



Meeting Agenda

Regular Meeting

Meeting No. 348
Wednesday, February 7 - 7:00 p.m.
VIA HYBRID ACCESS

David J. Chetcuti Community Room
450 Poplar Ave | Millbrae, CA 94030
*see attached venue map & parking

Public may also join the virtual webinar:
<https://smcgov.zoom.us/j/93248513630>

Or Dial in:

US: +1(669)900-6833 Webinar ID: 932 4851 3630

This meeting of the San Francisco Airport Community Roundtable will be in person at the above-mentioned address. Members of the public will be able to participate in the meeting remotely via the Zoom platform or in person at 450 Poplar Avenue, Millbrae, CA 94030. For information regarding how to participate in the meeting, either in person or remotely, please refer to instructions at the end of the agenda.

HYBRID PUBLIC PARTICIPATION:

List of attendees (using zoom sign-in credentials) will be displayed periodically throughout the meeting.

Public Comment

*Written public comments can be emailed to SFORoundtable@smcgov.org and should include specific agenda item to which you are commenting.

*Spoken public comments will also be accepted during the meeting in-person or via Zoom on Items NOT on the Agenda and for each Regular Agenda Item and at the end of Presentations, at the option of the speaker.

**Please see instructions for written and spoken comments at the end of this agenda.

ADA Requests

Individuals who require 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 packet or other writings that may be distributed at the meeting, should contact staff as early as possible but no later than 10:00am the day before the meeting at SFORoundtable@smcgov.org Notification in advance of the meeting will enable Staff to make reasonable arrangements to ensure accessibility to this meeting, the materials related to it, and your ability to comment.

Working together for quieter skies



AGENDA

Call to Order / Roll Call / Declaration of a Quorum Present
Sam Hindi, Roundtable Chairperson

Public Comment on Items NOT on the Agenda
Speakers are limited to two minutes. Roundtable members cannot discuss or take action on any matter raised under this item.

Action to set Agenda and to Approve Consent Items
Sam Hindi, Roundtable Chairperson

CONSENT AGENDA

All items on the Consent Agenda are approved/accepted in one motion. A Roundtable Member 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. Public Comment is received prior to approval of the Consent Agenda.

- 1. Airport Director's Reports p.9
 - a. November 2023
 - b. December 2023

- 2. Fiscal Year to Date Budget vs. Actuals Update p.23

REGULAR AGENDA

Public Comment received on Regular Agenda items prior to action.

- 3. **ACTION:** Election of Roundtable Chairperson for Calendar Year 2024 p.25
Sam Hindi, Roundtable Chairperson

- 4. **ACTION:** Election of Roundtable Vice-Chairperson for Calendar Year 2024
Roundtable Chairperson

- 5. **ACTION:** Approval of Resolution 24-01: Designating Regular Roundtable Meeting Dates, p.25
Time & Place for Calendar Year 2024
Roundtable Chairperson
Attachment: Memo & Resolution

- 6. **ACTION:** Subcommittee Assignments/Meeting Frequency p.28
Roundtable Chairperson
Attachment: Subcommittee Descriptions and 2024 Potential Meeting Dates Chart
 - a. Technical Working Group
 - b. Legislative
 - c. Ground-Based Noise
 - d. Work Program
 - e. Ad-Hoc Portable Noise Monitor Placement
 - f. Strategic Plan

PRESENTATIONS

Public Comment on Presentation items will be taken after the last item under presentations.

7. FAA update on the NIITE and HUSSH nighttime noise abatement procedures

8. Advanced Air Mobility (AAM)

p.31

Timothy Middleton, Principal Consultant, HMMH
Attachment: Advanced Air Mobility (AAM) Update, February 2024

9. Chairman's Update

Roundtable Chairperson

10. Airport Director Update

Ivar Satero, Airport Director

a. Aircraft Noise Office Update

Bert Ganoung, Aircraft Noise Office Manager

11. Subcommittee Updates

a. Technical Working Group Subcommittee January 18, 2024

Sam Hindi, TWG Subcommittee Chairperson

Attachment: [Subcommittee Agenda](#)

MEETING CLOSURE

12. Member Communications / Announcements

Roundtable Members and Staff

13. Adjourn

Roundtable Chairperson

Information Only

i. HMMH FAA IFP Information Gateway Review – December 2023

p.47

****Instructions for Public Comment during Meeting**

During the meeting, members of the public may address the Membership as follows:

Written Comments:

Written public comments may be emailed in advance of the meeting. Please read the following instructions carefully:

1. Your written comment should be emailed to sfoundtable@smcgov.org
2. Your email should include the specific agenda item on which you are commenting.
3. Members of the public are limited to one comment per agenda item.

Regular Meeting Agenda

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4. The length of the emailed comment should be commensurate with two minutes customarily allowed for verbal comments, which is approximately 250-300 words.
5. If your emailed comment is received by 5:00 pm on the day before the meeting, it will be provided to the Roundtable and made publicly available on the agenda website under the specific item to which comment pertains. The Roundtable will make every effort to read emails received after that time but cannot guarantee such emails will be read during the meeting, although such emails will still be included in the administrative record.

Spoken Comments:

In-person Participation:

1. If you wish to speak to the Membership, please fill out a speaker's slip located at the entrance. If you have anything you wish distributed to the Membership and included in the official record, please hand it to the Clerk who will distribute the information to the Membership and Staff.

Via Teleconference (Zoom):

1. The meeting may be accessed through Zoom online at <https://smcgov.zoom.us/j/93248513630> The webinar ID: 932 4851 3630. The meeting may also be accessed via telephone by dialing in +1-669-900-6833, entering webinar ID 932 4851 3630 then press #. Members of the public can also attend this meeting physically at the David J. Chetcuti Community Room, 450 Poplar Ave | Millbrae, CA 94030.
2. You may download the Zoom client or connect to the meeting using the internet browser. If you are using your browser, make sure you are using current, up-to-date browser: Chrome 30+, Firefox 27+, Microsoft Edge 12+, Safari 7+. Certain functionality may be disabled in older browsers including Internet Explorer.
3. You will be asked to enter an email address and name. We request that you identify yourself by name as this will be visible online and will be used to notify you that it is your turn to speak.
4. When the Chairperson calls for the item on which you wish you speak click on "raise-hand" icon. You will then be called on and unmuted to speak.

***Additional Information:**

For any questions or concerns regarding Zoom, including troubleshooting, privacy, or security settings, please contact Zoom directly.

Note: Public records that relate to any item on the open session Agenda (Consent and Regular Agendas) for a Regular Airport/Community Roundtable Meeting are available for public inspection. Those records that are distributed less than 72 hours prior to a Regular Meeting are available for public inspection at the same time they are distributed to all Roundtable Members, or a majority of the Members of the Roundtable. The Roundtable has designated the San Mateo County Planning & Building Department, at 455 County Center, 2nd Floor Redwood City, California 94063, for the purpose of making those public records available for inspection. The documents are also available on the Roundtable website at: www.sforoundtable.org.



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 in-person or via Zoom.

- For written comments you may email your comments ahead of time to sforoundtable@smcgov.org.
- To speak during the meeting in-person, submit a speaker slip to staff.
- To speak during the meeting via Zoom, you may use "raise-hand."
- The Roundtable Staff will call your name and allow you to speak. Full instructions in agenda below.

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. Video file of meeting will be posted to website once available. 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 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.



About the SFO Airport Community 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 25 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 2024, 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 450 Poplar Avenue, Millbrae, California unless otherwise noted. Meetings are also broadcast via Zoom to encourage public participation.** 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.

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)).



SFO Roundtable Regular Meetings

David J. Chetcuti Community Room

450 Poplar Avenue, Millbrae

- PARKING:**
1. Library parking lot (Poplar Street) adjacent to the Chetcuti Room
 2. Parking lot on Library Avenue
 3. City Hall parking lot (some restrictions). Take outdoor stairs up to Chetcuti Room
 4. Nearby neighborhood on-street parking

ENTRANCE: Chetcuti building can typically be entered from glass door at front of building.

ACCESSIBILITY: Ramp from Library Parking Lot to Chetcuti Room.





Member Roster

February 2024

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

**CITY AND COUNTY OF SAN FRANCISCO
MAYOR'S OFFICE**
Alexandra Sweet, (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

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

TOWN OF ATHERTON
Stacy Holland
Alternate: Bill Widmer

CITY OF BELMONT
Robin Pang-Maganaris
Alternate: Davina Hurt

CITY OF BRISBANE
Terry O'Connell
Alternate: Madison Davis

CITY OF BURLINGAME
Ricardo Ortiz
Alternate: Peter Stevenson

TOWN OF COLMA
Joanne del Rosario
Alternate: John Goodwin

CITY OF DALY CITY
Pamela DiGiovanni
Alternate: Rod Daus-Magbual

CITY OF EAST PALO ALTO
Martha Barragan

CITY OF FOSTER CITY
Sam Hindi

CITY OF HALF MOON BAY
Joaquin Jimenez
Alternate: Robert Brownstone

TOWN OF HILLSBOROUGH
Alvin Royse
Alternate: Christine Krolik

CITY OF MENLO PARK
Drew Combs
Alternate: Cecilia Taylor

CITY OF MILLBRAE
Angelina Cahalan
Alternate: Ann Schneider

CITY OF PACIFICA
Christine Boles
Alternate: Sue Vaterlaus

TOWN OF PORTOLA VALLEY
Judith Hasko
Alternate: Craig Hughes

CITY OF REDWOOD CITY
Kaia Eakin
Alternate: Chris Sturken

CITY OF SAN BRUNO
Sandy Alvarez
Alternate: Tom Hamilton

CITY OF SAN CARLOS
Pranita Venkatesh
Alternate: John Dugan

CITY OF SAN MATEO
Rob Newsom
Alternate: Lisa Diaz Nash

CITY OF SOUTH SAN FRANCISCO
Mark Nagales
Alternate: James Coleman

TOWN OF WOODSIDE
Paul Goeld
Alternate: Dick Brown

ROUNDTABLE ADVISORY MEMBERS

AIRLINES/FLIGHT OPERATIONS
Chief Pilot Lawrence Ellis, United Airlines

FEDERAL AVIATION ADMINISTRATION
Rachel Girvin, Regional Administrator
Faviola Garcia, Deputy Regional Administrator
Carlette Young, Supervisory Senior Advisor
Joseph Bert, Team Manager, Western Service Center

ROUNDTABLE STAFF
Kathleen Wentworth, Roundtable Coordinator
Roundtable Administrative Secretary
Gene Reindel, Technical Consultant (HMMH)

SFO AIRPORT NOISE OFFICE STAFF
Nupur Sinha, Director of Planning & Environmental Affairs
Bert Ganoung, Aircraft Noise Office Manager



Airport Director's Report

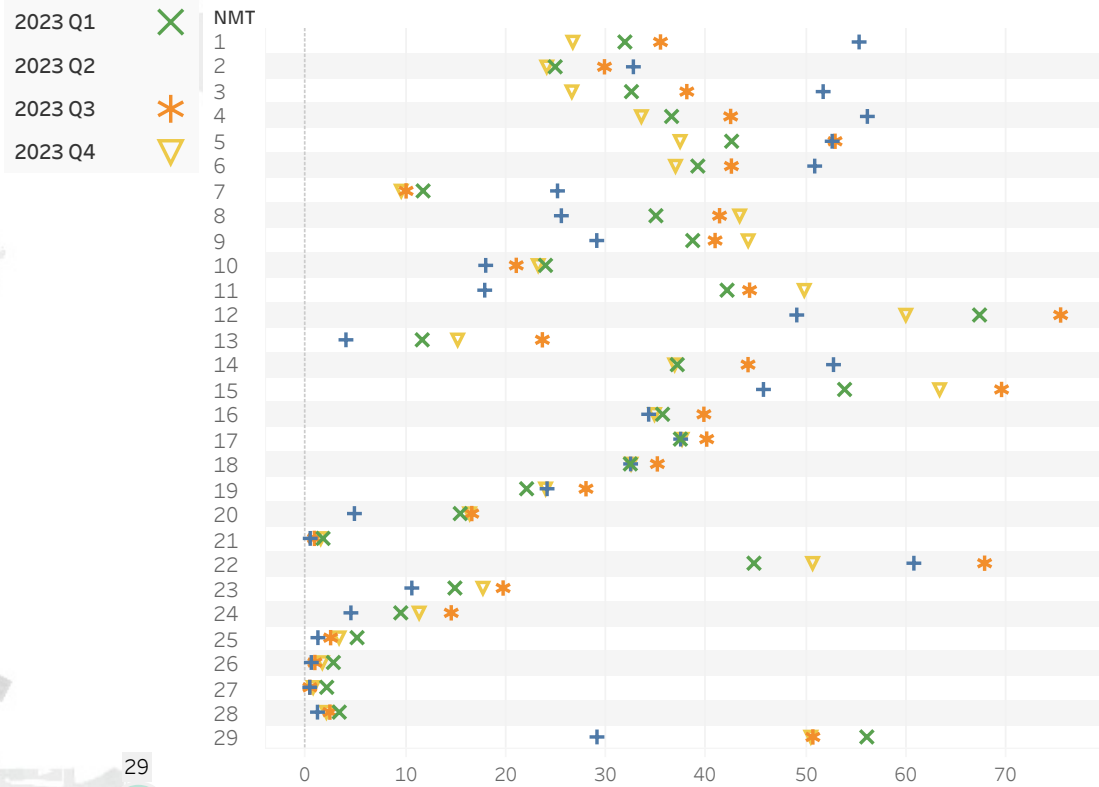
Presented at the February 7, 2024
Airport/Community Roundtable Meeting

Aircraft Noise Office
November 2023

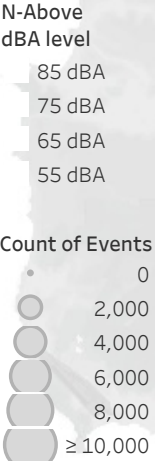


San Francisco
International
Airport

Nighttime N-Above 55 dBA Daily Average

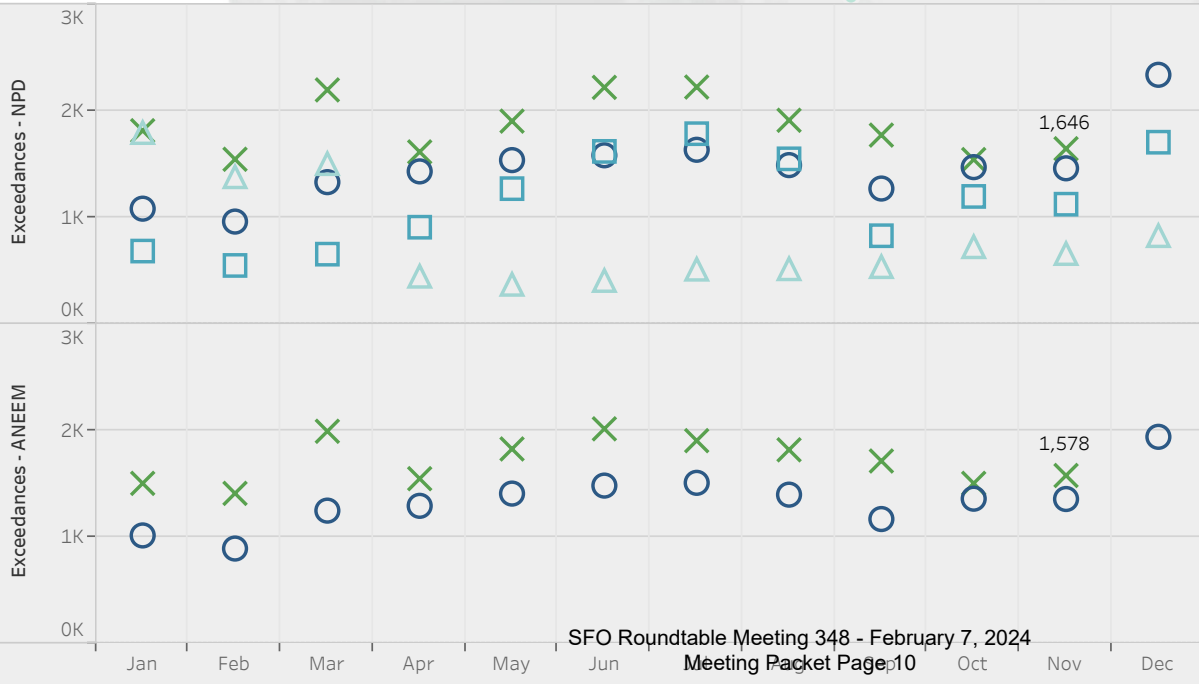


The chart above depicts the average daily N-Above 55dBA SFO aircraft noise events per NMT during nighttime hours (10pm-7am) compared to the previous 4 quarters. Values are derived from the ANEEM algorithm.



The map displays the N-Above counts at each NMT by N-Above Noise Level based on SFO aircraft noise events. Darker circles represent louder noise events and larger circles represent a larger number of noise events relative to the N-Above noise level. Values are derived from the ANEEM algorithm.

Significant Exceedances



Significant Exceedances (right) displays a total count of SFO aircraft noise events that produced a noise level higher than the maximum allowable decibel value established for a particular monitoring site.

Aircraft Noise Levels Details

NMT	City	ANOMS						ANEEM			
		Aircraft				Community		Aircraft			
		Noise Events (AVG Day)	CNEL (dBA)	SEL (dBA)	LMax (dBA)	CNEL (dBA)	Ambient Level (dBA)	Noise Events (AVG Day)	CNEL (dBA)	SEL (dBA)	LMax (dBA)
1	San Bruno	124	73	95	84	67	56	119	73	95	85
2	San Bruno	106	57	80	68	64	52	71	56	81	69
3	SSF	62	53	79	67	62	49	152	54	76	64
4	SSF	120	68	90	78	59	46	174	67	88	73
5	San Bruno	116	67	89	77	62	48	171	67	88	73
6	SSF	113	65	88	75	56	41	209	64	85	68
7	Brisbane	20	48	79	67	57	44	78	49	75	61
8	Millbrae	26	57	84	73	66	51	147	59	80	68
9	Millbrae	11	40	76	64	58	42	170	52	73	61
10	Burlingame	6	37	77	64	57	41	80	48	72	60
11	Burlingame	10	46	78	65	58	43	205	54	73	61
12	Foster City	319	61	82	71	57	41	406	62	81	68
13	Hillsborough	3	34	79	66	55	38	74	44	70	58
14	SSF	111	60	83	71	58	43	206	60	81	66
15	SSF	167	58	82	69	58	43	308	59	79	65
16	SSF	99	60	83	71	56	41	193	60	80	66
17	SSF	107	59	82	70	57	42	207	59	80	65
18	Daly City	102	64	88	76	61	44	159	64	85	71
19	Pacifica	91	61	85	74	57	42	102	61	84	72
20	Daly City	99	51	77	65	60	41	150	51	75	62
21	San Francisco	31	44	75	63	60	52	26	43	75	64
22	San Bruno	78	57	81	70	63	48	238	59	78	66
23	San Francisco	94	53	79	68	60	48	153	55	78	66
24	San Francisco	73	49	76	65	59	48	123	50	75	63
25	San Francisco	19	42	76	65	55	40	66	43	72	60
26	San Francisco	8	41	80	66	56	42	32	42	73	60
27	San Francisco	8	39	78	66	57	44	29	41	74	62
28	Redwood City	9	39	76	64	53	38	33	41	72	59
29	San Mateo	89	50	77	64	56	41	352	53	73	60

Noise Monitor's CNEL values (above) are derived from actual measured events and are used to validate the 65dBA CNEL noise footprint. Aircraft monthly CNELs from both ANOMS NPD and ANEEM algorithms for each monitor site are provided with daily average aircraft counts, the average Sound Exposure Level (SEL), and average Maximum Level (LMax). Noise levels from other noise sources in the community calculated by ANOMS is provided as Community CNEL. Ambient Level is represented by the LA90 noise value which is the noise level exceeded at the monitor for 90% of the time.

SFO N-Above NPD

SFO N-Above ANEEM

NMT	Min:Max							Min:Max						
	LMax	55 dBA	60 dBA	65 dBA	70 dBA	75 dBA	80 dBA	LMax	55 dBA	60 dBA	65 dBA	70 dBA	75 dBA	80 dBA
1	65:100	3,659	3,659	3,659	3,506	3,267	2,758	57:100	3,534	3,532	3,529	3,454	3,231	2,729
2	60:84	3,224	3,224	2,673	740	28	2	57:77	2,101	2,092	1,920	694	15	0
3	62:86	1,706	1,706	1,341	282	52	8	53:85	3,849	3,343	1,599	262	38	6
4	61:95	3,574	3,574	3,465	3,094	2,644	1,588	53:95	4,832	4,447	3,531	3,069	2,619	1,571
5	62:90	3,428	3,428	3,401	3,068	2,355	1,259	53:90	4,857	4,644	3,839	3,115	2,342	1,250
6	61:91	3,377	3,377	3,286	2,879	2,043	562	53:91	5,579	4,503	3,367	2,858	2,025	556
7	61:82	489	489	357	110	9	3	53:82	1,595	928	382	109	7	2
8	68:86	815	815	815	681	204	33	54:88	4,310	4,216	3,329	1,337	290	34
9	59:80	135	129	56	15	3	1	53:80	4,560	2,657	758	142	10	1
10	59:78	73	69	28	6	3	0	53:79	2,034	1,016	165	20	5	0
11	60:80	59	59	32	7	4	1	53:80	5,429	3,003	960	173	23	1
12	63:87	9,765	9,765	9,675	6,093	512	16	53:83	12,068	10,893	9,675	6,023	475	10
13	59:74	26	24	15	5	0	0	53:72	1,567	495	99	5	0	0
14	62:84	3,314	3,314	3,157	2,012	525	18	53:84	5,592	4,863	3,354	2,028	518	19
15	61:84	5,001	5,001	4,542	1,612	106	17	53:83	8,803	7,391	4,828	1,587	87	8
16	61:86	2,981	2,981	2,855	1,951	457	7	53:82	5,287	4,141	2,950	1,945	448	5
17	61:83	3,201	3,201	2,976	1,648	214	6	53:83	5,717	4,732	3,165	1,638	204	5
18	64:91	3,078	3,078	3,069	2,731	1,869	585	53:91	4,592	4,079	3,196	2,686	1,835	567
19	65:89	2,719	2,719	2,719	2,263	1,055	48	54:89	3,037	2,987	2,772	2,244	1,048	48
20	59:88	2,847	2,774	1,310	359	131	25	53:82	3,705	2,891	1,089	162	24	1
21	58:74	596	560	167	15	0	0	58:74	542	540	168	12	0	0
22	64:87	2,234	2,234	2,204	1,240	108	8	53:81	6,779	6,158	3,945	1,551	119	4
23	63:84	2,724	2,724	2,387	635	26	3	55:81	3,846	3,738	2,489	628	22	1
24	59:81	1,897	1,872	833	82	9	4	56:81	2,916	2,551	848	75	2	1
25	58:80	452	422	203	46	8	1	53:77	1,359	720	223	23	4	0
26	60:75	161	158	81	26	0	0	53:72	540	270	59	8	0	0
27	61:74	33	33	13	3	0	0	54:72	204	126	17	2	0	0
28	59:77	170	161	43	11	2	0	53:72	545	218	33	4	0	0
29	59:86	2,801	2,650	769	209	36	6	53:80	10,218	4,546	693	117	6	1

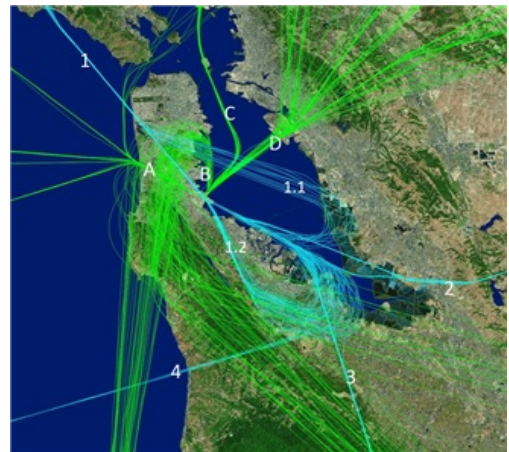
Noise Monitor N-Above values (above) are derived from actual measured events and assigned to aircraft overflights using both ANOMS NPD and ANEEM algorithms. N-Above represents the count of events where the peak noise (LMax) reached above the designated dBA value. Note, the charts on this page represent only SFO aircraft-related noise events.

Operations

November 2023

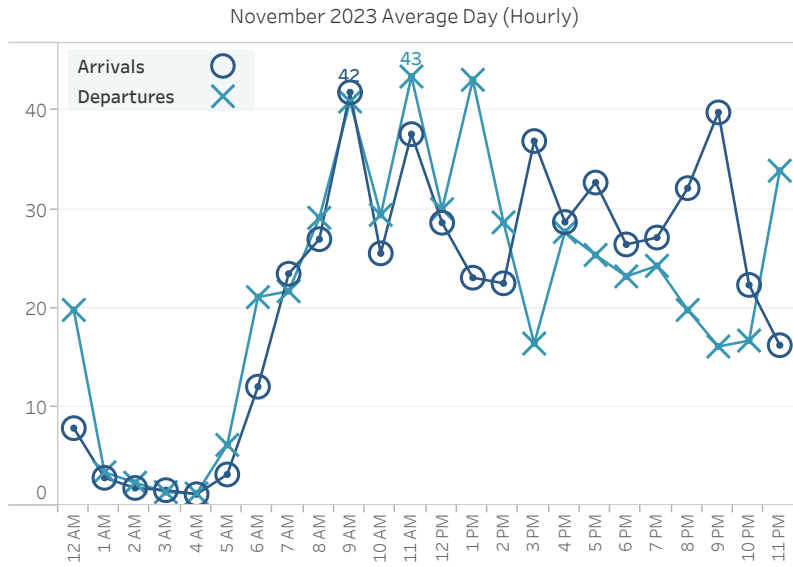
Monthly Ops	AVG Daily Ops	12 Month AVG	YOY Growth
31,314	1,044	31,421	9%

Major Arrival and Departure Routes (West Flow)



West Flow is depicted in the above image and is a predominate flow at SFO.

West Flow
97%



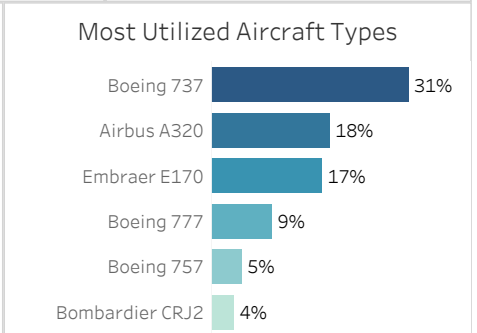
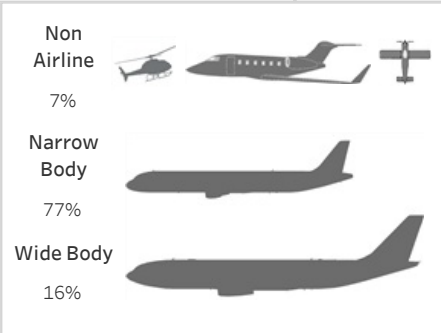
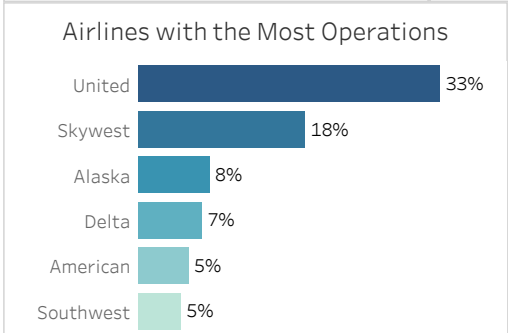
Top Destinations

Los Angeles	JFK	Las Vegas
7%	4%	4%

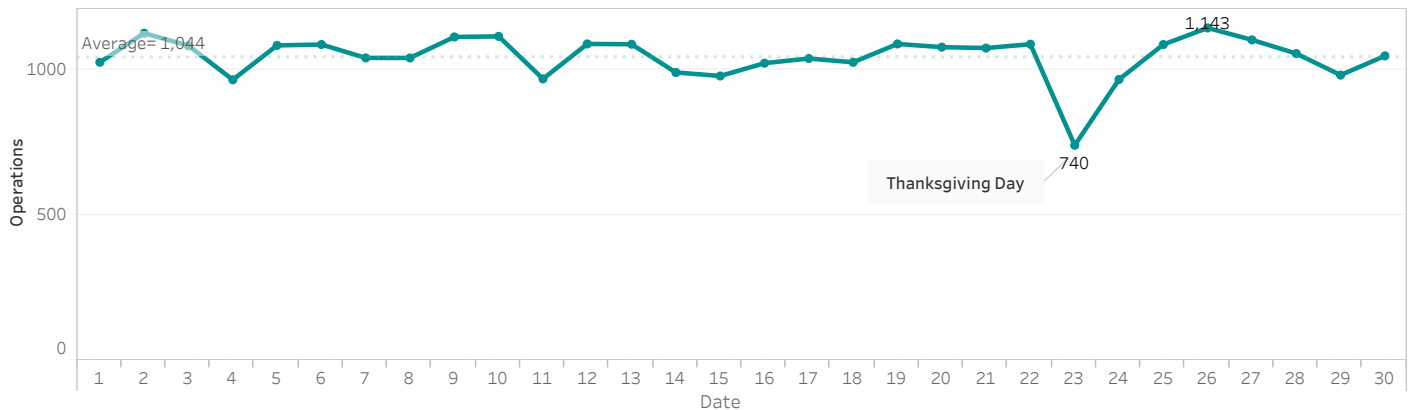
Down the Bay vs Peninsula

1.1 Down the Bay Visual	36%
1.2 BDEGA Arrival	64%

Arrival Route	Percentage	Departure Route	Percentage
1. BDEGA	28%	A. GAP	22%
2. DYAMD	37%	B. SSTIK	31%
3. SERFR	28%	C. NIITE	9%
4. PIRAT	7%	D. TRUKN RWY 01	37%
		D. TRUKN RWY 28	2%



Daily Aircraft Operations



Runway Usage and Nighttime Operations

Leftmost Runway Utilization table shows percent of runway usage for arrivals and departures by runway based on air carrier operations using jet, regional jet, and turboprop aircraft. Late Night Preferential Runway Use table depicts departure runway usage between 1am - 6am for jet aircraft for the whole month (top) and during nighttime hours only (bottom). Percentages [%] are rounded to the nearest whole number.

Runway Utilization

	Arrivals	Departures
01 L/R		76% 11,125
10 L/R		3% 505
19 L/R	3% 445	
28 L/R	97% 14,117	20% 2,939

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

	Departures
10 L/R	6% 21
01 L/R	61% 212
28 L/R	33% 113

Runway Utilization Arrivals

28L	28R
39%	61%
Night (10pm-7am)	
19%	81%

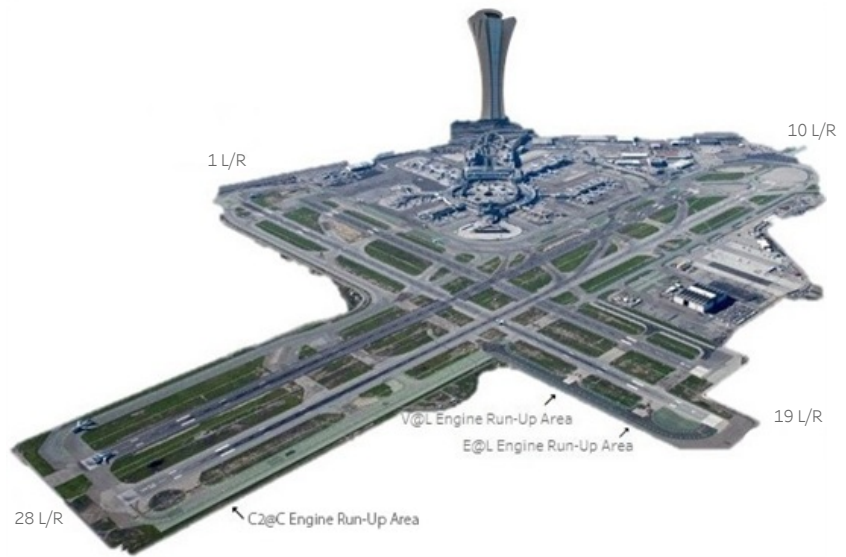
Nighttime Power Run-Ups

10pm-7am

American Airlines 2
United Airlines 6

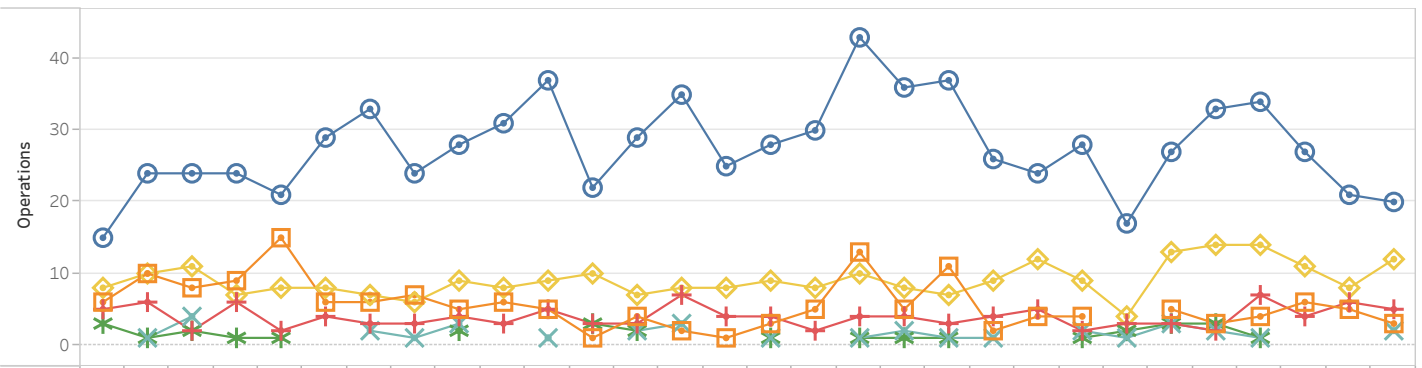
A power runup is a procedure used to test an aircraft engine after maintenance is completed. This is done to ensure safe operating standards prior to returning the aircraft to service. The Aircraft power settings range from idle to full power and may vary in duration.

Designated Power Runup locations are 19 L/R depicted on the airfield map (right) with airlines nighttime power runup counts shown above.



Hourly Nighttime Operations

○ 12 AM □ 1 AM + 2 AM × 3 AM * 4 AM ◇ 5 AM



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
12 AM	15	24	24	24	21	29	33	24	28	31	37	22	29	35	25	28	30	43	36	37	26	24	28	17	27	33	34	27	21	20
1 AM	6	10	8	9	15	6	6	7	5	6	5	1	4	2	1	3	5	13	5	11	2	4	4		5	3	4	6	5	3
2 AM	5	6	2	6	2	4	3	3	4	3	5	3	3	7	4	4	2	4	4	3	4	5	2	3	3	2	7	4	6	5
3 AM		1	4				2	1	3		1	2	3		1		1	2	1	1		2	1	3	2	1			2	
4 AM	3	1	2	1	1				2			3	2			1		1	1	1			1	2	3	3	1			
5 AM	8	10	11	7	8	8	7	6	9	8	9	10	7	8	8	9	8	10	8	7	9	12	9	4	13	14	14	11	8	12

Noise Reports

Reporters Annual AVG

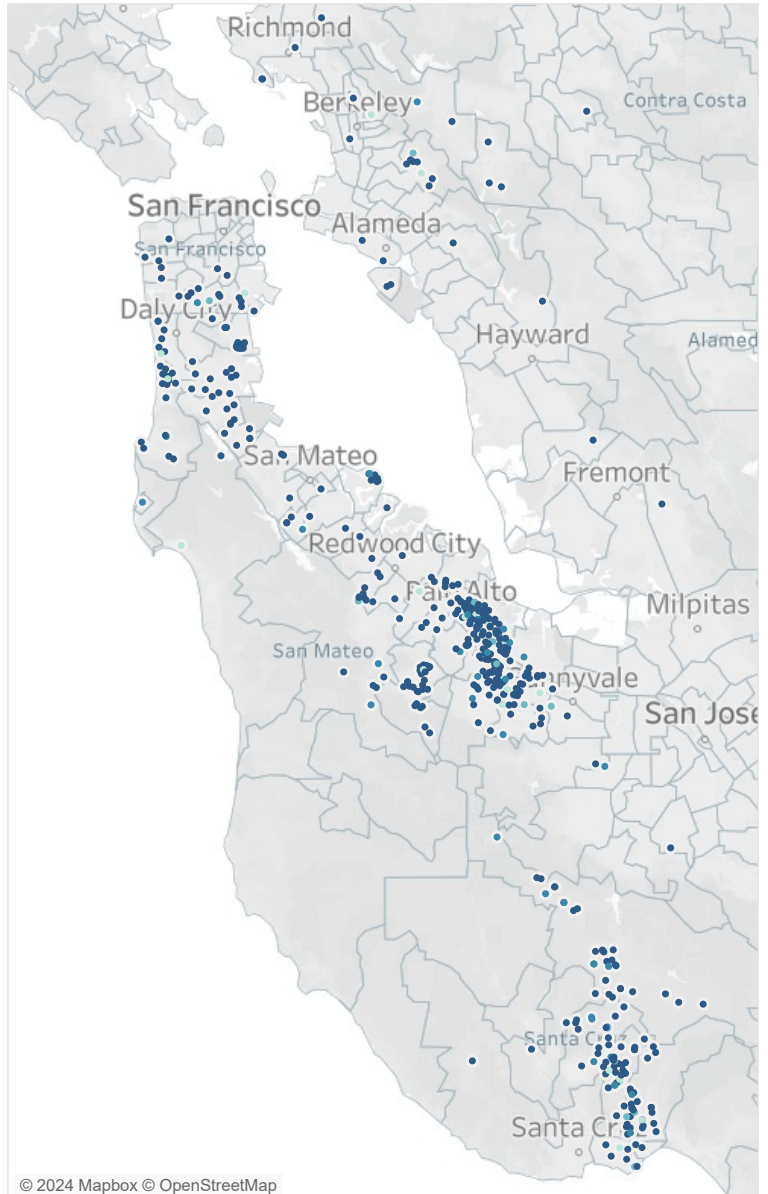
Noise Reporters Location Map

November 2023

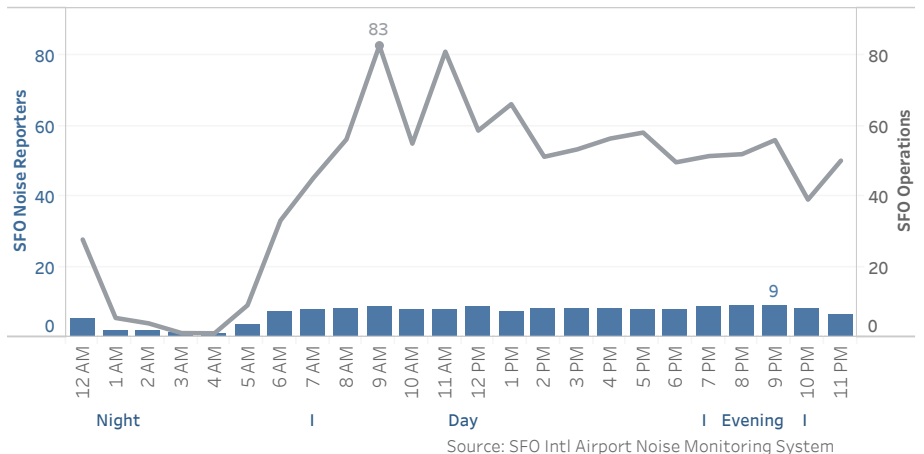
Noise Reporters / Noise Reports

	Noise Reporters	Noise Reports
Atherton	3	39
Belmont	2	27
Brisbane	18	221
Burlingame	2	6
Daly City	9	1,171
El Granada	1	1,057
Emerald Hills	5	629
Foster City	7	280
I	1	48
Millbrae	16	1,346
Montara	5	28
Montara	1	473
Pacifica	18	1,497
Portola Valley	29	6,530
Redwood City	8	338
San Bruno	8	157
San Carlos	1	1
San Francisco	20	2,575
San Mateo	6	531
South San Francisco	11	242
Woodside	8	1,750
Alameda	4	37
Berkeley	3	1,052
Capitola	1	118
Castro Valley	1	49
Cupertino	2	426
El Sobrante	1	1
Felton	3	57
Fremont	1	90
Lafayette	1	1
Los Altos	55	6,416
Los Altos Hills	10	815
Los Gatos	32	4,231
Moraga	3	93
Mountain View	17	2,257
Oakland	9	3,419
Orinda	2	451
Palo Alto	102	22,089
Richmond	3	130
Santa Cruz	42	10,306
Scotts Valley	23	3,854
Soquel	23	3,854
Stanford	3	519
Sunnyvale	2	880
Union City	1	63
Watsonville	1	69
Grand Total	524	80,223

520
Reports Annual AVG
84,789
New Reporters
23
New Reporters Top City
San Francisco South San Francisco
Furthest Report
64 Miles
Reports per SFO Operation
3
Top Aircraft Types
B737 A320 E75L
Top Flight Numbers
KAL214 TAI560 AMX664

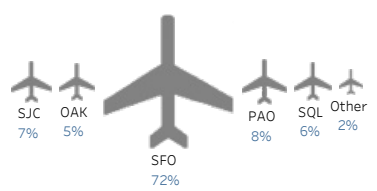


Hourly Noise Reporters (Average Day in a Month)



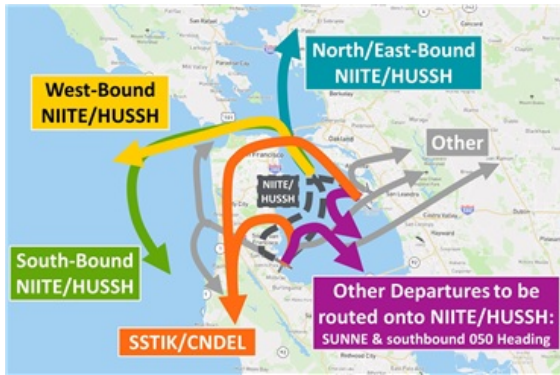
Notes:
Address validation Relies on USPS-provided ZIP Code look up table and USPS-specified default city values.

Noise Reports by Airport

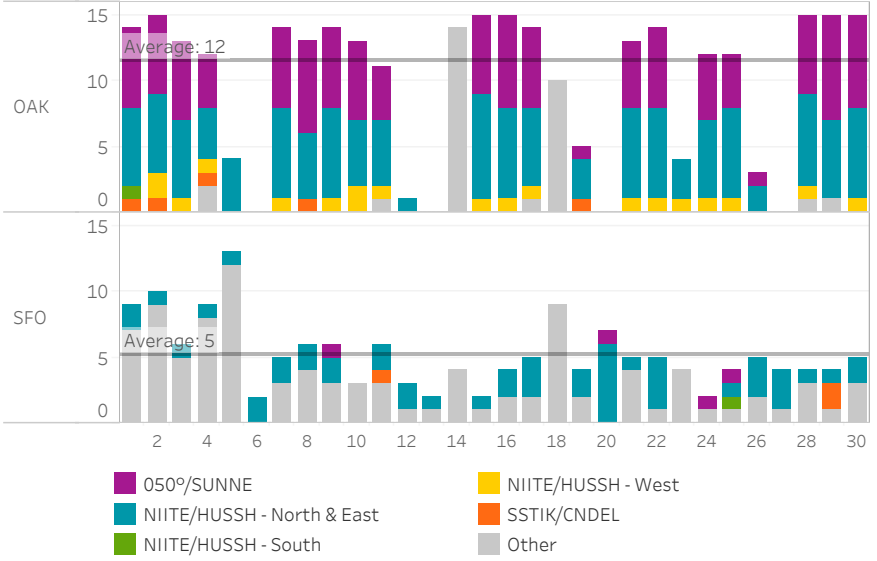


99% of noise reports correlate to a flight origin/destination airport.

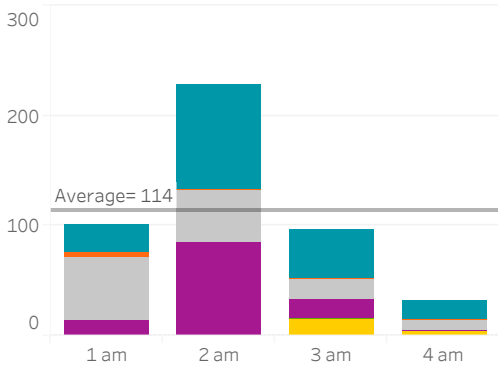
NIITE to GOBBS 1 am to 5 am (November 2023)



Count of Departures per Night



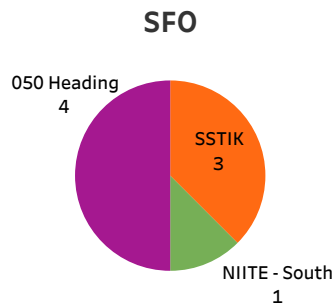
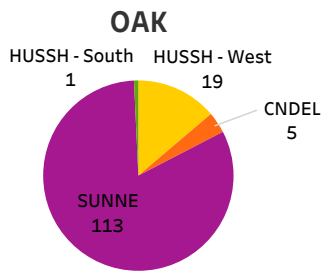
Average Total Departures per Hour



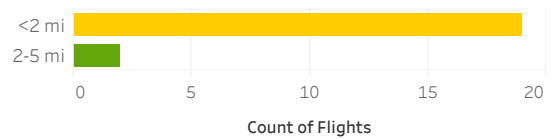
Departure Runway Usage

OAK		SFO					
12	30	01L	01R	10L	10R	28L	28R
8%	92%	12%	19%	4%	4%	35%	25%

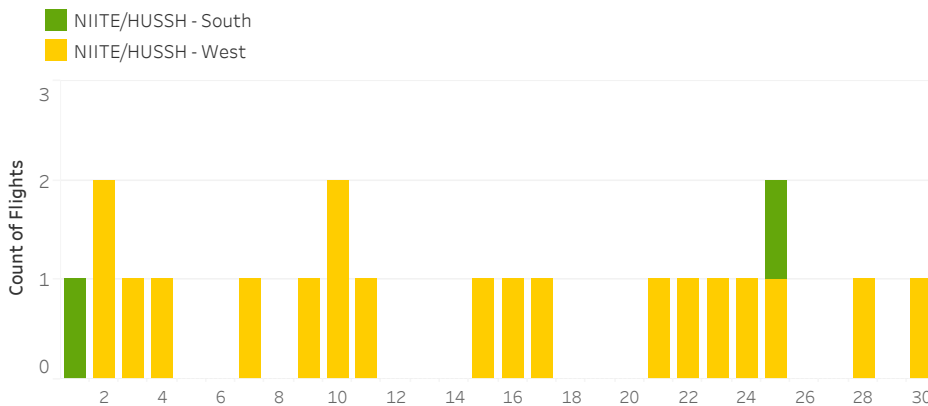
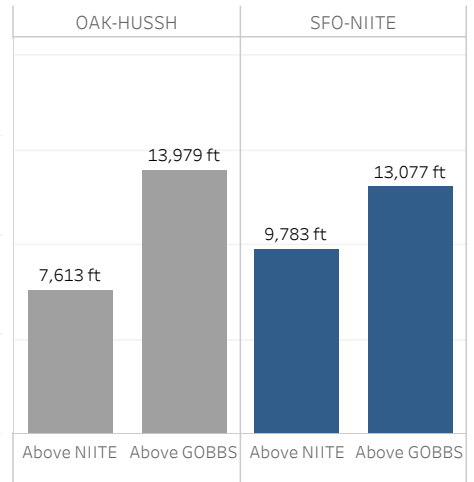
CNDEL and SSTIK Departures vs HUSSH and NIITE



How Close are Aircraft Flying to GOBBS?



Average Altitude at NIITE and GOBBS





Airport Director's Report

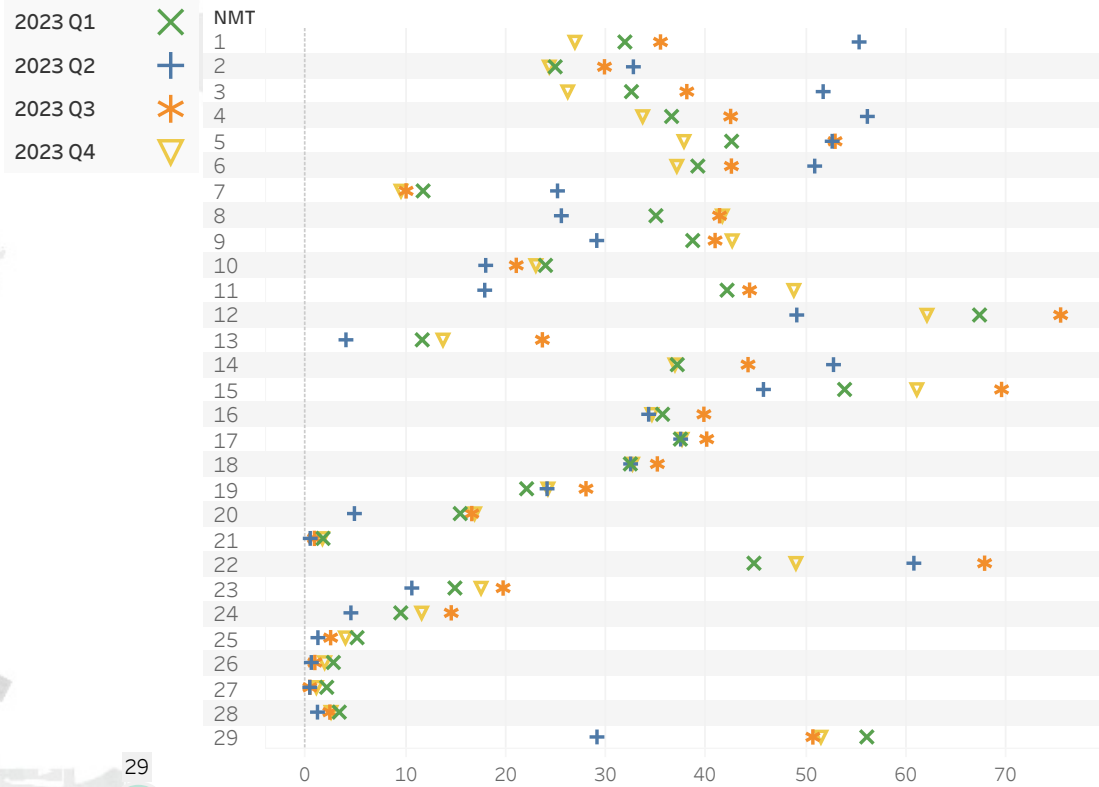
Presented at the February 7, 2024
Airport/Community Roundtable
Meeting

Aircraft Noise Office
December 2023



San Francisco
International
Airport

Nighttime N-Above 55 dBA Daily Average

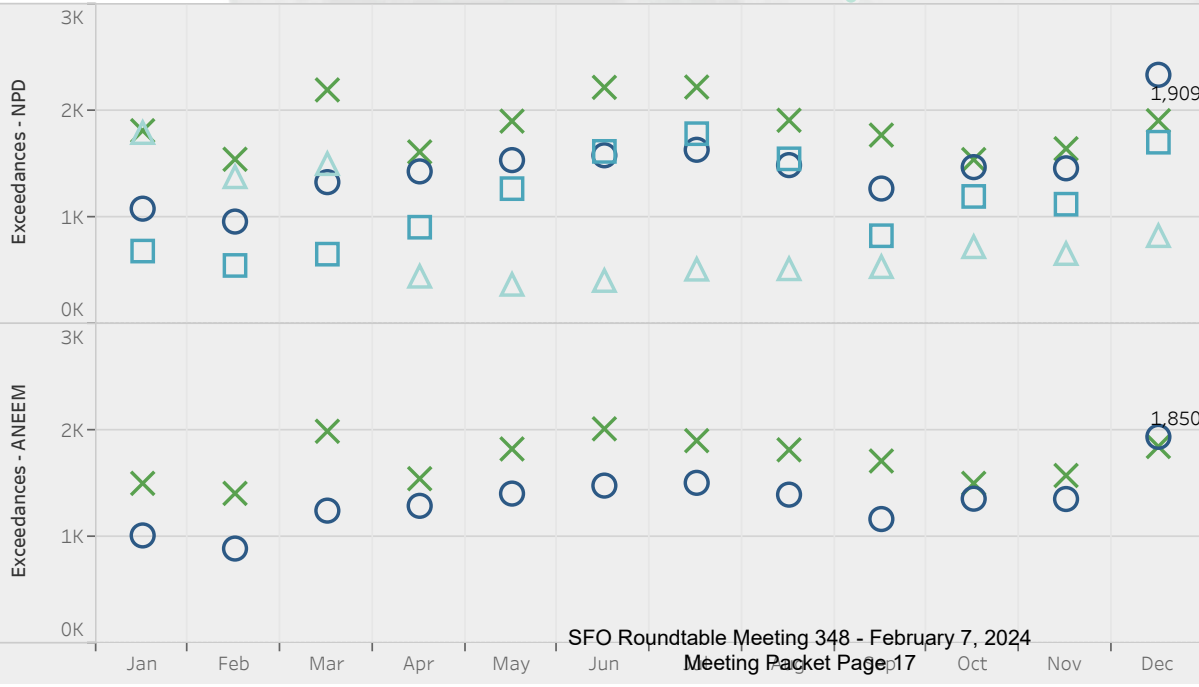


The chart above depicts the average daily N-Above 55dBA SFO aircraft noise events per NMT during nighttime hours (10pm-7am) compared to the previous 4 quarters. Values are derived from the ANEEM algorithm.



The map displays the N-Above counts at each NMT by N-Above Noise Level based on SFO aircraft noise events. Darker circles represent louder noise events and larger circles represent a larger number of noise events relative to the N-Above noise level. Values are derived from the ANEEM algorithm.

Significant Exceedances



Significant Exceedances (right) displays a total count of SFO aircraft noise events that produced a noise level higher than the maximum allowable decibel value established for a particular monitoring site.

Aircraft Noise Levels Details

December 2023

NMT	City	ANOMS						ANEEM			
		Aircraft			Community			Aircraft			
		Noise Events (AVG Day)	CNEL (dBA)	SEL (dBA)	LMax (dBA)	CNEL (dBA)	Ambient Level (dBA)	Noise Events (AVG Day)	CNEL (dBA)	SEL (dBA)	LMax (dBA)
1	San Bruno	120	73	95	84	67	56	117	73	95	85
2	San Bruno	111	57	80	68	64	52	68	56	82	69
3	SSF	71	55	80	68	62	50	144	55	78	64
4	SSF	117	68	90	78	59	46	164	67	89	73
5	San Bruno	114	67	90	78	62	49	175	67	88	73
6	SSF	111	65	88	76	56	42	201	64	85	69
7	Brisbane	25	49	79	67	56	44	75	50	76	62
8	Millbrae	24	55	84	73	66	50	131	58	80	68
9	Millbrae	9	39	75	64	58	42	158	52	73	61
10	Burlingame	6	36	76	64	57	42	72	48	73	60
11	Burlingame	8	38	76	64	58	43	196	53	73	61
12	Foster City	331	62	82	71	57	41	412	62	81	69
13	Hillsborough	2	35	79	65	56	37	72	44	70	58
14	SSF	111	60	84	71	59	43	199	60	81	67
15	SSF	162	58	82	69	58	43	288	59	80	65
16	SSF	96	60	83	71	58	42	178	60	81	66
17	SSF	105	59	83	70	57	42	194	59	80	66
18	Daly City	99	64	88	76	59	44	153	64	86	71
19	Pacifica	88	61	85	74	57	44	100	61	84	72
20	Daly City	94	51	78	65	60	41	141	51	75	62
21	San Francisco	32	44	75	63	60	52	21	43	75	64
22	San Bruno	79	57	82	71	64	49	226	59	79	67
23	San Francisco	94	53	79	68	60	48	136	55	79	66
24	San Francisco	74	50	77	65	60	47	113	50	76	63
25	San Francisco	18	41	75	64	55	40	64	43	71	60
26	San Francisco	7	39	79	65	59	43	31	42	73	60
27	San Francisco	9	40	77	66	57	44	26	41	74	61
28	Redwood City	11	40	76	64	54	38	32	42	73	60
29	San Mateo	128	54	79	65	57	42	342	55	75	61

Noise Monitor's CNEL values (above) are derived from actual measured events and are used to validate the 65dBA CNEL noise footprint. Aircraft monthly CNELs from both ANOMS NPD and ANEEM algorithms for each monitor site are provided with daily average aircraft counts, the average Sound Exposure Level (SEL), and average Maximum Level (LMax). Noise levels from other noise sources in the community calculated by ANOMS is provided as Community CNEL. Ambient Level is represented by the LA90 noise value which is the noise level exceeded at the monitor for 90% of the time.

SFO N-Above NPD

SFO N-Above ANEEM

NMT	Min:Max							Min:Max						
	LMax	55 dBA	60 dBA	65 dBA	70 dBA	75 dBA	80 dBA	LMax	55 dBA	60 dBA	65 dBA	70 dBA	75 dBA	80 dBA
1	66:104	3,682	3,682	3,682	3,546	3,330	2,852	60:104	3,594	3,593	3,585	3,525	3,297	2,825
2	60:83	3,522	3,522	2,893	865	27	5	57:78	2,084	2,069	1,900	817	16	0
3	62:89	2,094	2,094	1,680	436	132	32	53:87	3,829	3,389	1,866	410	112	20
4	61:95	3,628	3,628	3,509	3,127	2,687	1,637	55:95	4,782	4,517	3,612	3,122	2,678	1,635
5	63:95	3,494	3,494	3,470	3,118	2,427	1,288	53:91	5,235	5,022	4,062	3,200	2,433	1,289
6	61:91	3,430	3,430	3,336	2,912	2,123	709	53:91	5,644	4,657	3,431	2,901	2,114	708
7	61:79	632	632	453	172	19	0	53:79	1,699	1,100	474	162	15	0
8	68:86	753	753	753	609	178	24	53:88	3,999	3,941	3,021	1,233	263	35
9	59:76	123	115	40	3	1	0	53:78	4,438	2,606	716	133	9	0
10	59:76	81	79	30	8	1	0	53:76	1,904	1,032	246	26	2	0
11	59:79	59	55	23	5	1	0	53:79	5,450	3,224	957	181	21	0
12	63:86	10,423	10,423	10,319	6,554	550	24	53:84	12,661	11,678	10,320	6,446	509	15
13	59:75	27	23	7	2	1	0	53:75	1,528	461	102	4	1	0
14	61:86	3,431	3,431	3,268	2,107	646	26	54:86	5,607	4,966	3,524	2,109	636	19
15	62:90	4,881	4,881	4,511	1,806	190	23	53:84	8,443	7,067	4,795	1,766	160	15
16	61:84	2,983	2,983	2,860	1,935	524	9	53:82	5,163	4,171	3,001	1,965	529	8
17	61:87	3,249	3,249	3,048	1,720	237	4	53:82	5,647	4,764	3,191	1,697	229	3
18	64:94	3,118	3,118	3,112	2,818	1,869	675	53:94	4,586	4,074	3,172	2,755	1,843	673
19	65:84	2,733	2,733	2,733	2,294	1,116	76	52:84	3,067	2,962	2,774	2,281	1,113	76
20	59:88	2,868	2,804	1,319	357	117	19	53:80	3,644	2,835	1,037	142	16	0
21	59:83	691	646	169	26	3	1	57:74	441	439	163	20	0	0
22	64:85	2,333	2,333	2,296	1,355	179	26	53:84	6,755	6,348	4,203	1,739	180	9
23	63:83	2,715	2,715	2,417	616	35	7	55:78	3,576	3,491	2,470	601	21	0
24	59:86	2,010	1,989	903	130	8	1	54:77	2,783	2,479	878	119	2	0
25	58:80	474	430	149	26	6	1	53:75	1,421	690	158	14	1	0
26	59:80	164	161	57	14	4	0	53:76	611	356	70	11	1	0
27	59:78	130	128	54	8	2	0	55:73	255	171	28	4	0	0
28	59:78	222	211	63	11	2	0	53:73	564	254	44	2	0	0
29	59:88	4,153	3,962	1,718	581	139	21	53:81	10,283	5,379	1,500	406	76	3

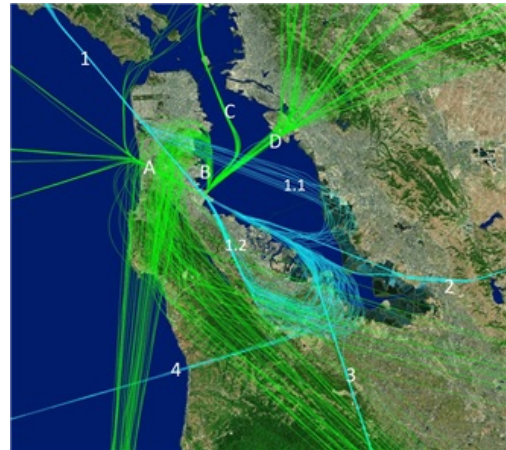
Noise Monitor N-Above values (above) are derived from actual measured events and assigned to aircraft overflights using both ANOMS NPD and ANEEM algorithms. N-Above represents the count of events where the peak noise (LMax) reached above the designated dBA value. Note, the charts on this page represent only SFO aircraft-related noise events.

Operations

December 2023

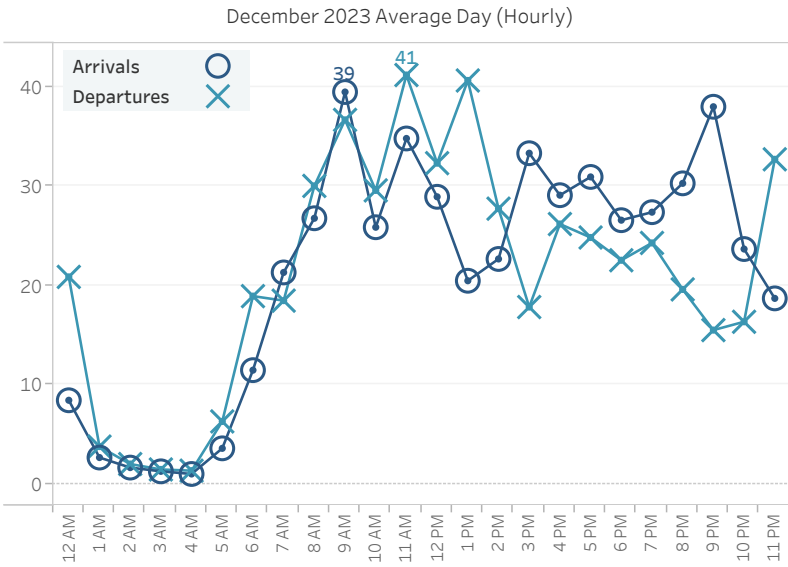
Monthly Ops	AVG Daily Ops	12 Month AVG	YOY Growth
31,492	1,016	31,660	9%

Major Arrival and Departure Routes (West Flow)



West Flow is depicted in the above image and is a predominate flow at SFO.

West Flow
89%



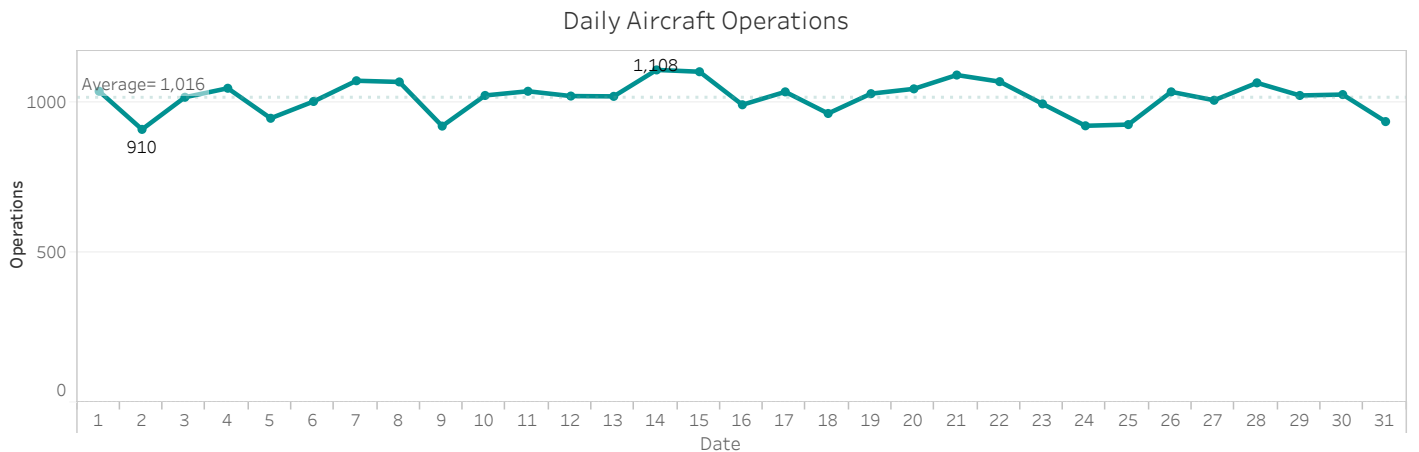
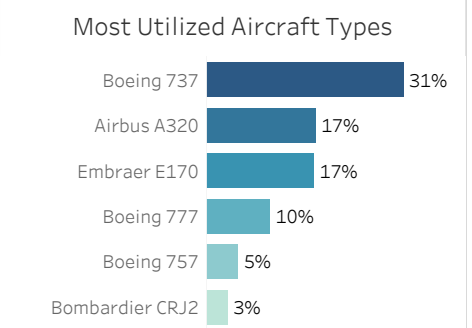
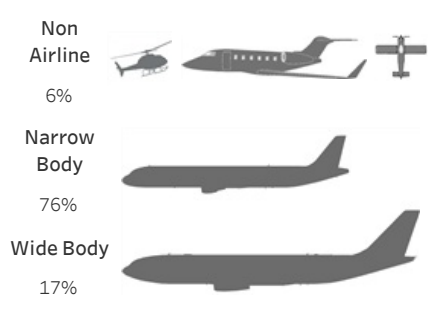
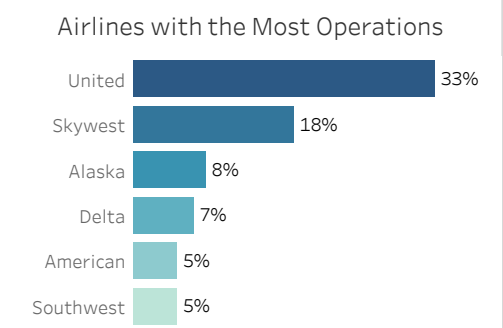
Top Destinations

Los Angeles	San Diego	JFK
6%	4%	4%

Down the Bay vs Peninsula

1.1 Down the Bay Visual	35%
1.2 BDEGA Arrival	65%

Arrival Route	Departure Route
1. BDEGA 28%	A. GAP 23%
2. DYAMD 37%	B. SSTIK 31%
3. SERFR 28%	C. NIITE 10%
4. PIRAT 7%	D. TRUKN RWY 01 35%
	D. TRUKN RWY 28 3%



Runway Usage and Nighttime Operations

Leftmost Runway Utilization table shows percent of runway usage for arrivals and departures by runway based on air carrier operations using jet, regional jet, and turboprop aircraft. Late Night Preferential Runway Use table depicts departure runway usage between 1am - 6am for jet aircraft for the whole month (top) and during nighttime hours only (bottom). Percentages [%] are rounded to the nearest whole number.

Runway Utilization

	Arrivals	Departures
01 L/R		68% 10,003
10 L/R	0% 3	12% 1,703
19 L/R	11% 1,672	
28 L/R	89% 13,041	21% 3,019

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

	Departures
10 L/R	18% 69
01 L/R	56% 212
28 L/R	26% 98

Runway Utilization Arrivals

28L	28R
37%	63%
Night (10pm-7am)	
20%	80%

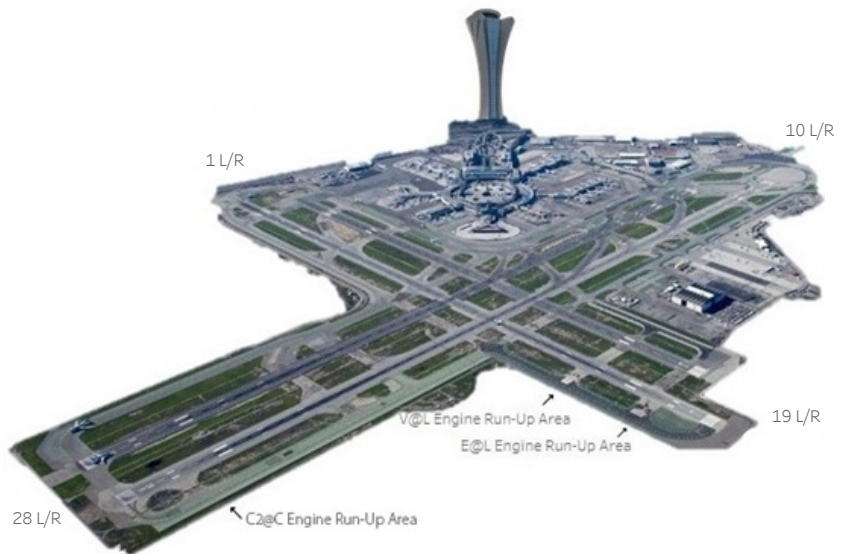
Nighttime Power Run-Ups

10pm-7am

American Airlines 2
United Airlines 9

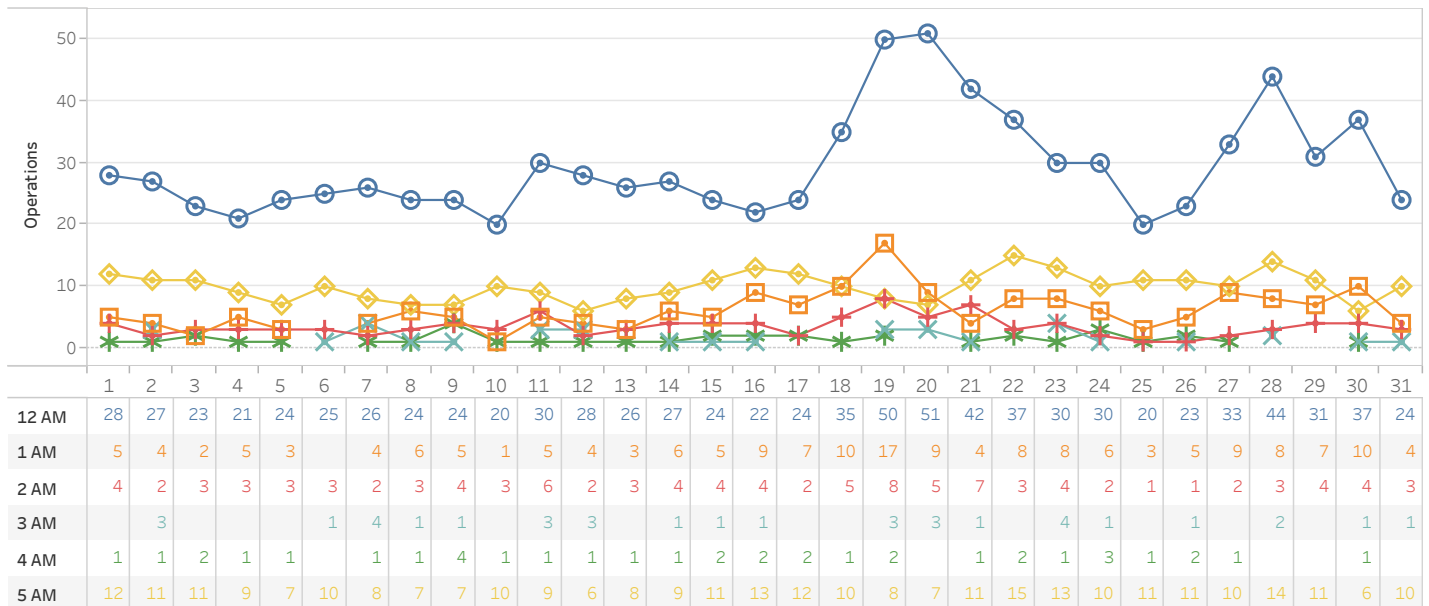
A power runup is a procedure used to test an aircraft engine after maintenance is completed. This is done to ensure safe operating standards prior to returning the aircraft to service. The Aircraft power settings range from idle to full power and may vary in duration.

Designated Power Runup locations are 19 L/R depicted on the airfield map (right) with airlines nighttime power runup counts shown above.



Hourly Nighttime Operations

○ 12 AM □ 1 AM + 2 AM × 3 AM * 4 AM ◇ 5 AM



Noise Reports

Reporters Annual AVG

Noise Reporters Location Map

December 2023

Noise Reporters / Noise Reports

	Noise Reporters	Noise Reports
Atherton	2	19
Belmont	5	29
Brisbane	14	112
Daly City	9	1,089
El Granada	1	1,235
Emerald Hills	5	347
Foster City	18	199
Half Moon Bay	1	1
Hillsborough	2	4
Menlo Park	15	1,142
Millbrae	4	12
Montara	1	450
Pacifica	14	1,274
Portola Valley	22	978
Redwood City	14	333
San Bruno	9	406
San Carlos	2	2
San Francisco	16	1,547
San Mateo	7	269
South San Francisco	11	212
Woodside	7	1,773
Alameda	6	84
Aptos	1	2
Berkeley	3	862
Boulder Creek	1	2
Capitola	2	83
Castro Valley	1	26
Cupertino	1	611
Felton	2	26
Fremont	2	70
Hayward	1	8
Los Altos	44	5,151
Los Altos Hills	11	650
Los Gatos	28	2,970
Moraga	3	89
Mountain View	12	3,389
Oakland	10	3,094
Orinda	2	335
Palo Alto	104	19,540
Penngrove	1	1
Pleasanton	1	33
Richmond	4	233
Santa Cruz	41	7,019
Scotts Valley	23	3,802
Soquel	22	3,221
Stanford	2	416
Sunnyvale	3	1,018
Watsonville	1	83
Grand Total	511	64,251

522

Reports Annual AVG

82,679

New Reporters

36

New Reporters Top City

Foster City

Furthest Report

64 miles

Reports per SFO Operation

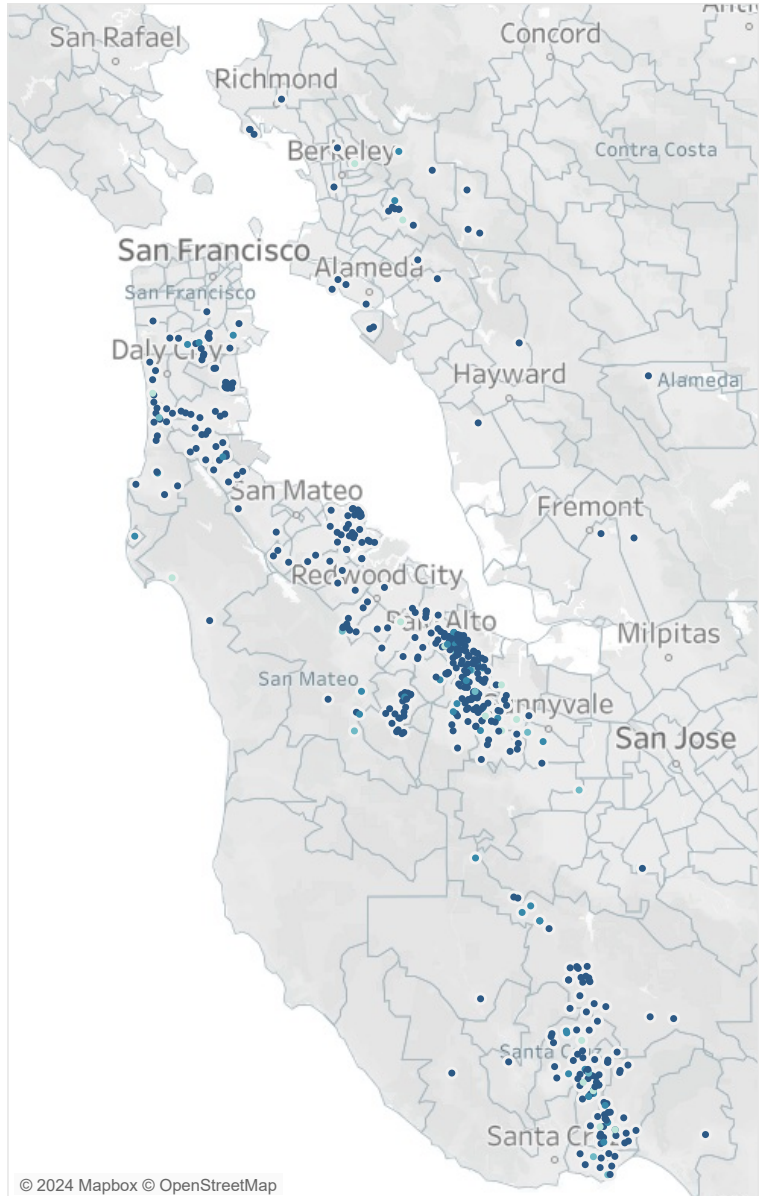
2

Top Aircraft Types

A320
B737
E75L

Top Flight Numbers

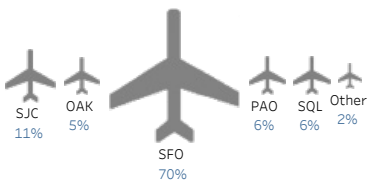
KAL214
JBU2736
TAI560



Other

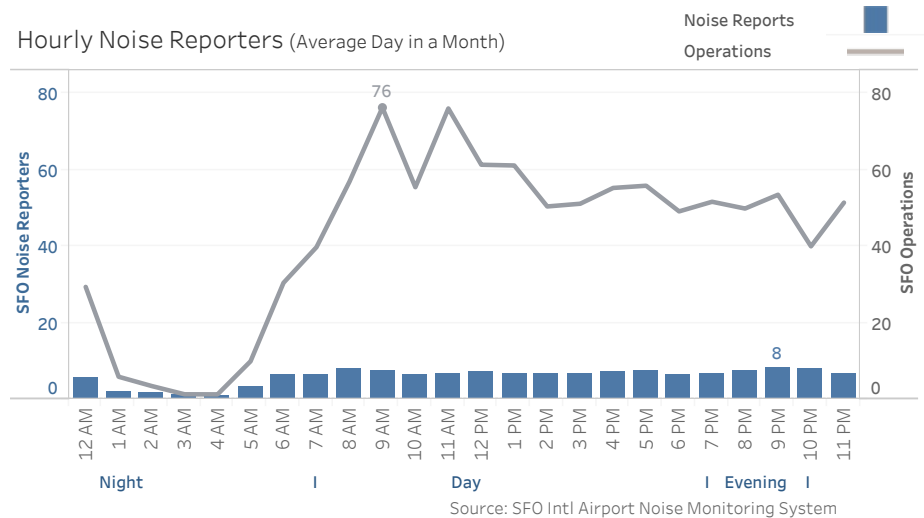
Notes:
Address validation Relies on USPS-provided ZIP Code look up table and USPS-specified default city values.

Noise Reports by Airport



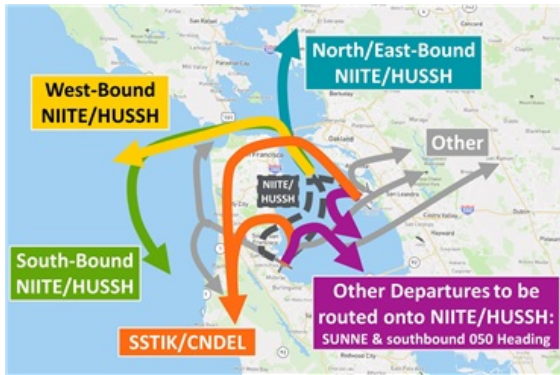
99% of noise reports correlate to a flight origin/destination airport.

Hourly Noise Reporters (Average Day in a Month)

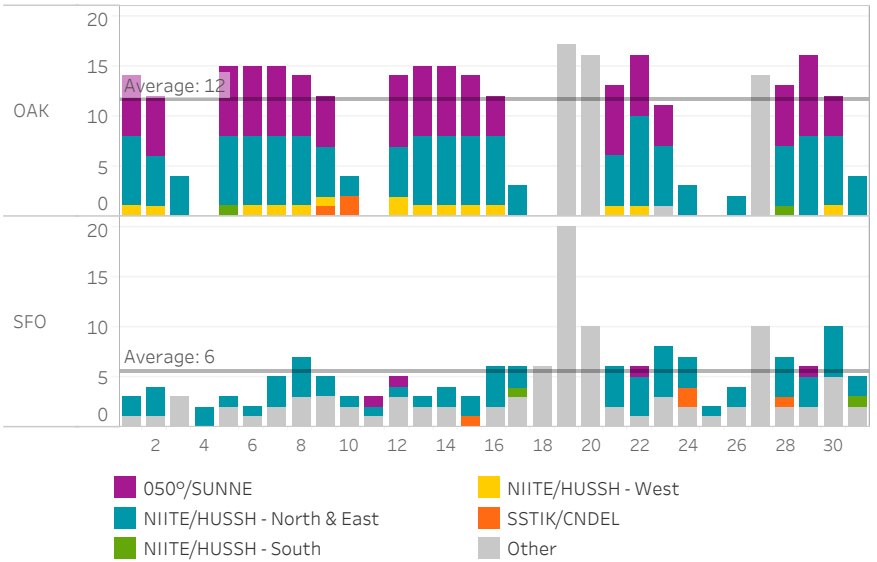


Source: SFO Intl Airport Noise Monitoring System

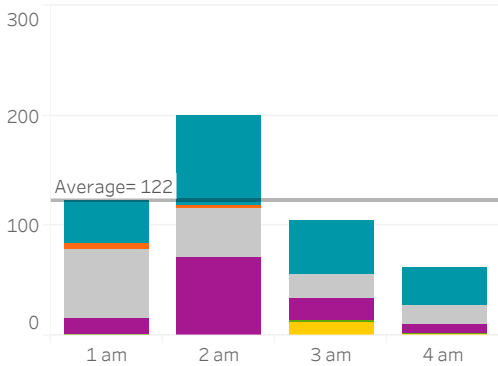
NIITE to GOBBS 1 am to 5 am (December 2023)



Count of Departures per Night



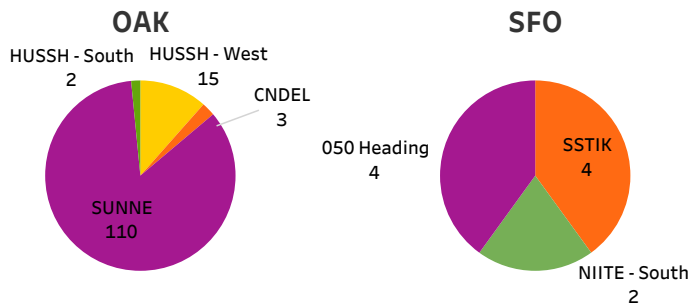
Average Total Departures per Hour



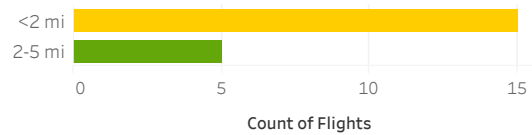
Departure Runway Usage

OAK		SFO					
12	30	01L	01R	10L	10R	28L	28R
15%	85%	7%	30%	13%	11%	19%	20%

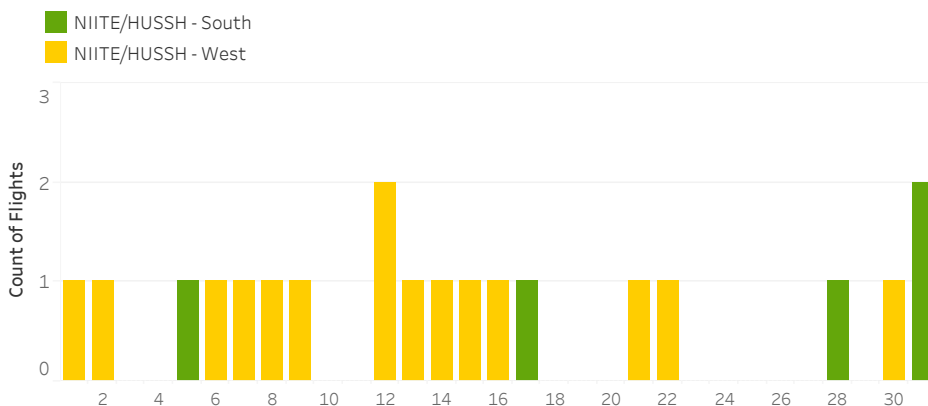
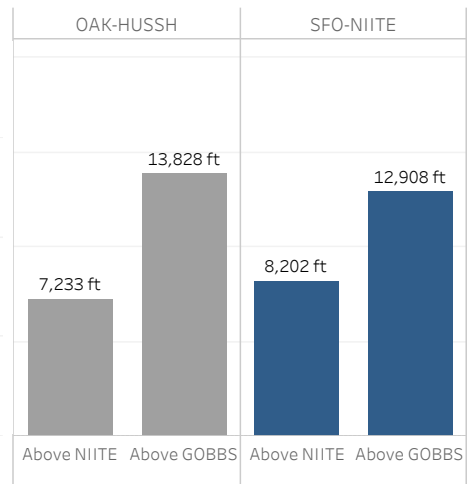
CNDEL and SSTIK Departures vs HUSSH and NIITE



How Close are Aircraft Flying to GOBBS?



Average Altitude at NIITE and GOBBS



SFO Roundtable Budget vs Actuals as of December 31, 2023

A	SOURCES	2023-24	2023-24 as of 12/31/23
	Revenue	<u>BUDGET</u>	<u>ACTUAL</u>
	San Francisco Airport Commission	\$ 220,000	\$110,000
	Roundtable Membership	\$ 43,500	\$ 33,000
	<i>In Kind Contributions*</i>		
		\$ 263,500	\$143,000
	Other Sources	<u>BUDGET</u>	
	Fund Balance Contribution	\$ 9,490	
	SOURCES TOTAL	\$ 272,990	
B	EXPENSES	2023-24	
	Staffing & Coordination	<u>BUDGET</u>	<u>ACTUAL</u>
	County of San Mateo Coordination Services	\$ 155,000	\$ 60,081
	Roundtable Aviation Technical Consultant	\$ 90,000	\$ 39,280
		\$ 245,000	\$ 99,361
	ADMINISTRATION / OPERATIONS	<u>BUDGET</u>	
	Meeting Rooms * In-Kind		
	Postage / Printing	\$ 1,500	
	Website	\$ 1,800	
	Data Storage & Conference Services	\$ 990	
	Miscellaneous Office Expenses/Equipment	\$ 3,000	\$ 926
	Video Services	\$ 8,000	\$ 2,306
		\$ 15,290	\$ 3,231
	PROJECTS, PROGRAMS, & OTHER	<u>BUDGET</u>	
	Noise Conferences Attendance, Coordinator	\$ 1,500	
	Noise Conferences Attendance, Members	\$ 3,000	\$ 150
	TRACON Field Trip(s)	\$ 950	
	Airport Noise Report subscription	\$ 2,500	\$ 2,500
	N.O.I.S.E. Membership	\$ 4,300	\$4,300
	Fly Quiet Awards	\$ 450	
	Special Study	\$ -	
		\$ 12,700	\$ 2,650
	EXPENSES TOTAL	\$ 272,990	\$ 65,267
	YEAR END BALANCE	<u>PROPOSED</u>	
		\$ -	
C	UNCOMMITTED FUNDS	2023-24	
		<u>PROPOSED</u>	
	Fund Balance	\$ 411,863	
	Contingency Reserve	\$ 40,000	
	UNCOMMITTED FUNDS TOTAL	\$ 451,863	

SFO Roundtable Budget vs Actuals as of December 31, 2023

*Meeting venues are in-kind contributions from Millbrae, Foster City, Hillsborough and the County of San Mateo.		
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February 2, 2024

TO: Roundtable Representatives, Alternatives, and Interested Persons

FROM: Kathleen Wentworth, Roundtable Coordinator

SUBJECT: Review/Approval of Resolution 24-01: Designating Roundtable Meeting Dates, Time, and Place for Calendar Year 2024

BACKGROUND:

California Government Code Section 54950 et seq., commonly known as the Ralph M. Brown Act (Open Meeting Law for local government bodies) and the adopted Roundtable Bylaws, as amended, require the Roundtable to establish the date, time, and place for holding its Regular Meetings. The amended Roundtable Bylaws state the following:

“The Roundtable membership shall establish, by adopted resolution, the date, time and place for Regular Roundtable Meetings. Such resolution shall be adopted at the February Regular Meeting or at the first Regular Meeting held thereafter each year.” (Roundtable Bylaws Article VI, Paragraph 1).

Special meetings, workshops, and other Roundtable related activities may be held as needed, in accordance with the relevant provisions in the Brown Act and the adopted Roundtable Bylaws.

DISCUSSION:

The proposed dates for Regular meetings are reflective of maintaining six meetings per fiscal year as practiced since 2016. Regular Meetings for calendar year 2024 are to be held at 7:00pm, in-person with hybrid access, in the David Chetcuti Community Room, 450 Poplar Avenue, Millbrae, California, on the first Wednesday of the following months: February, April, June, August, October and December, and therefore with adoption of Roundtable Resolution 24-01, the Regular Meetings would be scheduled as follows:

- **February 7**
- **April 3**
- **June 5**
- **August 7**
- **October 2**
- **December 4**

Dates for Roundtable Subcommittee meetings will be determined in consultation with Subcommittee Chairs and will be announced when venue is confirmed.

RECOMMENDATION:

Adopt the attached Roundtable Resolution No. 24-01 that specifies the date, time, and place for holding Regular Meetings of the SFO Airport/Community Roundtable, as required by the Brown Act and the Roundtable Bylaws for calendar year 2024.

Attachment: Resolution 24-01

RESOLUTION NO. 24-01

A RESOLUTION PROVIDING FOR THE DAY, TIME, AND PLACE FOR HOLDING REGULAR MEETINGS OF THE SAN FRANCISCO INTERNATIONAL AIRPORT/COMMUNITY ROUNDTABLE FOR CALENDAR YEAR 2024

RESOLVED, by the San Francisco Airport Community Roundtable that

WHEREAS, the San Francisco International Airport/Community Roundtable (Roundtable) was established in 1981, via a Memorandum of Understanding (MOU), to serve as a public forum to address community noise issues related to aircraft operations at San Francisco International Airport, and

WHEREAS, Article VI, Paragraph I of the adopted Roundtable Bylaws, as amended, requires the Roundtable to establish, by resolution, the date, time, and place for Regular Roundtable Meetings and that such resolution shall be adopted at the February Regular Meeting or at the first Regular Meeting held thereafter, and

WHEREAS, the Regular Meetings of the Roundtable are held in accordance with the relevant provisions of the Ralph M. Brown Act, which requires the Roundtable to establish a regular day, time, and place for holding its Regular Meetings (California Government Code Section 54950 et seq.).

NOW, THEREFORE BE IT RESOLVED, that the Regular Meetings of the Roundtable shall be scheduled as follows: the first Wednesday of February, April, June, August, October, and December 2024, at 7:00 p.m. in person with hybrid access at the David Chetcuti Community Room, 450 Poplar Avenue, Millbrae, California. Special Meetings and workshops may be scheduled and held, as needed, in accordance with the relevant provisions in the Brown Act and the adopted Roundtable Bylaws.

* * * * *

Adopted at the Regular meeting of February 7, 2024.

Chairperson

February 7, 2024

**SFO Airport/Community Roundtable Standing and Ad Hoc Subcommittees
Updated to Include Work Plan 2023-2024 Tasks**

STANDING SUBCOMMITTEES

Name	Role	Active/ Not Active	2023 Members eligible in 2024	Meeting Dates & Number of meetings Subject to change	Work Program July 1, 2023- June 30, 2024
Work Program	To recommend an annual work Plan that details the Roundtable focus for the coming fiscal year. Work Plan generally aligns with the Strategic Plan.	A	Sam Hindi Al Royse Kaia Eakin Terry O’Connell	Meets April – May 1 meeting	The current Work Program is effective July 1, 2022 - June 30, 2024. An updated Work Program will be submitted to the Roundtable in June 2024 for the following fiscal year.
Legislative	Research, analyze, and advise the Roundtable of any existing and/or pending legislative actions. Advocate for new or modified legislation or regulations.	A	Alvin Royse Pam DiGiovanni Rob Newsom Robin Pang-Maganaris	Meets quarterly between Membership meetings 2 meetings	-Work with Congressional delegations and other legislators to help develop and support aircraft noise-reduction legislation. -Lobby/advocate for improved laws and regulations that foster reduced aircraft noise. -Monitor activities from the Congressional Quiet Skies Caucus. -Solicit regular reports from N.O.I.S.E., Airport Noise Report, and Congressional Representatives regarding legislation.
Technical Working Group	Technical analysis, discussion and advocacy on specific flight noise issues outlined in the Roundtable’s Work Plan.	A	Sam Hindi Ricardo Ortiz Terry O’Connell Judith Hasko	Meets quarterly between Membership meetings 5 meetings	-Working with the Technical Consultant, the TWG will evaluate options and advocate for improved nighttime flight procedures. -Working with the technical consultant, the TWG should discuss with the FAA and other stakeholders ,the use of air traffic control non-safety vectoring (like aircraft “short-cuts”) over residential areas at any time – but especially at night. -Evaluate the effective implementation of the NIITE and HUSSH nighttime noise abatement procedures and advocate for use of extended nighttime hours. -Actively work with SFO on its proposed Ground Based Augmentation System (GBAS) to provide feedback on proposed GLS approaches including the associated noise evaluations, the Community Flight Procedure Packages and the community evaluation of GLS approaches. -Actively work with SFO on updates to the Fly Quiet Program.

Ground Based Noise	The mission of the Ground-based Noise Subcommittee ¹ is to investigate the sources of ground-based noise impacts from operations at San Francisco International Airport and research mitigation.	A	Al Royse Sandy Alvarez	Meetings held in non-RT Regular meeting months. 3 meetings	-Complete the Ground Based Noise “Up the Hill” Study -Analyze the results and technical recommendations of the “Up the Hill” Study and determine what, if any next steps are feasible. -Address and make recommendations about the noise impacts to communities from airport and airline ground operations.
Operations and Efficiency	Review meetings and business operations; streamline procedures and governing documents; develop recommendations for any proposed changes to the bylaws.	NA	5-7	If needed	No subcommittee appointments to be made at the February 2024 meeting.

AD HOC SUBCOMMITTEE

Name	Role	Active/ Not Active	Members	Meetings	Work Program July 1,2023- June 30, 2024
Portable Noise Monitor Placement Subcommittee	The mission of the Portable Noise Monitor Placement Subcommittee is to recommend to SFO placement of portable noise monitors.	NA	Terry O’Connell Christine Boles	If needed	- Recommend to SFO Airport how to prioritize community placement of portable noise monitors: locations, process, and methodology for placement. - Meet as needed when applications have been submitted for placement. Recommend locations for under-measured areas.
Strategic Plan	Complete a Membership and community survey. Develop a 5-year Strategic Plan to inform annual Work Plans.	A		Oct – Nov 2024 1 meeting	Draft the 2024-2028 Strategic Work Plan to submit to the December 2024 regular Roundtable Meeting. This subcommittee last met in 2020 to recommend the 2020-2024 Strategic Plan to the Roundtable Membership.

SFO Airport/Community Roundtable 2024 Meeting Schedule

Tentative Subcommittee dates (shown in gray) will be replaced by final dates made in consultation with Subcommittee Chairs and will be announced when venue is confirmed.

As of 2/7/2024			
	Meeting Date	Time	Venue
	1/18/2024	3:30pm	Foster City
REG	2/7/2024	7:00pm	Chetcuti
	2/26/2023		
	3/11/2024		
REG	4/3/2023	7:00pm	Chetcuti
	4/29/2024		
	5/13/2024		
REG	6/5/2024	7:00pm	Chetcuti
	6/24/2024		
	7/15/2024		
REG	8/7/2024	7:00pm	Chetcuti
	8/26/2024		
	9/9/2024		
REG	10/2/2024	7:00pm	Chetcuti
	10/29/2024		
	11/11/2024		
REG	12/4/2024	7:00pm	Chetcuti
	12/9/2024		

MEETING FREQUENCY

Regular Meeting (6)
LEG (2)
TWG (5)
GBN (3)
PNMP (1)
Work Plan (1)
Strategic Plan(1)

NOTES:

Staff can accommodate 2 Subcommittee meetings between regular meetings

Advanced Air Mobility (AAM) Update, February 2024

Presentation to the San Francisco Airport (SFO) Community Roundtable
Timothy Middleton, C.M. – Principal Consultant, HMMH
February 7, 2024

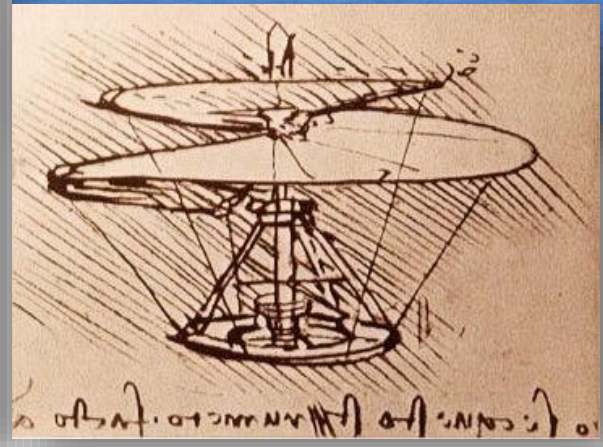
Agenda

- Introduction
- Definitions
- Vehicle Types
- Use Cases
- Infrastructure Considerations
- Noise, Airspace, & Operational Considerations
- Challenges, or Opportunities?



Source: <https://newatlas.com/aircraft/joby-manned-evtol-tests/>

*"History doesn't repeat itself,
but it often rhymes."*



Definitions

- AAM – Advanced Air Mobility
 - **As defined in the AAM Coordination and Leadership Act (P.L. 117-203, 136 Stat. 2227), October 17, 2022:**
AAM is a transportation system that moves people and property by air between two points in the United States (U.S.) using aircraft with advanced technologies, including electric aircraft, or electric vertical takeoff and landing (eVTOL) aircraft, in both controlled and uncontrolled airspace.
- RAM – Regional Air Mobility
 - *Air travel connecting suburbs, villages, towns, and rural areas to urban city centers and airports; or intra-city air travel*
- UAM – Urban Air Mobility
 - *Inter-city air travel*
- Drone – *Generic term for any aircraft without a pilot*
- UAS – *Uncrewed Aircraft Systems; technical term for Drones*
 - Small UAS – 14 CFR Part 107, Under 55 Pounds
 - Large UAS – 55 Pounds or More
- bVLOS – Beyond Visual Line Of Sight
- eVTOL – Electric Vertical Take-Off and Landing
- STOL – Short Take-Off and Landing
- CTOL – Conventional Take-Off and Landing

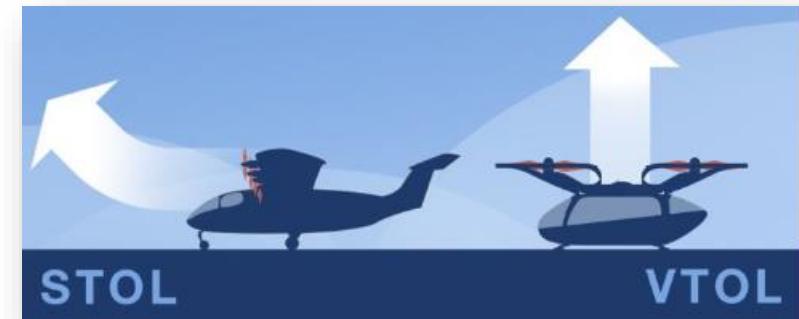
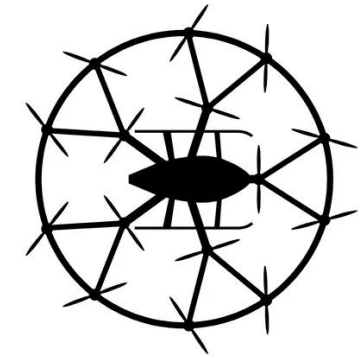


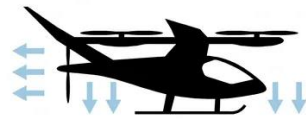
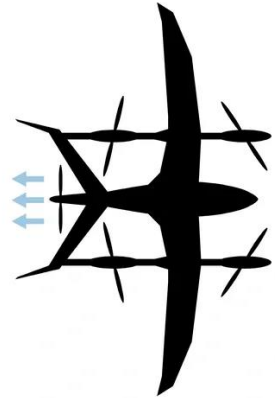
Image Source: FAA Innovate28:

<https://www.faa.gov/air-taxis/implementation-plan>

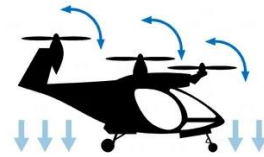
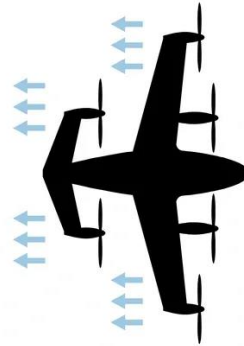
Vehicle Types



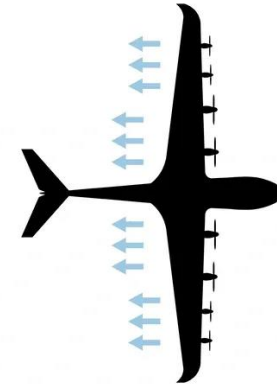
MULTICOPTER



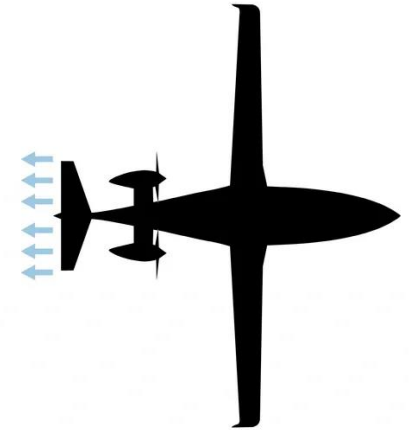
LIFT + CRUISE



VECTORED
THRUST



AUGMENTED
LIFT



CONVENTIONAL

Source: SMG Consulting, <https://aamrealityindex.com/aam-reality-index>

Vehicle Types



Use Cases

- Cargo
 - Last mile (UAS)
 - Airport to warehouse (AAM)
 - Airport to vertiport; airport to airport
- Medical
 - Patients
 - Organs, blood, supplies
- Passengers
 - Inter and intra city travel
 - On-demand air taxis
 - Scheduled service

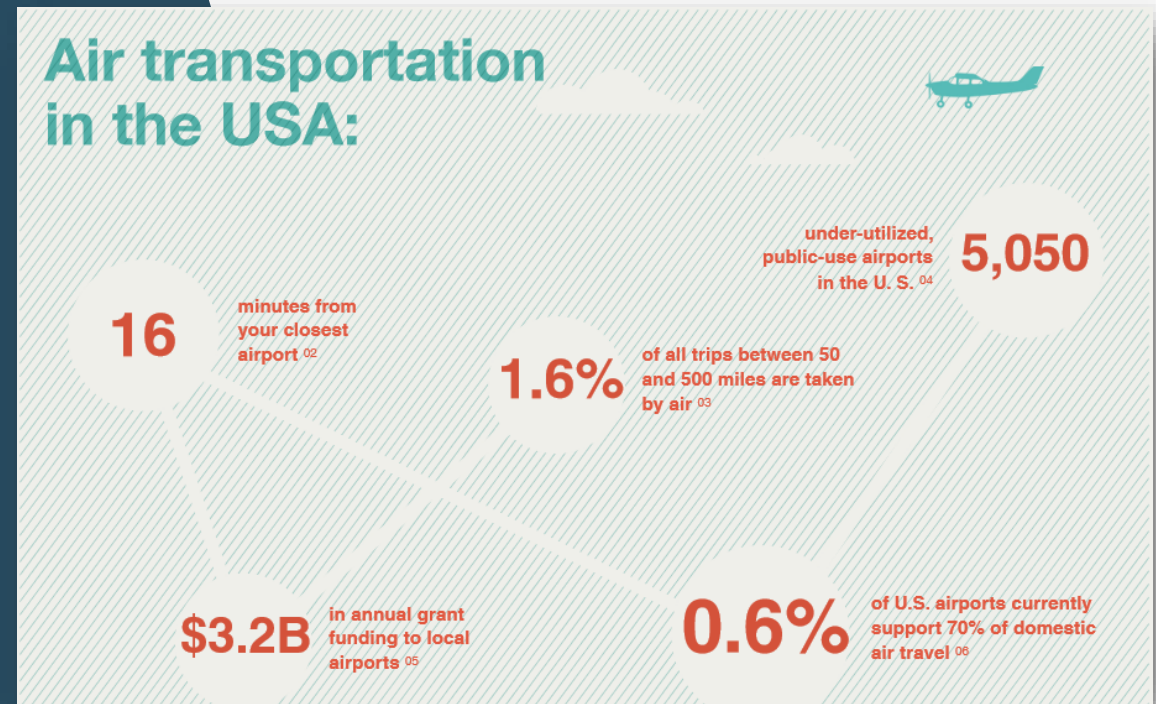


Sources: Archer Aviation inc. (top) and courtesy of Joby Aviation. ©Joby Aero, inc. (bottom).

Source: <https://www.reuters.com/business/aerospace-defense/us-faa-shifts-gears-certifying-future-flying-taxi-pilots-2022-05-10/>
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Infrastructure Considerations

- RAM operations look to increase utilization of existing airport infrastructure
- AAM and UAM operations look to **also** build new infrastructure, such as vertiports
- FAA vertiport guidance
 - Engineering brief No. 105, Vertiport Design
 - https://www.faa.gov/airports/engineering/engineering_briefs/engineering_brief_105_vertiport_design
- High real-estate prices: UAM/AAM utilization potential exists in dense congested urban areas where real estate is limited and costly
- Limited space: rooftops are not equipped for aircraft, charging, and emergency response, and parking garages are quite low in height
- Vehicle cost: on-demand services require significantly more carriers than scheduled ones
- Airspace integration: airspace is usually most congested in the cities
- Other challenges like certification cost, operations in inclement weather, passenger rooftop access, etc.



Source: NASA's Regional Air Mobility Report (<https://sacd.larc.nasa.gov/ram/>)


Interim Vertiport Design Guidance

FAA is preparing interim guidance for the design of vertiports and vertistops considering eVTOL vehicles.

- FAA plans to use transport helicopter criteria for VTOL vehicles. The rationale for increased size is enhanced safety
- Flight Approach and Take Off Zone (FATO) needs to be two times of the controlling dimension i.e., 50 feet long eVTOL would require 100 ft X 100 ft load-bearing surface.
- This larger size would be a problem for retrofitting rooftop style parking garage vertiports

Joby S4 Wingspan (WS): 45 ft
 Airbus CityAirbus WS: 52 ft
 Archer Maker: 10.4 ft
 Supernal S-A1: 56 ft

DRAFT



Federal Aviation Administration

Memorandum

Date: June XX, 2022

To: All Airports Regional Division Managers

From: Michael A.P. Meyers, P.E.
 Manager, Airport Engineering Division, AAS-100

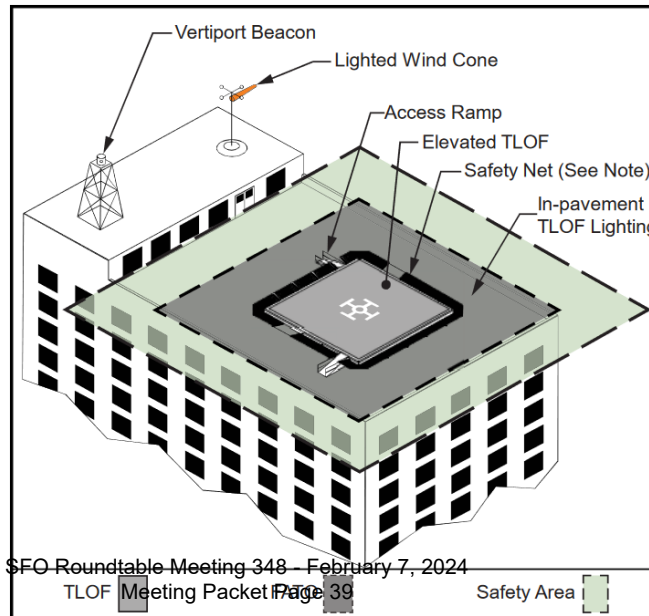
Prepared by:

Subject: Engineering Brief No. 105, Vertiport Design

This Engineering Brief provides interim guidance to airport owner operators and their support staff for the design of vertiports for vertical takeoff and landing (VTOL) operations. Note that this interim guidance will be subject to updates as data, analysis, and VTOL aircraft and operations develop in the future.

Attachment

Figure 3-8: Elevated Vertiport Configuration



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TLOF Meeting Packet Page 39

Note: See Figure 3-9 for safety net and lighting details.

Helicopter

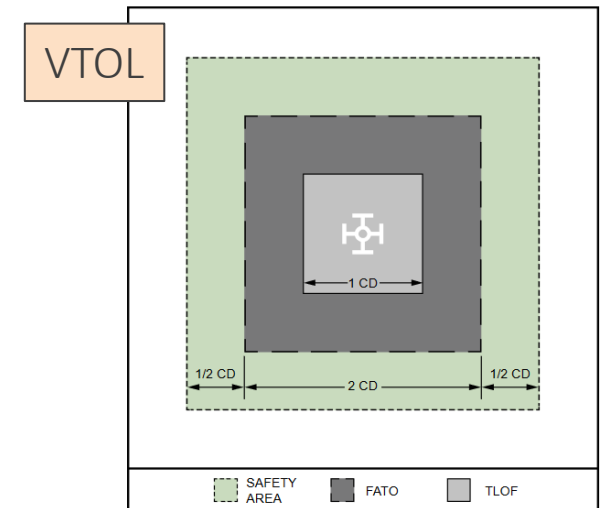
DIM	ITEM	VALUE	NOTES
A	Minimum TLOF Length	1 RD	
B	Minimum TLOF Width	1 RD	
C	Minimum FATO Length	1 ½ D	See Paragraph 207 a (1) and Figure 2.5 for adjustments of elevations above 1000'
E	Minimum FATO Width	1 ½ D	
F	Minimum Separation Between the Perimeters of the TLOF and FATO	¾ D - ½ RD	
G	Minimum Safety Area Width	See Table 2-1	

Note: For a circular TLOF and FATO, dimensions A, B, C and E refer to diameters.

Table 2-1: Landing Area Dimensions

Element	Dimension
TLOF	1CD
FATO	2CD
Safety Area	3CD (½ CD added to edge of FATO)

Figure 2-1: Relationship and Dimensions of TLOF, FATO, and Safety Area



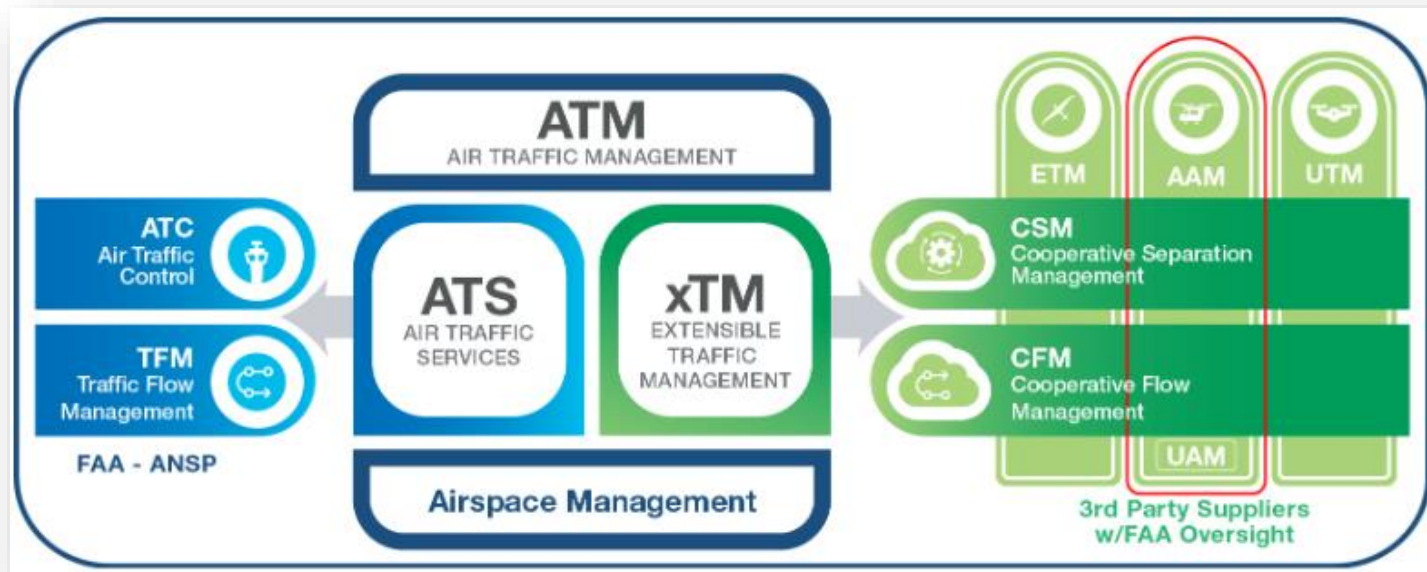
Noise, Operational, and Airspace Considerations



- The FAA is the federal authority over aircraft operations in all airspace and the regulatory and oversight authority for civil operations in the NAS. The FAA maintains an operating environment that ensures airspace users have access to the resources needed to meet specific operational objectives and that shared use of the airspace can be achieved safely and equitably. The FAA develops or modifies regulations to support UAM operations. The FAA will approve COPs to ensure that the FAA authority is maintained (e.g., NAS safety, equal access to airspace, security). The FAA will define, maintain, and make publicly available UAM Corridor definitions (e.g., routes and altitudes) and manage the performance requirements of UAM Corridors. – **FAA UAM Concept of Operations (CONOPS) 2.0**
https://www.faa.gov/sites/faa.gov/files/Urban%20Air%20Mobility%20-%20FAA%20UAM%20Concept%20of%20Operations%202.0_1.pdf

Noise, Operational, and Airspace Considerations

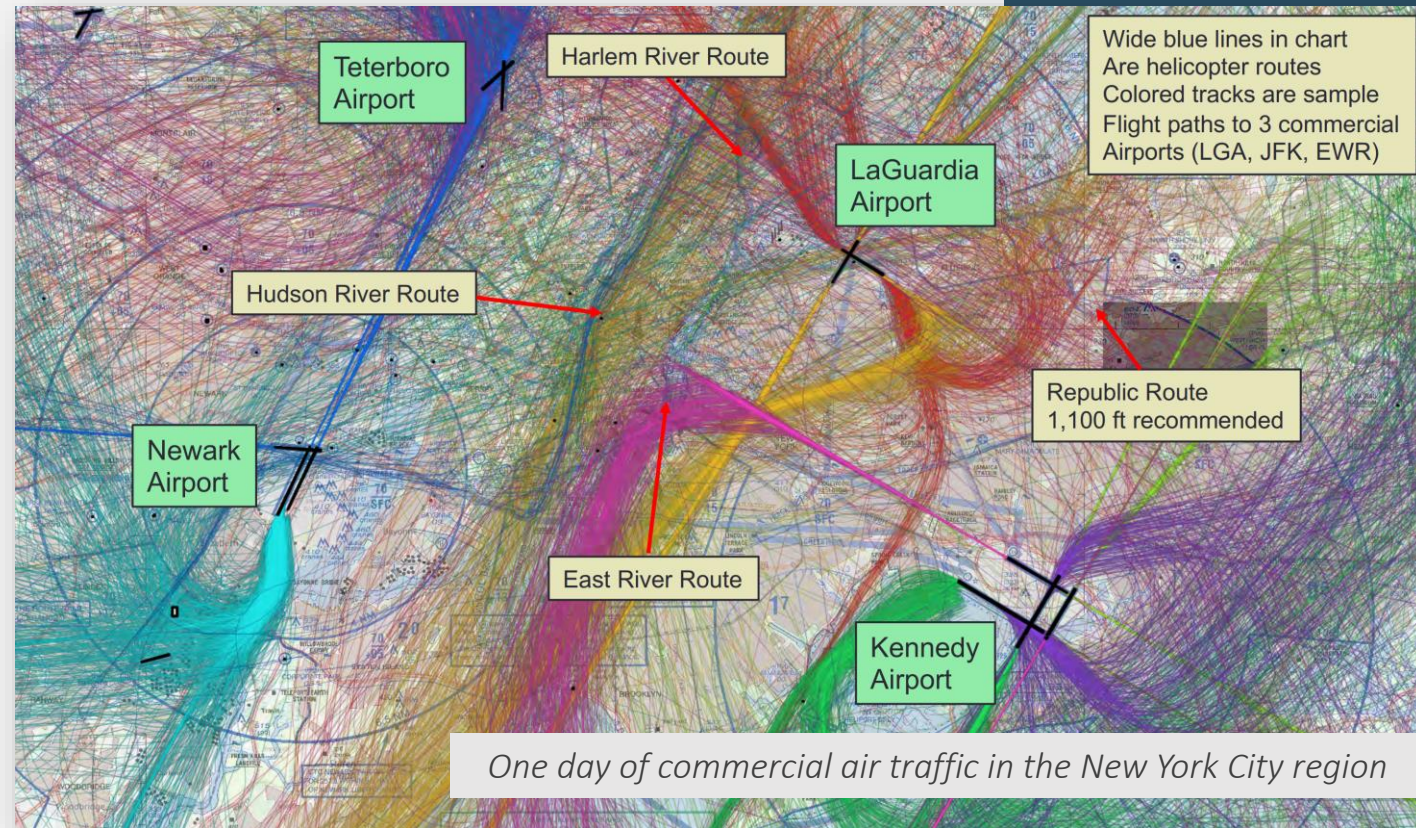
- Integrating AAM/UAM into National Airspace System (NAS) is complex
- Involvement of ATC in AAM/UAM traffic management could incur delay and put a burden on already saturated ATC
- FAA has developed a Concept of Operations (CONOPS) framework



- Source: FAA UAM CONOPS 2.0 <https://www.faa.gov/air-traffic/uam/blueprint> SFO Roundtable Meeting 348 - February 7, 2024 Meeting Packet Page 41

Noise, Operational, and Airspace Considerations

- NASA & FAA working with manufacturers to gather data to be used for certification and policy decision making
- Elements of sound include pitch, tone, harmony, etc.
- Noise metrics for Environmental and Land Use planning defined in FAA Order 1050.1F
- Community annoyance to noise of aircraft operations has changed over time; FAA has acknowledged:
 - FAA Neighborhood Environmental Survey
 - FAA Noise Policy Review
- Manufacturers are designing 'low-noise' aircraft
 - Rotor speed, location, airframe interaction, angle of flight all influence the 'quality' of the noise



Advanced Air Mobility – Community Integration Platform AAM-CIP

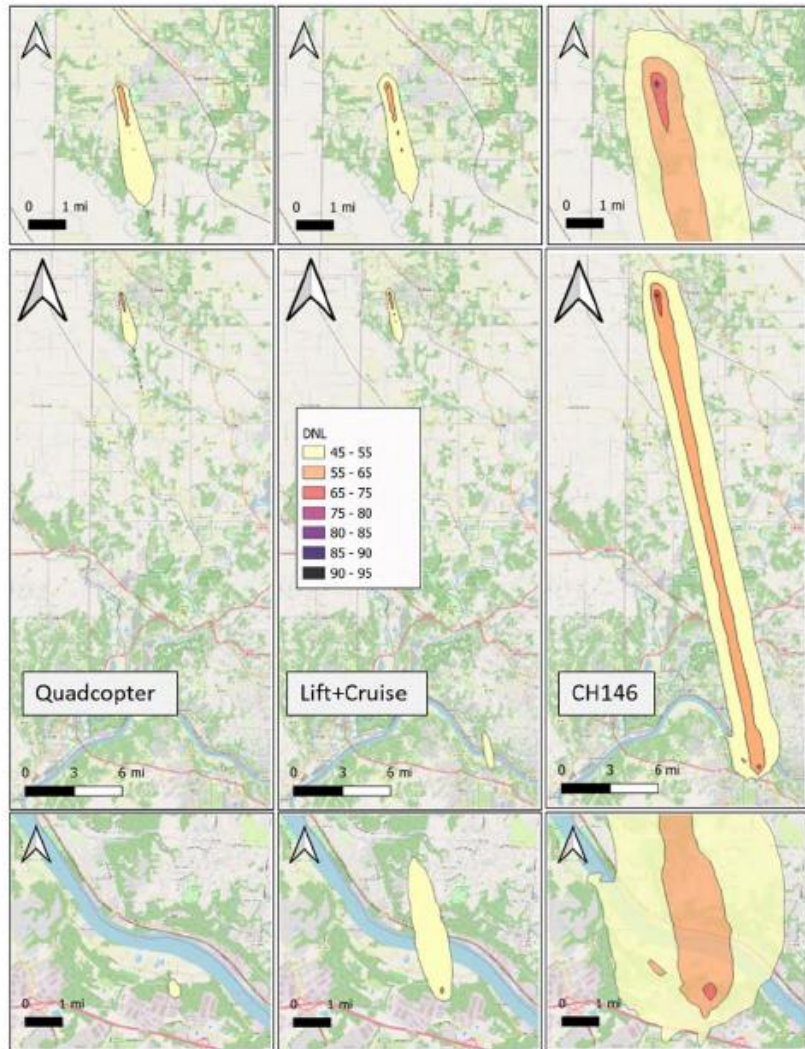


Figure 4. DNL Bands for AAM vehicles (Quadrotor and L+C), compared to Bell CH-146 Griffon Helicopter. The top and bottom panels zoom-in on Descent and Climb phase, respectively. The middle panels capture the entire flight’s noise exposure.

- A noise estimation framework for AAM vehicles has been built for the AAM CIP tool.
- The framework leverages the credible computing capabilities of the Advanced Acoustics Model, which allows for proper acoustic characterization of AAM vehicles as sound sources via sets of spectral hemispheres.
- The framework allows for the estimation of noise exposure from AAM operations



Noise Estimation Framework for Advanced Air Mobility

Joseph Czech^{1*} Mihir Rimjha¹ Timothy Middleton¹
 Daniel Cuppoletti² Peter Sorensen² Paul Cobb³
¹ Harris Miller Miller & Hanson, Inc., Anaheim, CA, USA
² University of Cincinnati, Cincinnati, OH, USA
³ Crown Consulting Inc., Arlington, VA, USA



Examples of State & Federal Plans

- Ohio Air Mobility Framework
 - <https://drive.ohio.gov/about-driveohio/news/ohio-aam-framework>
- Florida
 - <https://www.fdot.gov/aviation/advanced-air-mobility>
 - City of Orlando <https://www.orlando.gov/Our-Government/Orlando-plans-for-a-future-ready-city/Advanced-Air-Mobility>
- North Carolina
 - <https://www.ncdot.gov/divisions/aviation/advance-mobility/Pages/advanced-air-mobility.aspx>
- California
 - SB 800, <https://atrn.assembly.ca.gov/sites/atrn.assembly.ca.gov/files/SB%20800%20%28Caballero%29.pdf>
- US DOT, Interagency Working Group
 - <https://www.transportation.gov/aamiwg>

Image Source: <https://www.greencarcongress.com/2021/07/20210716-aam.html>



Challenges, or Opportunities?

- Balancing operational considerations with noise abatement
 - Flight paths optimized for efficiency of power (i.e., slower battery drain), are not conducive to noise abatement paths (i.e., up and out quick)
- Development of noise abatement flight routes within existing airspace guidance
 - FAA Innovate28;
<https://www.faa.gov/air-taxis/implementation-plan>
 - *FAA Could Improve Outreach through Enhanced Noise Metrics, Communication, and Support to Communities*
 - GAO Report:
<https://www.gao.gov/assets/gao-21-103933.pdf>



Thank You.

Timothy Middleton, C.M.

339.234.2816

tmiddleton@hmmh.com



MEMORANDUM

To: SFO Community Roundtable Members and Interested Parties

From: Jason R. Stoddard, Senior Airspace Analyst
Eugene M. Reindel, Vice President

Date: December 28, 2023

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

Reference: HMMH Project Number 312310

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 proposed changes and the reason for the changes. The FAA IFP Information Gateway published six updates for SFO, one update for OAK, and one update for SJC. There is currently one open comment period. The next publication is expected on January 25, 2024.

Important Terms and Items:

- FAA Stage 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 Arnav Products Charting for publication (NACO)
- FAA Status Definitions
 1. At Flight Check: At Flight Inspection for procedure validation
 2. Awaiting Publication: At Arnav 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
 - ATC: Air Traffic Control
 - IAP: Instrument Approach procedure
 - STAR: Standard Terminal Arrival Route
 - SID: Standard Instrument Departure
 - GPS: Global Positioning System
 - ILS: Instrument Landing System
 - LOC: Localizer

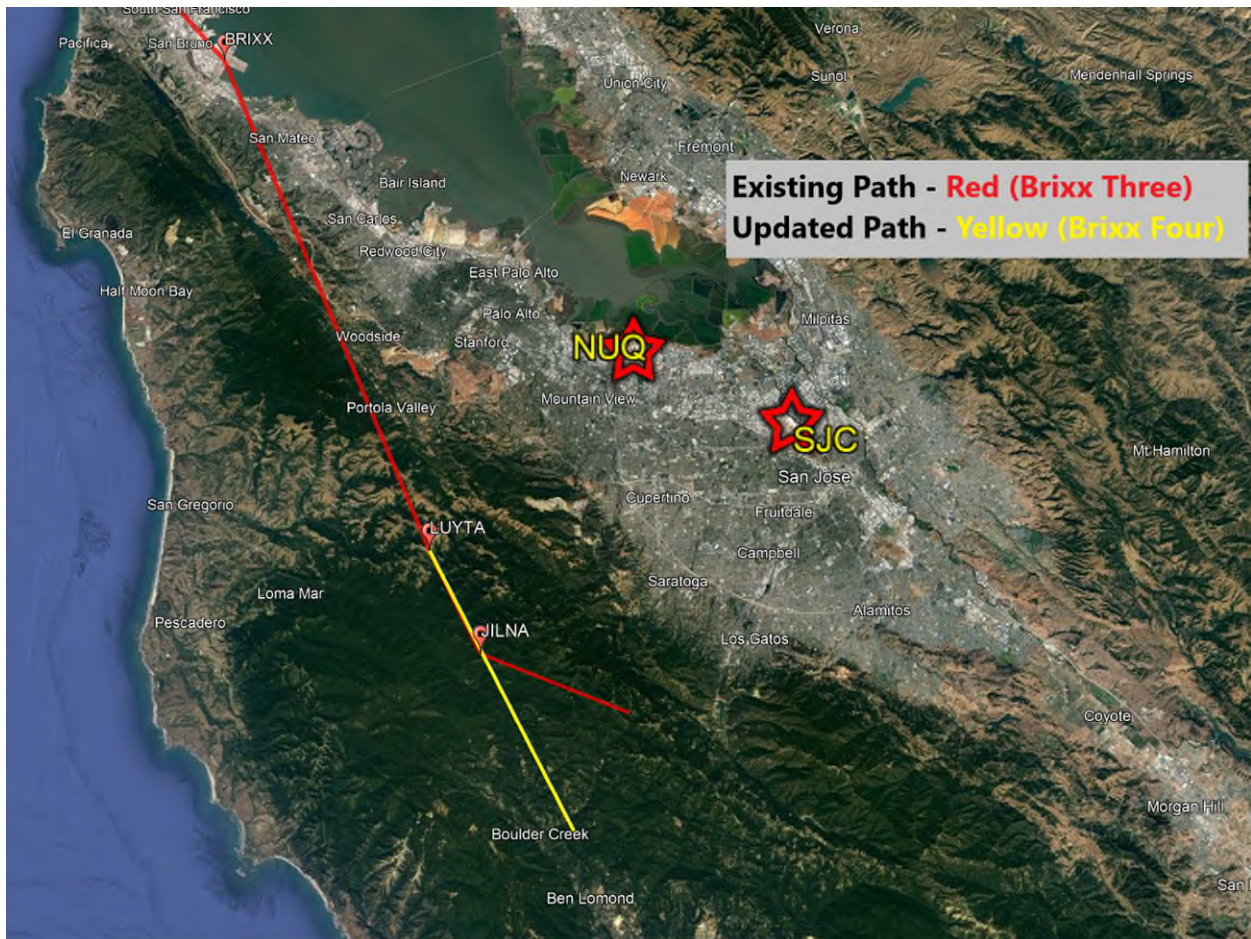
Updates:

- SFO GLS RWY 19R AMDT 1
 - Status changed to Published
 - Publication Date of November 30, 2023
- SFO GLS RWY 19L AMDT 1
 - Status changed to Published
 - Publication Date of November 30, 2023
- SFO ILS or LOC RWY 19L AMDT 23
 - Status changed to Published
 - Publication Date of November 30, 2023
- SFO RNAV (GPS) RWY 19L AMDT 4
 - Status changed to Published
 - Publication Date of November 30, 2023
- SFO RNAV (GPS) Y RWY 19R AMDT 3
 - Status changed to Published
 - Publication Date of November 30, 2023
- SFO RNAV (GPS) Z RWY 19R ORIG
 - Status changed to Published
 - Publication Date of November 30, 2023
- SJC STAR BRIXX FOUR (RNAV)
 - Status changed to At Flight Check
 - Scheduled Publication Date of March 21, 2024
- OAK SID OAKLAND SIX
 - Status changed to Awaiting Publication
 - Scheduled Publication Date of January 25, 2024

Open Comment Periods:

- SJC STAR BRIXX FOUR (RNAV)
 - Comment period ends January 1, 2024
The following changes are expected:
 - Removed the JILNA waypoint and made LUYTA waypoint the STAR terminus waypoint with an altitude restriction of AT 12000 ft MSL
 - Added Moffett Federal Airfield (KNUQ) to the list of airports utilizing the STAR
 - Additional administrative remarks were added that are not expected to change flight paths or altitudes beyond what is described above
 - Changes were requested by ATC to reduce controller workload and to reduce conflicts with SFO. Changes are depicted on next page
 - Concerns can be submitted via
https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/Aeronautical_Inquiries/?event=email.contact&details=General%20Comments

- Aircraft currently fly (depicted in red below) over LUYTA waypoint at 12,000 ft MSL (mean sea level), fly to JILNA waypoint at a magnetic directional heading of 141 degrees and then turn left to 105 degrees (magnetic) to await radar vectors from ATC to the final approach course into SJC (San Jose Mineta International Airport).
- Aircraft will now fly (depicted in yellow below) over waypoint LUYTA at 12,000 ft MSL and continue at a magnetic heading of 140 degrees (rather than 141 degrees) to await radar vectors from ATC to the final approach course into SJC or NUQ (Moffett Federal Airport). Aircraft will no longer use the JILNA waypoint on the BRIXX STAR.



Next Publication: We expect the following updates in the January 25, 2024 publication:

- OAK SID OAKLAND SIX to be published on January 25, 2024