacific Highway Community Planning Board	No
Melissa Hernholm-Danzo	Peninsula Steering Committee	Yes
Sjohnna Knack	Authority Staff	Yes
Heidi Gantwerk	Facilitator	Yes

*Members contacted staff ahead of time and are considered excused.

1. Welcome and Introductions

Heidi Gantwerk, facilitator for the Airport Noise Advisory Committee (ANAC), opened the meeting at 4:00 p.m. Introductions were made around the table. Ms. Gantwerk began by asking for approval of the December meeting minutes, which were approved with two edits.

Presentation Items

Note: A copy of the information in the presentation can be found via our website using the following link:

http://www.san.org/Airport-Authority/Meetings-Agendas/ANAC

Quieter Home Program Update – Craig Mayer, Deputy Program Manager, Quieter Home Program, provided an update on the Program's status. There are currently just over 600 applicants on the wait list, amounting to roughly 1,300 units. For December and January, 28 units were completed, and an estimated 300 will be completed by end of 2018. Total homes completed through January 31st are just under 3,500.

Mr. Mayer mentioned we are still working with the FAA on a small number of unresolved items, namely, eligibility of commercial zoning. There are a total of seven properties in process that are commercially zoned, which amounts to 67 units. There are 21 properties on the wait list representing 131 units that are currently ineligible based on their commercial zoning.

Question from ANAC: David Swarens asked if there's a way to differentiate between the types of zoned properties?

Mr. Mayer indicated that they are working with the FAA to determine what information could be provided to see if any of these properties are eligible.

Question from ANAC: Fred Kosmo asked if projection of completing 300 homes a year is still realistic?

Mr. Mayer confirmed that he has construction forecasts that indicate we will finish 300 homes in calendar year 2018.

Mr. Kosmo reported hearing complaints that that construction completed on their houses over last 5-7 years is starting to fall apart, and they're not very happy, and asked if the noise office had received similar complaints?

Mr. Mayer stated that is not typical, but if owners are having concerns with their products they should contact airport staff at (619) 400-2309.

Presentation on ANAC Recommendation #8, Alternative Funding for QHP – Mr. Mayer presented his research, which included contacting a consultant who deals with funding for airport projects. In speaking with this consultant, he was told that airports have been seeking alternative funding for residential sound insulation programs, with little success. Federally, there is the American Reinvestment and Recovery Act, but there has been no success in obtaining funding when programs have reached out.

On State level, CalTrans indicated to that their limited funding is predominantly reserved for general aviation projects. On a local level, Mr. Mayer spoke with City of San Diego Community Development Block Grant Program, and was told that money is typically used for low-income housing redevelopment, and very unlikely that those funds could be used.

Comment from ANAC: Kiera Galloway (Congressman Peters), said her office and other federal offices are happy to write letters of support if grants are found that would be helpful, or if there are federal grants that clarification is needed.

Missed Approach Statistics – Roman Lanyak, Noise Specialist, presented on missed approaches. Overall, there were 781 missed approaches in 2017, a 1.3% increase over 2016. Total operations and total arrivals increased by 6.2%, so the increase in missed approaches is significantly less than the increase in overall operations. There were 13 non-compliant missed approaches in December 2017, and eight in January 2018.

Further analysis was conducted as to where and when missed approaches are flown. The majority of missed approaches are flown between Noise Dot # 2 and #3, and fly a normal (published) departure path.

Early Turns – Mr. Lanyak explained the definition of early turns. There was a decrease in December of 84%, and 90% in January as compared to those months in 2016. This significant change is attributed to new satellite-based departure procedures and efforts working with airlines and general aviation. There were 420 early turns in 2017, a decrease of 45%, over 2016.

Reasons for early turns: Most were initiated by ATC, which was confirmed by listening to voice recorders. All tracks have been reviewed internally but the reasons have not been confirmed to be caused by the FAA. Some early turns are attributed to pilot error. A few are flown close to noise dots, within about 1,500 feet.

Only 7% of departing aircraft flew are not flying all the way to the ZZOOO waypoint. Most fly within a mile of waypoint ZZOOO. Mr. Lanyak noted that those departures are flying published departure procedures and are considered on-course.

Nighttime departures after 10 p.m. predominantly comply with the 290-departure heading. There were four in December 2017 and three in January 2018 that flew a runway heading of 275. There was one early turn in contraflow operations which was turned left to give way to arriving aircraft on Runway 09.

Question from ANAC: Deborah Watkins asked what the low number of nighttime violations is attributed to.

Mr. Lanyak said ATC gives pilots instruction to fly the 290-heading and they are complying.

Question from ANAC: David Swarens asked what the correlation is with curfew and nighttime departures?

Mr. Lanyak said nighttime departures begin at 10:00 p.m. and most aircraft depart between 10:00 and 11:30.

Question from ANAC: Fred Kosmo asked about flights between ZZOOO waypoint, shouldn't the number be compared to only flights that turn left?

Mr. Lanyak said that he could take a look at that request and only show left turning aircraft (presumably using the ZZOOO departure) for that statistic.

Question from ANAC: Melissa Hernholm-Danzo asked at what point is the airport at capacity for conducting missed approaches?

Ms. Knack said missed approaches will occur regardless of capacity if it is required for safety. There's no correlation between capacity and number of missed approaches.

Chris Cole commented that he sees no correlation between missed approaches, early turns, and total complaints.

Ms. Knack said they have found correlation between missed approaches that are flying a non-compliant route, because those are more concerning to the public. The FAA does receive the information. Unlike early turns, where operators are contacted, they are not contacted on missed approaches because they are done for safety.

Curfew Violations – Jimmy Vazques, Noise Specialist, presented on curfew violations, for the month of December 2017 and January 2018. Increases in violations in December, were mostly due to inclement weather between 28th-30th.

Noise Complaints – Based on the ANAC recommendations, total noise complaints are now included as part of the statistics. 99% of complaints filed come from a non-authority app, which only allows for loud aircraft as a complaint option. Overall, nine households generated 65% of complaints for December-January 2017.

Update on ANAC Recommendations – Ms. Knack presented the status update for ANAC recommendations. On October 2017, committee approved 21 recommendations, and she presented an action plan to address the recommendations to Airport Authority Board in December 2017. The action plan was accepted.

Recommendation #1 is to increase curfew penalties. We are still researching and plan to work with internal legal counsel to determine the next course of action.

Recommendation #5 was completed as radio communications with SoCal TRACON can be streamed online via LiveATC.net.

Recommendation #7 requested to add new community members on ANAC from Pacific Beach, La Jolla and Point Loma Heights. A comprehensive review of the board policy and modifications to that policy have been made to modify the committee structure, which will be taken to the Board in March for approval.

The membership modifications include adding four new members to ANAC from outside of 65 decibel contour. Three would come from City of San Diego Planning Groups because that is where the vast majority flight tracks are. One member will be selected to represent communities in East County or in the unincorporated county.

Neighborhoods will be selected based on communities that have the highest number of households submitting complaints over the past 12-months.

Based on 2017 data, the three communities being recommended are Mission Beach, Pacific Beach and La Jolla within the City of San Diego and La Mesa, representing the area outside of the City.

The community group members within the 65 dB contour would remain and terms for those individuals would be two-year, with one two-year reappointment, for a possible total of four years. The terms for members outside the 65 dB contour would be two-year terms, at which time airport staff would review the prior year's noise complaint locations.

It's also being proposed to add aviation industry members, one from National Business Aircraft Association (NBAA), who represents all general aviation aircraft; two airline positions, an active pilot, and an airline flight operations person; and one from Economic Development Council, or someone representing tourism.

Currently, there are 13 members. The modifications would bring the total number of voting members to 18, with the voting majority community members. A modification is being made to the position of the general community member; to be rotated from east and west representation, with a two-year term, starting with west and switching every two years. Ex-officio members are not affected.

We want greater clarity in purpose of ANAC, and the role of members, so our recommendation is create a work plan at the June meeting to guide ANAC for the year.

We're proposing that the last meeting of this membership be April, where we would recognize two long-term members that will no longer be on the new membership.

Ms. Knack continued with Recommendation #2, to use curfew penalties to pay for noise. She gave an overview of the noise budget showing that more than the amount of money collected from curfew penalties is used to run the noise office.

Recommendation #12 included a group of items requesting more data presented to ANAC. Most of the data has already been incorporated.

Ms. Knack explained there are exceptions, where it was not feasible to provide the data.

With regards to the independent audit of web-based flight tracking system, she explained that they are currently out to bid for a software upgrade to the current noise monitoring system. The new system will require rigorous State of California Acceptance Testing. Results will be presented to this committee.

For the recommendation to implement a way to educate the community to use FlightTracker, she indicated staff is considering a range of approaches, including having staff visit local libraries on a quarterly basis to provide demonstrations on the use of web-based flight tracking.

Staff continues to work on the recommendation to report on time above metric and the 55 dB contour.

Update on Part 150 process – Ms. Knack reached out to the FAA (Airports Division) to start the Part 150 update Request for Proposal, since FAA has to accept every milestone of the process. The FAA expressed that procedures outside the 65 could not be studied within the Part 150 document. To address those procedures, The Airport Authority will conduct a separate study and use Airport Authority funding.

We are collecting applications to build the Citizen Advisory Committee and the Technical Advisory Committee, and kick that off with flight procedure analysis, then roll right into Part 150. CAC applications are open till February 28; we currently have 27 applications for a 15-member committee. Selection will be made in early March. The first Citizen Meeting is March 22, at 2 p.m. First Technical Meeting is April 5, at 1:30 p.m.

Question from ANAC: What is the separate study for under 65?

Ms. Knack said Federal funding will only cover a Part 150 study if it's within the 65 contour. Therefore, that task will be pulled out and paid for by the airport. CAC and TAC will work on both studies simultaneously.

2. Public Comment

Gary Wonacott, representing the Mission Beach Town Council. He referred to the comment that there were no procedural changes made to nighttime departures pre and post Next Gen, and Ms. Watkins' question, why have right turns decreased? The answer was because these planes are now following published procedures, which is the PADRZ SID. He believes that there has been a change pre and post Next Gen, that the nighttime departures are also following the PADRZ SID. He said he's been looking at the tracker, and confirmed virtually every nighttime departure goes over the WNFLD waypoint, so those procedures follow the PADRZ SID. He said last week, Mission Beach Town Council passed a resolution requesting the San Diego County Regional Airport Authority to make a formal request of the FAA for them to do a parallel or concurrent 41A study. He believes a formal request is important to minimize the time. So, having them on board, getting a formal request into them so they can start it, he thinks would minimize the amount of time to get these procedures evaluated.

Gillian Ackland said she thinks there has been a increase in the number of flights and the loudness of flights. She said she's said it many times before, but it really is the truth. And with the expansion of the aircraft here, this is only going to increase. What we find is that we have a very strong emphasis on complaints. Making complaints is not easy, it's very stressful. If you miss one that means something didn't get counted, etc. So, when we see a decrease in the number of complaints, she doesn't think that is really any indication of the quietness or the less aircraft or etcetera, it's just business as usual, and people are getting really tired and fed up with the continual problem. She said she's glad to see we are making a little progress with doing something about it. She wants to emphasize the number of complaints is not correlated in any way to noise and aircraft movement. She said also, one of the aspects that has never been discussed is the health aspect. There have been studies for 10-20 years; a recent one was given in the February 6 edition of the Washington Post, where the link between aircraft noise, or noise in general—but for us it's mostly aircraft noise—and health is considerable. It really ends up in cardiovascular disease, etcetera. They cite two people; one is from Germany, and another from Mayo Clinic, so they are both cardiologists. In addition to the noise, there is also the air particle pollution. That again has not been addressed and continues to be a problem. She said she has seen a big increase in the last 18 months of aircraft with—of the pollution. She sees it in her house. She sees that the dirt and the dust is no longer just ordinary dust you can easily wipe away. It's now black and ingrained, and this is from the aircraft. She thinks we still have a big problem, and we need a great deal of work on it.

Marie Knox lives in La Mesa, not around Mt. Helix. She lives by Helix High School off University Avenue. She's been a resident of La Mesa since 1986. She and her husband bought their home in 2015. There were never any airplanes flying over their home. And in November of last year, it started where there are 737s flying continuously over their home, the yard, the neighborhood. She came here to report that La Mesa is being severely impacted with the new changes in flight path. She and her husband can't enjoy their yard. They can't leave their windows open when the weather is nice because the noise comes through their double-paned windows. It rattles their house. It starts at 6:30 in the morning, and continues till 11:30 at night. Sometimes the flights are farther away, sometimes they're directly over their home and very low. They come on either side of the house, and she's noticed it all over La Mesa. She knows she's not the only one that has a home in La Mesa that has 737s flying over. When she goes to the store, she sees them there, and when she's in the village having outside coffee with a friend, they're flying over there. When she's at the park with her dog, they're flying over. She wants to make it known that it is severely impacting us, and she hopes something can be done. She addressed La Mesa City Council this month, and all members agree that they've noticed an increase, and that something needs to be done.

Bea Pardo dittoed all of that.

Action items:

Ms. Gantwerk asked for nominations of two members of ANAC to serve on Technical Advisory Committee, both for Flight Procedure Analysis and for the Part 150 study update. After multiple nominations, there was a motion and approval to nominate Deborah Watkins and Melissa Hernholm-Danzo to be representatives on the Technical Advisory Committee.

3. Approval of December 2017 Minutes

Minutes were approved at beginning of meeting.

4. New Business

There was no new business.

5. Next Meeting/Adjourn

The location of the April 18 meeting is being changed to San Diego Holiday Inn Bayside. Further information will be provided.

Meeting was adjourned.