



Meeting Packet

Regular Meeting

Meeting No. 316

Wednesday, December 5, 2018 - 7:00 p.m.

David Chetcuti Community Room – Millbrae City Hall
450 Poplar Avenue – Millbrae, CA 94030

Note: To arrange an accommodation under the Americans with Disabilities Act to participate in this public meeting, please call (650) 363-1853 at least 2 days before the meeting date.

AGENDA

1. Call to Order / Roll Call / Declaration of a Quorum Present

ACTION

Elizabeth Lewis, Roundtable Chairperson / James A. Castaneda, AICP, Roundtable Coordinator

2. Introduction of Guests and Members of the FAA

INFORMATION

Elizabeth Lewis, Roundtable Chairperson

3. Public Comments on Items NOT on the Agenda

INFORMATION

Speakers are limited to two minutes. Roundtable members cannot discuss or take action on any matter raised under this item.

CONSENT AGENDA

All items on the Consent Agenda are approved/accepted in one motion. A Roundtable Representative can make a request, prior to action on the Consent Agenda, to transfer a Consent Agenda item to the Regular Agenda. Any items on the Regular Agenda may be transferred on the Consent Agenda in a similar manner.

4. Airport Director's Reports for September and October 2018

ACTION

1. September 2018 Airport Director's Report

pg. 15

REGULAR AGENDA

5. Discussion with FAA Regarding Questions Provided from Roundtable Chair, email to FAA dated November 9, 2018

INFORMATION

FAA Representative(s)

Justin Cook, Roundtable Technical Consultant

1. Email from Roundtable Chairperson dated November 9, 2018

pg. 21

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REGULAR AGENDA (continued)

6. SFO Updates

INFORMATION

Ivar Satero, Director – San Francisco International Airport

7. Follow-Up from November 8, 2018 Technical Working Group meeting

INFORMATION

Justin Cook, Roundtable Technical Consultant

James Castañeda, Roundtable Coordinator

8. Adoption of the Ground-Based Noise Ad-Hoc Subcommittee Scope of Work

ACTION

Ricardo Ortiz, Roundtable Vice-Chairperson

1. Scope of Work pg. 24

9. Consideration and Adoption of Roundtable FY 2018-2019 Budget

ACTION

James Castañeda, Roundtable Coordinator

1. Proposed FY 2018-2019 Budget pg. 27

10. Adoption of a Resolution Recognizing Sue Digre

ACTION

Elizabeth Lewis, Roundtable Chairperson

OTHER MATTERS

11. Aviation Noise News and Updates

INFORMATION

Justin Cook, Roundtable Technical Consultant

12. Member Communications / Announcements

INFORMATION

Roundtable Members and Staff

13. Adjourn

ACTION

Elizabeth Lewis, Roundtable Chairperson

Correspondences / Additional Reports

1. FAA Instrument Flight Procedures (IFP) Information Gateway Review pg. 35
2. San Francisco Short-Term Noise Monitoring Report pg. 39
3. Roundtable Request for an Extension of Public Comment (PIRAT), 11/5/2018 pg. 51
4. Aviation Noise News and Updates slides pg. 53



Welcome

The Airport/Community Roundtable is a voluntary committee that provides a public forum to address community noise issues related to aircraft operations at San Francisco International Airport. The Roundtable encourages orderly public participation and has established the following procedure to help you, if you wish to present comments to the committee at this meeting.

- You must fill out a Speaker Slip and give it to the Roundtable Coordinator at the front of the room, as soon as possible, if you wish to speak on any Roundtable Agenda item at this meeting.
- To speak on more than one Agenda item, you must fill out a Speaker Slip for each item.
- The Roundtable Chairperson will call your name; please come forward to present your comments.

The Roundtable may receive several speaker requests on more than one Agenda item; therefore, each speaker is limited to two (2) minutes to present his/her comments on any Agenda item unless given more time by the Roundtable Chairperson. The Roundtable meetings are recorded. Copies of the audio file can be made available to the public upon request. Please contact the Roundtable Coordinator for any request.

Roundtable Meetings are accessible to people with disabilities. Individuals who need special assistance or a disability-related modification or accommodation to participate in this meeting, or who have a disability and wish to request an alternative format for the Agenda, Meeting Notice, Meeting Packet, or other writings that may be distributed at the meeting, should contact the Roundtable Coordinator at least two (2) working days before the meeting at the phone or e-mail listed below. Notification in advance of the meeting will enable Roundtable staff to make reasonable arrangements to ensure accessibility to this meeting.

AIRPORT/COMMUNITY ROUNDTABLE OFFICERS & STAFF

Chairperson:

ELIZABETH LEWIS
Representative, Town of Atherton
elewis@ci.atherton.ca.us

Vice-Chairperson:

RICARDO ORTIZ
Representative, City of BURLINGAME
rortiz@burlingame.org

Roundtable Coordinator:

JAMES A. CASTAÑEDA, AICP
County of San Mateo
Planning & Building Department
jcastaneda@sforoundtable.org



About the Roundtable

The Airport/Community Roundtable was established in May 1981, by a Memorandum of Understanding (MOU), to address noise impacts related to aircraft operations at San Francisco International Airport (SFO). The Airport is owned and operated by the City and County of San Francisco, but it is located entirely within San Mateo County. This voluntary committee consists of 22 appointed and elected officials from the City and County of San Francisco, the County of San Mateo, and several cities in San Mateo County (see attached Membership Roster). It provides a forum for the public to address local elected officials, Airport management, FAA staff, and airline representatives, regarding aircraft noise issues. The committee monitors a performance-based aircraft noise mitigation program, as implemented by Airport staff, interprets community concerns, and attempts to achieve additional noise mitigation through a cooperative sharing of authority brought forth by the airline industry, the FAA, Airport management, and local government officials. The Roundtable adopts an annual Work Program to address key issues. In 2017, the Roundtable is scheduled to meet on the first Wednesday of the following months: February, April, June, August, October and December. Regular Meetings are held on the first Wednesday of the designated month at 7:00 p.m. at the **David Chetcuti Community Room at Millbrae City Hall, 450 Poplar Avenue, Millbrae, California** unless noted. Special Meetings and workshops are held as needed. The members of the public are encouraged to attend the meetings and workshops to express their concerns and learn about airport/aircraft noise and operations. For more information about the Roundtable, please contact Roundtable staff at (650) 363-1853.

POLICY STATEMENT

The Airport/Community Roundtable reaffirms and memorializes its longstanding policy regarding the “shifting” of aircraft-generated noise, related to aircraft operations at San Francisco International Airport, as follows:

“The Airport/Community Roundtable members, as a group, when considering and taking actions to mitigate noise, will not knowingly or deliberately support, encourage, or adopt actions, rules, regulations or policies, that result in the “shifting” of aircraft noise from one community to another, when related to aircraft operations at San Francisco International Airport.”

(Source: Roundtable Resolution No. 93-01)

FEDERAL PREEMPTION, RE: AIRCRAFT FLIGHT PATTERNS

The authority to regulate flight patterns of aircraft is vested exclusively in the Federal Aviation Administration (FAA). Federal law provides that:

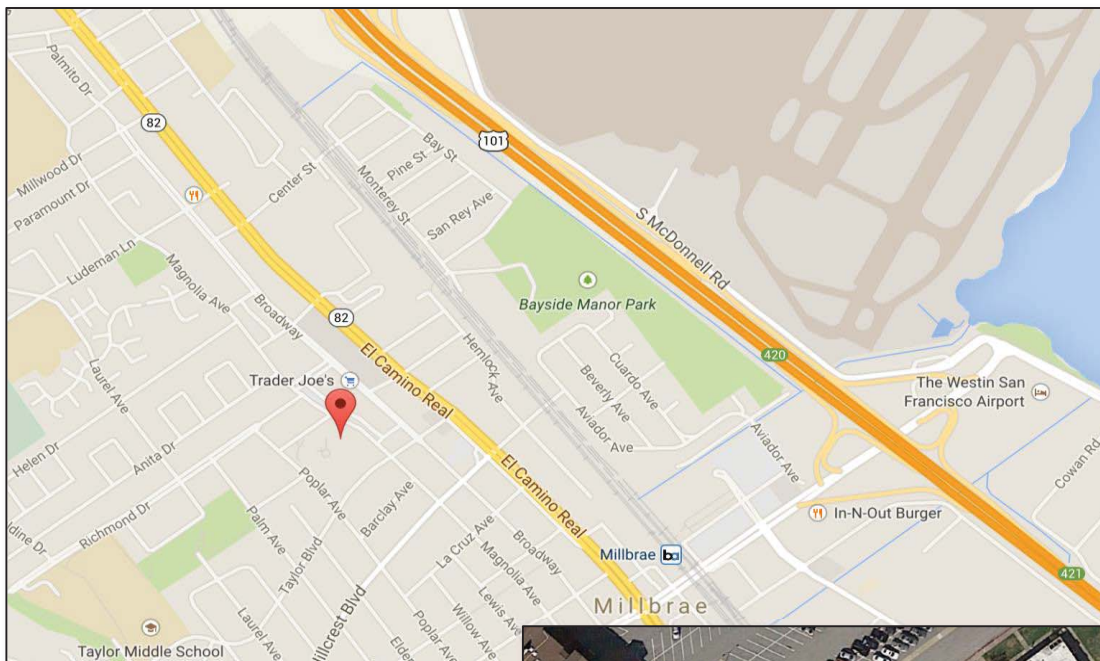
“No state or political subdivision thereof and no interstate agency or other political agency of two or more states shall enact or enforce any law, rule, regulation, standard, or other provision having the force and effect of law, relating to rates, routes, or services of any air carrier having authority under subchapter IV of this chapter to provide air transportation.”

(Source: 49 U.S.C. A. Section 1302(a)(1)).

Meeting Location

**David Chetcuti Community Room
450 Poplar Avenue - Millbrae, CA 94030**

Access through Millbrae Library parking lot on Poplar Avenue





Member Roster

December 2018

**CITY AND COUNTY OF SAN FRANCISCO
BOARD OF SUPERVISORS**

Ahsha Safai, Supervisor

**CITY AND COUNTY OF SAN FRANCISCO MAYOR'S
OFFICE**

David Takashima, (Appointed)

**CITY AND COUNTY OF SAN FRANCISCO AIRPORT
COMMISSION REPRESENTATIVE**

Ivar Satero, Airport Director (Appointed)

Alternate: Doug Yakel, Public Information Officer

**COUNTY OF SAN MATEO
BOARD OF SUPERVISORS**

Dave Pine, Supervisor

Alternate: Don Horsley, Supervisor

**CITY/COUNTY ASSOCIATION OF GOVERNMENTS
AIRPORT LAND USE COMMITTEE (ALUC)**

Adam Kelly, ALUC Chairperson (Appointed)

TOWN OF ATHERTON

Elizabeth Lewis, Mayor

Alternate: Bill Widmer, Council Member

CITY OF BELMONT

Douglas Kim, Council Member

Alternate: Eric Reed, Council Member

CITY OF BRISBANE

Terry O'Connell, Council Member

Alternate: Madison Davis, Council Member

CITY OF BURLINGAME

Ricardo Ortiz, Council Member

CITY OF DALY CITY

Glenn Sylvester, Mayor

CITY OF FOSTER CITY

Sam Hindi, Council Member

CITY OF HALF MOON BAY

Harvey Rarback, Council Member

TOWN OF HILLSBOROUGH

Alvin Royse, Council Member

Alternate: Shawn Christianson, Council Member

CITY OF MENLO PARK

Peter Ohtaki, Council Member

CITY OF MILLBRAE

Anne Oliva, Council Member

Alternate: Ann Schneider, Council Member

CITY OF PACIFICA

Sue Digre, Council Member

Alternate: John Keener, Mayor

TOWN OF PORTOLA VALLEY

Ann Wengert, Council Member

Alternate: Maryann Derwin, Council Member

CITY OF REDWOOD CITY

Janet Borgens, Council Member

CITY OF SAN BRUNO

Marty Medina, Council Member

Alternate: Rico Medina, Council Member

CITY OF SAN CARLOS

Ron Collins: Council Member

Alternate: Matt Grocott, Council Member

CITY OF SAN MATEO

Diane Papan, Council Member

CITY OF SOUTH SAN FRANCISCO

Mark Addiego, Council Member

Alternate: Pradeep Gupta, Council Member

TOWN OF WOODSIDE

Chris Shaw, Council Member

Alternate: Deborah Gordon, Council Member

ROUNDTABLE ADVISORY MEMBERS

AIRLINES/FLIGHT OPERATIONS

Captain James Abell, United Airlines

Glenn Morse, United Airlines

FEDERAL AVIATION ADMINISTRATION

Thann McLeod, NORCAL TRACON

Tony DiBernardo, FAA Sierra-Pacific District

ROUNDTABLE STAFF

James A. Castañeda, AICP, Roundtable Coordinator

Gene Reindel, Technical Consultant (HMMH)

Justin Cook, Technical Consultant (HMMH)

Adam Scholten, Technical Consultant (HMMH)

**SAN FRANCISCO INTERNATIONAL AIRPORT
NOISE ABATEMENT STAFF**

Bert Ganoung, Noise Abatement Manager

David Ong, Noise Abatement Systems Manager

Nastasja von Conta, Senior Noise Abatement Specialist

Anthony Carpeneti, Noise Abatement Specialist

Annelises Taing, Noise Abatement Specialist

Aircraft Noise Abatement Office

Glossary of common Acoustic and Air Traffic Control terms

A

ADS-B - Automatic Dependent Surveillance – Broadcast – ADS-B uses ground based antennas and in-aircraft displays to alert pilots to the position of other aircraft relative to their flight path. ADS-B is a key element of NextGen.

AGL – Above Ground Level, is a height measured with respect to the ground.

Air Carrier - A commercial airline with published schedules operating at least five round trips per week.

Air Taxi – An aircraft certificated for commercial service available for hire on demand.

ALP - Airport Layout Plan – The official, FAA approved map of an airport's facilities.

ALS – Approach Lighting System - Radiating light beams guiding pilots to the extended centerline of the runway on final approach and landing.

Ambient Noise Level – The existing background noise level characteristic of an environment.

Approach Lights – High intensity lights located along the approach path at the end of an instrument runway. Approach lights aid the pilot as he transitions from instrument flight conditions to visual conditions at the end of an instrument approach.

APU - Auxiliary Power Unit – A self-contained generator in an aircraft that produces power for ground operations of the electrical and ventilation systems and for starting the engines.

Arrival – The act of landing at an airport.

Arrival Procedure - A series of directions on a published approach plate or from air traffic control personnel, using fixes and procedures, to guide an aircraft from the en route environment to an airport for landing.

Arrival Stream – A flow of aircraft that are following similar arrival procedures.

ARTCC – Air Route Traffic Control Center - A facility providing air traffic control to aircraft on an IFR flight plan within controlled airspace and principally during the enroute phase of flight.

ATC - Air Traffic Control - The control of aircraft traffic, in the vicinity of airports from control towers, and in the airways between airports from control centers.

ATCT – Air Traffic Control Tower - A central operations tower in the terminal air traffic control system with an associated IFR room if radar equipped, using air/ground communications and/or radar, visual signaling and other devices to provide safe, expeditious movement of air traffic.

Avionics – Airborne navigation, communications, and data display equipment required for operation under specific air traffic control procedures.

Altitude MSL –Aircraft altitude measured in feet above mean sea level.

B

Backblast - Low frequency noise and high velocity air generated by jet engines on takeoff.

Base Leg – A flight path at right angles to the landing runway. The base leg normally extends from the downwind leg to the intersection of the extended runway centerline.

C

CDA - Continuous Descent Approach, see also OPD.

Center – See ARTCC.

Cloud Ceiling – The height above the earth's surface of the lowest layer of clouds that is reported as "broken" or "overcast." Is reported in feet AGL.

CNEL – Community Noise Equivalent Level - A noise metric required by the California Airport Noise Standards for use by airport proprietors to measure aircraft noise levels. CNEL includes an additional weighting for each event occurring during the evening (7:00pm – 9:59pm) and nighttime (10:00pm – 6:59am) periods to account for increased sensitivity to noise during these periods. Evening events are treated as though there were three and nighttime events are treated as though there were ten. This results in a 4.77 and 10 decibel penalty for operations occurring in the evening and nighttime periods, respectively.

CNEL Contour - The "map" of noise exposure around an airport as expressed using the CNEL metric. A CNEL contour is computed using the FAA-approved Integrated Noise Model (INM), which calculates the aircraft noise exposure near an airport.

Commuter Airline – Operator of small aircraft (maximum size of 30 seats) performing scheduled (maximum size of 30 seats) performing service between two or more points.

D

Decibel (dB) - In sound, decibels measure a scale from the threshold of human hearing, 0 dB, upward towards the threshold of pain, about 120-140 dB. Because decibels are such a small measure, they are computed logarithmically and cannot be added arithmetically. An increase of ten dB is perceived by human ears as a doubling of noise.

Delay Vectors - When ATC assigns an aircraft a heading that takes it off course, before bringing it back on course. Delay vectors may be used for many reasons such as for aircraft traffic or to create spacing between aircraft.

dBA - A-weighted decibels adjust sound pressure towards the frequency range of human hearing.

dBC - C-weighted decibels adjust sound pressure towards the low frequency end of the spectrum. Although less consistent with human hearing than A- weighting, dBC can be used to consider the impacts of certain low frequency operations.

Decision Height – The height at which a decision must be made during an instrument approach either to continue the approach or to execute a missed approach.

Departure – The act of an aircraft taking off from an airport.

Departure Procedure – A published IFR departure procedure describing specific criteria for climb, routing, and communications for a specific runway at an airport.

Displaced Threshold - A threshold that is located at a point on the runway other than the physical beginning.

Aircraft can begin departure roll before the threshold, but cannot land before it.

DME - Distance Measuring Equipment - Equipment (airborne and ground) used to measure, in nautical miles, a slant range distance of an aircraft from the DME navigational aid.

DNL - Day/Night Average Sound Level - The daily average noise metric in which that noise occurring between 10:00 p.m. and 7:00 a.m. is penalized by 10 dB. DNL is often expressed as the annual-average noise level.

DNL Contour - The "map" of noise exposure around an airport as expressed using the DNL metric. A DNL contour is computed using the FAA-approved Integrated Noise Model (INM), which calculates the aircraft noise exposure near an airport.

Downwind Leg – A flight path parallel to the landing runway in the direction opposite the landing direction.

Duration - The length of time in seconds that a noise event lasts. Duration is usually measured in time above a specific noise threshold.

E

En route – The portion of a flight between departure and arrival terminal areas.

Exceedance— Whenever an aircraft overflight produces a noise level higher than the maximum decibel value established for a particular monitoring site, the noise threshold is surpassed and a noise exceedance occurs. An exceedance may take place during approach, takeoff, or possibly during departure ground roll before lifting off.

F

FAA - The Federal Aviation Administration is the agency responsible for aircraft safety, movement and controls. FAA also administers grants for noise mitigation projects and approves certain aviation studies including FAR Part 150 studies, Environmental Assessments, Environmental studies, Environmental Assessments, Environmental Impact Statements, and Airport Layout Plans.

FAR – Federal Aviation Regulations are the rules and regulations, which govern the operation of aircraft, airways, and airmen.

FAR Part 36 – A Federal Aviation Regulation defining maximum noise emissions for aircraft.

FAR Part 91 – A Federal Aviation Regulation governing the phase out of Stage 1 and 2 aircraft as defined under FAR Part 36.

FAR Part 150 – A Federal Aviation Regulation governing noise and land use compatibility studies and programs.

FAR Part 161 – A Federal Aviation Regulation governing aircraft noise and access restrictions.

Final Approach – The last leg in an aircraft's approach to landing, when the aircraft is lined up with the runway and is descending for landing.

Fix – A geographical position determined by visual references to the surface, by reference to one or more NavAids, or by other navigational methods.

Fleet Mix – The mix or differing aircraft types operated at a particular airport or by an airline.

Flight Plan – Specific information related to the intended flight of an aircraft. A flight plan is filed with a Flight Service Station or Air Traffic Control facility.

FMS – Flight Management System - a specialized computer system in an aircraft that automates a number of in-flight tasks, which reduces flight crew workload and improves the precision of the procedures being flown.

G

GA - General Aviation – Civil aviation excluding air carriers, commercial operators and military aircraft.

GAP Departure – An aircraft departure via Runways 28 at San Francisco International Airport to the west over San Bruno, South San Francisco, Daly City, and Pacifica.

Glide Slope – Generally a 3-degree angle of approach to a runway established by means of airborne instruments during instrument approaches, or visual ground aids for the visual portion of an instrument approach and landing.

Go-Around - an aborted landing of an aircraft that is on final approach.

GPS - Global Positioning System – A satellite based radio positioning, navigation, and time-transfer system.

GPU - Ground Power Unit – A source of power, generally from the terminals, for aircraft to use while their engines are off to power the electrical and ventilation systems on the aircraft.

Ground Effect – The excess attenuation attributed to absorption or reflection of noise by manmade or natural features on the ground surface.

Ground Track – is the path an aircraft would follow on the ground if its airborne flight path were plotted on the ground the terrain.

H

High Speed Exit Taxiway – A taxiway designed and

provided with lighting or marking to define the path of aircraft traveling at high speed from the runway center to a point on the center of the taxiway.

I

IDP - Instrument Departure Procedure - An aeronautical chart designed to expedite clearance delivery and to facilitate transition between takeoff and en route operations. IDPs were formerly known as SIDs or Standard Instrument Departure Procedures.

IFR - Instrument Flight Rules - Rules and regulations established by the FAA to govern flight under conditions in which flight by visual reference is not safe.

ILS - Instrument Landing System – A precision instrument approach system which normally consists of a localizer, glide slope, outer marker, middle marker, and approach lights.

IMC – Instrument Meteorological Conditions - Weather conditions expressed in terms of visibility, distance from clouds, and cloud ceilings during which all aircraft are required to operate using instrument flight rules.

Instrument Approach – A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing, or to a point from which a landing may be made visually.

J

K

Knots – A measure of speed used in aerial navigation. One knot is equal to one nautical mile per hour (100 knots = 115 miles per hour).

L

Load Factor – The percentage of seats occupied in an aircraft.

Lmax – The peak noise level reached by a single aircraft event.

Localizer – A navigational aid that consists of a directional pattern of radio waves modulated by two signals which, when receding with equal intensity, are displayed by compatible airborne equipment as an "on-course" indication, and when received in unequal intensity are displayed as an "off-course" indication.

LDA – Localizer Type Directional Aid – A facility of comparable utility and accuracy to a localizer, but not part of a complete ILS and not aligned with the runway.

M

Middle Marker - A beacon that defines a point along the glide slope of an ILS, normally located at or near the point of decision height.

Missed Approach Procedure – A procedure used to redirect a landing aircraft back around to attempt another landing. This may be due to visual contact not established at authorized minimums or instructions from air traffic control, or for other reasons.

N

NAS – National Airspace System - The common network of U.S. airspace; air navigation facilities, equipment and services, airports or landing areas; aeronautical charts, information and services; rules, regulations and procedures, technical information, manpower and material.

Nautical Mile – A measure of distance used in air and sea navigation. One nautical mile is equal to the length of one minute of latitude along the earth's equator. The nautical mile was officially set as 6076.115 feet. (100 nautical miles = 115 statute miles)

Navaid – Navigational Aid.

NCT – Northern California TRACON – The air traffic control facility that guides aircraft into and out of San Francisco Bay Area airspace.

NDB – Non-Directional Beacon - Signal that can be read by pilots of aircraft with direction finding equipment. Used to determine bearing and can "home" in or track to or from the desired point.

NEM – Noise Exposure Map – A FAR Part 150 requirement prepared by airports to depict noise contours. NEMs also take into account potential land use changes around airports.

NextGen – The Next Generation of the national air transportation system. NextGen represents the movement from ground-based navigation aids to satellite-based navigation.

NMS – See RMS

Noise Contour – See CNEL and DNL Contour.

Non-Precision Approach Procedure – A standard instrument approach procedure in which no electronic glide slope is provided.

O

OAPM - Optimization of Airspace and Procedures in the Metroplex – This is a part of the FAA's Next Generation of air traffic control plans for 21 areas with multiple airports in the United States.

Offset ILS – Offset Parallel Runways – Staggered runways having centerlines that are parallel.

Operation – A take-off, departure or overflight of an aircraft. Every flight requires at least two operations, a take-off and landing.

Outer Marker – An ILS navigation facility in the terminal area navigation system located four to seven miles from the runways edge on the extended centerline indicating the beginning of final approach.

Overflight – Aircraft whose flights originate or terminate outside the metropolitan area that transit the airspace without landing.

OPD – Optimized Profile Descent – An efficient, reduced power method by which aircraft approach airports for landing. It is designed to reduce level off segments during descent, reducing fuel consumption and noise.

P

PASSUR System – Passive Surveillance Receiver - A system capable of collecting and plotting radar tracks of individual aircraft in flight by passively receiving transponder signals.

PAPI – Precision Approach Path Indicator - An airport lighting facility in the terminal area used under VFR conditions. It is a single row of two to four lights, radiating high intensity red or white beams to indicate whether the pilot is above or below the required runway approach path.

PBN –Performance Based Navigation - Area navigation based on performance requirements for aircraft operating along an IFR route, on an instrument approach procedure or in a designated airspace.

Preferential Runways - The most desirable runways from a noise abatement perspective to be assigned whenever safety, weather, and operational efficiency permits.

Precision Approach Procedure – A standard instrument approach procedure in which an electronic glide slope is provided, such as an ILS. GPS precision approaches may be provided in the future.

PRM – Precision Runway Monitoring – A system of high-resolution monitors for air traffic controllers to use in landing aircraft on parallel runways separated by less than 4,300'.

Q

R

Radar Vectoring – Navigational guidance where air traffic controller issues a compass heading to a pilot.

Reliever Airport – An airport for general aviation and other aircraft that would otherwise use a larger and busier air carrier airport.

RMS – Remote Monitoring Site - A microphone placed in a community and recorded at San Francisco International Airport's Noise Monitoring Center. A network of 29 RMS's generate data used in preparation of the airport's Noise Exposure Map.

RNAV – Area Navigation - A method of IFR navigation that allows an aircraft to choose any course within a network of navigation beacons, rather than navigating directly to and from the beacons. This can conserve flight distance, reduce congestion, and allow flights into airports without beacons.

RNP – Required Navigation Performance - A type of performance-based navigation (PBN) that allows an aircraft to fly a specific path between two 3- dimensionally defined points in space. RNAV and RNP systems are fundamentally similar. The key difference between them is the requirement for on-board performance monitoring and alerting. A navigation specification that includes a requirement for on-board navigation performance monitoring and alerting is referred to as an RNP specification. One not having such a requirement is referred to as an RNAV specification.

Run-up – A procedure used to test aircraft engines after maintenance to ensure safe operation prior to returning the aircraft to service. The power settings tested range from idle to full power and may vary in duration.

Run-up Locations - Specified areas on the airfield where scheduled run-ups may occur. These locations are sited, so as to produce minimum noise impact in surrounding neighborhoods.

Runway – A long strip of land or water used by aircraft to land on or to take off from.

S

Sequencing Process – Procedure in which air traffic is merged into a single flow, and/or in which adequate separation is maintained between aircraft.

Shoreline Departure – Departure via Runways 28 that utilizes a right turn toward San Francisco Bay as soon as feasible. The Shoreline Departure is considered a noise abatement departure procedure.

SID - Standard Instrument Departure - An aeronautical chart designed to expedite clearance delivery and to facilitate transition between takeoff and enroute operations.

SENEL – Single Event Noise Exposure Level - The noise exposure level of a single aircraft event measured over the time between the initial and final points when the noise level exceeds a predetermined threshold. It is important to distinguish single event noise levels from cumulative noise levels.

such as CNEL. Single event noise level numbers are generally higher than CNEL numbers, because CNEL represents an average noise level over a period of time, usually a year.

Single Event – Noise generated by a single aircraft overflight.

SOIA – Simultaneous Offset Instrument Approach Is an approach system permitting simultaneous Instrument Landing System approaches to airports having staggered but parallel runways. SOIA combines Offset ILS and regular ILS definitions.

STAR – Standard Terminal Arrival Route is a published IFR arrival procedure describing specific criteria for descent, routing, and communications for a specific runway at an airport.

T

Taxiway – A paved strip that connects runways and terminals providing the ability to move aircraft so they will not interfere with takeoffs or landings.

Terminal Airspace - The air space that is controlled by a TRACON.

Terminal Area – A general term used to describe airspace in which approach control service or airport traffic control service is provided.

Threshold – Specified boundary.

TRACON -Terminal Radar Approach Control – is an FAA air traffic control service to aircraft arriving and departing or transiting airspace controlled by the facility. TRACONs control IFR and participating VFR flights. TRACONs control the airspace from Center down to the ATCT.

U

V

Vector – A heading issued to a pilot to provide navigational guidance by radar. Vectors are assigned verbally by FAA air traffic controllers.

VFR – Visual Flight Rules are rules governing procedures for conducting flight under visual meteorological conditions, or weather conditions with a ceiling of 1,000 feet above ground level and visibility of three miles or greater. It is the pilot's responsibility to maintain visual separation, not the air traffic controller's, under VFR.

Visual Approach – Wherein an aircraft on an IFR flight plan, operating in VFR conditions under the control of an air traffic facility and having an air traffic control authorization, may proceed to destination airport under VFR.

VASI – Visual Approach Slope Indicator - An airport lighting facility in the terminal area navigation system used primarily under VFR conditions. It provides vertical visual guidance to aircraft during approach and landing, by radiating a pattern of high intensity red and white focused light beams, which indicate to the pilot that he/she is above, on, or below the glide path.

VMC – Visual Meteorological Conditions - weather conditions equal to or greater than those specified for aircraft operations under Visual Flight Rules (VFR).

VOR - Very High Frequency Omni-directional Range – A ground based electronic navigation aid transmitting navigation signals for 360 degrees oriented from magnetic north. VOR is the historic basis for navigation in the national airspace system.

W

X

Y

Z

how to reach us

**SFO Aircraft Noise Abatement Office mailing address is:
P.O. Box 8097, San Francisco, CA 94128**

Phone:	650.821.5100
Fax:	650.821.6777
Noise Complaints:	650.821.4736
Toll Free Noise Complaints:	877.206.8290
Noise Complaint E-mail:	sfo.noise@flysfo.com
Airport Web Page:	www.flysfo.com
Noise Abatement Web Page:	www.flyquietsfo.com
Roundtable Web Page:	www.sforoundtable.org

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Airport Director's Report

Presented at the December 5, 2018
Airport Community Roundtable Meeting

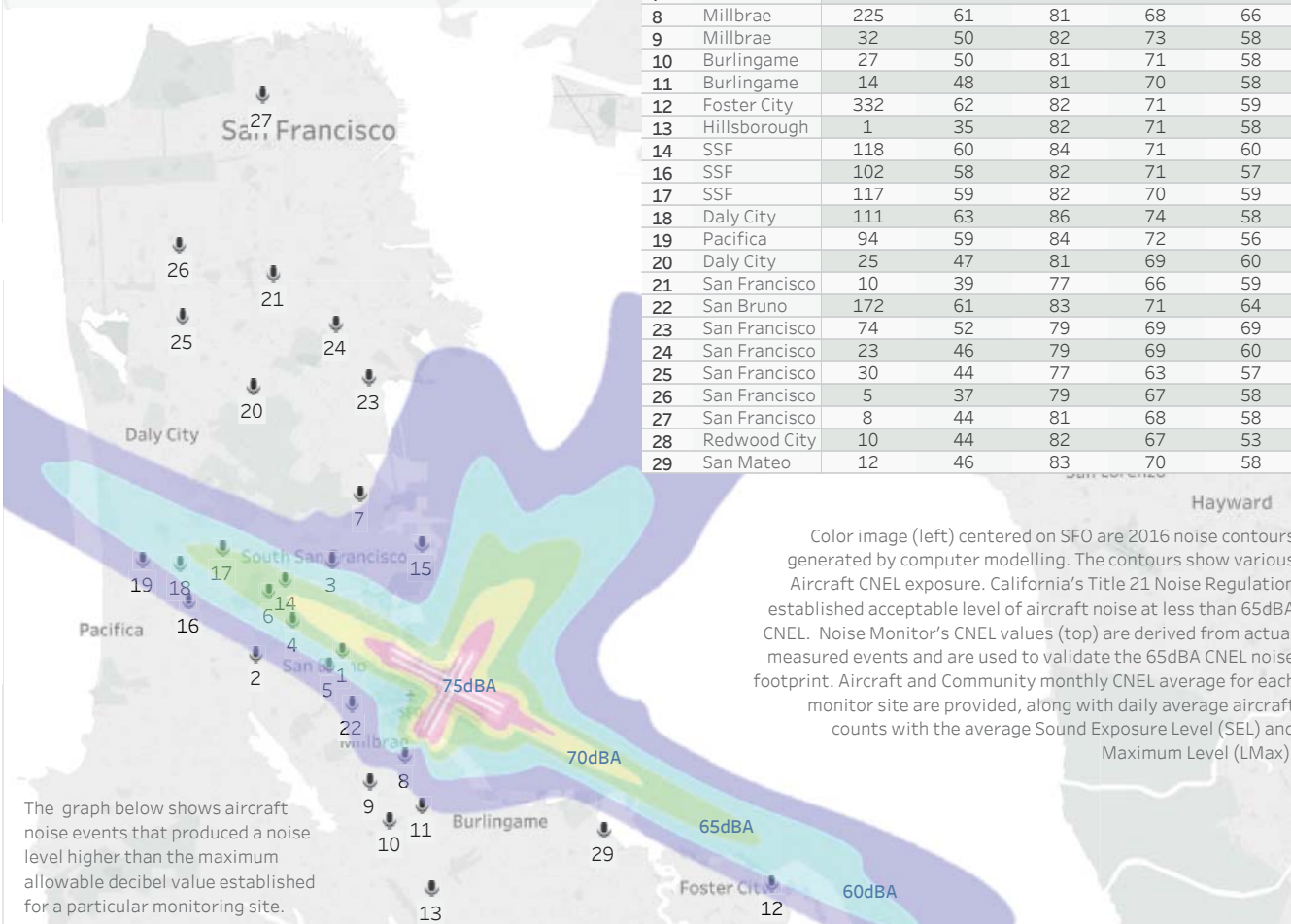
Aircraft Noise Abatement Office
September 2018



San Francisco
International
Airport

The map shows 29 aircraft noise monitoring locations that keep track of noise levels in the communities around the airport. Image centered on SFO airport shows quarterly aircraft noise levels (dBA) exposure. The green zone marks 65dBA Community Noise Exposure Level (CNEL). The CNEL metric is used to assess and regulate aircraft noise exposure in communities surrounding the airport.

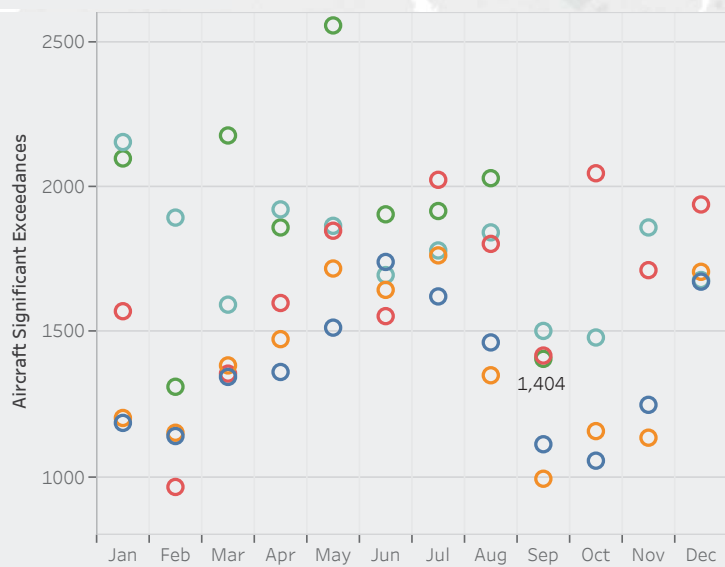
Site	City1	Noise Events (AVG Day)	Aircraft			City
			CNEL (dBA)	SEL (dBA)	LMax (dBA)	
1	San Bruno	217	73	92	77	67
3	SSF	69	54	80	69	61
4	SSF	135	68	90	78	60
5	San Bruno	150	66	88	76	62
6	SSF	122	65	88	76	58
7	Brisbane	23	48	79	69	59
8	Millbrae	225	61	81	68	66
9	Millbrae	32	50	82	73	58
10	Burlingame	27	50	81	71	58
11	Burlingame	14	48	81	70	58
12	Foster City	332	62	82	71	59
13	Hillsborough	1	35	82	71	58
14	SSF	118	60	84	71	60
16	SSF	102	58	82	71	57
17	SSF	117	59	82	70	59
18	Daly City	111	63	86	74	58
19	Pacifica	94	59	84	72	56
20	Daly City	25	47	81	69	60
21	San Francisco	10	39	77	66	59
22	San Bruno	172	61	83	71	64
23	San Francisco	74	52	79	69	69
24	San Francisco	23	46	79	69	60
25	San Francisco	30	44	77	63	57
26	San Francisco	5	37	79	67	58
27	San Francisco	8	44	81	68	58
28	Redwood City	10	44	82	67	53
29	San Mateo	12	46	83	70	58



Color image (left) centered on SFO are 2016 noise contours generated by computer modelling. The contours show various Aircraft CNEL exposure. California's Title 21 Noise Regulation established acceptable level of aircraft noise at less than 65dBA CNEL. Noise Monitor's CNEL values (top) are derived from actual measured events and are used to validate the 65dBA CNEL noise footprint. Aircraft and Community monthly CNEL average for each monitor site are provided, along with daily average aircraft counts with the average Sound Exposure Level (SEL) and Maximum Level (LMax).

The graph below shows aircraft noise events that produced a noise level higher than the maximum allowable decibel value established for a particular monitoring site.

Significant Exceedances



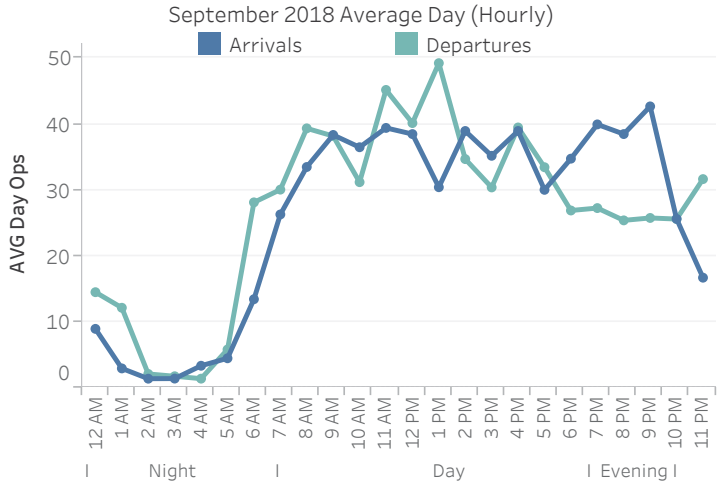
Year
 2014 (Blue)
 2015 (Orange)
 2016 (Red)
 2017 (Teal)
 2018 (Green)

Note: Site 2 and Site 15 are currently not operational.

Monthly Operations Summary

September 2018

37,705	1,257	38,446	-3.4%
Monthly Operations	Average Daily Operations	12 Month AVG	YOY Growth



Major Arrival and Departure Route Pattern (West Flow)



Arrivals

1. BDEGA	27%
2. DYAMD	40%
3. SERFR	28%
4. OCEANIC	5%

Departures

A. GAP	21%
B. SSTIK	27%
C. NIITE	10%
D. TRUKN RWY 01	39%
D. TRUKN RWY 28	3%

Top Destinations

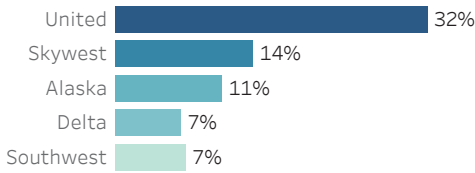
Los Angeles	Seattle
8%	5%

West Flow
100%

Down the Bay vs Peninsula

1.1 BDEGA East	28%
1.2 BDEGA West	72%

Airlines with the Most Operations



Business Jets / Helicopters / GA 16%



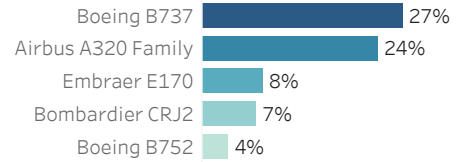
Narrowbody Jets 69%



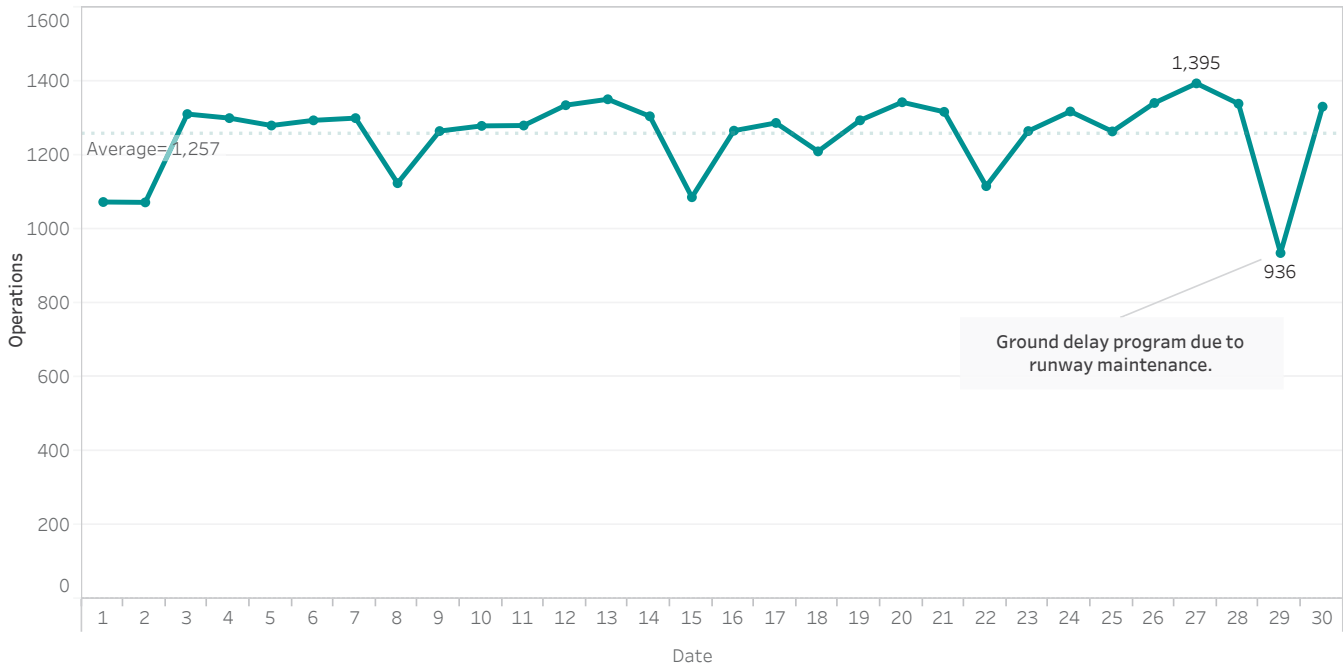
Widebody Jets 15%



Most Utilized Aircraft Types



Daily Aircraft Operations



Runway Usage and Nighttime Operations

Monthly runway usage is shown for arrivals and departures, further categorized by all hours and nighttime hours. Graph at the bottom of the page shows hourly nighttime operations for each day. Power Runup locations are depicted on the airport map with airline nighttime power runup counts shown below. (Percent [%] rounded to nearest whole number)

Runway Utilization (all hours)

	Arrivals	Departures
01 L/R		79% 13,743
10 L/R		0% 1
28 L/R	100% 16,838	21% 3,734

Late Night Preferential Runway Use (1 am - 6 am)

	Departures
01 L/R	43% 259
28 L/R	57% 341

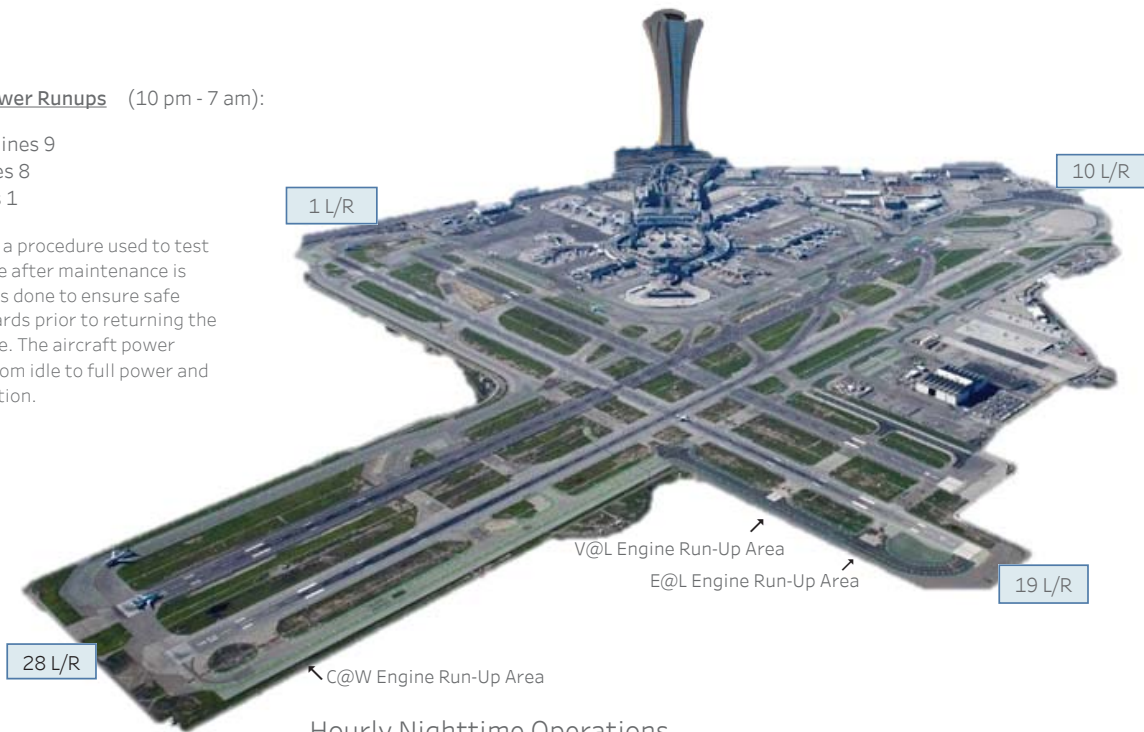
28 L vs R

Arrivals	
28L	28R
44%	56%
Night (10 pm - 7 am)	
23%	77%

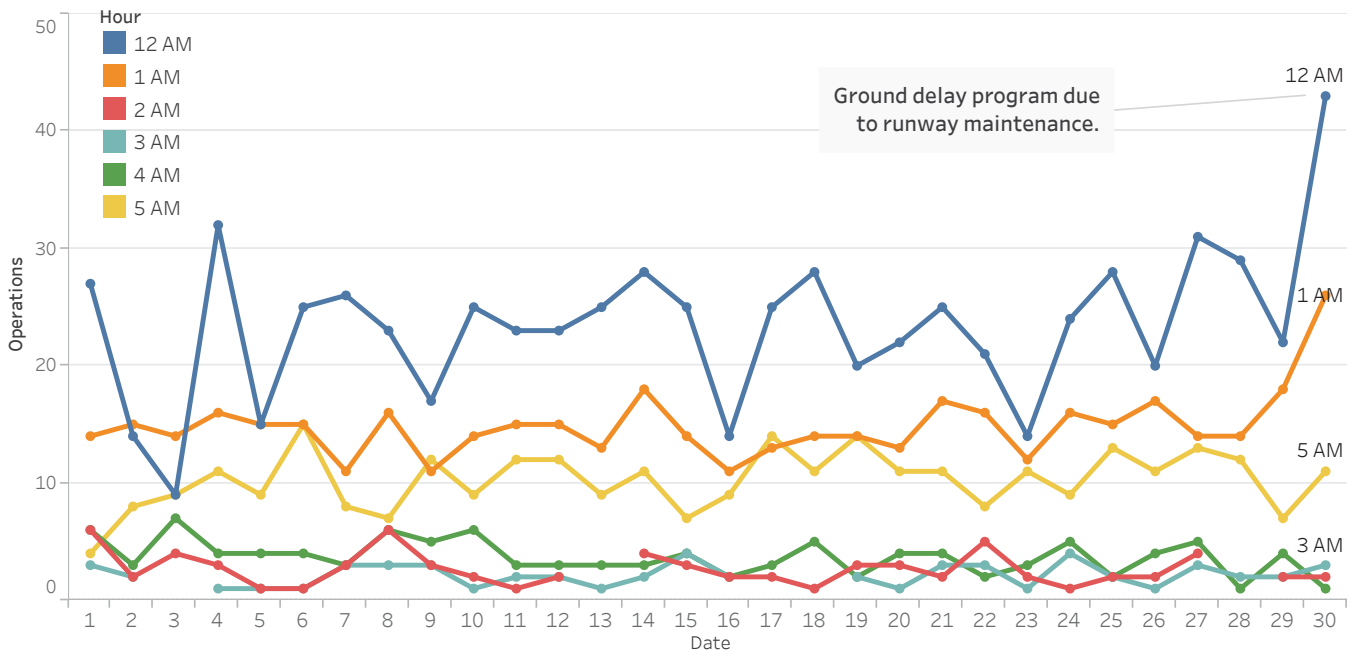
Nighttime Power Runups (10 pm - 7 am):

- American Airlines 9
- United Airlines 8
- Delta Airlines 1

A power runup is a procedure used to test an aircraft engine after maintenance is completed. This is done to ensure safe operating standards prior to returning the aircraft to service. The aircraft power settings range from idle to full power and may vary in duration.



Hourly Nighttime Operations



Noise Reports



September 2018

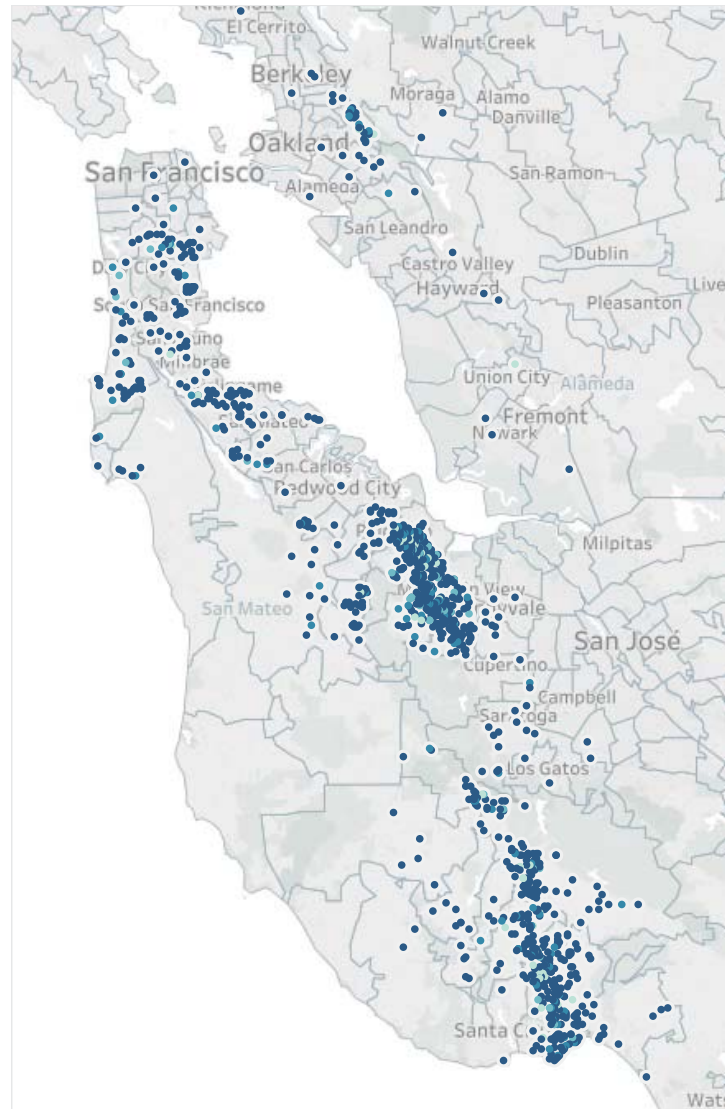
Noise Reporters / Noise Reports

	Noise Reporters	Noise Reports
Atherton	5	430
Belmont	4	561
Brisbane	24	1,649
Burlingame	29	1,599
Daly City	11	1,718
El Granada	2	382
Foster City	3	50
Half Moon Bay	6	327
Hillsborough	9	534
Menlo Park	23	2,016
Millbrae	5	17
Pacifica	40	3,972
Portola Valley	35	5,374
Redwood City	13	1,188
San Bruno	10	1,127
San Carlos	2	166
San Francisco	40	4,232
San Mateo	25	1,238
South San Francisco	13	59
Woodside	11	1,237
Alameda	1	4
Aptos	10	377
Ben Lomond	7	150
Berkeley	6	247
Bonny Doon	2	115
Boulder Creek	5	117
Brookdale	1	5
Capitola	18	2,429
Carmel	4	66
Castro Valley	1	15
Cupertino	2	389
East Palo Alto	3	7
Felton	12	832
Fremont	2	65
Hayward	2	3
La Selva Beach	1	24
Los Altos	155	17,675
Los Altos Hills	29	8,015
Los Gatos	141	20,611
Moraga	2	242
Morgan Hill	2	168
Mountain View	50	4,711
Oakland	30	6,714
Palo Alto	219	45,877
Pinole	1	634
Richmond	3	1,111
San Jose	2	44
Santa Cruz	123	19,968
Saratoga	15	719
Scotts Valley	75	11,549
Soquel	74	7,109
Sunnyvale	9	240
Union City	1	1,177
Watsonville	1	247
Total	1,319	179,532

Roundtable Communities

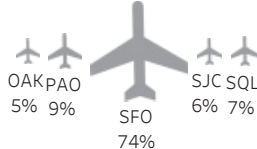
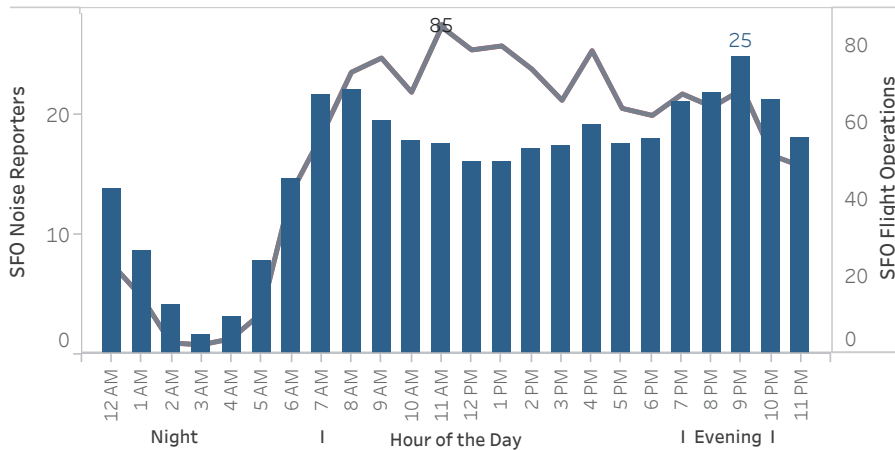
Other Communities

Noise Reporters Location Map



- 1,446 Noise Reporters (12 month AVG)
- 211,265 Noise Reports (12 Month AVG)
- 45 New Reporters
- Burlingame New Reporters Top City
- 88 Miles Furthest Report
- 4 Reports per SFO Operation
- B737 A320 E75L Top Aircraft Type
- KAL213* CMP382* JBU736 Top Flight Number *Night

Hourly Noise Reporters vs. Flight Operations (AVG Day)



Our software vendor's address validation relies on USPS-provided ZIP code look up table and USPS-specified default city values.

Source: SFO Intl Airport Noise Monitoring System

99% of noise reports correlate to a flight origin/destination airport:

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November 5, 2018

TO: Roundtable Members and Interested Parties

FROM: Eugene M. Reindel
Justin W. Cook – INCE, LEED GA
Roundtable Technical Consultant - HMMH

SUBJECT: Questions for the FAA at the **December 5**, 2018 SFO Airport/Community Roundtable Meeting (*revised 11/9/2018*)

The following are four (4) items for the Federal Aviation Administration (FAA) to answer at the **December 5, 2018 SFO Airport/Community Roundtable Regular Meeting**. While these are specific items that we would like the FAA to answer, we are also hoping that the FAA will come prepared to discuss possible alternate solutions should they deem any of these not feasible.

Item 1:

Problem Statement: Following the publication of the FOGGG, SAHEY and CIITY Departure Procedures (DPs) for SFO Runways 10L and 10R immediate concern was generated over the close proximity of the SAHEY and CIITY DPs to the eastern shoreline of the San Francisco Peninsula. Both SFO and the public requested moving back to the previous DUMBARTON DP. This was deemed “not feasible” apparently due to the FAA desiring to have simultaneous dual departures thus requiring compliance with the divergent heading requirement for the FOGGG and the SAHEY/CIITY DPs.

Question: If the DUMBARTON departure procedure for Runway 10 during southeast flow conditions (not opposite direction operations) cannot be recommissioned, what would be required to achieve a new procedure with a similar heading (such as 080 or 085) that keeps aircraft largely over the Bay as the DUMBARTON DP did? We would like to examine a wide variety of options including, creating new and decommissioning and/or greatly modifying the SAHEY and CIITY departure procedures. Examine the use of a single stream departure in both day and night with projected volumes.

Item 2:

Problem Statement: The SFO SSTIK DP brings an extremely large volume of flights over the densely populated middle and Northern San Francisco Peninsula. Previously, the PORTE and OFFSHORE DPs split the volume based on destination with a substantial amount crossing directly across the peninsula with the OFFSHORE DP, south over the Pacific Ocean. The concentration of these two previous procedures under the SSTIK DP has proved problematic.

Question: What would be required to achieve converting the OFFSHORE DP into an RNAV DP and 1) change the angle to stay over the Pacific Ocean and not over or near the Peninsula, 2) repeat to the extent possible the geographical path of the OFFSHORE from takeoff to the Pacific Ocean and 3) connect at FFOIL or another similar offshore waypoint while remaining clear of Special Use Airspace

Questions for the FAA at the December 5, 2018 SFO Airport/Community Roundtable Meeting

(Revised 11/9/2018)

November 5, 2018

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(SUA)? If the OFFSHORE DP cannot be turned into a RNAV with the above considerations, can a DP be constructed that achieves the same basic ground track as the existing OFFSHORE DP with the above considerations? For discussion purposes the Technical Working Group would appreciate the FAA providing Google Earth or similar graphics including waypoints, the SSTIK, EUGEN, PORTE, OFFSHORE DPs with transitions, SUAs (floor, ceiling and hours of operation) and any other procedures that may impact an OFFSHORE RNAV overlay or similar procedure creation.

Additional Clarification: As charted, the OFFSHORE departure directs aircraft from Runways 1L/R to SEPDY, WAMMY, SEGUL. As charted, the OFFSHORE departure directs aircraft from Runways 28L/R to SENZY, WAMMY, SEGUL.

If aircraft flew over WAMMY and SEGUL – they would remain over ocean and not over the Peninsula. In our question, we discuss creating a RNAV departure procedure that takes a path from takeoff to the ocean (WAMMY) and then connect at FFOIL (close to SEGUL) while remaining clear of the Special Use Airspace).

In looking at actual flights utilizing the OFFSHORE departure procedure, they turn and cut across the Peninsula instead of staying over the ocean. Our question applies to both sets of runways utilized. The goal is for aircraft to remain over the ocean and not cross over the Peninsula.

Item 3:

Problem Statement: Continuing with the SSTIK DP though focusing on the waypoint SSTIK - The November 2017 Phase II Final document included the Airport/Community Roundtable's ask stating in Appendix D, 2.38 "Move SSTIK N + E as much as feasible to allow maximum altitude gain before turning to fly over land using the historic SEPDY waypoint as a guide." The FAA responded somewhat cryptically, "Due to a change in criteria, the SSTIK waypoint is in the process of being moved 0.44 NM to the East-Southeast of its present position. The FAA does not support moving SSTIK north due to the close proximity to OAK procedures." When requesting more information, we received the following: "AFS 8260.58 criteria has changed since this SID (Standard Instrument Departure) was originally implemented. RNAV SID criteria now requires that when successive Direct to a Fix (DF) is used, it must be within 15 degrees of the runway centerline. The current location of SSTIK is 22.95 degrees from the departure end of Runway 01R." On September 13, 2018 the charting release date we had been informed by the FAA to expect the SSTIK waypoint move, it did not. We were informed that only the YYUNG transition changed adding and dropping waypoints. This revision did not include the SSTIK move.

Question: Can the FAA overlay the proposed new SSTIK waypoint with the current SSTIK waypoint in the same image and provide both current and proposed SSTIK DPs in Google Earth KML files? This will include the ground track for the procedure as it is today as well as the procedure as it would look with the new SSTIK waypoint. We request modeled flight track information for these two waypoints on the SSTIK procedure as well as the new charting date. Please provide the design notes for the change in the SSTIK waypoint location.

Item 4:

Problem Statement: Following the recent appearance of the STAR PIRAT (RNAV) One on the FAA's Instrument Flight Procedures (IFP) Information Gateway, there has been community concern generated around its altitudes and locations over the middle and southern San Francisco Peninsula.

Questions for the FAA at the December 5, 2018 SFO Airport/Community Roundtable Meeting

(Revised 11/9/2018)

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Questions:

The Roundtable requests that the FAA provide a graphic representation of the STAR PIRAT (RNAV) that displays the projected flight paths from PIRAT's oceanic origination point to final approaches at SFO and OAK and estimates the projected corridor of the flight paths and altitudes in 1,000-foot increments on a Google map?

1. Provide information on whether this path would result in any changes between the current flight paths and altitudes being flown today from aircraft in the vicinity of PIRAT (from the Pacific Ocean coastline to the Woodside VOR to Final SFO and Oakland) approaches.
2. Provide information about any increase in number of flights that will not use the proposed STAR PIRAT (RNAV)?
3. Would the FAA provide graphic representation showing the evolution of Oceanic arrivals for both SFO and OAK over the last 5 years and into the future? The Roundtable requests the FAA utilize a one month data set for the same month in the years 2013-2018.
4. Will there be an increase in flights over ARGGG versus the current flight volume over the Woodside VOR? What percentage of flights will be vectored after ARGGG? In looking at the procedure development graphics, is the use of the previous San Francisco Class-B Airspace different from the current San Francisco Class-B Airspace? Can the FAA create a new graphic showing the previous and current San Francisco Class B Airspace?



SFO Roundtable Ground-Based Noise Ad-Hoc Subcommittee Proposed Scope of Work

Problem statement

Noise from ground-based operations at San Francisco International Airport (SFO) has a distinct adverse impact on the quality of life for communities adjacent to the airport. As such, ground-based noise (GBN) should be considered a separate and discrete problem from noise created by airborne aircraft, e.g., over-flight/in-flight noise.

There is a perception in the adjacent communities that GBN has increased in recent years, and that such escalation may be a result of factors other than those related to the FAA's implementation of NextGen aircraft procedures including the NorCal Metroplex.

Scope of Work

The SFO Airport/Community Noise Roundtable (SFO RT) GBN Ad-Hoc Subcommittee shall be focused exclusively on GBN noise concerns. GBN sources include, but are not limited to, the following:

- Aircraft application of power on takeoff (also known as “back-blast”)
- Aircraft becoming airborne on takeoff (also known as “secondary back-blast”)
- Aircraft application of reverse thrust after touch down/arrival
- Aircraft engine run-up/warm up procedures prior to departure
- Aircraft taxiing, queueing and waiting
- Aircraft use of Auxiliary Power Units (APU)
- Vehicular and other noise sources on the airfield

The Subcommittee will initially focus on the collection of data to adequately define the problem, after which it will explore possible solutions and/or mitigations.

Research/Collection of Data

Initial research shall be divided primarily into the following three buckets. (*Organization responsible for providing the information is indicated in parentheses.*)

1. Infrastructure: Conditions and Procedures

- a. Physical conditions at SFO and changes to physical conditions over past 5 years, including the following infrastructural features (*Information to be provided by SFO*)
 - Sound barriers/blast barriers/walls along western perimeter
 - Removal and or addition of structures and features at the south end of runways 1L/1R
 - Access road
 - New construction, including hotel and other structures
 - Fire station
 - Aircraft taxiing path – Installation of Engineering Materials Arrestor System (EMAS): Is aircraft now farther away from barriers? If so, what impact does that have? Did EMAS installation result in any other changes in procedures?

Ground-Based Noise Ad-Hoc Subcommittee Proposed Scope of Work

November 29, 2018

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- b. Environmental conditions/Terrain (wind, mountains, etc) (*Information to be provided by SFO*)
 - Frequency of west flow conditions that put Runway 01L/R in use
 - Changes in climate/atmospheric conditions that exacerbate noise
 - Other?
 - c. Operational procedures (existing and prior) (*Information to be provided by SFO*)
 - Did taxiing path change?
 - What type/size/class of aircraft are being used? Do they produce different types of GBN, eg do they use less thrust?
 - Has the number of flights increased over time? And/or are existing flights more loaded with passengers? With heavier loads, does the noise increase?
 - Agreements between SFO and airlines regarding use of APUs
 - When are Noise Abatement Departure Procedures (NADP) used? Does the steeper climb have different GBN impact?
 - d. Impact of actions by actors others than SFO (*Information to be provided by SFO*)
 - Is there any airline behavior (eg APUs) that impacts ground-based noise?
 - Are there other actors (eg contractors for the hotel or terminal construction) that may have impact?
2. Metrics - Analyze current and historical noise monitor data for the past 5 years to obtain appropriately weighted noise data for ground-based events.
- a. Existing data for GBN (*Information to be provided by SFO*)
 - What GBN data has SFO collected in past 5 years?
 - Is there data specific to Burlingame, Millbrae, and Hillsborough?
 - Is noise data correlated to a specific flight track? In cases where the data is not correlated to a specific flight track, is it maintained?
 - Noise level vs duration of noise
 - CalOSHA – does the state agency collect data on noise exposure for employees for worker safety?
 - b. Existing equipment used to collect such data (*Information to be provided by SFO*)
 - What equipment does SFO currently have in place, and what does it measure (relative to GBN or low-frequency noise)?
 - What new equipment is currently being procured (RFP in progress) and what *will* it measure?
 - c. Data and Studies on GBN from other airports/communities - what are the most relevant takeaways for SFO? (*Information to be provided by HMMH*)
 - HMMH 1998 study on Baltimore Washington Airport (BWI)
 - MSP 2000
 - FAA 2007 partner study
 - Wyle study on SFO (2001)
 - Any available studies on taxi noise?
 - Any available studies on use of APUs?
 - d. Equipment/measuring tools that may be needed in future (*Information to be provided by HMMH*)
 - Is there other technology out there that would help us better collect GBN data in the future?
 - Where are the ideal locations to site monitors for purposes of measuring GBN?

Ground-Based Noise Ad-Hoc Subcommittee Proposed Scope of Work

November 29, 2018

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- Are “accelerometers” necessary?

3. Mitigation Options

- a. What types of mitigation have been used elsewhere? (*Information to be provided by HMMH*)
- b. Mitigation at the home vs mitigation at the airport
 - Alternative designs for blast barrier
 - Analysis of how sound waves bounce off structures and how they may be retrofitted to disperse sound waves.
 - What changes in procedure might help mitigate noise?
 - Does home-based mitigation impact perception of noise?
- c. What further study is required to develop recommendations regarding mitigation?

Sub-Committee Schedule

The Subcommittee shall meet approximately every other month (on the alternating month with regular SFORT meetings), with a tentative schedule as follows:

- January 2019 Subcommittee meeting – SFO and HMMH to present findings from the research/collection of data listed above, particularly regarding infrastructure, procedures and existing metrics
- March 2019 Subcommittee meeting – Discussion and analysis of mitigation options. Discussion of whether further work is needed. Develop recommendation, if possible, to full SFORT regarding next steps.
- April 2019 full SFORT meeting – Present recommendation (if available) to full SFORT regarding next steps
- May 2019 Subcommittee meeting – if needed



November 29, 2018

TO: Roundtable Budget Work Group
FROM: James A. Castañeda, AICP, Roundtable Coordinator
SUBJECT: Proposed Roundtable Budget for FY 2017-2018 *JAC*

In preparation for the Work Program Subcommittee’s review of the proposed Fiscal Year 2018-2019 Budget, staff has prepared the following memo to outline the various elements of the proposed budget based on results from the close of the FY2017-2018 budget. The Work Program Subcommittee will review the budget and provide a recommendation for the Roundtable to consider at the December 5, 2018 regular meeting.

This memo examines each major budget category and compares two previous fiscal years and our current fiscal year 2018/19 proposed budget.

INCOME

In FY 2017-2018, the Roundtable received all expected funding with the exception of one member city (City of Millbrae). Staff will work with the department’s fiscal specialist to follow-up with that. For FY 2018-2019, staff is proposing to return back to the normal dues outlined in the Roundtable’s bylaws in order to fund the expected expenditures (outlined in the next section). Below is the table that outlines the last two fiscal years, and the proposed funding for FY 2018-2019.

EXPECTED FUNDING FUND SOURCE	2016-2017		2017-2018		2018-2019
	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET
1 San Francisco Airport	\$220,000	\$220,000	\$220,000	\$220,000	\$220,000
2 Roundtable Member Cities (18 Cities)	\$13,500	\$13,500	\$13,500	\$12,750	\$27,000
3 County of San Mateo	\$6,000	\$6,000	\$6,000	\$6,000	\$12,000
4 C/CAG Airport Land Use Committee	\$750	\$750	\$750	\$750	\$1,500
5 Unused Fund Balance from Previous Year	\$42,435	\$42,435	\$28,613	\$28,613	\$34,853
TOTAL :	\$282,685	\$281,935	\$268,863	\$268,113	\$295,353

Funding for the Roundtable comes from the following sources:

1. Annual Funding from the San Francisco Airport Commission

The Airport's contribution for FY 2017-2018 was \$220,000.

2. Annual Funding from Other Roundtable Members

The annual funding amounts from the other Roundtable members (18 cities, the County of San Mateo, and C/CAG Airport Land Use Committee (ALUC)) will be the normal fees outlined in the bylaws, resulting in the following dues: Cities - \$1,500 each; County - \$12,000, and C/CAG - \$1,500. Since FY 2011-2012, the Roundtable has only collected half of the member dues.

3. Roundtable Fund Balance from the Prior Fiscal Year

The Roundtable fund balance from the previous fiscal year (FY 2017-2018) is \$34,103. This is the balance after closeout of all prior contract obligations from that fiscal year.

PROPOSED ALLOCATIONS AND EXPENDTURES

Staff and Consultant Support Services - \$203,000

Funding for staff support to the Roundtable will consist of the following:

1. **Roundtable Coordinator** (\$113,000 per year). This amount represents a reimbursement to the County of San Mateo for FY 2017-2018 to provide half-time Planner support to the Roundtable. This cost is the half-time loaded wage rate for a Planner III provided from San Mateo County that includes overhead cost of the position to conduct meetings and Roundtable business for one year. This amount allocated per year is unchanged from prior years.

2. **Roundtable Aviation Consultant for Technical Support** (\$90,000). This allocation is to cover the work performed by the Roundtable's Aviation Technical Support. In July 2017, the County contracted with HMMH to provide services (as selected by the Roundtable). The allocated funds for consultant services as \$90,000, and for FY2017-2018 that amount was exceeded by \$20,713 for a total of \$110,713 for work performed during the fiscal year. Additional work occurred as a result of having Technical Working Group meetings on a bi-monthly basis and requesting the consultant to attend and present at those meetings. This addition amount is covered by the two \$20,000 Aviation Consultant and General Contingency line items (#15 and #16). For the proposed FY 2018-2019 budget, maintaining the agreed \$90,000 is proposed and utilizing the contingency funds if necessary for work in excess of the budgeted amount.

STAFF/CONSULTANT SUPPORT	2016-2017		2017-2018		2018-2019
	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET
1 County of San Mateo Coordination	\$226,000	\$226,000	\$113,000	\$113,000	\$113,000
2 Roundtable Consultant	\$43,000	\$19,668	\$90,000	*\$110,713	\$90,000
TOTAL :	\$269,000	\$245,668	\$203,000	\$233,000	\$203,000

* \$20,713 is deducted from the contingency funds in lines 15 & 16.

Roundtable Administration/Operations - \$10,507

3. **Postage/Photocopying** (\$3,000). This amount represents a reimbursement to the County of San Mateo for costs associated with reproduction of meeting materials and postage. This amount is unchanged from FY 2017-2018.
4. **Website** (\$107). This amount represents a reimbursement to the County of San Mateo for costs associated with paying website hosting dues and renewal of domain registration. This amount is unchanged from FY 2017-2018.
5. **Data Storage and Conference Services** (\$900). This amount represents a reimbursement to the County of San Mateo for the cost associated with maintaining all of the Roundtable's email system, digital files and archives to Internet cloud-based storage. The Roundtable offers online conference services at subcommittee meeting for remote members when the location logistics allow. This amount is unchanged from FY 2017-2018.
6. **Supplies/Equipment** (\$1,500). This amount represents a reimbursement to the County of San Mateo to provide supplies and equipment to the Roundtable Coordinator and administrative support staff when needed, as well as supplies used during meetings, including the FlyQuiet Awards in the spring. This amount is unchanged from FY 2017-2018.
7. **Video Services** (\$5,000). This amount represents a reimbursement to the County of San Mateo to contract video streaming services for Roundtable meetings for the six regular for FY 2017-2018. The average cost of video services for each meeting is \$833. This amount is unchanged from FY 2017-2018 as it expected to expand video services to other subcommittee meetings (such as the Technical Working Group meetings).

ADMINISTRATION / OPERATIONS	2016-2017		2017-2018		2017-2018
	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET
3 Postage / Printing	\$600	\$603	\$3,000	\$2,427	\$3,000
4 Website	\$200	\$107	\$107	\$107	\$107
5 Data Storage/Conference Services	\$900	\$847	\$900	\$681	\$900
6 Misc Office Expenses/Equipment	\$1,585	\$1,627	\$1,500	\$1,221	\$1,500
7 Video Services	\$3,000	\$2,160	\$5,000	\$3,030	\$5,000
TOTAL :	\$6,285	\$5,345	\$10,507	\$7,466	\$10,507

Projects, Programs, and Additional Allocations - \$9,700

8. **Noise Conference Attendance, Coordinator** (\$1,500). This amount represents a reimbursement to the Coordinator for attendance to Aircraft Noise related conferences such as the annual UC Davis Noise Symposium held in the spring. This amount is unchanged from FY 2017-2018.
9. **Additional Noise Conferences Attendees** (\$2,000). This amount represents the cost associated with additional Roundtable members attendance to Aircraft Noise related conferences such as the annual UC Davis Noise Symposium held in the spring, National Organization to Insure a sound Control Environment (N.O.I.S.E.) legislative summit, and/or other aircraft noise related conferences that would be beneficial to the Roundtable. This amount should allow two members to attend one conference. This amount is reduced from the prior fiscal year.
10. **TRACON Field Trip** (\$750). This amount represents the estimated cost associated with providing transportation and lunch to members for a field trip to the NorCal TRACON facility, normally in conjunction with the Oakland Noise Forum. This amount is unchanged from FY 2017-2018.
11. **Airport Noise Report newsletter subscription** (\$850). This amount represents the annual subscription dues for the Roundtable to receive the Airport Noise Report to help keep Roundtable staff and members informed of news related to aircraft noise. This amount is unchanged from the prior fiscal year.
12. **National Organization to Insure A Sound Control Environment Membership** (\$4,300). This amount represents the cost associated with membership with National Organization to Insure a sound Control Environment (N.O.I.S.E.). The Roundtable become a member late in the prior fiscal year, therefor no invoice was received for that year, but is expected to be this fiscal year.
13. **Special Events** (\$300). This amount represents the cost associated with the Roundtable hosting special events or funding food and refreshments at special meetings.

PROJECTS & PROGRAMS	2015-2016		2016-2017		2017-2018
	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET
8 Noise Conferences, Coordinator	\$1,800	\$1,109	\$1,800	\$1,230	\$1,500
9 Noise Conferences, Members	\$4,000	\$0	\$4,000	\$0	\$2,000
10 TRACON Field Trip	\$750	\$350	\$750	\$0	\$750
11 Airport Noise Report Subscript	\$850	\$850	\$850	\$850	\$850
12 N.O.I.S.E.	\$0	\$0	\$4,300	\$0	\$4,300
13 Special Events	\$0	\$0	\$300	\$0	\$300
TOTAL :	\$7,400	\$2,309	\$12,000	\$2,080	\$9,700

Contingency Funds - \$40,000

Starting in FY 2012-2013, the Roundtable allocated the remaining uncommitted funds to be used as a contingency reserve for unanticipated work for either Roundtable staff or the Aviation consultant. As explained in the Staff and Consultant Support Services discussion earlier, the Roundtable Consultants' services exceeded the \$90,000 allocation amount by \$20,173. The contingency funds allow for such overruns in the event of unanticipated additional work. During the last fiscal year, the Roundtable has conducted Technical Working Group and other subcommittee meetings where the consultants have been in attendance. It's proposed to keep the contingency funds through the current fiscal year at the same levels as prior years.

PROJECTS & PROGRAMS	2016-2017		2017-2018		2018-2019
	BUDGET	ACTUAL	BUDGET	ACTUAL	
15 Consultant Contingency	\$0	\$0	\$20,000	\$20,000	
16 General Contingency	\$0	\$0	\$20,000	\$713	
TOTAL :	\$0	\$0	\$40,000	\$20,713	

OVERALL CLOSING

With the proposed funding allocation, it's estimated that the Roundtable budget will close with an approximate year-end balance of \$32,146.

	2016-2017		2017-2018		2018-2019
	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET
Expected Funding	\$282,685	\$281,935	\$268,863	\$268,113	\$295,353
Proposed Allocation	\$282,685	\$253,322	\$265,507	\$233,260	\$263,207
YEAR END:	\$0	\$28,613	\$3,356	\$34,853	\$32,146

The complete spreadsheet is on the following page. Additional background information follows.

SFO Airport/Community Roundtable - Expense Report & Proposed Budget FY 2018-2019

A EXPECTED FUNDING		2016-2017		2017-2018		2018-2019
FUND SOURCE		BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET
1	San Francisco Airport Commission	\$220,000	\$220,000	\$220,000	\$220,000	\$220,000
2	Roundtable Member Cities (18 Cities)	\$13,500	\$13,500	\$13,500	\$12,750	\$27,000
3	County of San Mateo	\$6,000	\$6,000	\$6,000	\$6,000	\$12,000
4	C/CAG Airport Land Use Committee	\$750	\$0	\$750	\$750	\$1,500
5	Unused Fund Balance from Previous Year	\$42,435	\$42,435	\$28,613	\$28,613	\$34,853
TOTAL:		\$282,685	\$281,935	\$268,863	\$268,113	\$295,353
B POTENTIAL FUNDING ALLOCATIONS		2016-2017		2017-2018		2018-2019
STAFF/CONSULTANT SUPPORT		BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET
STAFF/CONSULTANT SUPPORT		\$269,000	\$245,668	\$203,000	\$223,713	\$203,000
1	County of San Mateo Coordination Services	\$226,000	\$226,000	\$113,000	\$113,000	\$113,000
2	Roundtable Aviation Technical Consultant	\$43,000	\$19,668	\$90,000	\$110,713	\$90,000
ADMINISTRATION / OPERATIONS		BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET
ADMINISTRATION / OPERATIONS		\$6,285	\$5,345	\$10,507	\$7,466	\$10,507
3	Postage / Printing	\$600	\$603	\$3,000	\$2,427	\$3,000
4	Website	\$200	\$107	\$107	\$107	\$107
5	Data Storage & Conference Services	\$900	\$847	\$900	\$681	\$900
6	Miscellaneous Office Expenses/Equipment	\$1,585	\$1,627	\$1,500	\$1,221	\$1,500
7	Video Services	\$3,000	\$2,160	\$5,000	\$3,030	\$5,000
PROJECTS, PROGRAMS, & ADDITIONAL ALLOCATIONS		BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET
PROJECTS, PROGRAMS, & ADDITIONAL ALLOCATIONS		\$7,400	\$2,309	\$12,000	\$2,080	\$9,700
8	Noise Conferences Attendance, Coordinator	\$1,800	\$1,109	\$1,800	\$1,230	\$1,500
9	Noise Conferences Attendance, Members	\$4,000	\$0	\$4,000	\$0	\$2,000
10	TRACON Field Trip(s)	\$750	\$350	\$750	\$0	\$750
11	Airport Noise Report subscription	\$850	\$850	\$850	\$850	\$850
12	N.O.I.S.E. Membership	\$0	\$0	\$4,300	\$0	\$4,300
13	Special Events			\$300	\$0	\$300
CONTINGENCY FUND		BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET
CONTINGENCY FUND		\$0	\$0	\$40,000	\$20,713	\$40,000
15	Aviation Consultant Contingency	\$0	\$0	\$20,000	\$20,000	\$20,000
16	General Contingency	\$0	\$0	\$20,000	\$713	\$20,000
EXPENSES SUBTOTAL		BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET
EXPENSES SUBTOTAL		\$282,685	\$253,322	\$265,507	\$233,260	\$263,207
UNCOMMITTED FUNDS / YEAR END BALANCE		PROJECTED	ACTUAL	PROJECTED	ACTUAL	PROJECTED
UNCOMMITTED FUNDS / YEAR END BALANCE		\$0	\$28,613	\$3,356	\$34,853	\$32,146

SUPPLEMENTAL INFORMATION/DISCUSSION

The following is a discussion on the background information regarding the contracted services provided to the Roundtable.

County Service and Background

On July 1, 2016, the City and County of San Francisco and the County of San Mateo entered a three-year agreement to provide coordinating services for the Roundtable in their role to identify noise impacts and reduction measures. The contract requires the following from the County of San Mateo:

- Planner (half-time position) as Program Coordinator
- Retain qualified technical consultant for technical support
- Administrative Support to the Program Coordinator
- Roundtable Media Program, Media Support and Website Content
- Provide operating needs of the Roundtable (postage, photocopying, office equipment/supplies, website support, etc.)

San Mateo County is compensated for the aforementioned requirements from the Roundtable Trust Fund, which is funded from contributions by the City and County of San Francisco Airport Commission (Airport) and the Roundtable membership cities' annual dues.

As part of this agreement, the San Mateo County is to provide a report to SFO that generally describes the work performed for the Roundtable by County staff. That report is as follows:

The Roundtable is funded by its membership. The annual membership contributions are maintained in a Roundtable Trust Fund. The County of San Mateo Planning and Building Department, on behalf of the Roundtable, manage the fund. All Roundtable expenses, such as staff support, technical support consultant contracts, office supplies/equipment, mailing/photocopying costs, etc. are paid from that fund. Any monies that are not spent each year are added as revenue to the budget for the following fiscal year. All staff support and professional consultant services are provided to the Roundtable through the County of San Mateo Planning and Building Department. The amounts for these support services are shown as budgeted expenditures in the annual Roundtable budget.

SERVICE DETIALS

A. Planner (half-time position) - Program Coordinator

Per the established agreement, San Mateo County assigns a Planner from the Planning & Building Department to act as Program Coordinator at a half-time (20 hours/week, or 1,040 hours annually) position. The assigned Coordinator tasks performed by the Coordinator include (but not limited) to the following:

- Maintain communications with Airport staff regarding Roundtable agenda items, Work Program items, noise complaints, monthly noise reports, quarterly reports, and related items.
- Manage a technical consultant to provide technical support to the Roundtable.
- Coordinate, review, and approve the work products and monthly billing per the scopes of work of the technical consultant.

Proposed Budget for FY 2018-2019 Work Group Memo

November 28, 2018

Page 8 of 8

- Directs/assigns administrative assistance work to available County Planning & Building administrative staff when needed.
- Administrative support to Roundtable including preparation of materials for agenda items, annual draft budget, meeting summaries, and preparation and distribution of monthly agenda packets.
- Attend all Regular Roundtable Meetings, workshops and subcommittee meetings.
- Update website as necessary.
- Provide technical and logistical support at all meetings.

B. Retain qualified technical consultant for technical support

In June 2017, the Roundtable accepted a three-year agreement with HMMH, who began technical support services to the Roundtable July 2017.

C. Administrative Support to the Program Coordinator

As part of the County service structure, the Program Coordinator has utilized County Planning administrative staff to assist the Roundtable when necessary. Due to the increased work load, a dedicated half-time administrative support is being explored to assist the Program Coordinator with meeting coordination and logistics, as well as assistance at Roundtable meetings.

D. Roundtable Media Program, Media Support and Website Content

Staff has maintained and updated the Roundtable's website with agendas, minutes, published reports, and other relevant information. Staff also manages e-mail distribution to lists to cities and other interested parties for important noise impact announcements. Staff will continue explore other media opportunities with resources available.

E. Provide operating needs of the Roundtable (postage, photocopying, office equipment/supplies, website support, etc.)

County staff over the course of the current fiscal year has provided all materials necessary for the Roundtable's operations. This includes expenses incurred related to the Fly Quiet Awards expenses, meeting supplies, as well as independent data services, storage, and equipment.



November 15, 2018

TO: Roundtable Members and Interested Parties

FROM: Bryan Lynch, Consultant
Justin W. Cook – INCE, LEED GA, Principal Consultant
Roundtable Technical Consultant - HMMH

SUBJECT: Federal Aviation Administration (FAA) Instrument Flight Procedures (IFP) Information Gateway Review

At the request of the Roundtable, Harris Miller Miller & Hanson Inc. (HMMH) is monitoring and reviewing updates to procedures published onto the FAA's IFP Information Gateway in the regions of San Francisco International Airport (SFO), Metropolitan Oakland International Airport (OAK), and Norman Y. Mineta San Jose International Airport (SJC).

After analyzing the documents posted, HMMH determines what changes are proposed and the reason for the changes. The FAA IFP Information Gateway published updates on the day of October 31th and November 8st of 2018. All of the changes were considered to be of low importance. The next publication is expected to be on January 3, 2018.

Important Terms and Items:

- FAA Stage and Status Definitions
 1. FPT: Procedures are coordinated with Air Traffic, Tech Ops and Airports for feasibility, preparation and priority (FPO)
 2. DEV: Development of the procedures
 3. FC: FAA Flight Inspection of the developed procedures
 4. PIT: Production Integration Team (TS)
 5. CHARTING: Procedures at AeroNav Products Charting for publication (NACO)
- FAA Status
 1. At Flight Check: At Flight Inspection for procedure validation
 2. Awaiting Publication: At AeroNav Products Charting for publication
 3. Complete: Procedure development action finished
 4. On Hold: Procedure waiting data/information to allow it to proceed/continue to next stage
 5. Pending: Procedure development work on-going
 6. Published: Procedure charted and published
 7. Under Development: Procedure is being worked on by the FAA
 8. Terminated: Procedure/project terminated
- Glossary
 - RNAV: Area Navigation
 - IAP: Instrument Approach procedure

HMMH FAA IFP Information Gateway Review

November 15, 2018

Page 2 of 4

- STAR: Standard Terminal Arrival Route
- GPS: Global Positioning System
- ILS: Instrument Landing System
- LOC: Localizer

Low Importance:

- October 31, 2018
 - ILS OR LOC RWY 28 L AMDT 27A at SFO stage change to FPT with a scheduled publish date of January 3, 2019
- November 1, 2018
 - ILS OR LOC RWY 28L, AMDT, AMDT 27 at SFO stage change to CHARTING with a scheduled publish date of November 8, 2018
- November 8, 2018
 - ILS OR LOC RWY 28L AMDT 27 at SFO stage change to PUBLISHED
 - (Figure 1) Replaces AMDT 26
 - Missed Approach procedure climb changed from 325ft/nm to 2100 to 330ft/nm to 1600
 - Decrease in altitude crossing NEPIC (over water) from 1,080ft to 860ft
 - Straight in and circling minima have been increased to 860ft
- November 8, 2018
 - RNAV (GPS) RWY 19L AMDT 3A at SFO stage change to PUBLISHED
 - (Figure 2) Replaces AMDT3
 - Increases missed approach climb from 420ft to 500ft

High Importance:

- None

Open Comment Periods:

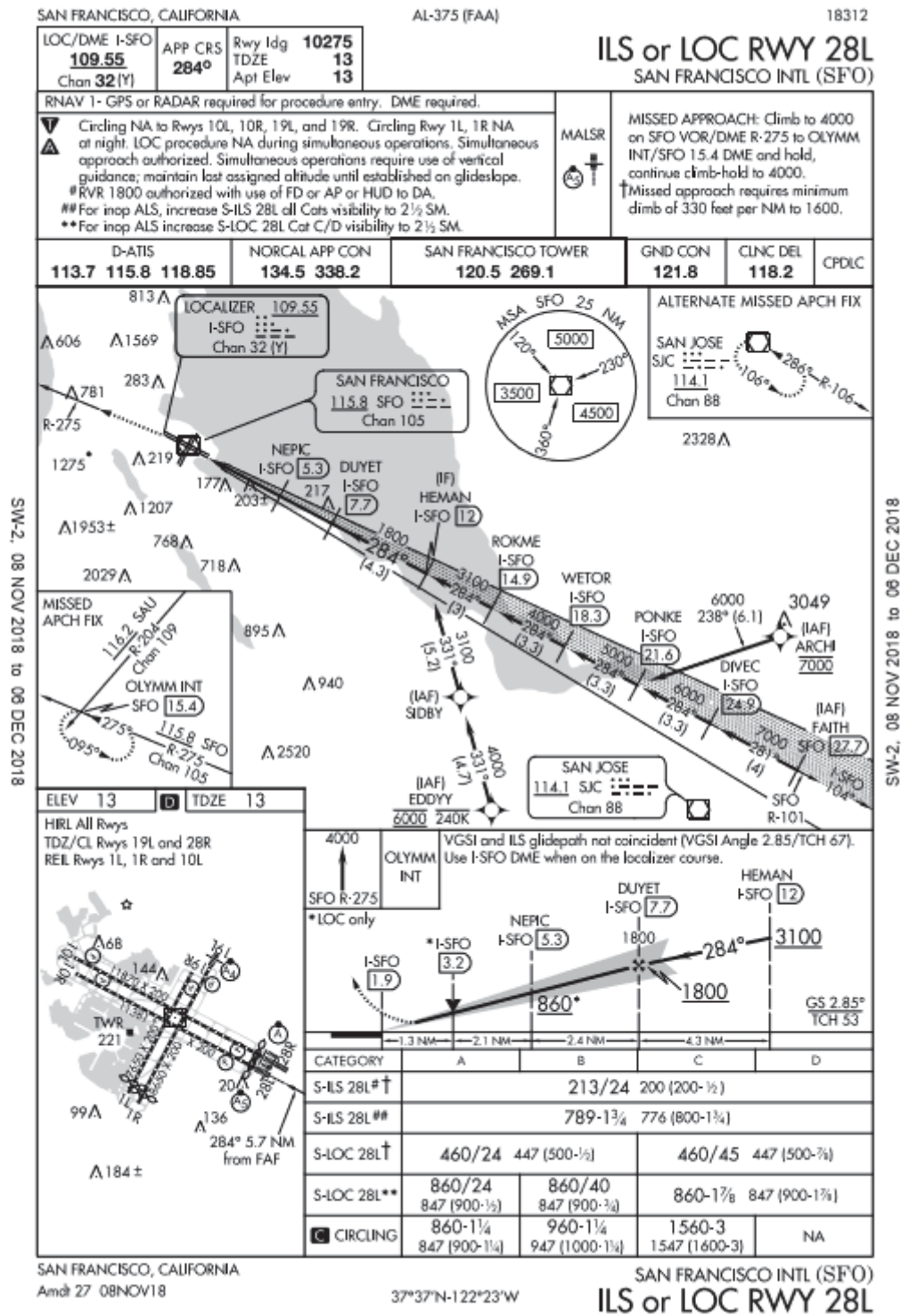
- None

Next Publication:

We expect to see updates for the following on the January 3, 2019 publication:

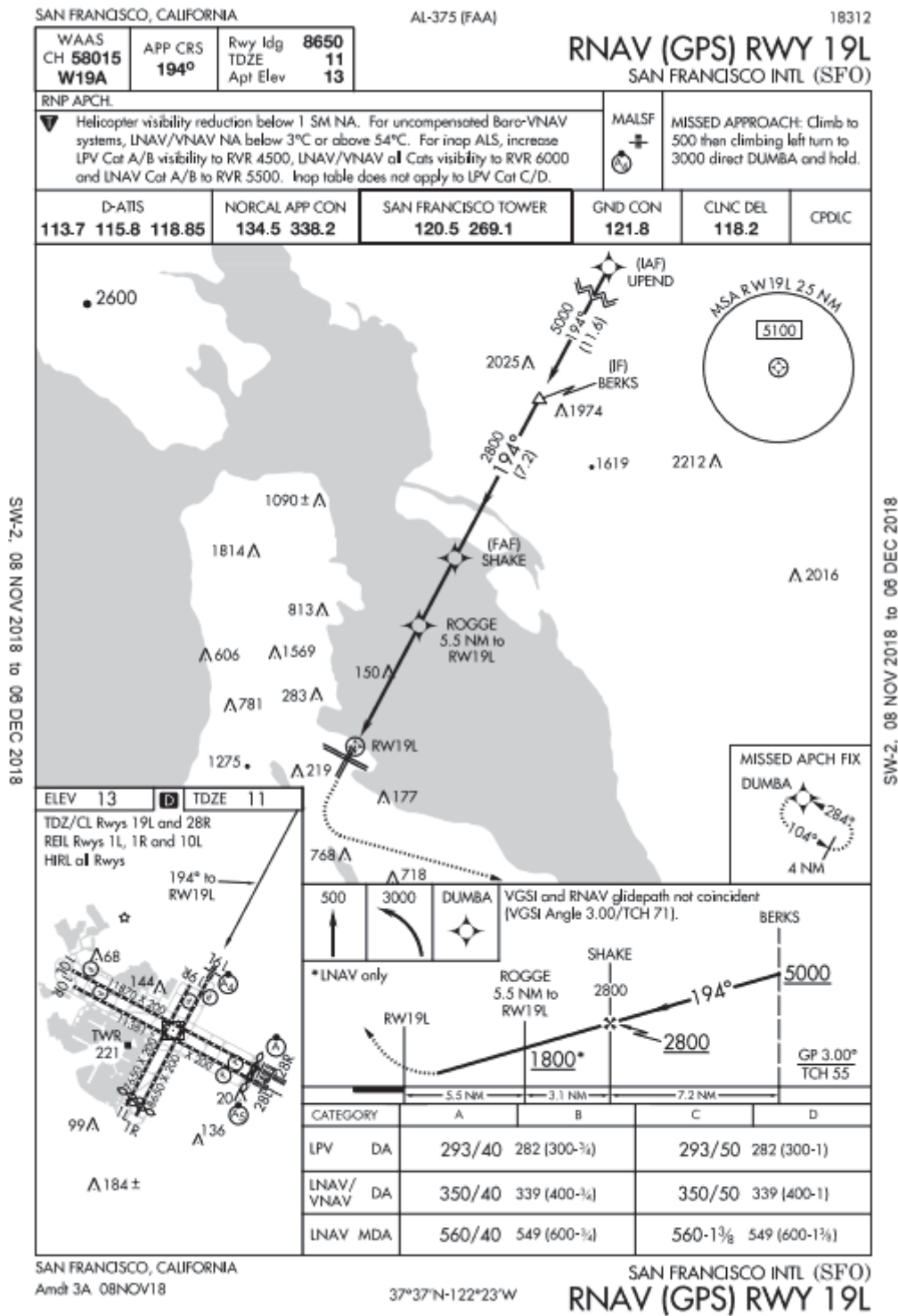
- SFO
 - STAR DYAMD (RNAV) FIVE
 - Currently "Awaiting Publication (NFDC)"
 - ILS OR LOC RWY 28R, AMDT, AMDT 15A
 - Currently "Under Development"
 - ILS OR LOC RWY 28L, AMDT, AMDT 27A
 - Currently "Under Development"

Figure 1. ILS OR LOC RWY 28L, AMDT, AMDT 27 at SFO



Source: [https://www.faa.gov/aero_docs/dtpp/1812/00375IL28L.PDF#nameddest=\(SFO\)](https://www.faa.gov/aero_docs/dtpp/1812/00375IL28L.PDF#nameddest=(SFO))

Figure 2. RNAV (GPS) RWY 19L AMDT 3A at SFO



Source: [https://www.faa.gov/aero_docs/dtpb/1812/00375R19L.PDF#nameddest=\(SFO\)](https://www.faa.gov/aero_docs/dtpb/1812/00375R19L.PDF#nameddest=(SFO))

MEMORANDUM

TO: SAN FRANCISCO COMMUNITY
FROM: SAN FRANCISCO INTERNATIONAL AIRPORT AIRCRAFT NOISE
ABATEMENT OFFICE
SUBJECT: SAN FRANCISCO SHORT-TERM NOISE MONITORING REPORT
DATE: OCTOBER 31, 2018

The San Francisco International Airport (SFO) Aircraft Noise Abatement Office conducted aircraft noise monitoring in San Francisco to determine the noise levels within the community from aircraft operations at SFO. This measurement period was from September 1, 2018 through September 16, 2018. The monitoring was made possible with the assistance of an Excelsior neighborhood resident. The overall average daily noise level from all aircraft was 48dBA CNEL. The Community daily noise level was 53dBA CNEL. Noise from all aircraft over this location increased the total average daily noise level by 1dBA. SFO aircraft attributed approximately 68% of all aircraft noise events over the southeast geographic quadrant of San Francisco. During this monitoring period, there weren't any weather conditions that resulted in flight delays or the use of reverse flow traffic -patterns for aircraft to safely operate. The thresholds of 53dBA during the day and 50dBA during the night was used for this measurement period. The high number of community noise events is due to the low thresholds which recorded wind noise as individual noise events.

The monitoring site at the Excelsior neighborhood is relatively quiet with ambient noise levels of 49dBA, considering that most of the Excelsior Neighborhood is in an urban community setting. On an average day there were 272 overflights out of which 185 exceeded the noise monitor threshold and recorded a noise event. The majority of flights departing SFO use over water departure procedures that reduces noise in residential communities when wind speed and wind direction allow for a safe take-off. Aircraft taking off on Runways 01L and 01R bound for airports in the south or southeast; will turn left over the San Francisco Peninsula using the SSTIK Departure Procedure and/or as directed by Federal Aviation Administration Air Traffic Controllers. These SFO operations represent 72% of aircraft noise events over Excelsior, while 25% are attributed to OAK southbound departures on Runway 30 that are conducting a left turn over San Francisco Peninsula as well. Additional information about flight operations can be found at the Appendix.

During the noise monitoring period, SFO Aircraft Noise Abatement Office received noise reports from 28 individuals in San Francisco. Of the 1,914 complaints submitted, 80% (1,526) were in the daytime hours (7am-7pm), 9% (172) for the evening hours (7pm-10pm), and 11% (216) for the nighttime hours (10pm-7am). The majority of SFO Aircraft noise events (75%) occurred between 7am and 7pm. On average, there were 3 nighttime noise events daily. Any aircraft noise above the ambient level threshold may become a nuisance for the residents. Between the 6am to 10am hours, there is a discrepancy that show a high number of noise reporters against a low number of noise events. This means that Excelsior residents are most disturbed during these morning hours.

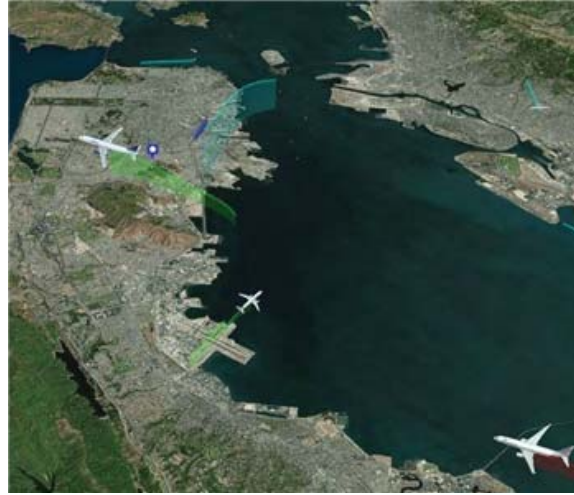
dba- stands for A-weighted decibel. Decibel unit measures the loudness of a sound and is computed as the signal to noise ratio. A-weighting is used to adjust for frequency range of human hearing. An increase of ten decibels is perceived by human ear as a doubling of noise.

CNEL- This metric is used to assess and regulate aircraft noise exposure in communities surrounding the airport. California Title 21 Noise Regulations established acceptable average level of aircraft noise of 65dBA CNEL.

Short Term Noise Monitoring Report San Francisco

September 1 - 16, 2018

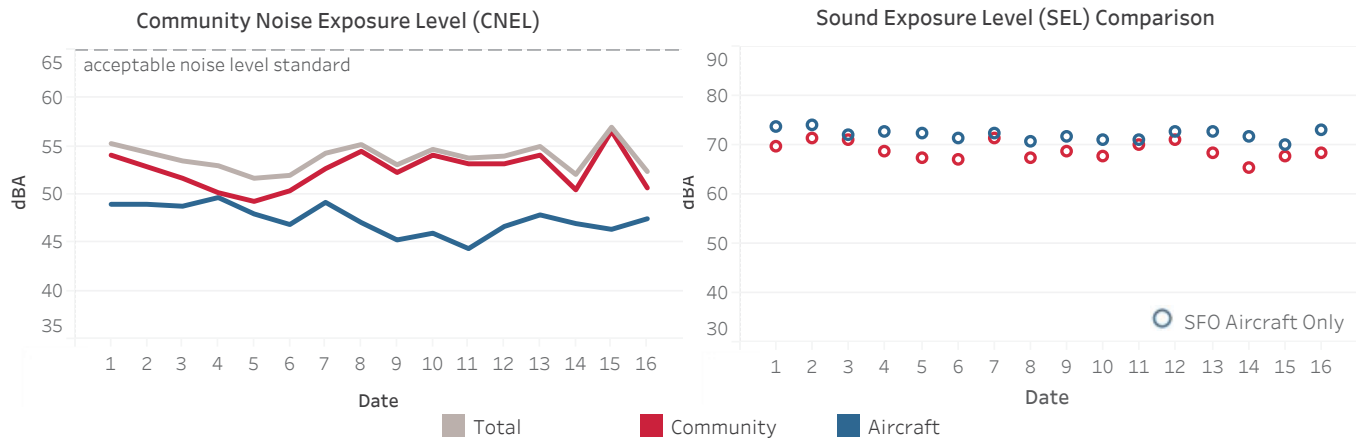
Aircraft CNEL: 48dBA
 Community CNEL: 53dBA
 Total CNEL: 54dBA
 SEL: 72dBA
 LMax: 59dBA
 Ambient Noise: 49dBA
 Noise Monitor Treshold: 53dBA (day—7am to 10pm), 50 dbA (night—10pm to 7am)
 SFO Aircraft Noise Events: 127 per day
 SFO Operations Flow: West Flow
 Cause of Aircraft Overflights: SFO departures from Runway 01L/R making left turn over SF's southeast quadrant and OAK departures off Runway 30 over SF. Both are southbound traffic.



Daily Noise Event Averages

Date	Noise Events	SFO		Noise Events	Non-SFO		Community		
		Avg. SEL (dBA)	Avg. LMax (dB)		Avg. SEL (dBA)	Avg. LMax (dB)	Noise Events	Avg. SEL (dBA)	Avg. LMax (dB)
1	138	74	60	50	71	58	473	70	55
2	136	74	61	49	72	59	375	71	57
3	170	72	59	57	70	57	188	71	57
4	183	73	60	64	68	56	159	69	56
5	180	72	60	46	68	56	190	67	56
6	127	71	58	59	69	57	236	67	55
7	146	72	59	69	71	57	354	71	57
8	118	71	58	86	72	57	416	67	55
9	137	72	58	39	68	56	233	69	56
10	112	71	58	44	70	56	460	68	55
11	69	71	58	41	70	57	433	70	57
12	109	73	60	64	71	57	479	71	57
13	101	73	60	71	70	57	480	68	56
14	127	72	59	29	68	57	61	65	54
15	50	70	57	51	69	56	741	68	55
16	131	73	60	53	70	57	151	68	56
Daily Average	127	72	59	55	70	57	339	69	56

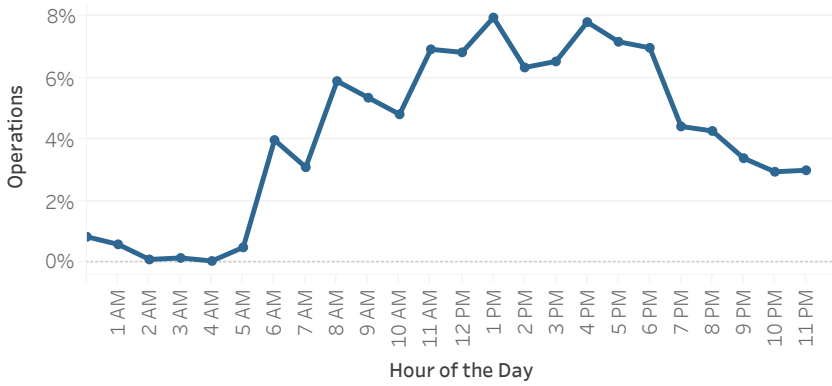
SFO Events are: Single SFO Aircraft, Multiple SFO Aircraft, Simultaneous SFO and Non-SFO Aircraft, and Simultaneous Community and SFO Aircraft.
SEL - Sound Exposure Level of a noise event is measured over time between the initial and final points when the noise level exceeds a predetermined threshold and its energy is compressed into one second.
Lmax - The maximum noise level is a measurement of the peak level of a noise event.
CNEL- This metric is used to assess and regulate aircraft noise exposure in communities surrounding the airport. California Title 21 Noise Regulations established acceptable average level of aircraft noise of 65dBA CNEL.



SFO Aircraft Noise Events by Day (7am-7pm), Evening (7pm-10pm) and Night (10pm-7am)

Day	Noise Events	SFO Noise Events (%)	Avg. SEL (dBA)	Min. SEL (dBA)	Max. SEL (dBA)	Avg. LMax (dB)	Min. LMax (dBA)	Max. LMax (dBA)	Avg. Duration (sec)	Min. Duration (sec)	Max. Duration (sec)
Day	1,541	76%	73	53	83	60	53	73	31	1	60
Evening	246	12%	70	53	78	58	53	67	26	1	60
Night	247	12%	70	57	78	57	50	67	29	5	60

SFO Noise Events by Hour of the Day

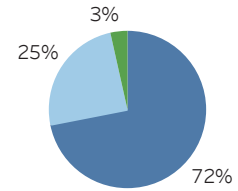


SFO Departures Altitude

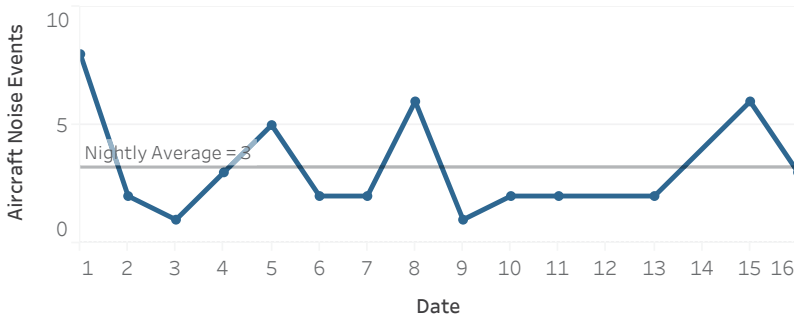
Altitude Range	Percentage
≤4000	20%
≤4500	27%
≤5000	24%
≤5500	16%
≤6000	7%
>6000	6%

Only aircraft that registered a noise event on the monitor are considered.

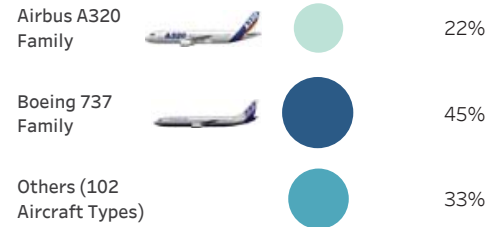
Airport
 ■ SFO
 ■ OAK
 ■ Others



SFO Nighttime (midnight-6am)



Aircraft Type



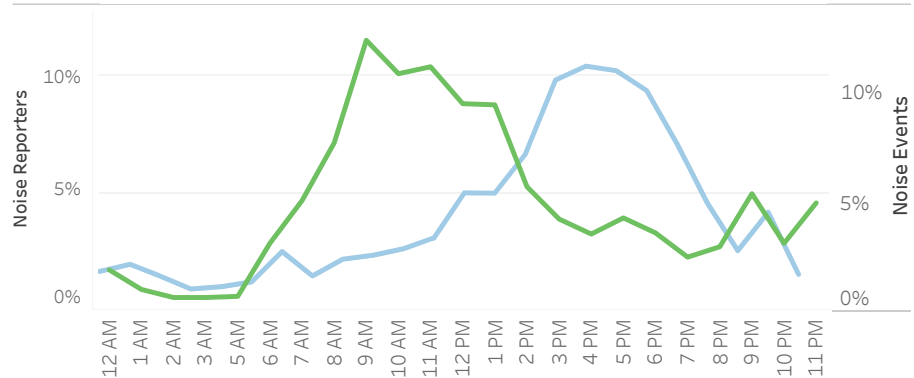
Noise Reporters

Date	Noise Reporters	Noise Reports
1	11	148
2	15	133
3	13	171
4	15	234
5	16	123
6	11	76
7	9	131
8	13	54
9	9	69
10	13	96
11	10	66
12	12	141
13	13	144
14	11	124
15	7	15
16	13	189
Total	28*	1,914

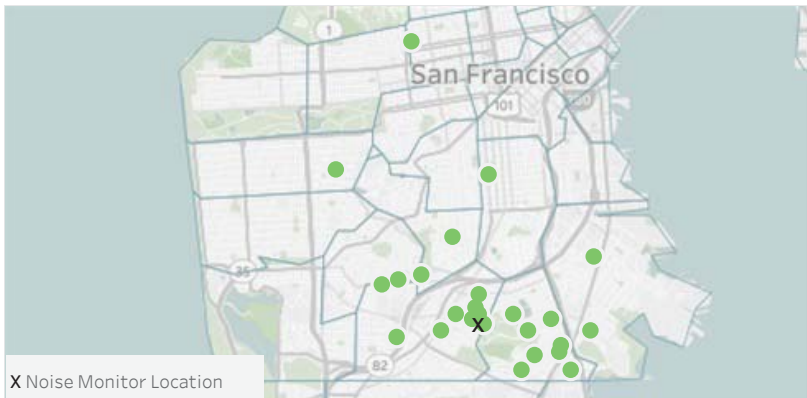
* Individual Reporters

68%
 of overflights registered a noise event.
 (272 avg daily overflights of which 185 created a noise event)

Noise Reporters vs Noise Events



Noise Reporters Location



Hour

Noise Monitor on Location



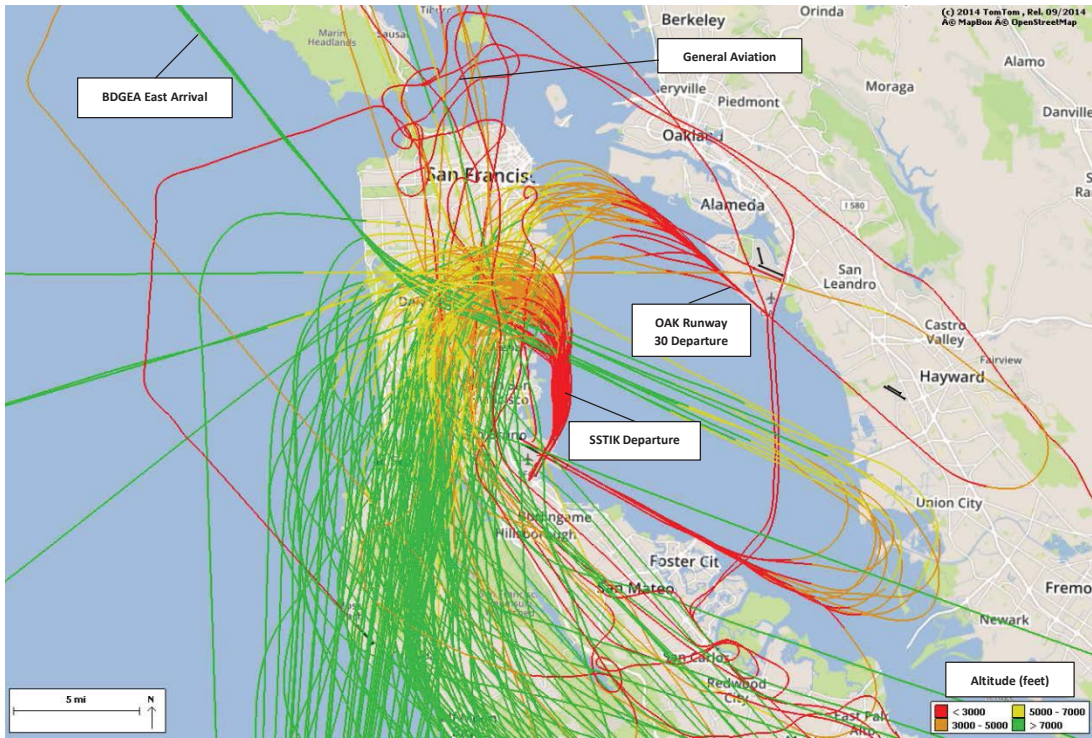
APPENDIX

DATA

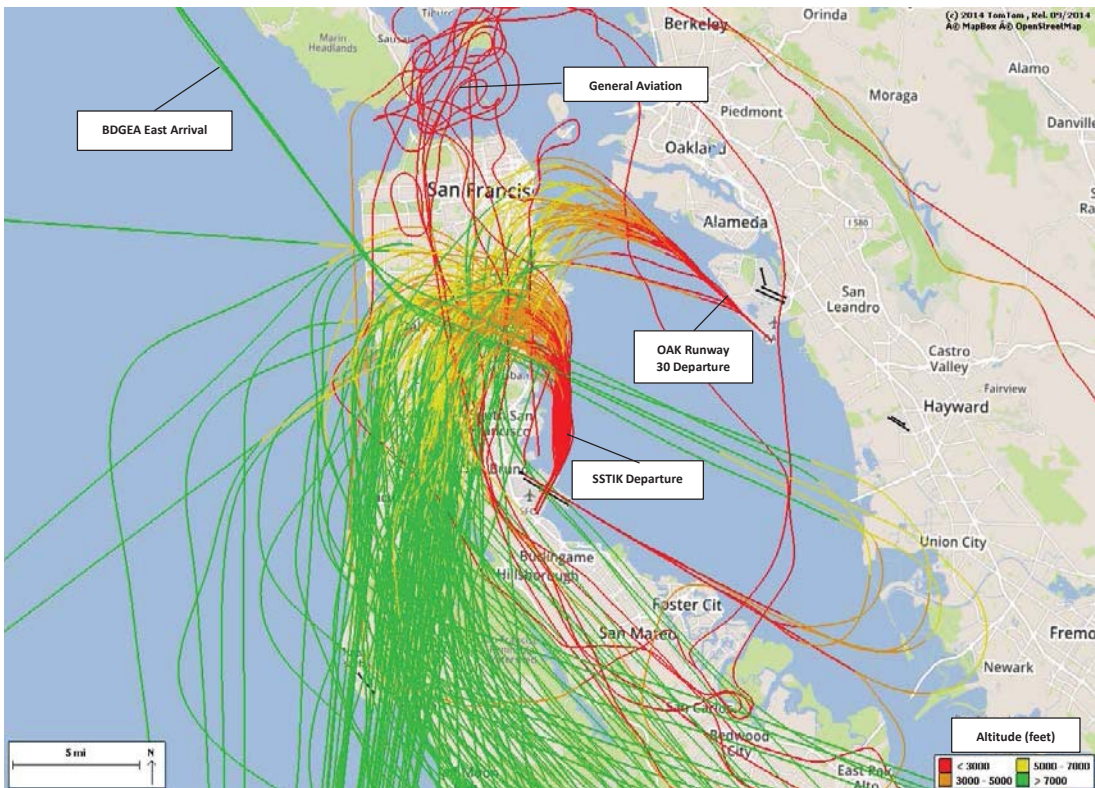
This appendix contains actual flight tracks of aircraft that created a noise event during the monitoring period of September 1st to September 16th, 2018 at the Excelsior district of San Francisco. These tracks do not show all aircraft operations of each day. Tracks shown are aircraft that overflew near the monitoring site and registered a noise event. Flight tracks are color coded by altitude in feet (Mean Sea Level). The majority of aircraft that registered a noise event are jet aircraft operating at SFO and Oakland International Airport. Other aircraft that registered a noise event include General Aviation aircraft operations.

Flight Routes of Noise Events

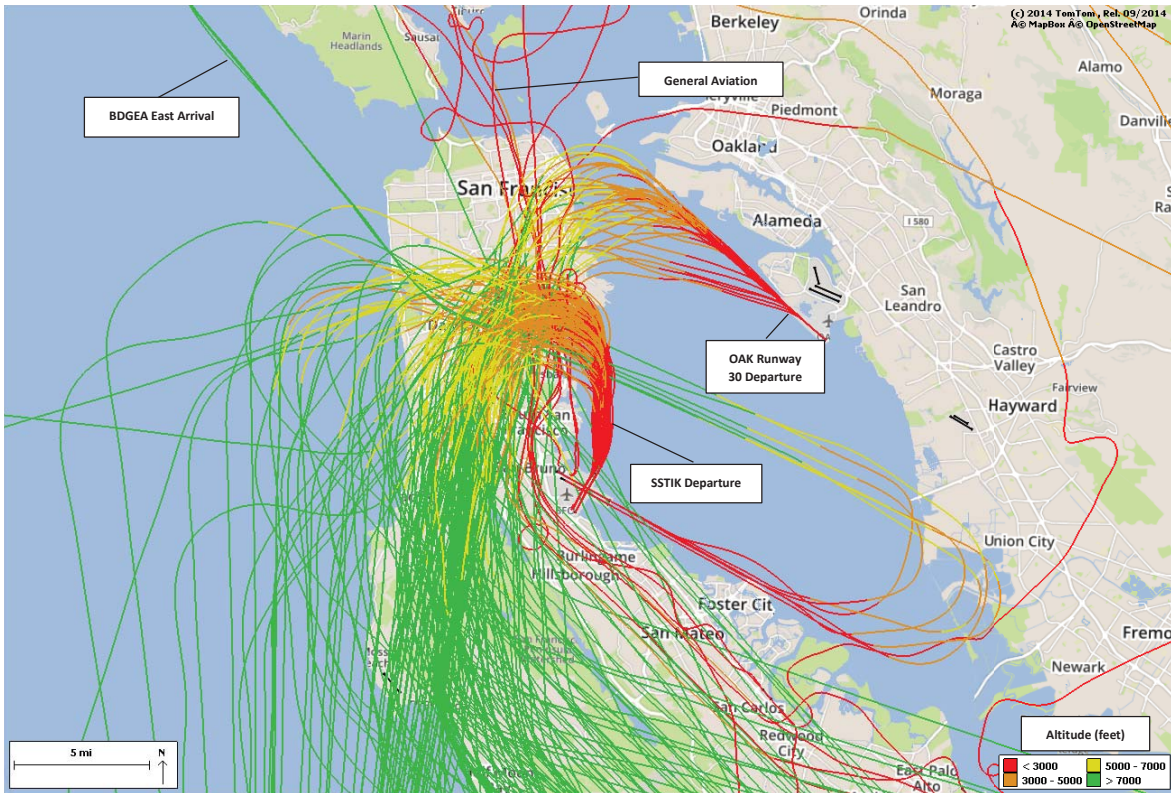
September 1st — 169 aircraft noise events



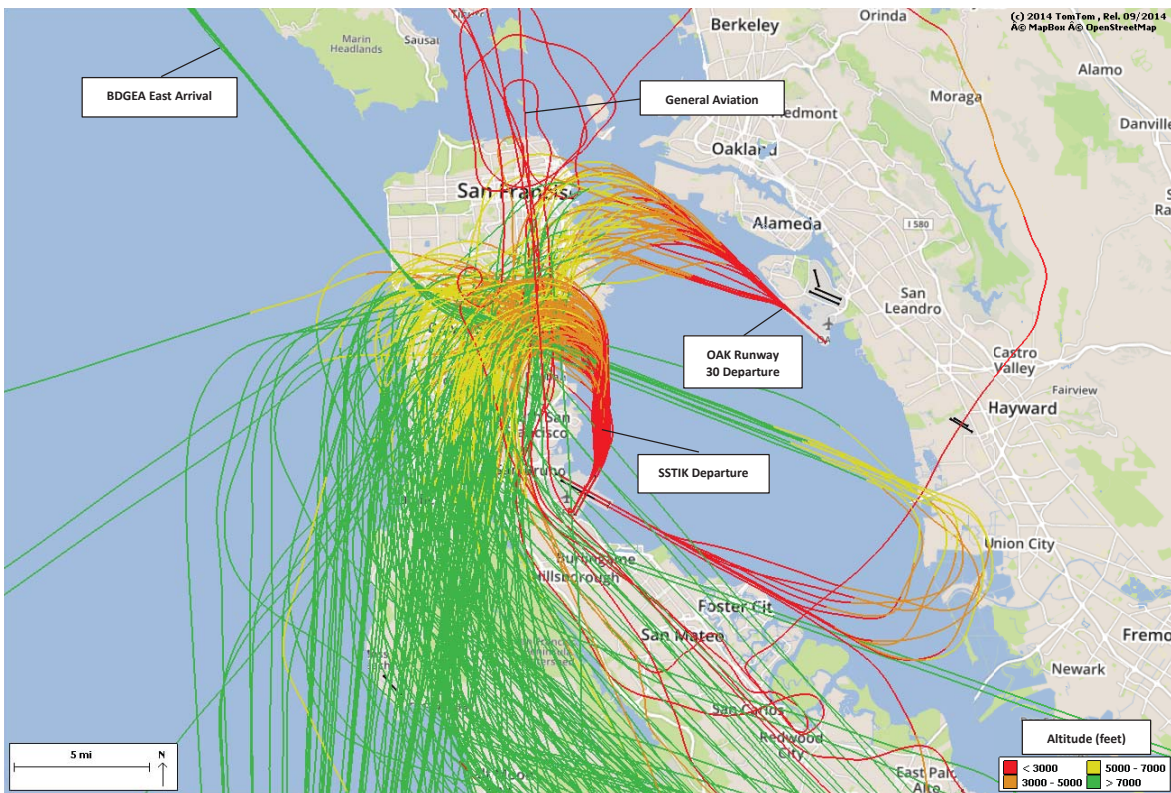
September 2nd — 164 aircraft noise events



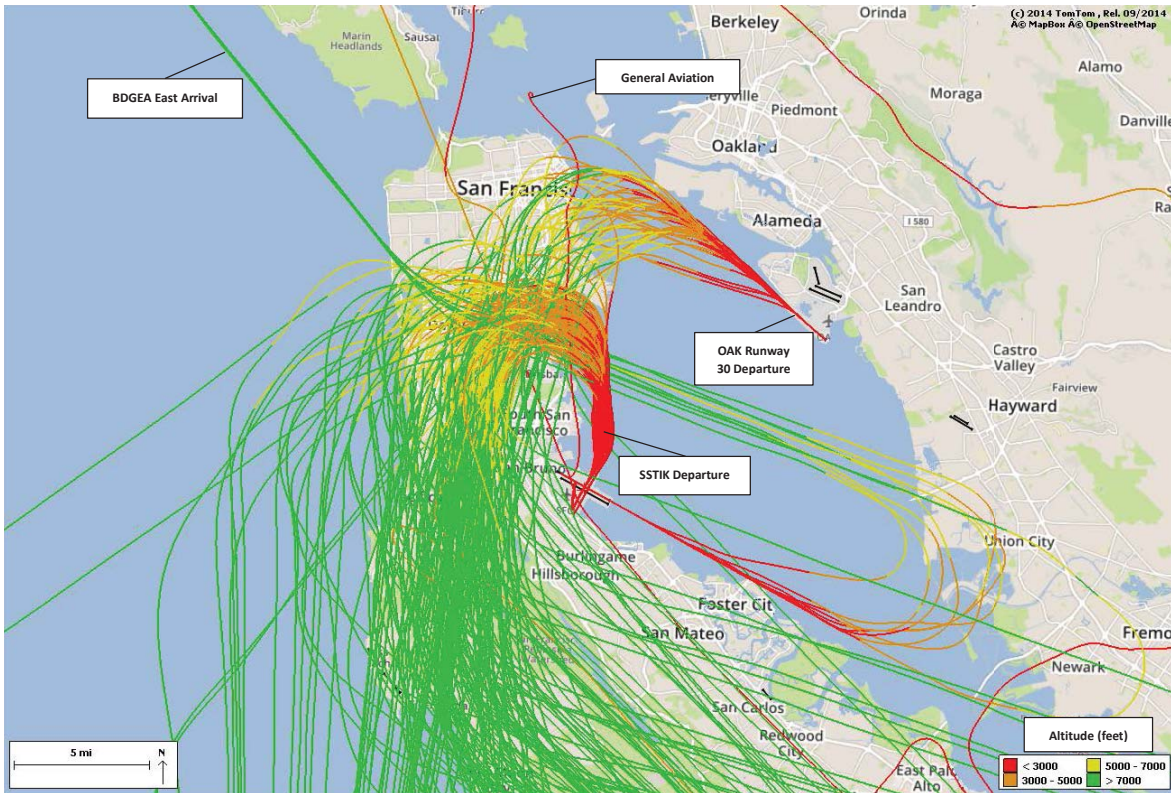
September 3rd — 204 aircraft noise events



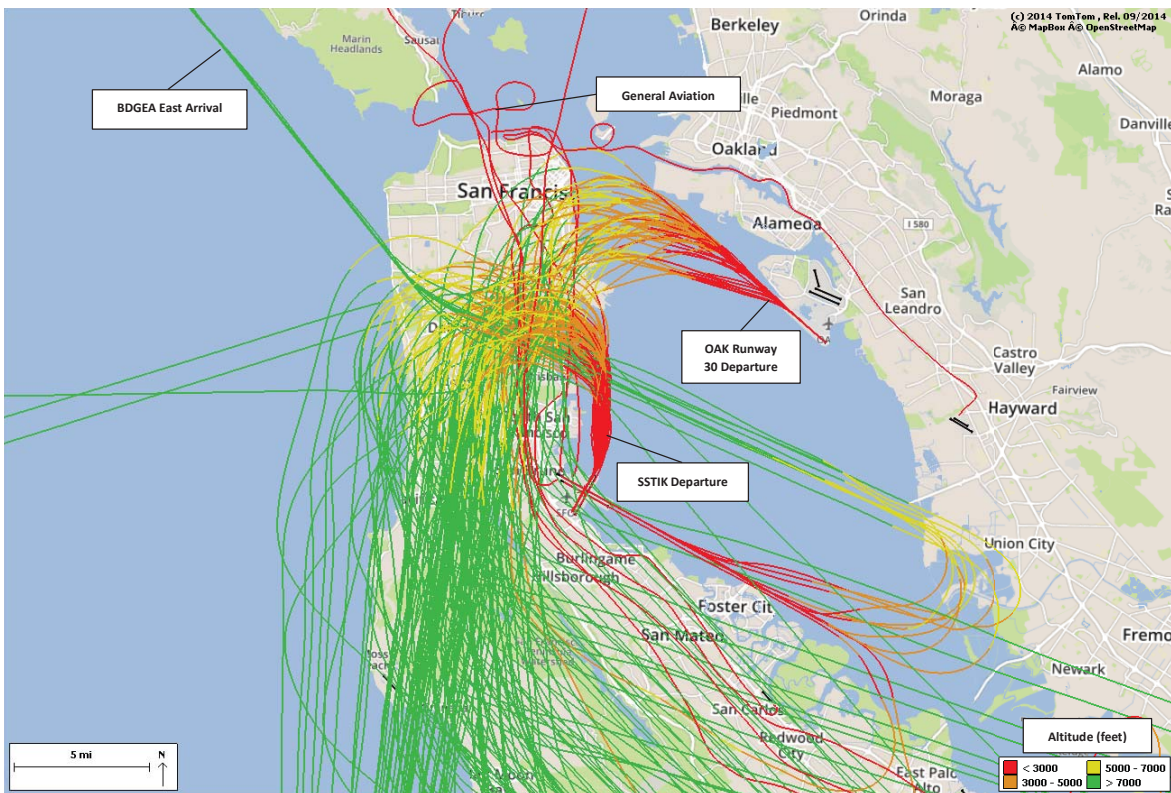
September 4th — 222 aircraft noise events



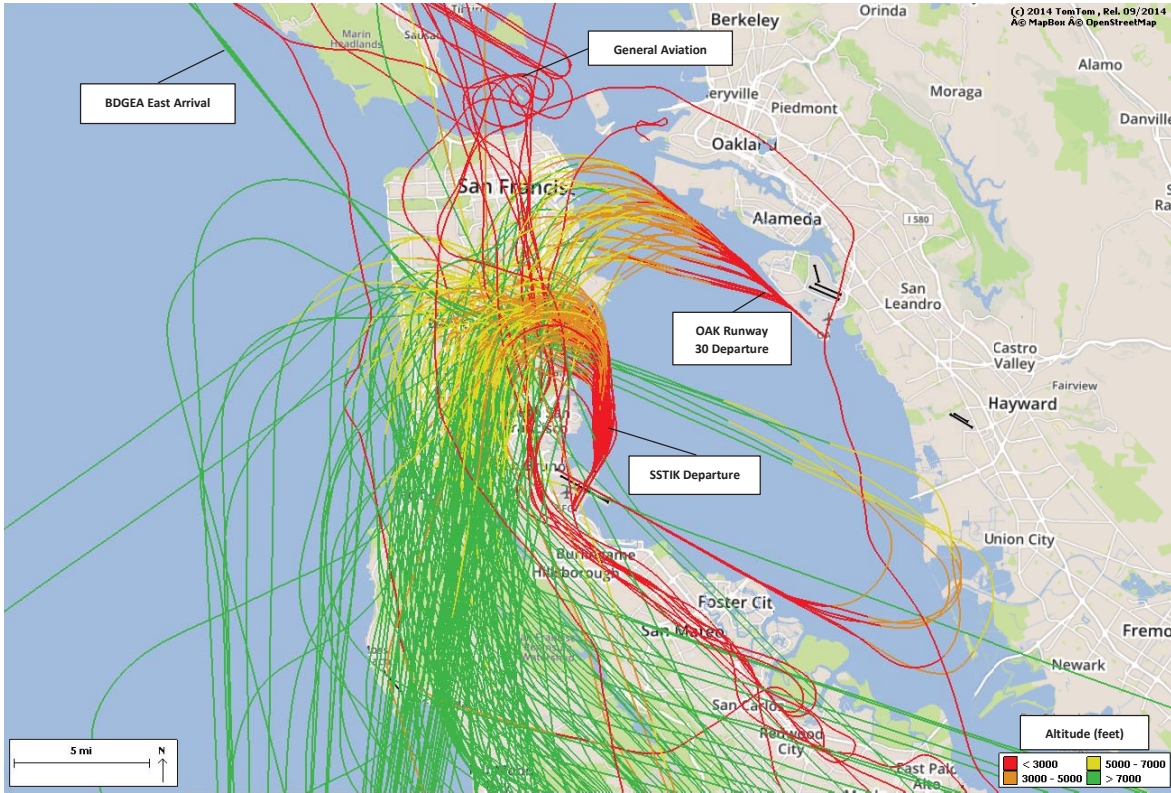
September 5th — 202 aircraft noise events



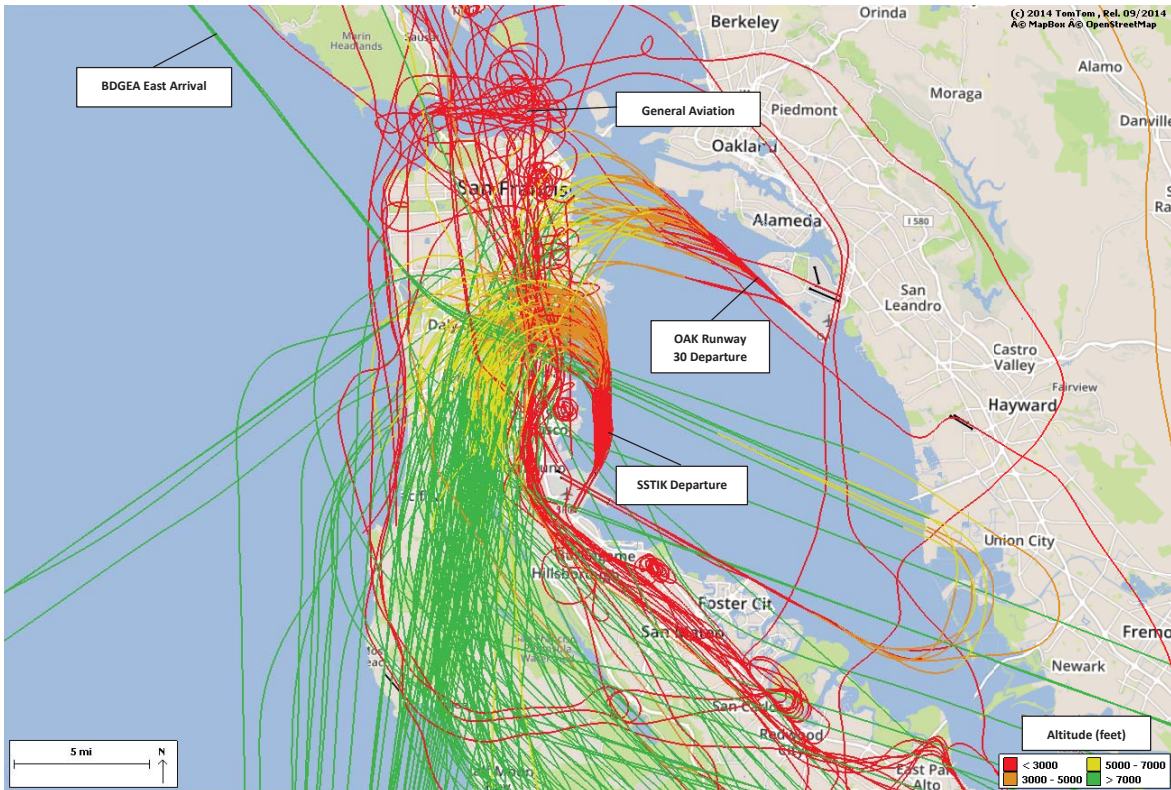
September 6th — 171 aircraft noise events



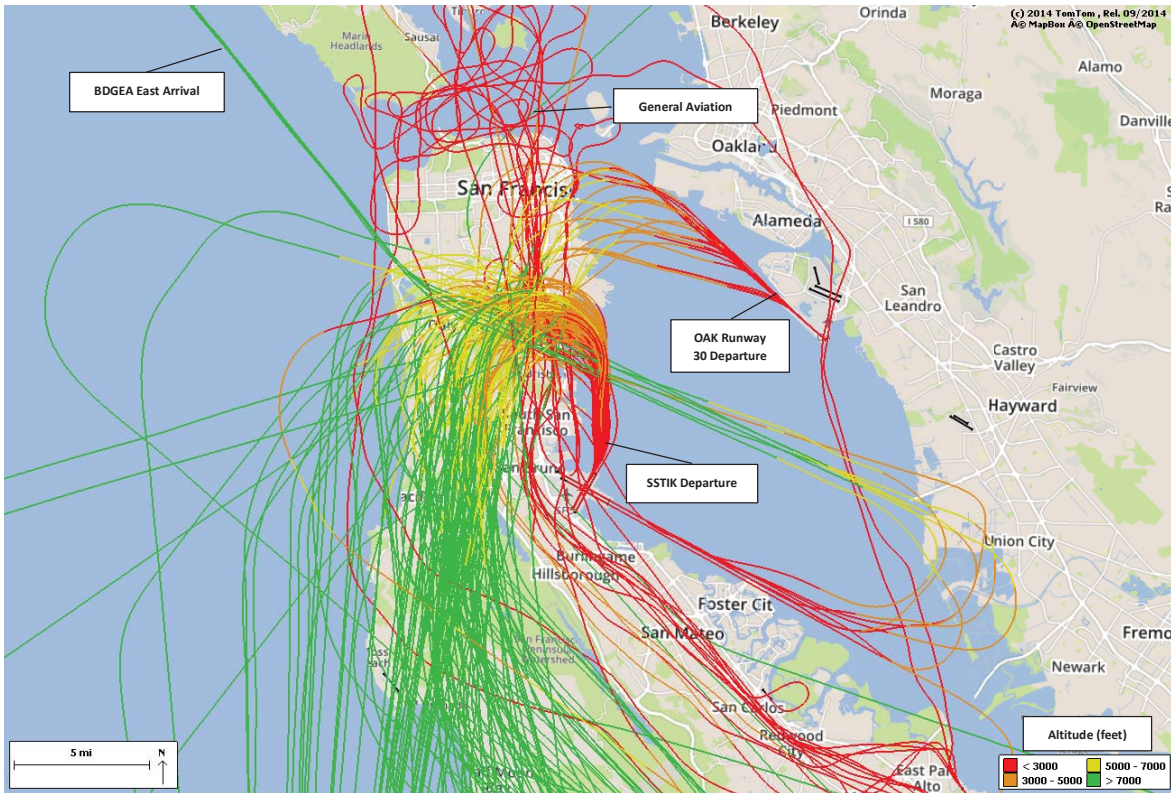
September 7th — 196 aircraft noise events



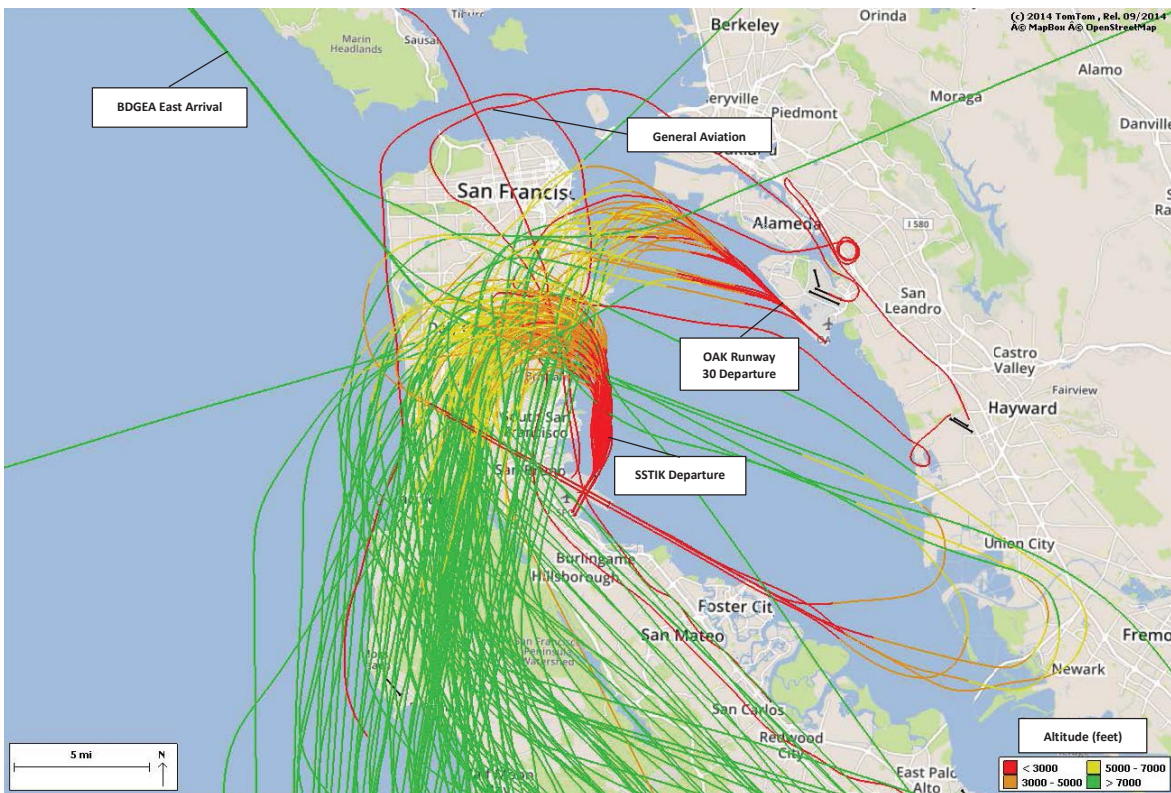
September 8th — 162 aircraft noise events



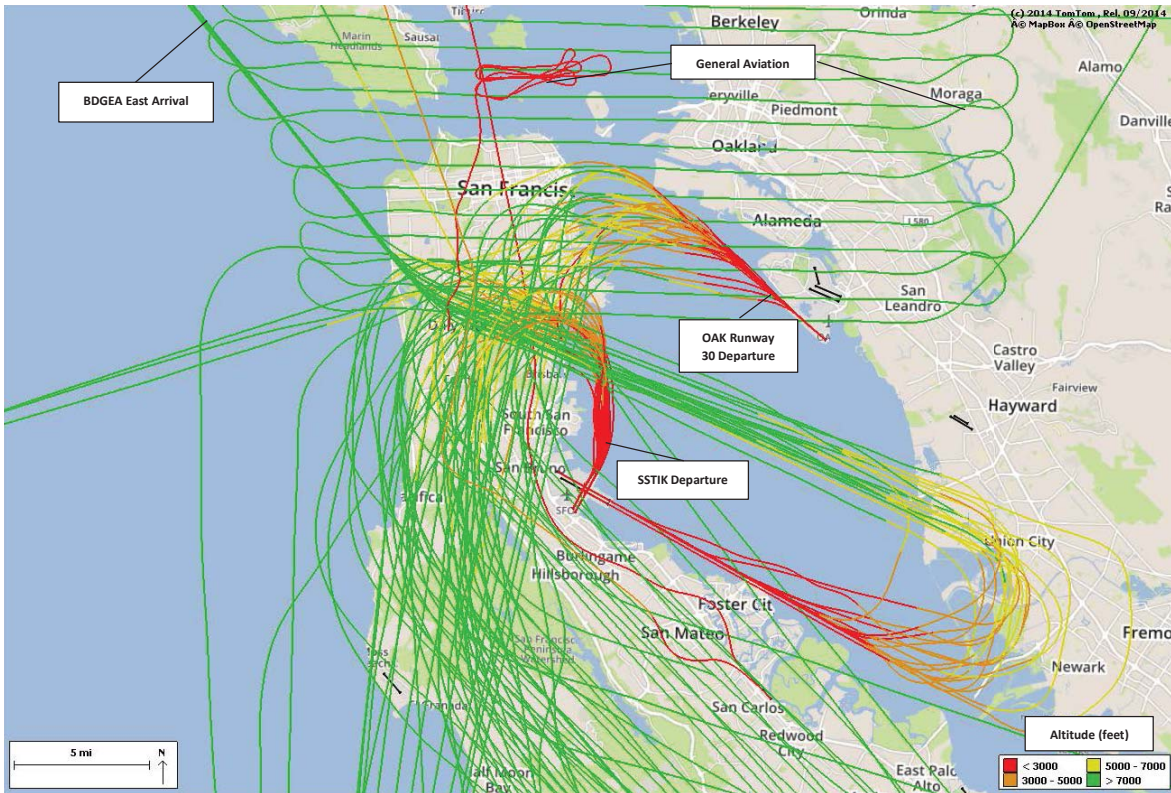
September 9th — 153 aircraft noise events



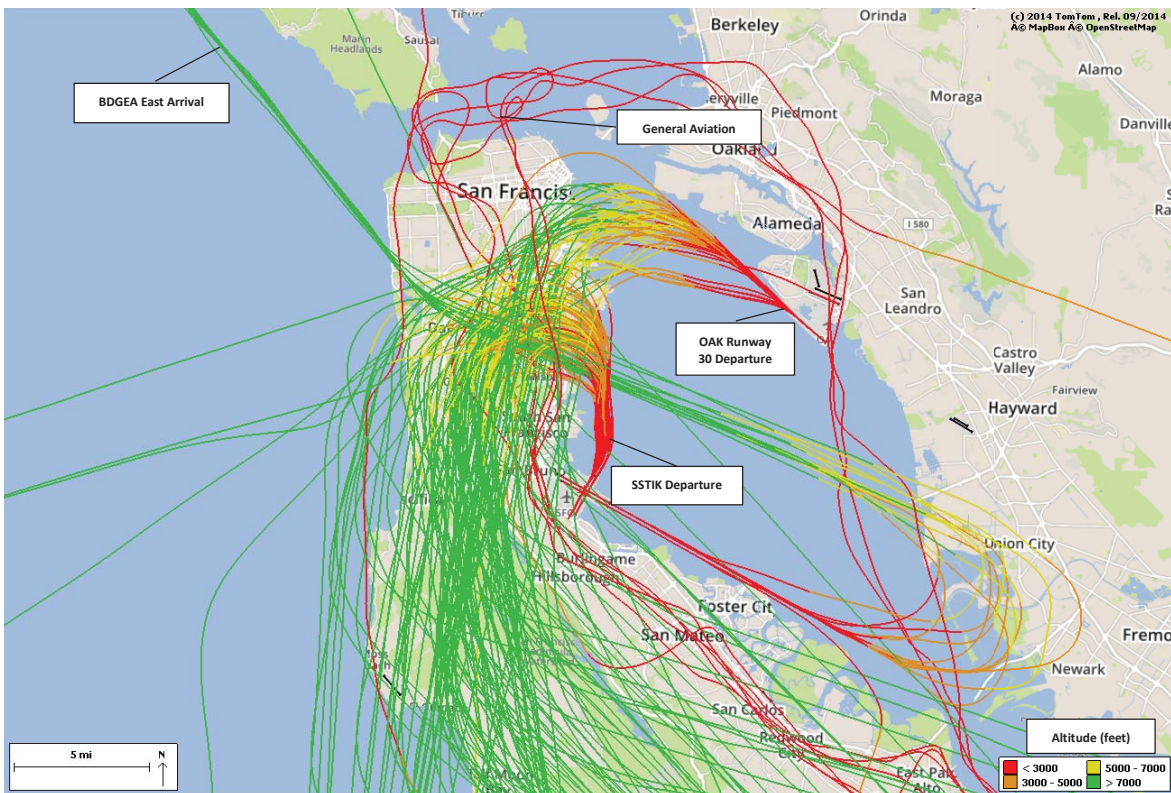
September 10th — 139 aircraft noise events



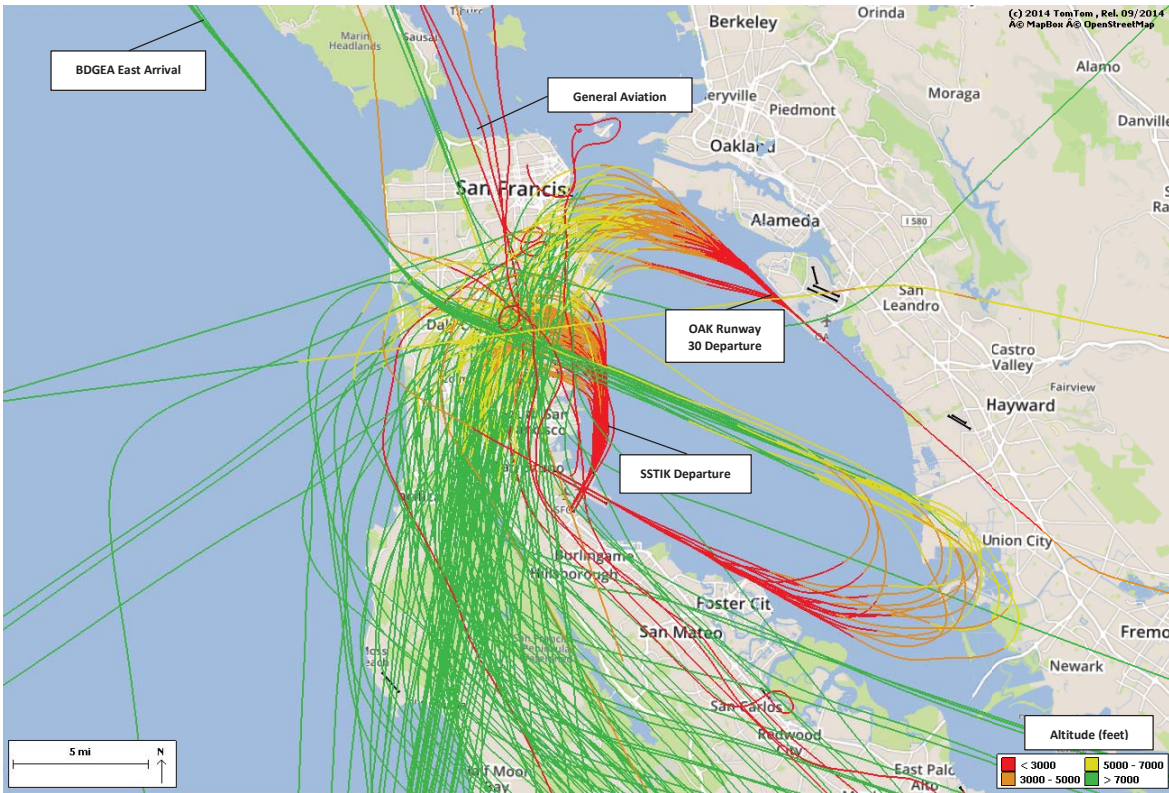
September 11th — 99 aircraft noise events



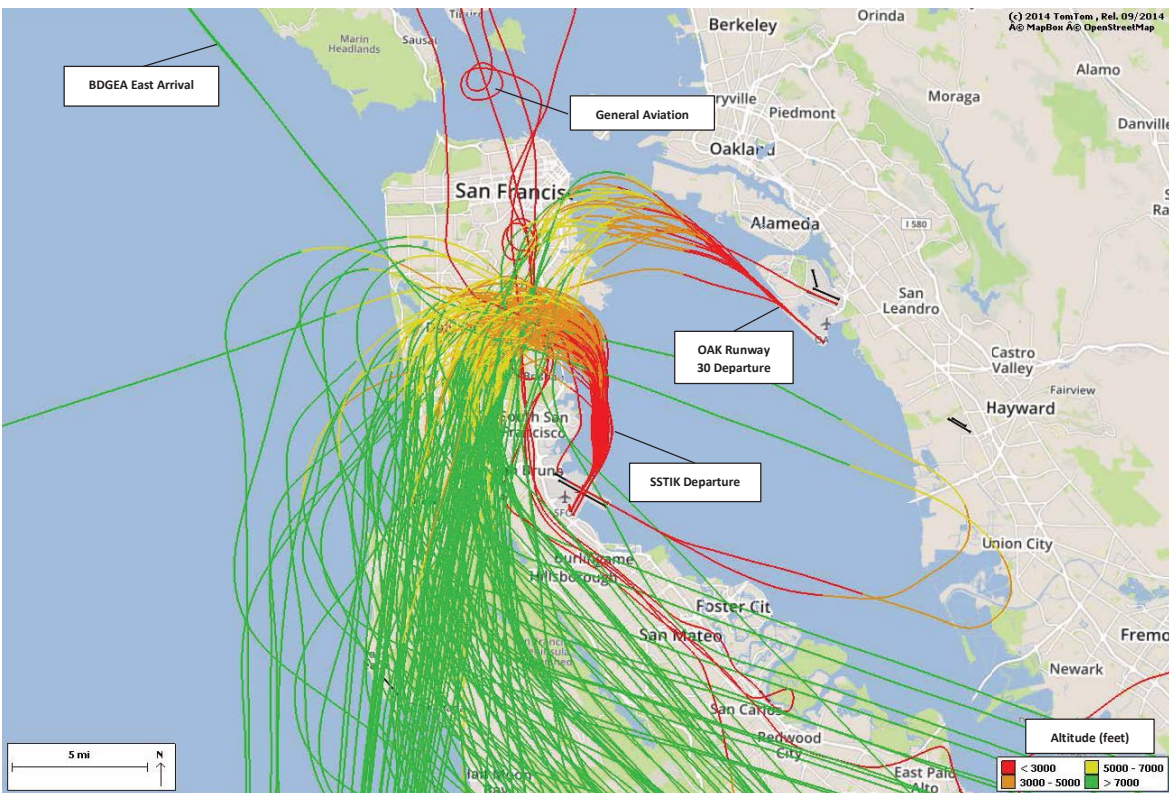
September 12th — 150 aircraft noise events



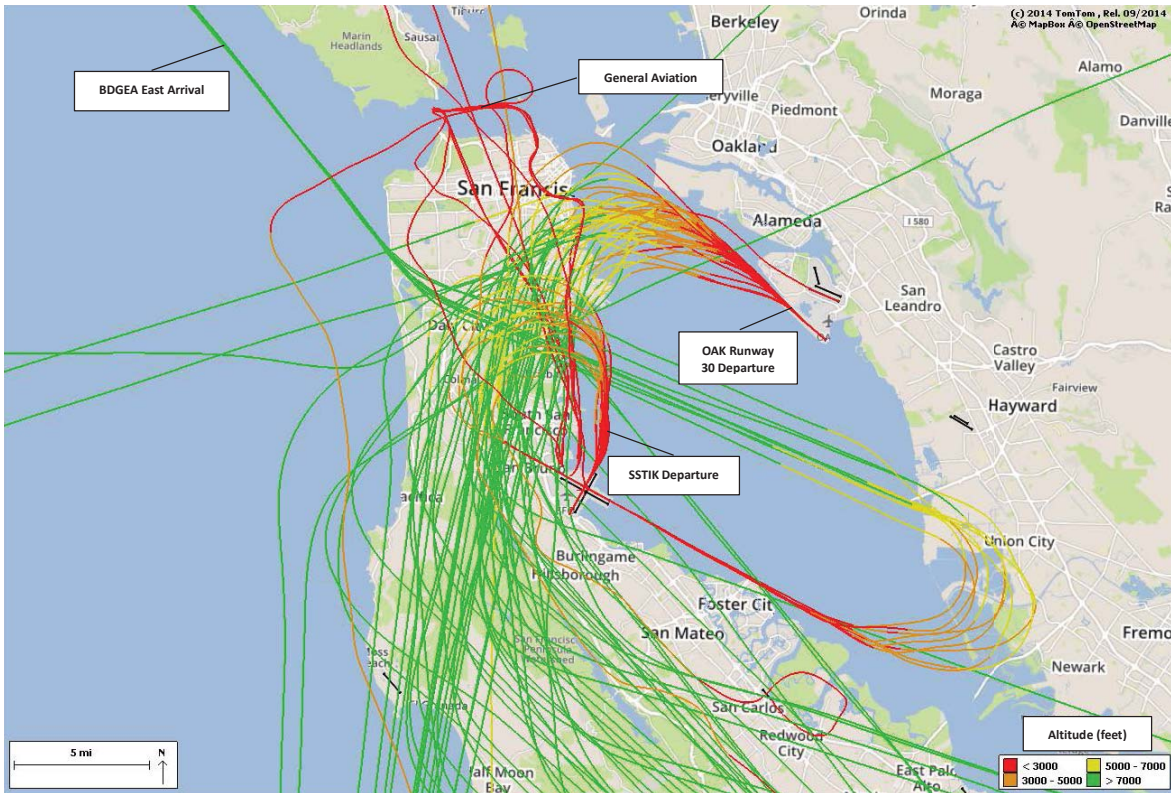
September 13th — 155 aircraft noise events



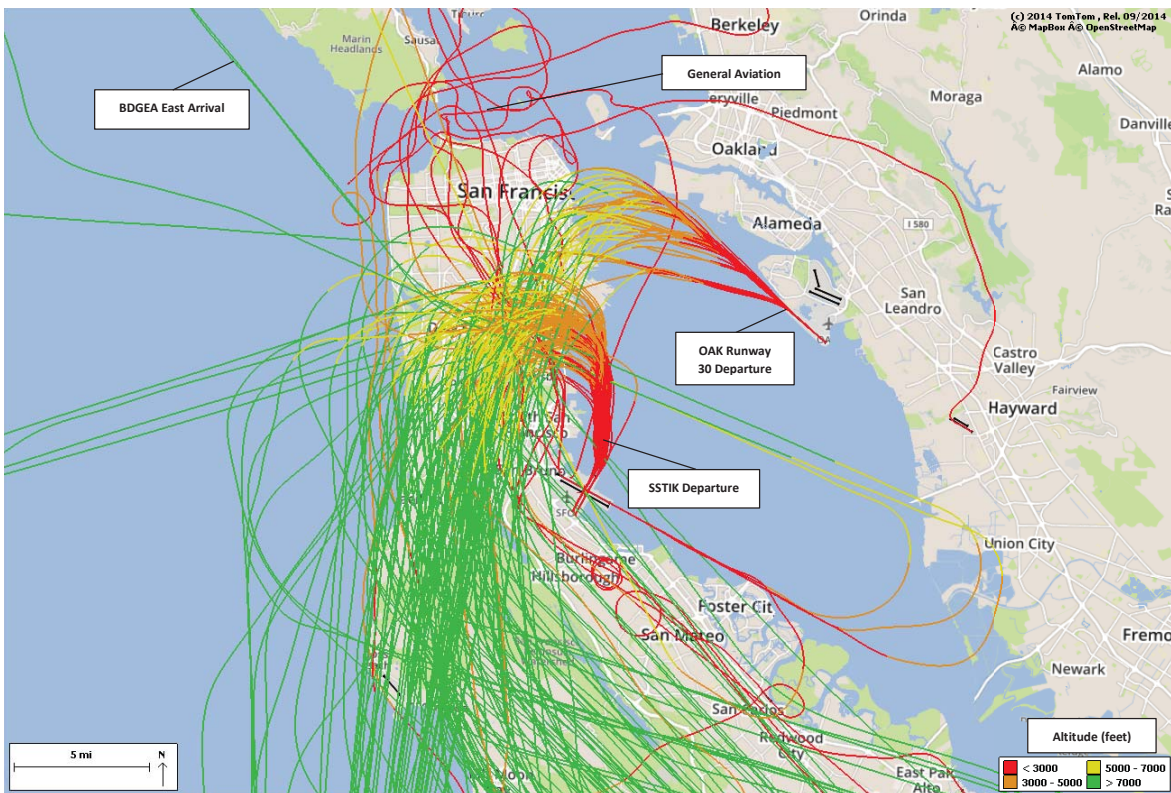
September 14th — 150 aircraft noise events



September 15th — 85 aircraft noise events



September 16th — 169 aircraft noise events





November 5, 2018

Federal Aviation Administration
Western Service Center - Operations Support Group
1601 Lind Avenue SW
Renton, WA 98057

Re: Request for an Extension of Public Comment Period for PIRAT STAR (RNAV)


This request for a sixty (60) day extension of the public comment period from November 13, 2018, is in reference to the proposed PIRAT STAR (RNAV) procedure that was recently posted on the IFP (Instrument Flight Procedures) Gateway.

As the Chair of the San Francisco Airport Community Roundtable, this newly proposed PIRAT STAR (RNAV) procedure comes as a surprise. Over the past several months we have been in regular communication with the Office of the Regional Administrator FAA regarding overflight noise impacts to our San Francisco Bay Area communities. At no time was there mention of this new procedure. In fact, at least two FAA representatives have attended the Roundtable's past two regular meetings. In our pre-meeting conference calls and at the meetings no one mentioned that this procedure was being processed. It is our understanding that the public comment period deadline is November 13, 2018.

Members of our community and our technical consultants just recently (within the past week) brought this to my attention with great alarm. There is concern that the new procedure will increase the amount of flights currently using the OTA over Portola Valley, Woodside, Los Altos and Palo Alto. There is concern that this procedure has been developed without input from our communities with regard to altitudes and vectoring over the middle and southern San Francisco Peninsula. There are questions and concerns about whether the use of the previous San Francisco Class-B Airspace via the current San Francisco Class-B Airspace is still valid. There are many more areas of this procedure we need to analyze, and to do that, we believe a sixty (60) day extension is necessary. Therefore, we respectfully request a sixty (60) day extension of the public comment period.

A key part of the Roundtable's mission is to continually abide by Article II Section 5 of its Memorandum of Understanding which states, *"that the Roundtable members, as a group, will not take an action(s) that would result in the "shifting" of noise from one community to another, related to aircraft operations at San Francisco International Airport."* It is our intention to fulfill this article for our stakeholders in San Mateo County and the City and County of San Francisco through a thorough review of the proposed PIRAT STAR (RNAV) procedure in its entirety, including technical reports.

Respectfully,



Elizabeth Lewis, Roundtable Chairperson

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San Francisco International Airport/Community Noise Roundtable Meeting

Aviation Noise News

December 5, 2018



Federal AIP Grants

- 16 airports received a total of \$116.8 Million in Federal Airport Improvement Program (AIP) grants for noise mitigation projects in FY2018
 - ~114 million to 11 airports for residential sound insulation
 - ~67 thousand to 1 airport for sound insulation of public buildings
 - ~100 thousand to 1 airport for noise monitoring system installation
 - ~2 million to 5 airports for noise compatibility planning studies
- \$33.5 million more than the \$83.2 million that 14 airports received in FY2017



Formal Alignment of Community Groups

- The National Quiet Skies Coalition, which was an informal coalition of grass-roots community groups, has formed into a non profit corporation called the Quiet Skies Conference or QSC
- The goals of the QSC focus on:
 - Inclusion of communities in all stages of decision-making on flight path changes or new flight procedures that affect them
 - Use of noise metrics to measure the “true impact” of noise
 - Protection of public health and the environment



Link Between Noise Exposure and Heart Disease

- Preliminary research presented this month at an American Heart Association’s (AHA) scientific event found that people exposed to the highest levels of chronic noise exposure (such as highway and airport noise) have an increased risk of heart attacks and strokes
- Exposure fuels the activity of a brain region involved in stress response and this response in turn promotes blood vessel inflammation
- Study funded in part by AHA and the National Institutes of Health
- Study suggested more research needed to determine whether reduction in noise exposure could meaningfully lower risk



BWI Airport Update

- Maryland filed petition with D.C. Court of Appeals following FAA's inaction regarding environmental impacts and flight paths at Baltimore-Washington Thurgood Marshall Airport (BWI)
- In June 2018, Maryland filed an administrative petition with FAA requesting supplemental environmental assessment as well as revisions to area navigation routes and procedures at BWI
- Assistant FAA Chief Council for Airports * & Environmental Law, James Loftin, said FAA "declines" to respond to Maryland's administrative petition but noted the agency did agree in July to reengage on noise issues with the BWI Community Roundtable but will limit its involvement to issues outside the scope of administrative petitions

