San Francisco International
Airport/Community Roundtable

455 County Center, 2nd Floor
Redwood City, CA 94063
T (650) 363-1853
F (650) 363-4849
www.sforoundtable.org

ROUNDTABLE REGULAR MEETING PACKET

Meeting No. 292

Wednesday, October 1, 2014 - 7:00 p.m.

David Chetcuti Community Room – Millbrae City Hall
450 Popular 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
Cliff Lentz, Roundtable Chairperson / James A. Castaneda, AICP, Roundtable Coordinator

2. 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 ITEMS

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.

3. Review of Airport Director's Reports for: — ACTION

May 2014	pg. 11
June 2014	pg. 19
July 2014	pg. 27
August 2014	pg. 35

4. Review of Roundtable Regular Meeting Overview for June 4, 2014 — ACTION
Item continued to next Regular Meeting — pg. 43

REGULAR AGENDA

5. Request from the City of Palo Alto for Roundtable Membership — ACTION
Cliff Lentz, Roundtable Chairperson — pg. 47

6. Review of SFO FlyQuiet Report for Q2 2014 — ACTION
Bert Ganoung, Manager - Aircraft Noise Abatement Office — pg. 53

7. Airport Director's Comments — INFORMATION
John Martin, Director – San Francisco International Airport

REGULAR AGENDA – WORK PROGRAM ITEMS

8. SFO Construction Follow Up — INFORMATION
Bert Ganoung, Manager - Aircraft Noise Abatement Office

9. Update, FAA's PORTE Departure Analysis — INFORMATION
Bert Ganoung, Manager - Aircraft Noise Abatement Office
Cliff Lentz, Roundtable Chairperson

10. Update, Oceanic Arrivals Over the Woodside VOR — INFORMATION
Bert Ganoung, Manager - Aircraft Noise Abatement Office
Cliff Lentz, Roundtable Chairperson

11. Update, Optimization of Airspace & Procedures in the Metroplex (Metroplex)
Cindy Gibbs, Roundtable Aviation Technical Consultant — INFORMATION

12. Work Program FY 2014-2015 — ACTION
Cindy Gibbs, Roundtable Aviation Technical Consultant — pg. 71

13. Budget FY 2014-2015 — ACTION
James Castañeda, Program Coordinator — pg. 87

OTHER MATTERS

14. Airport Noise Briefing — INFORMATION
Cindy Gibbs, Roundtable Aviation Technical Consultant

15. Member Communications / Announcements — INFORMATION
Roundtable Members and Staff

16. Adjourn — ACTION
Cliff Lentz, Roundtable Chairperson

Next Regular Roundtable Meeting Date: Wednesday, December 3, 2014

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.

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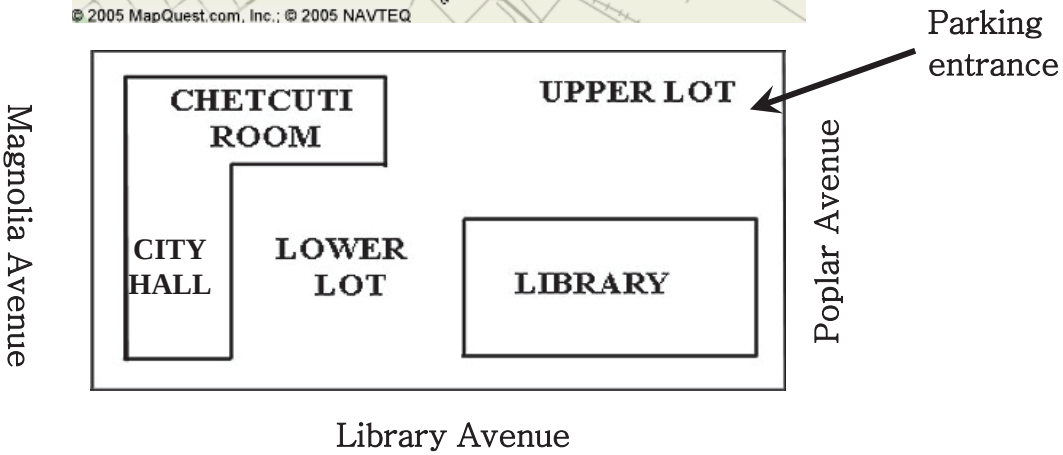
ROUNDTABLE REGULAR MEETING LOCATION

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

Access through Millbrae Library parking lot on Poplar Avenue



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ABOUT THE AIRPORT/COMMUNITY ROUNDTABLE

OVERVIEW

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. The Roundtable is scheduled to meet on the first Wednesday of the following months: February, April, June, September and November. **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. 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."* (49 U.S.C. A. Section 1302(a)(1)).

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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, Agenda 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:
CLIFF LENTZ
Representative, City of Brisbane
clifflentz@ci.brisbane.ca.us

Vice-Chairperson:
DAVE PINE
Representative, County of San Mateo
dpine@smcgov.org

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

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MEMBERSHIP ROSTER OCTOBER 2014
REGULAR MEMBERS

CITY AND COUNTY OF SAN FRANCISCO
BOARD OF SUPERVISORS
Representative: Vacant
Alternate: Vacant

CITY AND COUNTY OF SAN FRANCISCO
MAYOR'S OFFICE
Julian C. L. Chang, (Appointed)
Alternate: Edwin Lee, Mayor

CITY AND COUNTY OF SAN FRANCISCO
AIRPORT COMMISSION REPRESENTATIVE
John L. Martin, Airport Director (Appointed)
Alternate: Doug Yakel, Acting Airport Spokesperson

COUNTY OF SAN MATEO BOARD OF SUPERVISORS
Dave Pine, Supervisor/Roundtable Vice-Chairperson
Alternate: Don Horsley, Supervisor

CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY (C/CAG)
AIRPORT LAND USE COMMITTEE (ALUC)
Richard Newman, ALUC Chairperson (Appointed)
Alternate: Carol Ford, Aviation Representative (Appointed)

TOWN OF ATHERTON
Elizabeth Lewis, Council Member
Alternate: Bill Widmer, Council Member

CITY OF BELMONT
Representative: Vacant
Alternate: Vacant

CITY OF BRISBANE
Cliff Lentz, Council Member/Roundtable Chairperson
Alternate: Lori Liu, Council Member

CITY OF BURLINGAME
Ricardo Ortiz, Council Member
Alternate: Vacant

MEMBERSHIP ROSTER OCTOBER 2014

CITY OF DALY CITY
Raymond Buenaventura, Mayor
Alternate: Carol Klatt, Council Member

CITY OF FOSTER CITY
Steve Okamoto, Council Member
Alternate: Vacant

CITY OF HALF MOON BAY
Naomi Patridge, Council Member
Alternate: Allan Alifano, Council Member

TOWN OF HILLSBOROUGH
Alvin Royse, Council Member
Alternate: Shawn Christianson, Council Member

CITY OF MENLO PARK
Richard Cline, Council Member
Alternate: Peter Ohtaki, Council Member

CITY OF MILLBRAE
Robert Gottschalk, Council Member
Alternate: Marge Colapietro, Council Member

CITY OF PACIFICA
Sue Digre, Council Member
Alternate: Vacant

TOWN OF PORTOLA VALLEY
Ann Wengert: Council Member
Alternate: Maryann Derwin, Council Member

CITY OF REDWOOD CITY
Rosanne Foust, Council Member
Alternate: Vacant

CITY OF SAN BRUNO
Ken Ibarra, Council Member
Alternate: Rico Medina, Council Member

CITY OF SAN CARLOS
Bob Grassilli: Council Member
Alternate: Ron Collins, Council Member

MEMBERSHIP ROSTER OCTOBER 2014

CITY OF SAN MATEO
David Lim, Council Member
Alternate: Vacant

CITY OF SOUTH SAN FRANCISCO
Mark Addiego, Council Member
Alternate: Pradeep Gupta, Council Member

TOWN OF WOODSIDE
David Burow, Council Member
Alternate: Thomas Shanahan, Council Member

ROUNDTABLE ADVISORY MEMBERS

AIRLINES/FLIGHT OPERATIONS
Captain Andy Allen, United Airlines
Glen Morse, United Airlines
Michael Jones, United Airlines

FEDERAL AVIATION ADMINISTRATION
Elisha Novak, Airports District Office, Burlingame
Greg Kingery, SFO Air Traffic Control Tower
Don Kirby, Northern California Terminal Radar Approach Control (NORCAL TRACON)

ROUNDTABLE STAFF/CONSULTANTS

James A. Castañeda, AICP, Roundtable Coordinator
Cynthia Gibbs, Roundtable Aviation Technical Consultant (BridgeNet International)
Harvey Hartman, Roundtable Aviation Technical Consultant (Hartman & Associates)

SAN FRANCISCO INTERNATIONAL AIRPORT NOISE ABATEMENT STAFF

Bert Ganoung, Noise Abatement Manager
David Ong, Noise Abatement Systems Manager
Ara Balian, Noise Abatement Specialist
Barbara Lawson, Noise Abatement Specialist
John Hampel, Noise Abatement Specialist
Joyce Satow, Noise Abatement Office Administration Secretary

CONSENT AGENDA

Regular Meeting # 292
October 1, 2014

Agenda Items 3 & 4

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San Francisco International Airport

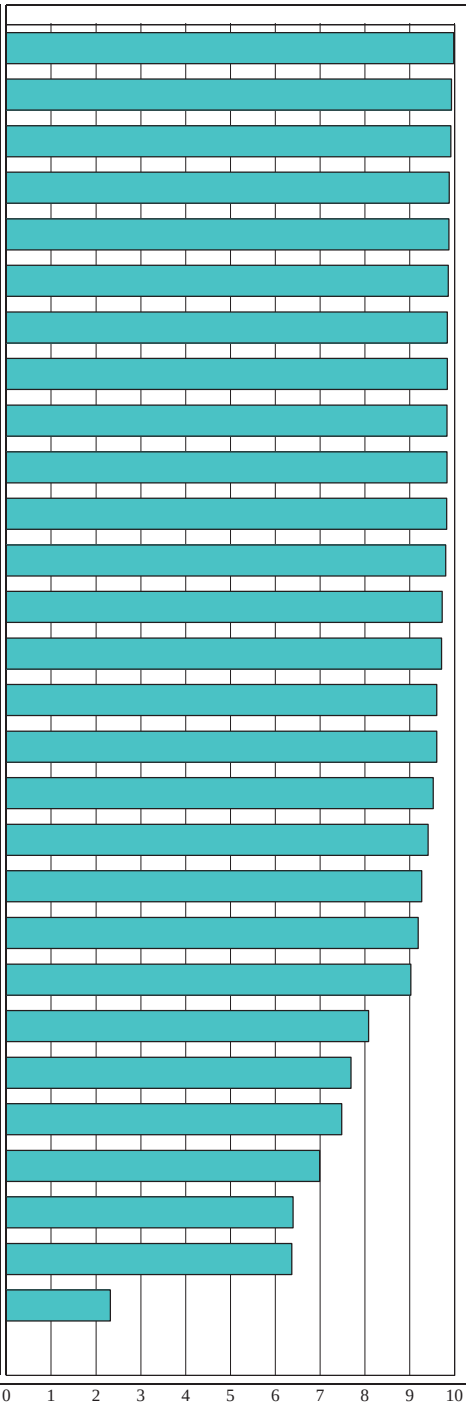
Airport Director's Report

Presented at the October 1, 2014
Airport Community Roundtable Meeting
SFO Aircraft Noise Abatement Office
May 2014

Monthly Noise Exceedance Report
San Francisco International Airport -- Director's Report
Period: **May 2014**

Airline		Noise Exceedances: *Total Noise Exceedances*	*Total Operations per Month*	*Exceedances per 1,000 Operations*	***Score***
SkyWest	SKW	34	7,767	4	***9.98***
Compass	CPZ	18	1,228	15	***9.93***
Virgin America	VRD	54	3,062	18	***9.91***
American Airlines	AAL	43	1,754	25	***9.88***
FLYFRONTIER.COM	FFT	7	280	25	***9.88***
DELTA	DAL	41	1,444	28	***9.86***
jetBlue	JBU	22	685	32	***9.84***
Alaska Airlines	ASA	31	943	33	***9.84***
US AIRWAYS	AWE	34	993	34	***9.83***
UNITED	UAL	361	10,465	34	***9.83***
SOUTHWEST	SWA	87	2,469	35	***9.83***
AIR CANADA	ACA	25	633	39	***9.80***
WESTJET	WJA	7	124	56	***9.72***
AEROMEXICO.	AMX	13	220	59	***9.71***
AirTran	TRS	5	62	81	***9.60***
virgin atlantic	VIR	5	62	81	***9.60***
BRITISH AIRWAYS	BAW	12	125	96	***9.52***
ABX AIR	ABX	10	84	119	***9.41***
Avianca	TAI	13	88	148	***9.27***
FedEx	FDX	11	67	164	***9.19***
NCA Nippon Cargo Airlines	NCA	11	56	196	***9.03***
SINGAPORE AIRLINES	SIA	48	124	387	***8.08***
EVA AIR	EVA	56	120	467	***7.69***
CATHAY PACIFIC	CPA	63	124	508	***7.48***
KOREAN AIR	KAL	74	122	607	***6.99***
AIR NEW ZEALAND	ANZ	45	62	726	***6.40***
ASIANA AIRLINES	AAR	82	112	732	***6.37***
CHINA AIRLINES	CAL	178	115	1,548	***2.32***
Philippines	PAL	125	62	2,016	***0.00***
TOTAL		**1,515**	**33,452**	**8,314**	

Noise Exceedance Quality Rating



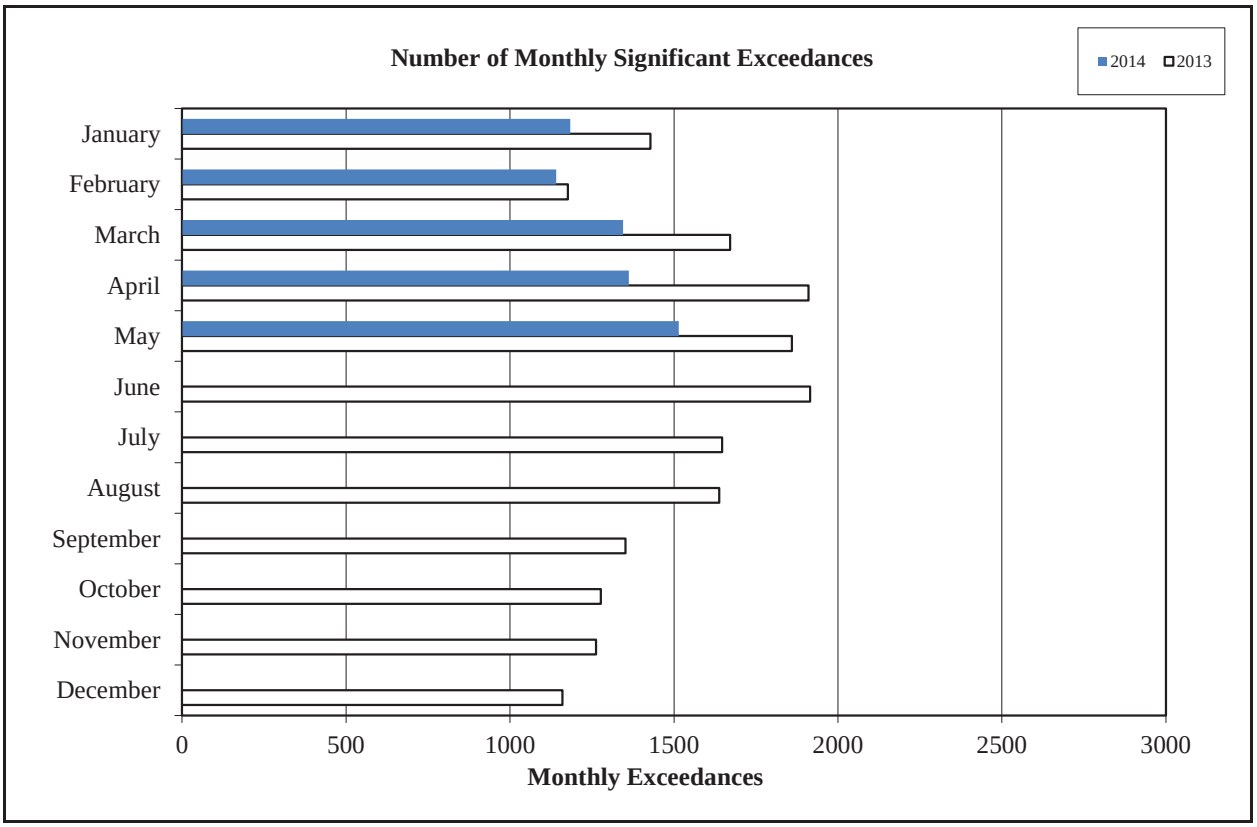
Source: SFO Noise Abatement Office

Historical Significant Exceedances Report
San Francisco International Airport -- Director's Report
Period: **May 2014**

San Francisco International Airport

Month	Number of Monthly Significant Exceedances 2010	2011	2012	2013	2014	Change from Last Year
January	1312*	1580	1378	1428	1184	**-244**
February	1297*	1429	1581	1176	1141	**-35**
March	1778	1681	1703	1671	1345	**-326**
April	1449	1900	1870	1910**	1362	**-548**
May	2042	2024	1912	1859**	1515	**-344**
June	2177	1947	2355	1915		**0**
July	1743	2017	2621	1647		**0**
August	2090	1847	1823	1638***		**0**
September	1636	1609	1464	1352		**0**
October	1537	1572	1689	1277		**0**
November	1599	1575	1421	1262		**0**
December	1411	1447	1439	1160		**0**
Annual Total	20071	20628	21256	18295	6547	
Year to Date Trend	**20071**	**20628**	**21256**	**18295**	**6547**	**-1497**

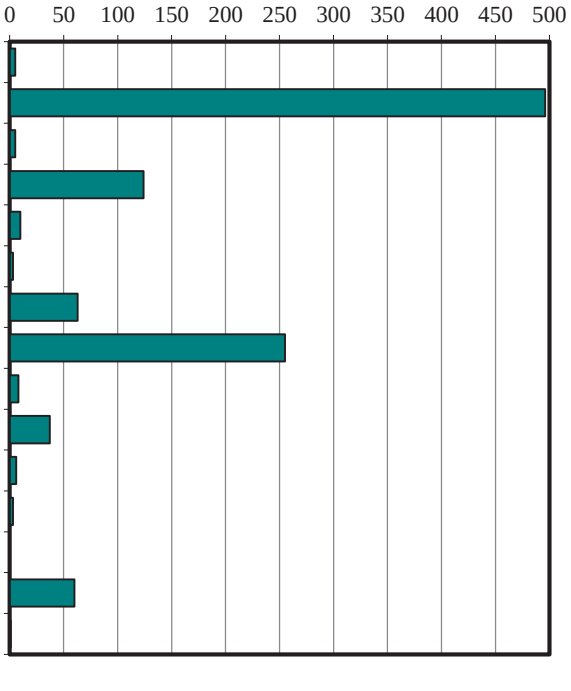
* Revised with correct amount of exceedance - 4/30/10
** Revised with correct amount of exceedance - 8/5/13
*** No data available from Site 7, August 1-26



Monthly Calls by Community

Source: Airport Noise Monitoring System

Community	Total Complaints	Total Number of Callers
Roundtable Communities		
Atherton	5	1
Brisbane	496	12
Burlingame	5	5
Daly City	124	5
Foster City	10	1
Millbrae	3	1
Pacifica	63	2
Portola Valley	255	12
San Francisco	8	4
San Mateo	37	7
South San Francisco	6	5
Woodside	3	2
Other Communities		
Palo Alto	60	11
San Rafael	1	1
Total	**1,076**	**69**

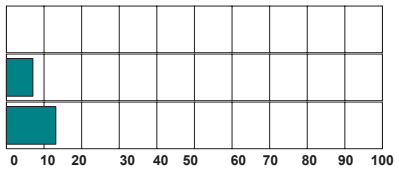


Monthly Noise Complaint Summary Map May 2014

Caller Location and Amount of Complaints

Monthly Nighttime Power Runups Report (85-06-AOB)
San Francisco International Airport -- Director's Report
Period : **May 2014**
Time of Day : From 10 pm through 7 am

Airline	Code	Number of Runups	Runups Per 1,000 Departures	Percentage of Runups
SOUTHWEST	SWA	1	0.8	4%
American Airlines	AAL	8	9.1	35%
UNITED	UAL	14	2.7	61%
Total		**23**		



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 power settings tested range from idle to full power and may vary in duration.

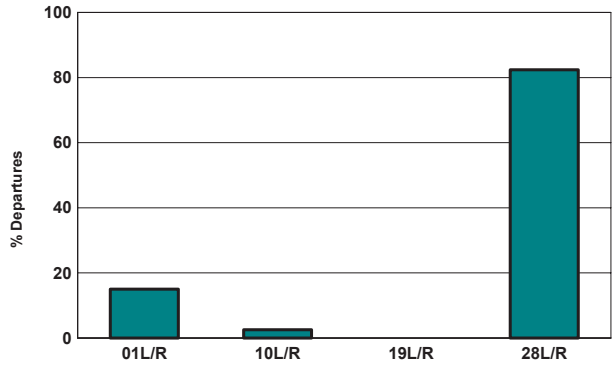
Late Night Preferential Runway Use Report
San Francisco International Airport -- Director's Report
Period: May 2014
Time of Day: Late Night (1 am to 6 am)

Runway Utilization (1 am to 6 am)

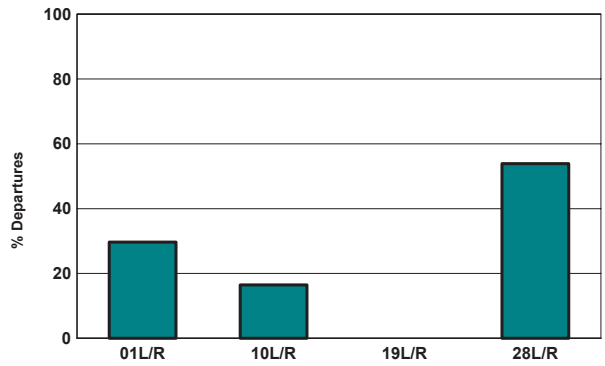
Monthly Jet Departures

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
01L/R	110	51	92	72	47	-	-	-	-	-	-	-	372
10L/R	45	68	57	28	8	-	-	-	-	-	-	-	206
19L/R	-	-	-	-	-	-	-	-	-	-	-	-	0
28L/R	40	60	121	196	258	-	-	-	-	-	-	-	675
Total	**195**	**179**	**270**	**296**	**313**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,253**
01L/R	56%	28%	34%	24%	15%	0%	0%	0%	0%	0%	0%	0%	30%
10L/R	23%	38%	21%	9%	3%	0%	0%	0%	0%	0%	0%	0%	16%
19L/R	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
28L/R	21%	34%	45%	66%	82%	0%	0%	0%	0%	0%	0%	0%	54%

Current Month (1 am to 6 am)



Year-to-Date (1am to 6 am)



Current Month (1 am to 6 am)

Numbers rounded to nearest whole percentages

Year-to-Date (1am to 6am)

Numbers rounded to nearest whole percentages

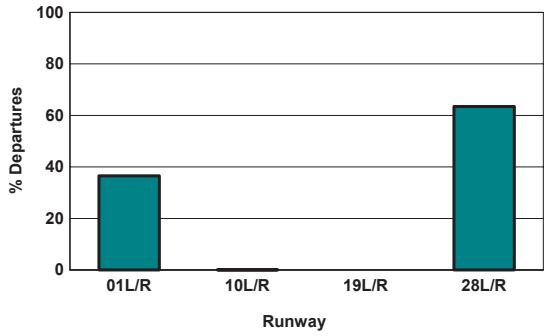
Air Carrier Runway Use Summary Report
San Francisco International Airport -- Director's Report
Period: May 2014
Time of Day : All Hours

Runway Utilization (All Hours)

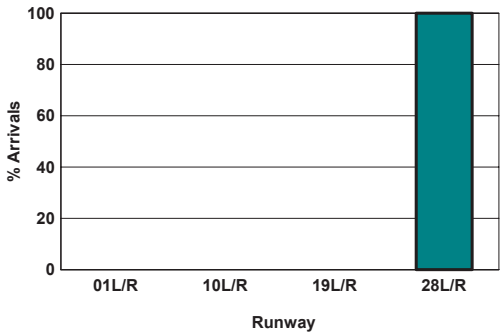
Source: Airport Noise Monitoring System

	Runway Utilization				Total
	01L/R	*10L/R*	*19L/R*	*28L/R*	
Total Monthly Operations					
Departures	6,435	8	0	11,174	17,617
Arrivals	0	0	0	17,230	17,230
Percentage Utilization					
Departures	36.5%	0.0%	0.0%	63.4%	100%
Arrivals	0.0%	0.0%	0.0%	100.0%	100%

Departures (All Hours)



Arrivals (All Hours)



Percentage Departure Utilization

Numbers rounded to nearest whole percentages

Percentage Arrival Utilization

Numbers rounded to nearest whole percentages

San Francisco International Airport

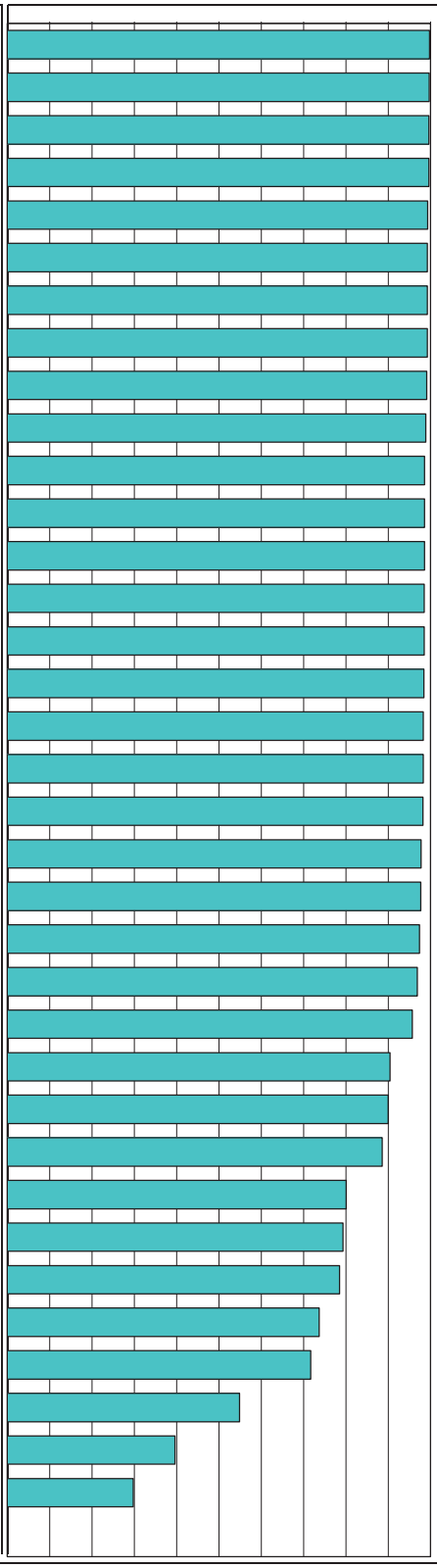
Airport Director's Report

Presented at the October 1, 2014
Airport Community Roundtable Meeting
SFO Aircraft Noise Abatement Office
June 2014

Monthly Noise Exceedance Report
San Francisco International Airport -- Director's Report
Period: **June 2014**

Airline		Noise Exceedances: *Total Noise Exceedances*	*Total Operations per Month*	*Exceedances per 1,000 Operations*	***Score***
SkyWest	SKW	40	6,926	6	***9.97***
FLYFRONTIER.COM	FFT	2	272	7	***9.97***
Sun Country Airlines	SCX	1	130	8	***9.97***
NETJETS	EJA	3	371	8	***9.96***
Compass Airlines	CPZ	16	1,119	14	***9.94***
Virgin America	VRD	49	3,048	16	***9.93***
ANA	ANA	1	60	17	***9.92***
JAPAN AIRLINES	JAL	1	60	17	***9.92***
AIRFRANCE	AFR	2	100	20	***9.91***
BRITISH AIRWAYS	BAW	3	121	25	***9.89***
DELTA	DAL	52	1,652	31	***9.86***
SOUTHWEST	SWA	82	2,551	32	***9.85***
Alaska Airlines	ASA	33	1,025	32	***9.85***
jetBlue	JBU	22	665	33	***9.85***
中國東方航空 CHINA EASTERN	CES	2	60	33	***9.85***
AIR CANADA	ACA	25	716	35	***9.84***
U·S AIRWAYS	AWE	38	1,003	38	***9.83***
American Airlines	AAL	70	1,806	39	***9.83***
UNITED	UAL	432	10,711	40	***9.82***
KLM	KLM	3	60	50	***9.77***
AirTran	TRS	3	58	52	***9.77***
WESTJET	WJA	7	120	58	***9.74***
Avianca	TAI	6	87	69	***9.69***
AEROMEXICO.	AMX	20	209	96	***9.57***
FedEx	FDX	14	66	212	***9.04***
XL Airways	XLF	4	18	222	***9.00***
ABX AIR	ABX	21	83	253	***8.86***
NCA Nippon Cargo Airlines	NCA	23	52	442	***8.00***
SINGAPORE AIRLINES	SIA	56	122	459	***7.93***
EVA AIR	EVA	60	126	476	***7.85***
CATHAY PACIFIC	CPA	70	120	583	***7.37***
KOREAN AIR	KAL	76	121	628	***7.17***
ASIANA AIRLINES	AAR	115	115	1,000	***5.49***
AIR NEW ZEALAND	ANZ	79	59	1,339	***3.96***
CHINA AIRLINES	CAL	176	113	1,558	***2.97***
Philippines	PAL	133	60	2,217	***0.00***
TOTAL		**1,740**	**33,985**	**10,166**	

Noise Exceedance Quality Rating



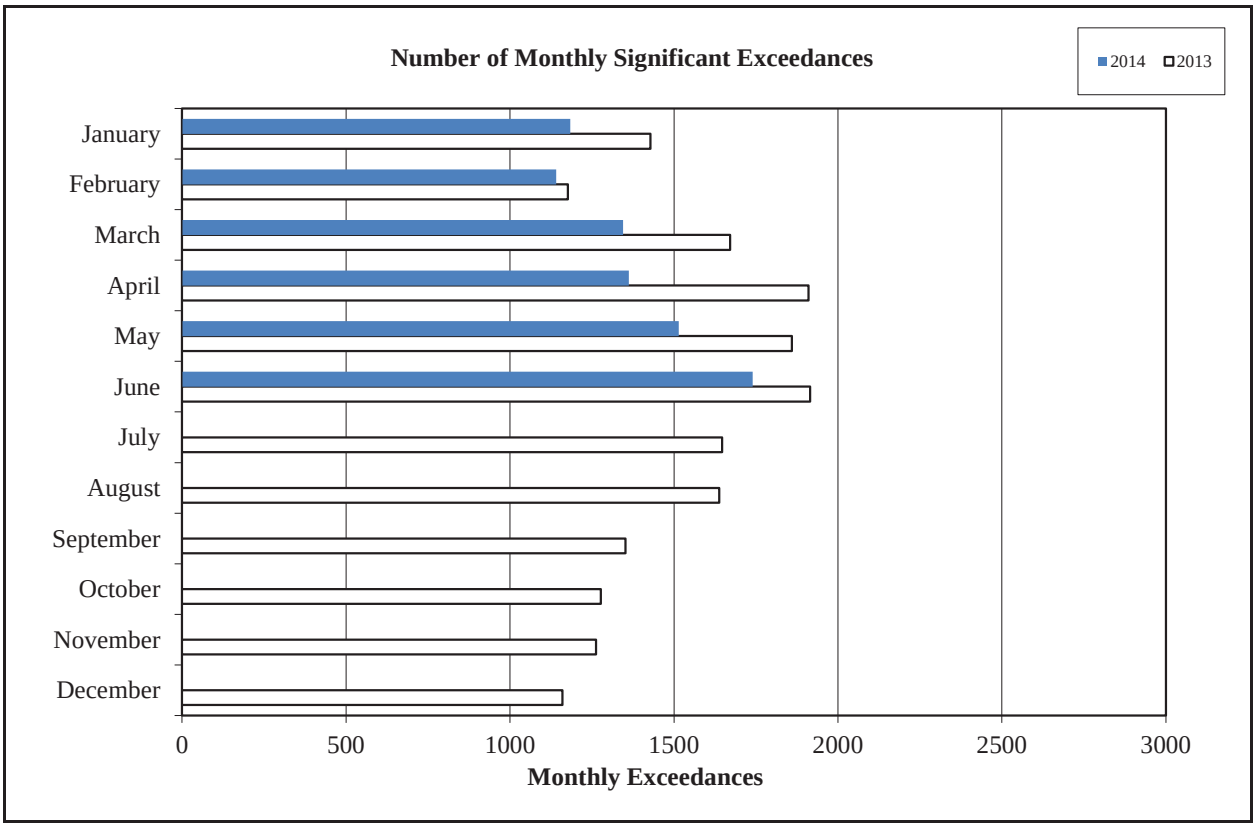
Source: SFO Noise Abatement Office

Historical Significant Exceedances Report
San Francisco International Airport -- Director's Report
Period: **June 2014**

San Francisco International Airport

Month	Number of Monthly Significant Exceedances 2010	2011	2012	2013	2014	Change from Last Year
January	1312*	1580	1378	1428	1184	**-244**
February	1297*	1429	1581	1176	1141	**-35**
March	1778	1681	1703	1671	1345	**-326**
April	1449	1900	1870	1910**	1362	**-548**
May	2042	2024	1912	1859**	1515	**-344**
June	2177	1947	2355	1915	1740	**-175**
July	1743	2017	2621	1647		**0**
August	2090	1847	1823	1638***		**0**
September	1636	1609	1464	1352		**0**
October	1537	1572	1689	1277		**0**
November	1599	1575	1421	1262		**0**
December	1411	1447	1439	1160		**0**
Annual Total	20071	20628	21256	18295	8287	
Year to Date Trend	**20071**	**20628**	**21256**	**18295**	**8287**	**-1672**

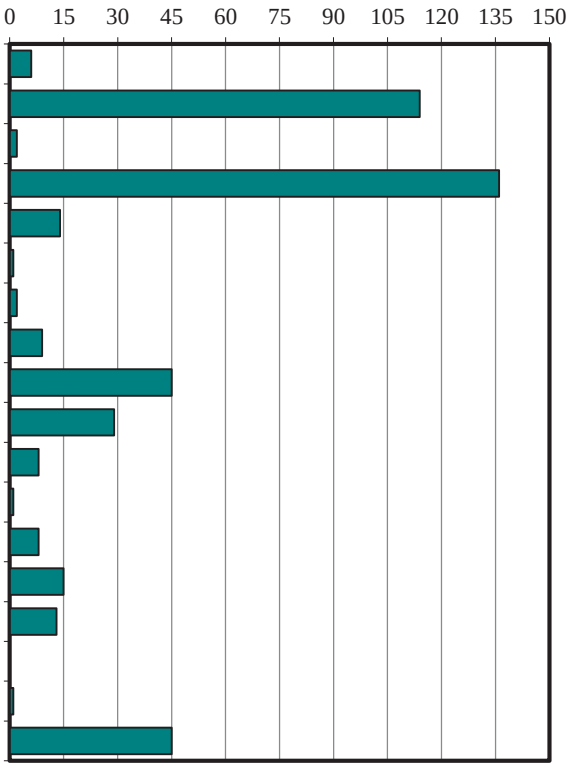
* Revised with correct amount of exceedance - 4/30/10
** Revised with correct amount of exceedance - 8/5/13
*** No data available from Site 7, August 1-26



Monthly Calls by Community

Source: Airport Noise Monitoring System

Community	Total Complaints	Total Number of Callers
Roundtable Communities		
Atherton	6	1
Brisbane	114	12
Burlingame	2	2
Daly City	136	4
Foster City	14	5
Hillsborough	1	1
Menlo Park	2	1
Millbrae	9	2
Pacifica	45	2
Portola Valley	29	11
San Bruno	8	6
San Francisco	1	1
San Mateo	8	6
South San Francisco	15	13
Woodside	13	2
Other Communities		
Oakland	1	1
Palo Alto	45	3
Total	**449**	**73**

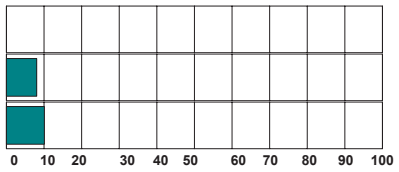


Monthly Noise Complaint Summary Map June 2014

Caller Location and Amount of Complaints

Monthly Nighttime Power Runups Report (85-06-AOB)
San Francisco International Airport -- Director's Report
Period : **June 2014**
Time of Day : From 10 pm through 7 am

Airline	Code	Number of Runups	Runups Per 1,000 Departures	Percentage of Runups
Virgin America	VRD	1	0.6	5%
UNITED	UAL	9	1.7	43%
American Airlines	AAL	11	11.9	52%
Total		**21**		



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 power settings tested range from idle to full power and may vary in duration.

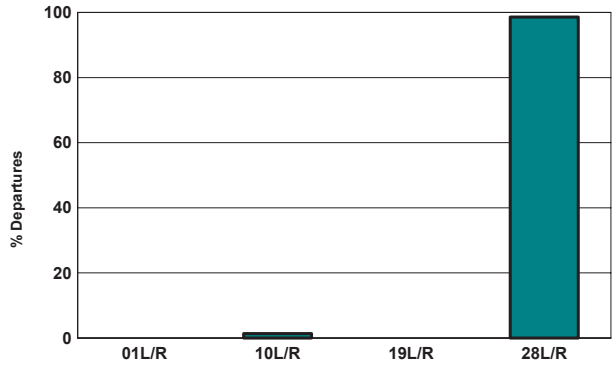
Late Night Preferential Runway Use Report
San Francisco International Airport -- Director's Report
Period: Mune 2014
Time of Day: Late Night (1 am to 6 am)

Runway Utilization (1 am to 6 am)

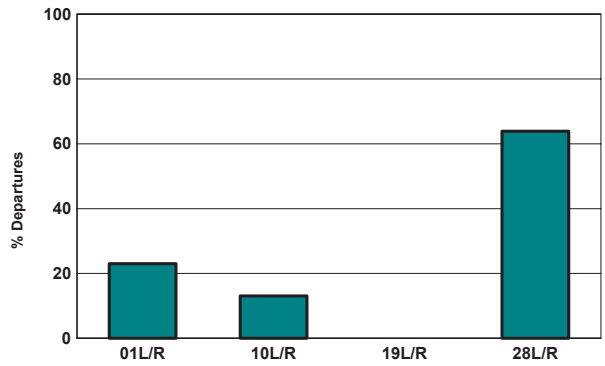
J onthly Met Departures

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
01L/R	110	51	92	72	47	-	-	-	-	-	-	-	372
10L/R	45	68	57	28	8	5	-	-	-	-	-	-	211
19L/R	-	-	-	-	-	-	-	-	-	-	-	-	0
28L/R	40	60	121	196	258	357	-	-	-	-	-	-	1,032
Total	**195**	**179**	**270**	**296**	**313**	**362**	**-**	**-**	**-**	**-**	**-**	**-**	**1,615**
01L/R	56%	28%	34%	24%	15%	0%	0%	0%	0%	0%	0%	0%	23%
10L/R	23%	38%	21%	9%	3%	1%	0%	0%	0%	0%	0%	0%	13%
19L/R	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
28L/R	21%	34%	45%	66%	82%	99%	0%	0%	0%	0%	0%	0%	64%

Current J onth (1 am to 6 am)



Year-to-Date (1am to 6 am)



Current J onth (1 am to 6 am)

Numbers rounded to nearest whole percentages

Year-to-Date (1am to 6am)

Numbers rounded to nearest whole percentages

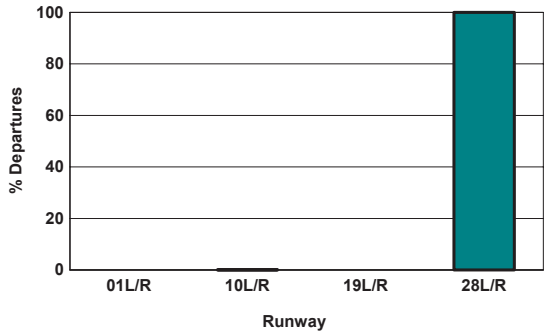
Air Carrier Runway Use Summary Report
San Francisco International Airport -- Director's Report
Period: June 2014
Time of Day : All Hours

Runway Utilization (All Hours)

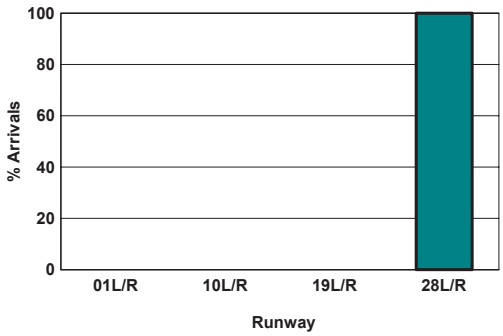
Source: Airport Noise Monitoring System

	Runway Utilization				Total
	01L/R	*10L/R*	*19L/R*	*28L/R*	
Total Monthly Operations					
Departures	0	6	0	17,457	17,463
Arrivals	0	0	0	16,983	16,983
Percentage Utilization					
Departures	0.0%	0.0%	0.0%	100.0%	100%
Arrivals	0.0%	0.0%	0.0%	100.0%	100%

Departures (All Hours)



Arrivals (All Hours)



Percentage Departure Utilization

Numbers rounded to nearest whole percentages

Percentage Arrival Utilization

Numbers rounded to nearest whole percentages

San Francisco International Airport

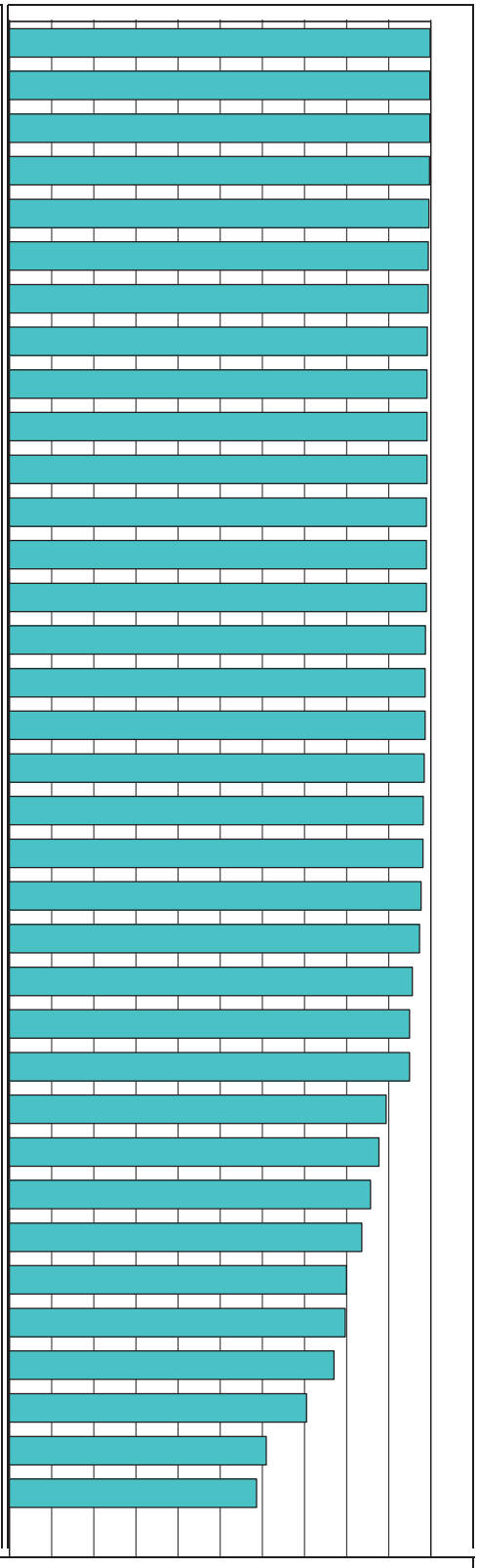
Airport Director's Report

Presented at the October 1, 2014
Airport Community Roundtable Meeting
SFO Aircraft Noise Abatement Office
July 2014

Monthly Noise Exceedance Report
San Francisco International Airport -- Director's Report
Period: **July 2014**

Airline		Noise Exceedances: *Total Noise Exceedances*	*Total Operations per Month*	*Exceedances per 1,000 Operations*	***Score***
SkyWest Airlines	SKW	47	7,367	6	***9.98***
FLYFRONTIER.COM	FFT	2	275	7	***9.98***
Compass Airlines	CPZ	9	1,217	7	***9.98***
Virgin America	VRD	31	3,113	10	***9.97***
Lufthansa	DLH	2	124	16	***9.95***
SOUTHWEST	SWA	52	2,613	20	***9.94***
Alaska Airlines	ASA	24	1,108	22	***9.94***
DELTA	DAL	50	1,791	28	***9.92***
AIR CANADA	ACA	23	736	31	***9.91***
virgin atlantic	VIR	2	62	32	***9.91***
UNITED	UAL	362	11,129	33	***9.91***
American Airlines	AAL	70	1,890	37	***9.89***
U·S AIRWAYS	AWE	39	1,053	37	***9.89***
jetBlue	JBU	25	662	38	***9.89***
Avianca	TAI	4	90	44	***9.87***
AIRFRANCE	AFR	5	107	47	***9.87***
KLM	KLM	3	62	48	***9.86***
WESTJET	WJA	7	126	56	***9.84***
XL Airways	XLF	1	16	63	***9.82***
HAWAIIAN AIRLINES	HAL	4	62	65	***9.82***
AirTran	TRS	5	62	81	***9.77***
AEROMEXICO.	AMX	19	205	93	***9.74***
FedEx	FDX	11	72	153	***9.56***
BRITISH AIRWAYS	BAW	22	124	177	***9.49***
ABX AIR	ABX	16	90	178	***9.49***
NCA Nippon Cargo Airlines	NCA	20	54	370	***8.94***
SINGAPORE AIRLINES	SIA	54	125	432	***8.77***
SOUTHERN AIR	SOO	1	2	500	***8.57***
EVA AIR	EVA	83	145	572	***8.36***
KOREAN AIR	KAL	87	124	702	***8.00***
CATHAY PACIFIC	CPA	88	124	710	***7.97***
ASIANA AIRLINES	AAR	90	112	804	***7.70***
AIR NEW ZEALAND	ANZ	62	60	1,033	***7.05***
CHINA AIRLINES	CAL	160	117	1,368	***6.09***
Philippines	PAL	97	67	1,448	***5.86***
KALITTA AIR	CKS	42	12	3,500	***0.00***
TOTAL		**1,619**	**35,098**	**12,766**	

Noise Exceedance Quality Rating



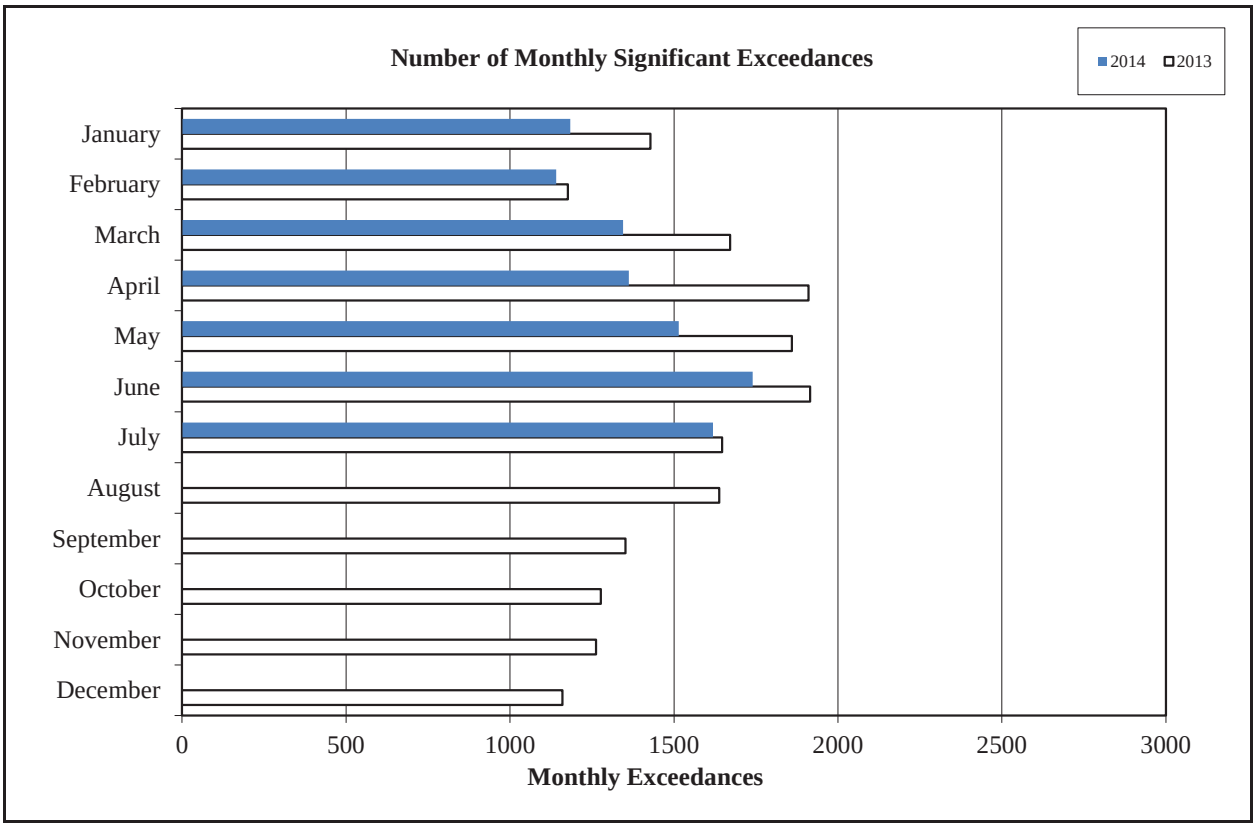
Source: SFO Noise Abatement Office

Historical Significant Exceedances Report
San Francisco International Airport -- Director's Report
Period: **July 2014**

San Francisco International Airport

Month	Number of Monthly Significant Exceedances 2010	2011	2012	2013	2014	Change from Last Year
January	1312*	1580	1378	1428	1184	**-244**
February	1297*	1429	1581	1176	1141	**-35**
March	1778	1681	1703	1671	1345	**-326**
April	1449	1900	1870	1910**	1362	**-548**
May	2042	2024	1912	1859**	1515	**-344**
June	2177	1947	2355	1915	1740	**-175**
July	1743	2017	2621	1647	1619	**-28**
August	2090	1847	1823	1638***		**0**
September	1636	1609	1464	1352		**0**
October	1537	1572	1689	1277		**0**
November	1599	1575	1421	1262		**0**
December	1411	1447	1439	1160		**0**
Annual Total	20071	20628	21256	18295	9906	
Year to Date Trend	**20071**	**20628**	**21256**	**18295**	**9906**	**-1700**

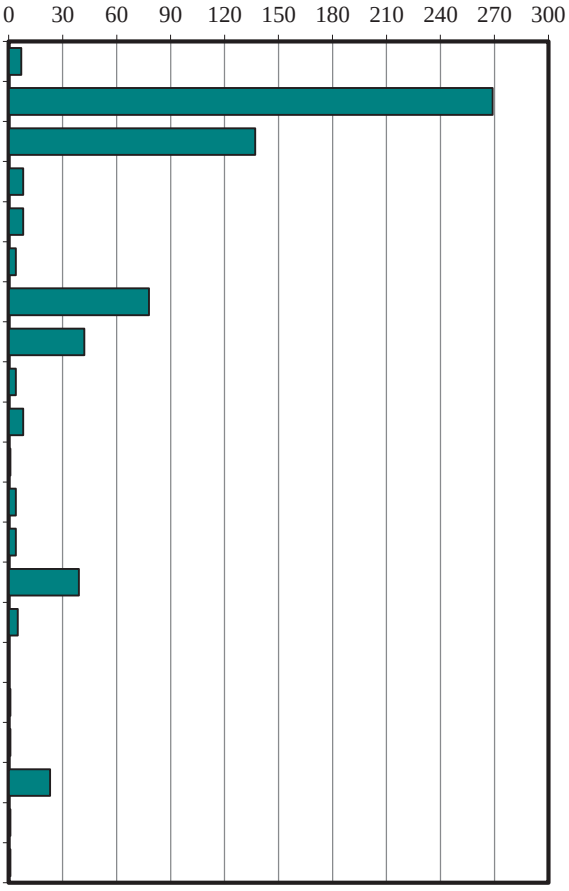
* Revised with correct amount of exceedance - 4/30/10
** Revised with correct amount of exceedance - 8/5/13
*** No data available from Site 7, August 1-26



Monthly Calls by Community

Source: Airport Noise Monitoring System

Community	Total Complaints	Total Number of Callers
Roundtable Communities		
Atherton	7	1
Brisbane	269	40
Daly City	137	5
Foster City	8	6
Menlo Park	8	4
Millbrae	4	1
Pacifica	78	2
Portola Valley	42	8
Redwood City	4	4
San Bruno	8	7
San Carlos	1	1
San Francisco	4	4
San Mateo	4	4
South San Francisco	39	24
Woodside	5	2
Other Communities		
Moraga	1	1
Oakland	1	1
Palo Alto	23	5
San Rafael	1	1
St. Helena	1	1
Total	**645**	**122**

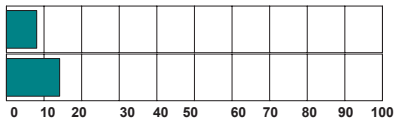


Monthly Noise Complaint Summary Map July 2014

Caller Location and Amount of Complaints

Monthly Nighttime Power Runups Report (85-06-AOB)
San Francisco International Airport -- Director's Report
Period : **July 2014**
Time of Day : From 10 pm through 7 am

Airline	Code	Number of Runups	Runups Per 1,000 Departures	Percentage of Runups
UNITED	UAL	9	1.6	38%
American Airlines	AAL	15	15.5	63%
Total		**24**		



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 power settings tested range from idle to full power and may vary in duration.

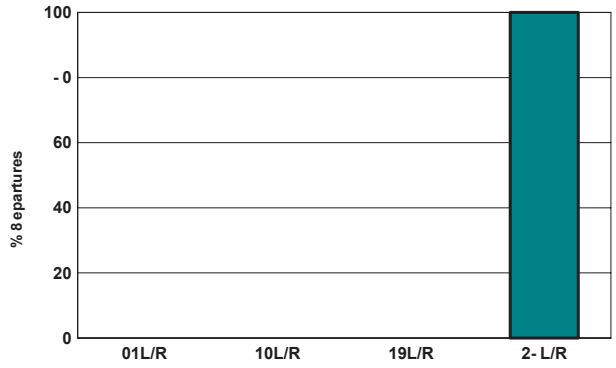
Late Night Preferential Runway Use Report
San Francisco International Airport -- Director's Report
Period: July 2014
Time of Day: Late Night (1 am to 6 am)

Runway Utilization (1 am to 6 am)

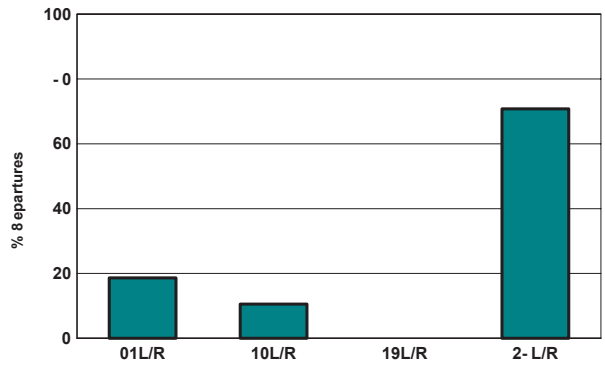
Monthly Net Departures

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
01L/R	110	51	92	72	47	-	-	-	-	-	-	-	372
10L/R	45	68	57	28	8	5	-	-	-	-	-	-	211
19L/R	-	-	-	-	-	-	-	-	-	-	-	-	0
28L/R	40	60	121	196	258	357	381	-	-	-	-	-	1,413
Total	**195**	**179**	**270**	**296**	**313**	**362**	**381**	,	,	,	,	,	**1,996**
01L/R	56%	28%	34%	24%	15%	0%	0%	0%	0%	0%	0%	0%	19%
10L/R	23%	38%	21%	9%	3%	1%	0%	0%	0%	0%	0%	0%	11%
19L/R	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
28L/R	21%	34%	45%	66%	82%	99%	100%	0%	0%	0%	0%	0%	71%

Current Month (1 am to 6 am)



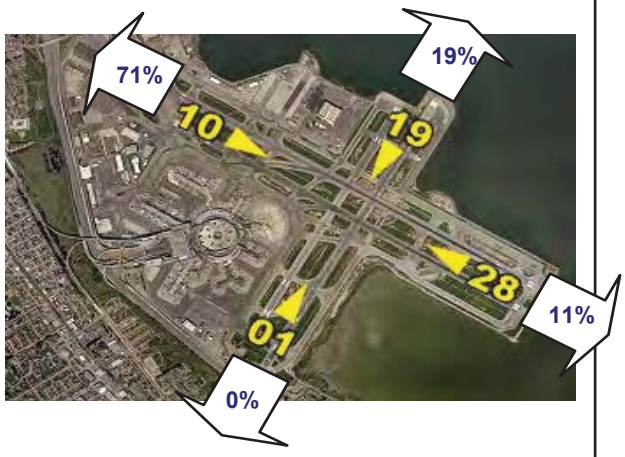
Year-to-Date (1am to 6 am)



Current Month (1 am to 6 am)

Numbers rounded to nearest whole percentages

Year-to-Date (1am to 6am)



Numbers rounded to nearest whole percentages

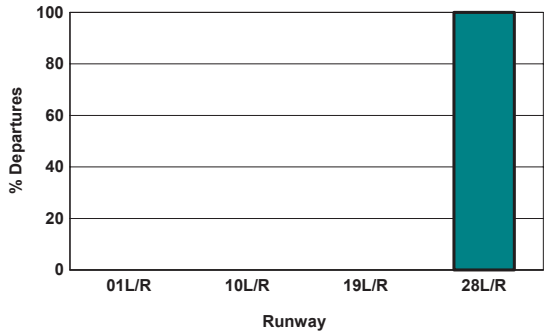
Air Carrier Runway Use Summary Report
San Francisco International Airport -- Director's Report
Period: July 2014
Time of Day : All Hours

Runway Utilization (All Hours)

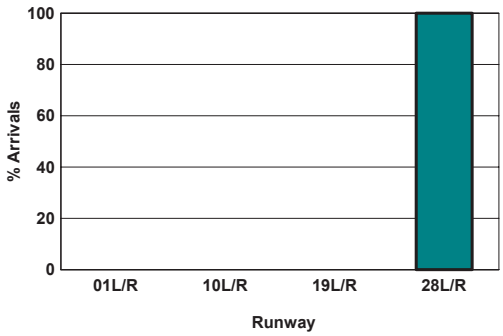
Source: Airport Noise Monitoring System

	Runway Utilization				Total
	01L/R	*10L/R*	*19L/R*	*28L/R*	
Total Monthly Operations					
Departures	0	0	0	18,234	18,234
Arrivals	0	0	0	17,818	17,818
Percentage Utilization					
Departures	0.0%	0.0%	0.0%	100.0%	100%
Arrivals	0.0%	0.0%	0.0%	100.0%	100%

Departures (All Hours)



Arrivals (All Hours)



Percentage Departure Utilization

Numbers rounded to nearest whole percentages

Percentage Arrival Utilization

Numbers rounded to nearest whole percentages

San Francisco International Airport

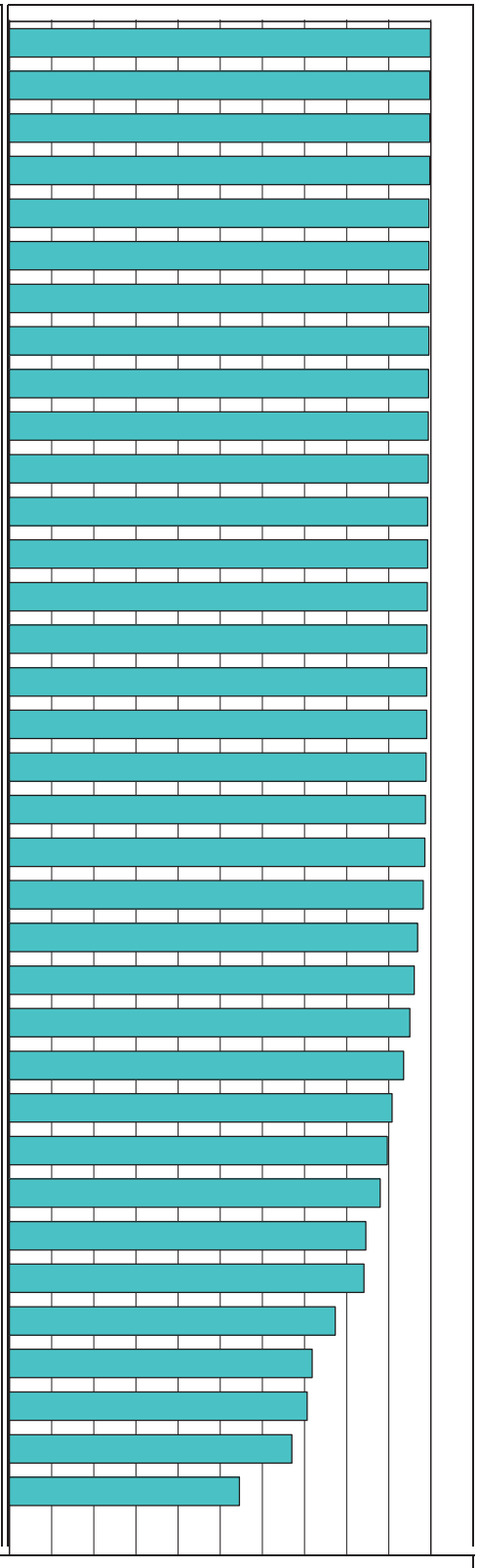
Airport Director's Report

Presented at the October 1, 2014
Airport Community Roundtable Meeting
SFO Aircraft Noise Abatement Office
August 2014

Monthly Noise Exceedance Report
San Francisco International Airport -- Director's Report
Period: **August 2014**

Airline		Noise Exceedances: *Total Noise Exceedances*	*Total Operations per Month*	*Exceedances per 1,000 Operations*	***Score***
SkyWest Airlines	SKW	17	7,713	2	***9.99***
FLYFRONTIER.COM	FFT	2	276	7	***9.98***
Compass Airlines	CPZ	9	1,176	8	***9.98***
Virgin America	VRD	26	2,977	9	***9.97***
Southwest	SWA	39	2,509	16	***9.95***
Air China	CCA	1	62	16	***9.95***
China Eastern	CES	1	62	16	***9.95***
Virgin Atlantic	VIR	1	62	16	***9.95***
Air France	AFR	2	108	19	***9.94***
Alaska Airlines	ASA	22	1,098	20	***9.94***
American Airlines	AAL	40	1,908	21	***9.94***
WestJet	WJA	3	124	24	***9.93***
Delta	DAL	47	1,825	26	***9.92***
Air Canada	ACA	20	705	28	***9.92***
United	UAL	332	10,914	30	***9.91***
US Airways	AWE	32	1,007	32	***9.91***
British Airways	BAW	4	125	32	***9.90***
jetBlue	JBU	25	668	37	***9.89***
AirTran	TRS	4	95	42	***9.87***
Swiss	SWR	3	62	48	***9.86***
Aeromexico	AMX	12	196	61	***9.82***
Hawaiian Airlines	HAL	7	66	106	***9.68***
Avianca	TAI	12	90	133	***9.60***
XL Airways	XLF	3	18	167	***9.50***
FedEx	FDX	15	69	217	***9.35***
ABX Air	ABX	26	84	310	***9.08***
Nippon Cargo Airlines	NCA	18	52	346	***8.97***
Singapore Airlines	SIA	50	124	403	***8.80***
EVA Air	EVA	73	141	518	***8.46***
Cathay Pacific	CPA	66	124	532	***8.41***
Korean Air	KAL	93	122	762	***7.73***
Air New Zealand	ANZ	51	54	944	***7.19***
Philippines	PAL	67	68	985	***7.07***
Asiana Airlines	AAR	113	102	1,108	***6.70***
China Airlines	CAL	177	116	1,526	***5.45***
Kalitta Air	CKS	47	14	3,357	***0.00***
TOTAL		**1,460**	**34,916**	**11,926**	

Noise Exceedance Quality Rating



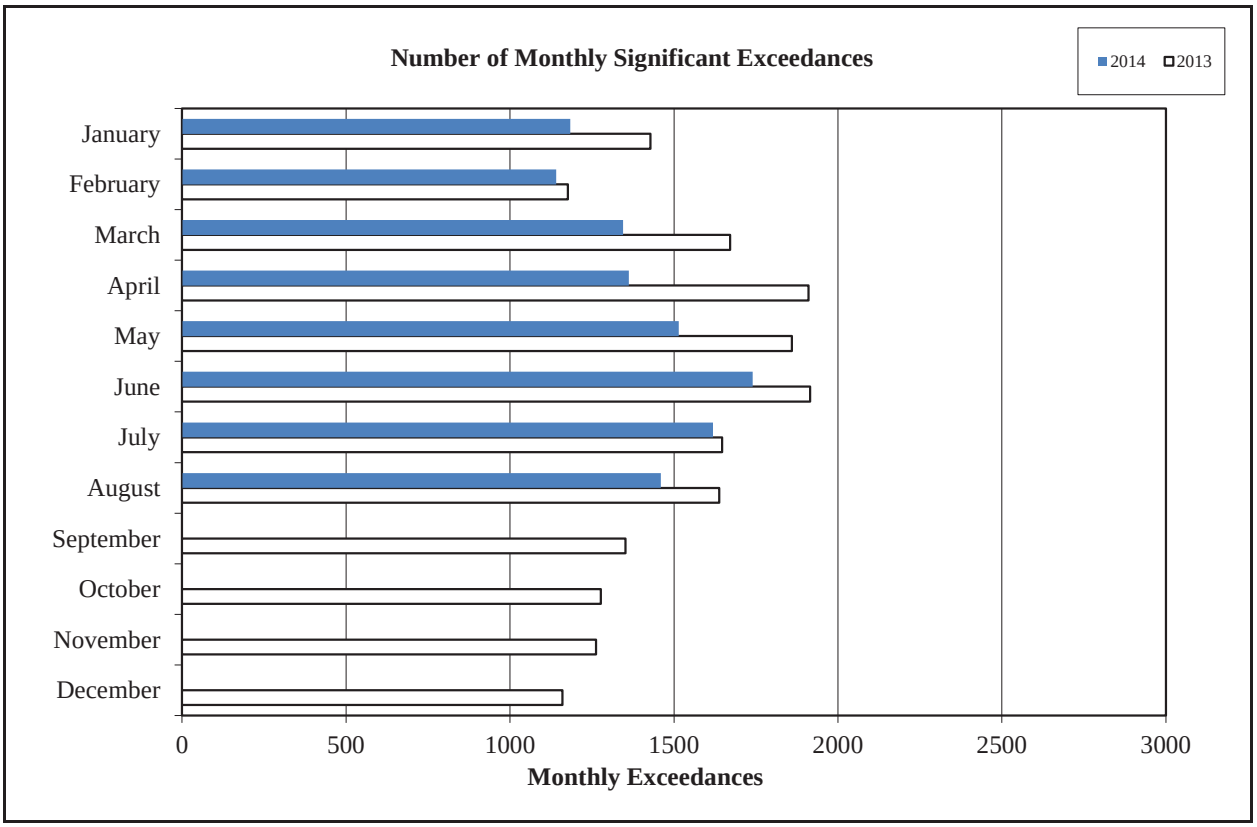
Source: SFO Noise Abatement Office

Historical Significant Exceedances Report
San Francisco International Airport -- Director's Report
Period: **August 2014**

San Francisco International Airport

Month	Number of Monthly Significant Exceedances 2010	2011	2012	2013	2014	Change from Last Year
January	1312*	1580	1378	1428	1184	**-244**
February	1297*	1429	1581	1176	1141	**-35**
March	1778	1681	1703	1671	1345	**-326**
April	1449	1900	1870	1910**	1362	**-548**
May	2042	2024	1912	1859**	1515	**-344**
June	2177	1947	2355	1915	1740	**-175**
July	1743	2017	2621	1647	1619	**-28**
August	2090	1847	1823	1638***	1460	**-178**
September	1636	1609	1464	1352		**0**
October	1537	1572	1689	1277		**0**
November	1599	1575	1421	1262		**0**
December	1411	1447	1439	1160		**0**
Annual Total	20071	20628	21256	18295	11366	
Year to Date Trend	**20071**	**20628**	**21256**	**18295**	**11366**	**-1878**

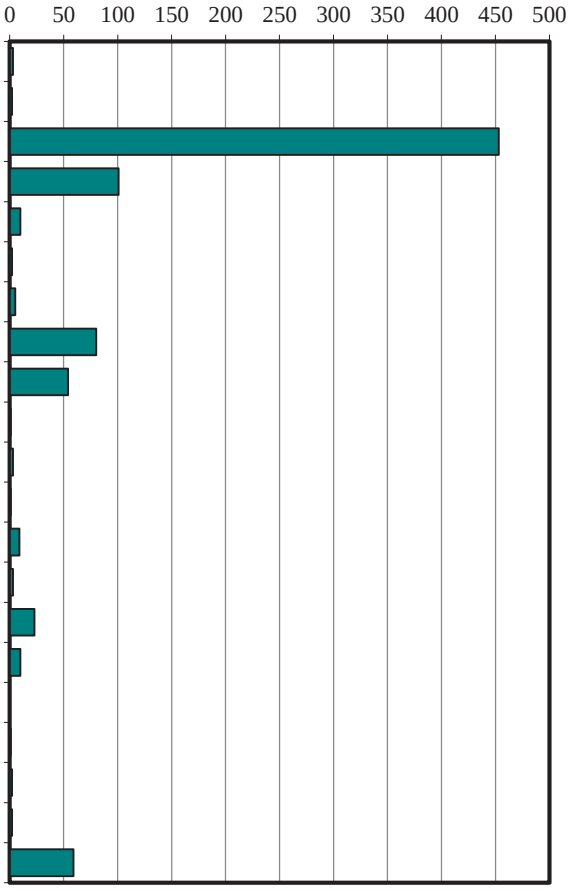
* Revised with correct amount of exceedance - 4/30/10
** Revised with correct amount of exceedance - 8/5/13
*** No data available from Site 7, August 1-26



Monthly Calls by Community

Source: Airport Noise Monitoring System

Community	Total Complaints	Total Number of Callers
Roundtable Communities		
Atherton	3	2
Belmont	2	1
Brisbane	453	17
Daly City	101	6
Foster City	10	7
Hillsborough	2	2
Menlo Park	5	3
Pacifica	80	2
Portola Valley	54	12
Redwood City	1	1
San Bruno	3	3
San Carlos	1	1
San Francisco	9	6
San Mateo	3	3
South San Francisco	23	12
Woodside	10	6
Other Communities		
Alameda	1	1
Moraga	2	1
Oakland	2	2
Palo Alto	59	15
Total	**824**	**103**

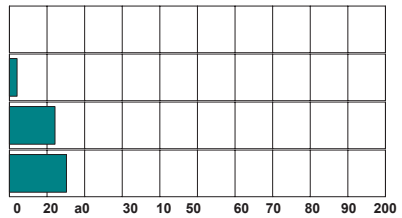


Monthly Noise Complaint Summary Map August 2014

Caller Location and Amount of Complaints

Monthly Nighttime Power Runups Report (85-06-AOB)
San Francisco International Airport -- Director's Report
Period : **August a021**
Time of Day : From 10 pm through 7 am

Airline	4 oCe	Numder ob Runups	Runups Per 2f000 , epDrtures	PercentDge obRunups
Virgin America	VRD	1	0.7	3%
DELTA	DAL	3	3.3	9%
UNITED	UAL	13	2.4	39%
American Airlines	AAL	16	16.5	48%
TotDl		**33**		



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 power settings tested range from idle to full power and may vary in duration.

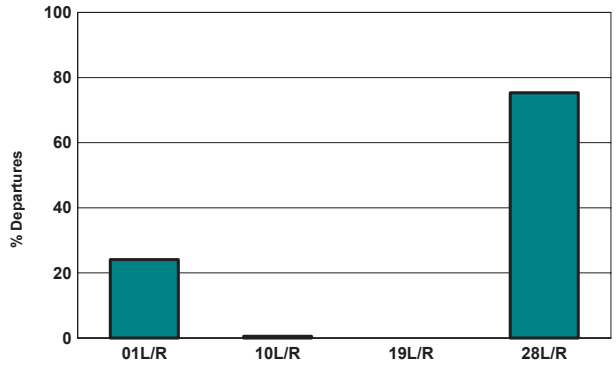
Late Night Preferential Runway Use Report
San Francisco International Airport -- Director's Report
Period: August 2014
Time of Day: Late Night (1 am to 6 am)

Runway Utilization (1 am to 6 am)

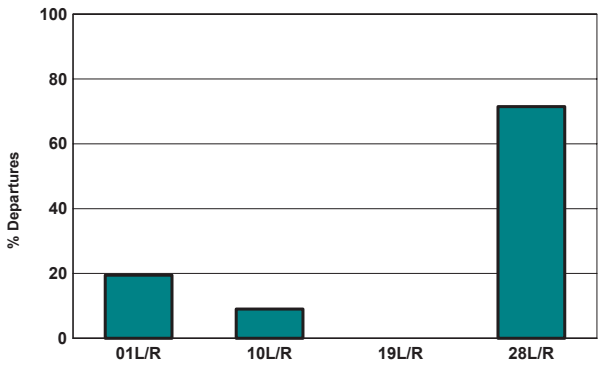
Monthly Jet Departures

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
01L/R	110	51	92	72	47	-	-	33	-	-	-	-	460
10L/R	45	63	57	23	3	5	-	2	-	-	-	-	218
19L/R	-	-	-	-	-	-	-	-	-	-	-	-	0
23L/R	40	60	121	196	253	857	831	275	-	-	-	-	1,633
Total	**195**	**179**	**270**	**296**	**313**	**362**	**381**	**365**	**-**	**-**	**-**	**-**	**2,361**
01L/R	56%	23%	84%	24%	15%	0%	0%	24%	0%	0%	0%	0%	19%
10L/R	28%	83%	21%	9%	8%	1%	0%	1%	0%	0%	0%	0%	9%
19L/R	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
23L/R	21%	84%	45%	66%	32%	99%	100%	75%	0%	0%	0%	0%	71%

Current Month (1 am to 6 am)



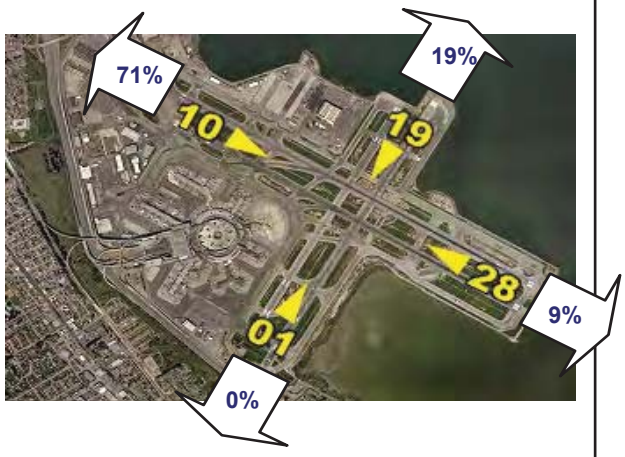
Year-to-Date (1am to 6 am)



Current Month (1 am to 6 am)

Numbers rounded to nearest whole percentages

Year-to-Date (1am to 6am)



Numbers rounded to nearest whole percentages

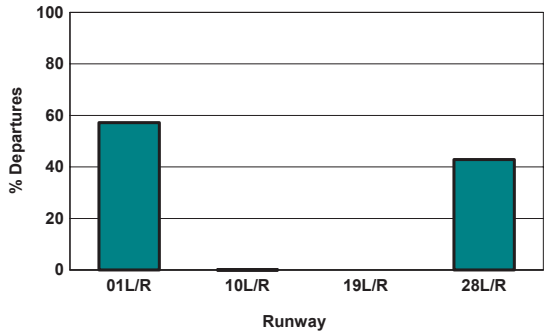
Air Carrier Runway Use Summary Report
San Francisco International Airport -- Director's Report
Period: August 2014
Time of Day : All Hours

Runway Utilization (All Hours)

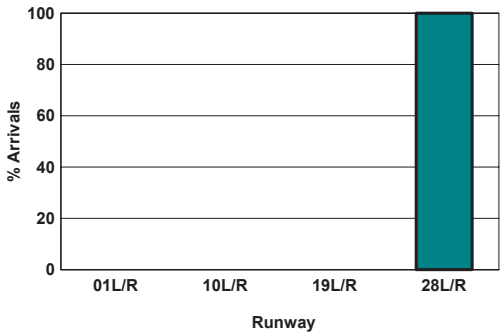
Source: Airport Noise Monitoring System

	Runway Utilization				Total
	01L/R	*10L/R*	*19L/R*	*28L/R*	
Total Monthly Operations					
Departures	10,385	1	0	7,784	18,170
Arrivals	0	0	0	17,673	17,673
Percentage Utilization					
Departures	57.2%	0.0%	0.0%	42.8%	100%
Arrivals	0.0%	0.0%	0.0%	100.0%	100%

Departures (All Hours)



Arrivals (All Hours)



Percentage Departure Utilization

Numbers rounded to nearest whole percentages

Percentage Arrival Utilization

Numbers rounded to nearest whole percentages

San Francisco International
Airport/Community Roundtable

455 County Center, 2nd Floor
Redwood City, CA 94063
T (650) 363-1853
F (650) 363-4849
www.sforoundtable.org

October 1, 2014

TO: Roundtable Representatives, Alternatives, and Interested Persons

FROM: James A. Castañeda, AICP, Roundtable Coordinator

SUBJECT: Meeting Overview for the June 4, 2014 Roundtable Meeting

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Due to time constraints in budget, work program, and packet preparation, the Meeting Overview for the June 4, 2014 Regular Meeting is not available for review at this time. It will be available and posted on the Roundtable's website as soon as it becomes available, and will be presented to the Roundtable for consideration/adoption at the next Regular Meeting. An audio copy of the meeting can be made available to download upon request.

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REGULAR AGENDA

Regular Meeting # 292
October 1, 2014

Agenda Items 5 - 13

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San Francisco International
Airport/Community Roundtable

455 County Center, 2nd Floor
Redwood City, CA 94063
T (650) 363-1853
F (650) 363-4849
www.sforoundtable.org

August 13, 2014

TO: Roundtable Representatives and Alternates

FROM: James A. Castañeda, AICP, Roundtable Coordinator

SUBJECT: City of Palo Alto request to join the Roundtable

The Roundtable held a Subcommittee meeting on July 22, 2014 to discuss the City of Palo Alto's request to join the San Francisco International Airport/Community Roundtable. The Subcommittee meeting was scheduled after the Roundtable's June 4, 2014 Regular Meeting in which the City of Palo Alto asked to be included as a voting member of the Roundtable and the Roundtable sent the matter to the Subcommittee. Information regarding the City of Palo Alto's request is attached to this memo. This memo provides a summary of the meeting, including recommendations of the Roundtable members.

July 22, 2014 Subcommittee Meeting

Members Present

Rich Newman	C/CAG, ALUC
Sue Digre	City of Pacifica
Ann Wengert	Town of Portola Valley
Rosanne Foust	City of Redwood City
John Martin	Airport Director, San Francisco International Airport
Julian Chang	City and County of San Francisco Mayor's Office

Staff Present

James Castaneda	Roundtable Coordinator, County of San Mateo
Cindy Gibbs	Roundtable Technical Consultant, BridgeNet International
John Bergner	Airport Planning, San Francisco International Airport
Bert Ganoung	Airport Noise Abatement Office, San Francisco International Airport
Andrew Swanson	Airport Manager, City of Palo Alto

Meeting Summary

The meeting discussed three main issues 1) inclusion of the City of Palo Alto as a voting member of the Roundtable, 2) admitting a non-County of San Mateo city to the Roundtable and 3) which agency should address airport noise issues for the region.

The subcommittee members recognized that aircraft noise is a regional issue that can go beyond the physical borders of the County of San Mateo and City and County of San Francisco. They underscored that citizen concerns related to aircraft noise should be heard and it is important to determine the appropriate agency for these requests to be sent. The subcommittee members concluded to recommend the Roundtable not take a vote on including the City of Palo Alto as a voting member of the Roundtable.

They recommended the following items to move forward:

- Encouraged the City of Palo Alto to continue attending Roundtable meetings to voice their concerns; SFO Noise Abatement Office staff noted they currently work with the City of Palo Alto citizens and staff on overflight questions and data requests.
- Participate on a regional level through the Association of Bay Area Government's Regional Airport Planning Committee (RAPC). RAPC is "*...representative of a broad range of stakeholders in the region - it serves as an investigative panel and advisory body to its governing boards as well as a forum for public discussion on regional aviation issues.*" RAPC meets at the Association of Bay Area Governments (ABAG) offices in downtown Oakland; the RAPC board is made up of elected officials from ABAG, San Francisco Bay Conservation, and Metropolitan Transportation Commission as well as staff from the region's airports.
- Draft a letter to RAPC to encourage the group to hold regular meetings and address noise issues in the Bay Area. RAPC cancelled its last two meetings in April and July 2014; it has not met since October 2013. The last year RAPC met on a regular basis was 2011. It is recommended the Roundtable draft a letter for the Chairman's signature encouraging RAPC to start meeting at regular intervals again to serve as the region's group to address noise issues for all three major airports.
- Assist the City of Palo Alto and County of Santa Clara in creating a County of Santa Clara Roundtable organization. The County of Santa Clara does not currently have a group focused on aircraft noise issues from general aviation or commercial activity in the County or from the region's other airports. They are the only county with a major commercial service airport in the Bay Area that does not have an airport-focused noise organization with elected officials or appointed staff.

Attachments

Request from Palo Alto, dated May 29, 2014

City of Palo Alto
Office of the Mayor and City Council

May 29, 2014

Cliff Lentz
Chair, San Francisco Airport Community Roundtable
San Mateo County Planning & Building Department
455 County Center, 2nd Floor
Redwood City, CA 94063

Re: Request to Include the City of Palo Alto as a Voting Member of the San Francisco Airport Community Roundtable

Dear Chair Lentz,

Thank you for considering adding the City of Palo Alto as a voting member of the San Francisco Airport Community Roundtable. As you can see from the attached map, Palo Alto is directly impacted by aircraft operations from San Francisco International Airport. My City Council colleagues and I believe that a seat on the Roundtable is extremely important for Palo Alto, and would also benefit the Roundtable and San Francisco International Airport (SFO).

Designating a seat for Palo Alto at the Roundtable would serve two purposes: 1) Our citizens will have an elected official to represent their concerns about noise impacts from aircraft operations at SFO; and 2) the Airport will have a representative of the City of Palo Alto to relay accurate and timely information about Airport operations to our community and advocate for sensible and well-supported changes.

Recently, Congresswoman Anna Eshoo's office contacted Palo Alto about the NorCal OAPM Environmental Assessment and asked us to support the Congresswoman's request for an extension of the comment period. Congresswoman Eshoo's request was the first time that Palo Alto officials were made aware of the NorCal OAPM. We gladly supported Congresswoman Eshoo's request letter by sending our own letters, but the experience taught us that the City of Palo Alto would be better served by participating in the San Francisco Airport Community Roundtable, where we would receive regular updates about important developments at SFO that impact our community.

P.O. Box 10250
Palo Alto, CA 94303
650.329.2477
650.328.3631 fax

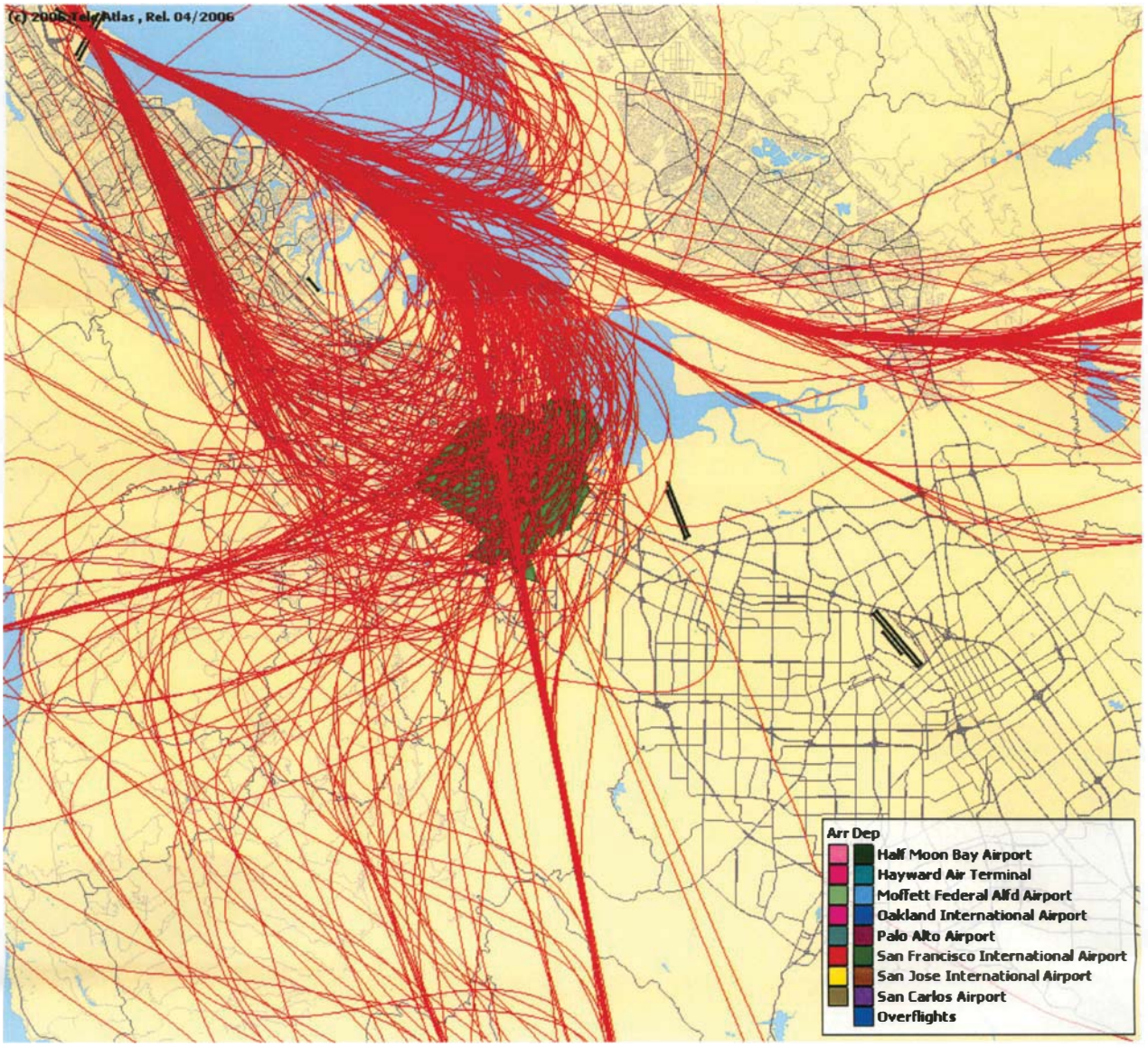
We believe that a seat on the Roundtable is key to an open dialogue, understanding and cooperative approach with other cities on the Peninsula that are impacted by aircraft operations from San Francisco International Airport. We greatly look forward to joining the group and playing a constructive role in Airport-community relations.

Sincerely,

Nancy Shepherd
Mayor, City of Palo Alto

cc: Congresswoman Anna Eshoo
Congresswoman Jackie Speier
Congresswoman Zoe Lofgren
Congressman Mike Honda
Senator Jerry Hill
Assembly Member Richard Gordon
Palo Alto City Council
James Keene, Palo Alto City Manager
Molly Stump, Palo Alto City Attorney
Mike Sartor, Palo Alto Public Works Director
Andy Swanson, Palo Alto Airport Manager

San Francisco International flight tracks for a 24 hour period on April 18, 2014 the City of Palo Alto is highlight in green:



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San Francisco International Airport

Fly Quiet Report

Presented at the October 1, 2014
Airport Community Roundtable Meeting
SFO Aircraft Noise Abatement Office
Second Quarter 2014

Fly Quiet Program

San Francisco International Airport's Fly Quiet Program is an Airport Community Roundtable initiative implemented by the Aircraft Noise Abatement Office. Its purpose is to encourage individual airlines to operate as quietly as possible at SFO. The program promotes a participatory approach in complying with noise abatement procedures and objectives by grading an airline's performance and by making the scores available to the public via newsletters, publications, and public meetings.

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

Program Goals

The overall goal of the Fly Quiet Program is to influence airlines to operate as quietly as possible in the San Francisco Bay Area. A successful Fly Quiet Program can be expected to reduce both single event and total noise levels around the airport.

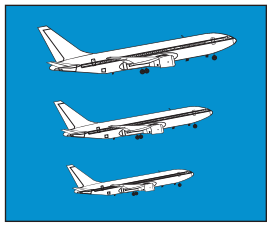
Program Reports

Fly Quiet reports communicate results in a clear, understandable format on a scale of 0-10, zero being poor and ten being good. This allows for an easy comparison between airlines over time. Individual airline scores are computed and reports are generated each quarter. These quantitative scores allow airline management and flight personnel to measure exactly how they stand compared to other operators and how their proactive involvement can positively reduce noise in the Bay Area.

Program Elements

Currently the Fly Quiet Program rates jets and regional jets on six elements : the overall noise quality of each airline's fleet operating at SFO, an evaluation of single overflight noise level exceedences, a measure of how well each airline complies with the preferred nighttime noise abatement runways, assessment of airline performance to the Gap and Shoreline Departures, and over the bay approaches to runways 28L and 28R.

SFO's Fly Quiet Ratings



Fleet Noise Quality

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

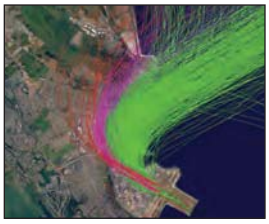
Noise Exceedance

Eliminating high-level noise events is a long-standing goal of the Airport and the Airport Community Roundtable. As a result the Airport has established single event maximum noise level limits at each noise-monitoring site. These thresholds were set to identify aircraft producing noise levels higher than are typical for the majority of the operations.

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. Noise exceedances are logged by the exact operation along with the aircraft type and airline name.

Nighttime Preferential Runway Use

SFO's Nighttime Preferential Runway Use program was developed in 1988. Although the program cannot be used 100% of the time because of winds, weather, and other operational factors, the Airport, the Community Roundtable, the FAA, and the Airlines have all worked together to maximize its use when conditions permit. The program is voluntary; compliance is at the discretion of the pilot in command. The main focus of this program is to maximize flights over water and minimize flights over land and populated areas between 1:00 a.m. and 6:00 a.m. Fortunately, because airport activity levels are lower late at night, it is feasible to use over-water departure procedures more frequently than would be possible during the day. Reducing nighttime noise—especially sleep disturbance— is a key goal of SFO's aircraft noise abatement program.



Shoreline Departure Quality

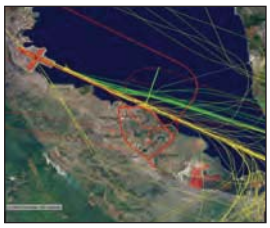
Aircraft departing SFO using Runways 28L and 28R are also considered by the Fly Quiet grading system whenever they use the Shoreline Departure Procedure. This predominately VFR (visual flight rules) departure steers aircraft to the northeast shortly after takeoff in an attempt to keep aircraft and aircraft noise away from the residential communities located to the northwest of SFO. By keeping aircraft east of Highway 101 the majority of the overflights will be experienced by industrial and business parks instead of residential areas.

In order to evaluate each airline's performance when flying a Shoreline Departure, a corridor was established using Interstate 101 (green colored flight tracks) as a reference point. The corridor runs north along 101, beginning approximately one-mile north-northwest of the end of Runways 28L and 28R and continuing up into the City of Brisbane. Departures west of 101 are scored marginal or poor depending on their location.

Gap Departure Quality

Aircraft departing SFO using Runways 28L and 28R frequently depart straight out using a procedure known as the Gap Departure. This procedure directs air traffic to fly a route that takes them over the area northwest of the airport over the cities of South San Francisco, San Bruno, Daly City, and Pacifica. In an attempt to mitigate noise in this specific area, the Gap Departure Quality Rating has been included as a category in the Fly Quiet Program.

Since "higher is quieter", aircraft altitudes are recorded along the departure route. Scores are assigned at specified points or gates set approximately one mile apart, with the higher aircraft receiving higher scores.



Foster City Arrival Quality

The Arrival Quality Rating is the latest addition to the Fly Quiet Program. In an effort to further reduce nighttime noise in neighboring communities, this rating is designed to maximize over-bay approaches to Runways 28 between 11:00 p.m. and 6:00 a.m. Airlines arriving to Runways 28 during these hours are assessed based on which approach flight path was used. Over-the-bay approaches are rated good (green colored flight tracks), versus over-the-communities which are rated poor.

Revised date: 5/15/09

Airline Fly Quiet Summary Report - 2nd Quarter 2014

April 1 to June 30, 2014

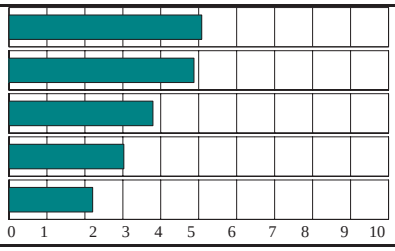
Airline		Fleet Noise Quality	Noise Exceedance	Nighttime Runway Use	Departures Shoreline	Departures Gap	Arrivals Foster City	Final Score	Airline Fly Quiet Rating
AIR CHINA	CCA	7.15	10.00	-	-	8.26	-	8.47	
ANA	ANA	7.15	9.98	-	-	8.28	-	8.47	
JAPAN AIRLINES	JAL	10.00	9.98	-	-	5.06	-	8.35	
Lufthansa	DLH	7.74	10.00	-	9.29	5.80	-	8.21	
Compass Airlines	CPZ	10.00	9.94	-	9.87	5.14	5.79	8.15	
ABX AIR	ABX	4.87	9.26	-	10.00	8.30	7.29	7.94	
中國東方航空 CHINA EASTERN	CES	4.05	9.95	-	-	9.82	-	7.94	
Aer Lingus	EIN	4.05	10.00	-	8.33	9.15	-	7.88	
AIR CANADA	ACA	6.80	9.85	-	9.81	5.03	7.65	7.83	
Scandinavian Airlines	SAS	8.17	10.00	-	-	5.22	-	7.80	
SkyWest Airlines	SKW	10.00	9.98	4.44	9.63	6.10	5.69	7.64	
FLYFRONTIER.COM	FFT	5.90	9.93	6.27	9.94	5.00	8.71	7.63	
Emirates	UAE	7.15	10.00	-	-	5.72	-	7.62	
Virgin America	VRD	5.25	9.93	-	9.81	5.47	7.43	7.58	
AIRFRANCE	AFR	9.21	9.96	-	6.25	4.82	-	7.56	
XL Airways	XLF	4.05	9.28	-	6.25	10.00	-	7.40	
US AIRWAYS	AWE	4.77	9.86	5.56	8.90	6.78	8.34	7.37	
DELTA	DAL	6.21	9.89	5.50	9.33	5.84	7.38	7.36	
SWISS	SWR	8.17	10.00	-	-	3.42	-	7.20	
FedEx	FDX	3.43	9.23	-	9.27	6.25	6.64	6.96	
WESTJET	WJA	5.82	9.77	-	9.86	4.03	5.00	6.90	
UNITED	UAL	5.85	9.84	5.02	9.42	3.97	7.17	6.88	
Alaska Airlines	ASA	5.21	9.88	-	9.77	4.16	5.16	6.84	
American Airlines	AAL	5.69	9.89	5.05	9.29	2.80	8.08	6.80	
AirTran	TRS	5.82	9.67	4.07	9.38	2.81	8.77	6.75	
jetBlue	JBU	4.85	9.86	3.94	8.89	5.13	7.85	6.75	
								6.65	SFO AVERAGE
SOUTHWEST	SWA	5.76	9.87	1.67	9.72	5.55	7.24	6.63	
suncountry airlines	SCX	5.82	9.99	5.00	9.95	1.25	6.88	6.48	
AEROMEXICO	AMX	5.82	9.69	2.58	9.64	4.81	5.94	6.41	
Avianca	TAI	5.44	9.50	2.97	8.82	5.05	6.34	6.35	
virgin atlantic	VIR	3.43	9.88	-	-	4.93	-	6.08	
KLM	KLM	3.43	9.93	-	7.12	3.84	-	6.08	
NCA Nippon Cargo Airlines	NCA	9.59	8.54	2.50	5.00	4.25	5.83	5.95	
EVA AIR	EVA	6.58	8.15	0.23	5.00	5.96	7.22	5.52	
KOREAN AIR	KAL	7.91	7.37	1.24	-	5.27	5.22	5.40	
AIR NEW ZEALAND	ANZ	4.54	6.51	-	-	4.96	-	5.34	
SINGAPORE AIRLINES	SIA	7.14	8.11	0.00	5.00	6.28	5.00	5.25	
BRITISH AIRWAYS	BAW	3.45	9.72	-	-	2.21	-	5.13	

Airline Fly Quiet Summary Report - 2nd Quarter 2014

April 1 to June 30, 2014

Airline		Fleet Noise Quality	Noise Exceedance	Nighttime Runway Use	Departures Shoreline	Departures Gap	Arrivals Foster City	Final Score
HAWAIIAN AIRLINES	HAL	4.05	9.98	3.33	-	3.05	5.00	5.08
CATHAY PACIFIC	CPA	5.29	7.74	0.11	-	6.23	5.00	4.87
ASIANA AIRLINES	AAR	4.62	6.26	1.32	0.00	5.23	5.34	3.80
CHINA AIRLINES	CAL	3.43	3.41	0.22	-	5.07	-	3.03
Philippines	PAL	4.00	0.00	0.00	0.00	4.22	5.00	2.20
SFO Average		**5.99**	**9.08**	**2.91**	**8.05**	**5.36**	**6.55**	**6.65**

Airline Fly Quiet Rating

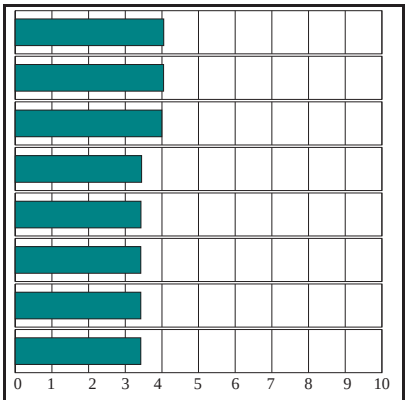


Fleet Noise Quality - 2nd Quarter 2014

April 1 to June 30, 2014

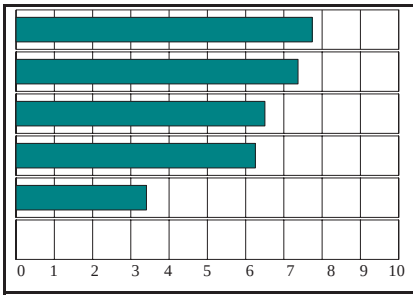
Airline		Nationwide Fleet Noise Quality Rating	San Francisco Average Daily Jet Operations	San Francisco Score	Fleet Noise Quality Rating
JAPAN AIRLINES	JAL	4.20	1	10.00	
Compass Airlines	CPZ	10.00	20	10.00	
SkyWest Airlines	SKW	10.00	75	10.00	
NCA Nippon Cargo Airlines	NCA	3.90	1	9.59	
AIRFRANCE	AFR	5.49	1	9.21	
Scandinavian Airlines	SAS	4.96	1	8.17	
SWISS	SWR	5.17	1	8.17	
KOREAN AIR	KAL	4.05	2	7.91	
Lufthansa	DLH	6.09	2	7.74	
ANA	ANA	5.43	1	7.15	
AIR CHINA	CCA	3.46	1	7.15	
Emirates	UAE	7.89	1	7.15	
SINGAPORE AIRLINES	SIA	5.93	2	7.14	
AIR CANADA	ACA	6.75	10	6.80	
EVA AIR	EVA	5.05	2	6.58	
DELTA	DAL	4.92	24	6.21	
				5.99	SFO AVERAGE
FLYFRONTIER.COM	FFT	6.41	4	5.90	
UNITED	UAL	5.83	171	5.85	
AEROMEXICO	AMX	5.54	3	5.82	
suncountry airlines	SCX	5.82	2	5.82	
AirTran	TRS	6.97	1	5.82	
WESTJET	WJA	5.82	1	5.82	
SOUTHWEST	SWA	5.70	41	5.76	
American Airlines	AAL	3.94	29	5.69	
Avianca	TAI	5.18	1	5.44	
CATHAY PACIFIC	CPA	4.18	2	5.29	
Virgin america	VRD	5.31	50	5.25	
Alaska Airlines	ASA	5.10	16	5.21	
ABX AIR	ABX	1.52	1	4.87	
jetBlue	JBU	6.13	11	4.85	
US AIRWAYS	AWE	5.67	16	4.77	
ASIANA AIRLINES	AAR	3.93	2	4.62	
AIR NEW ZEALAND	ANZ	4.00	1	4.54	
中國東方航空 CHINA EASTERN	CES	4.63	1	4.05	
Aer Lingus	EIN	4.05	1	4.05	

Airline		Nationwide Fleet Noise Quality Rating	San Francisco Average Daily Jet Operations	San Francisco Score	Fleet Noise Quality Rating
XL Airways	XLF	4.05	0	*4.05*	
HAWAIIAN AIRLINES	HAL	6.21	1	*4.05*	
Philippines	PAL	5.09	1	*4.00*	
BRITISH AIRWAYS	BAW	4.34	2	*3.45*	
FedEx	FDX	2.80	1	*3.43*	
CHINA AIRLINES	CAL	3.62	2	*3.43*	
KLM	KLM	4.67	1	*3.43*	
virgin atlantic	VIR	5.84	1	*3.43*	
AVERAGE		**5.25**	**12**	**5.99**	



Airline		Noise Exceedances				Noise Exceedance Quality Rating
		Total Noise Exceedances	*Total Quarterly Operations*	*Exceedances per 1000 Operations*	***Score***	
Air China	CCA	0	182	0	***10.00***	
Lufthansa	DLH	0	352	0	***10.00***	
Aer Lingus	EIN	0	128	0	***10.00***	
Scandinavian Airlines	SAS	0	163	0	***10.00***	
SWISS	SWR	0	182	0	***10.00***	
Emirates	UAE	0	182	0	***10.00***	
suncountry airlines	SCX	1	302	3	***9.99***	
SkyWest Airlines	SKW	54	13,684	4	***9.98***	
Hawaiian Airlines	HAL	1	189	5	***9.98***	
Japan Airlines	JAL	1	183	5	***9.98***	
ANA	ANA	1	182	5	***9.98***	
Air France	AFR	2	220	9	***9.96***	
China Eastern	CES	2	181	11	***9.95***	
Compass Airlines	CPZ	50	3,605	14	***9.94***	
Virgin America	VRD	147	9,013	16	***9.93***	
KLM	KLM	3	182	16	***9.93***	
Frontier	FFT	13	782	17	***9.93***	
American Airlines	AAL	137	5,291	26	***9.89***	
Delta	DAL	117	4,419	26	***9.89***	
Virgin Atlantic	VIR	5	182	27	***9.88***	
Alaska Airlines	ASA	80	2,880	28	***9.88***	
Southwest	SWA	230	7,416	31	***9.87***	
US Airways	AWE	93	2,901	32	***9.86***	
JetBlue	JBU	66	2,055	32	***9.86***	
Air Canada	ACA	64	1,809	35	***9.85***	
United	UAL	1,124	31,081	36	***9.84***	
WestJet	WJA	14	259	54	***9.77***	
British Airways	BAW	24	366	66	***9.72***	
AeroMexico	AMX	45	630	71	***9.69***	
AirTran	TRS	14	180	78	***9.67***	
Avianca	TAI	30	260	115	***9.50***	
XL Airways	XLF	4	24	167	***9.28***	
ABX Air	ABX	44	255	173	***9.26***	
FedEx	FDX	37	206	180	***9.23***	
					9.08	SFO AVERAGE
Nippon Cargo Airlines	NCA	54	159	340	***8.54***	
EVA Air	EVA	158	368	429	***8.15***	
Singapore Airlines	SIA	161	366	440	***8.11***	

Airline		Noise Exceedances: *Total Noise Exceedances*	*Total Quarterly Operations*	*Exceedances per 1000 Operations*	***Score***	**Noise Exceedance Quality Rating**
Cathay Pacific	CPA	191	364	525	***7.74***	
Korean Air	KAL	222	363	612	***7.37***	
Air New Zealand	ANZ	147	181	812	***6.51***	
Asiana Airlines	AAR	295	339	870	***6.26***	
China Airlines	CAL	521	340	1532	***3.41***	
Philippines	PAL	423	182	2324	***0.00***	

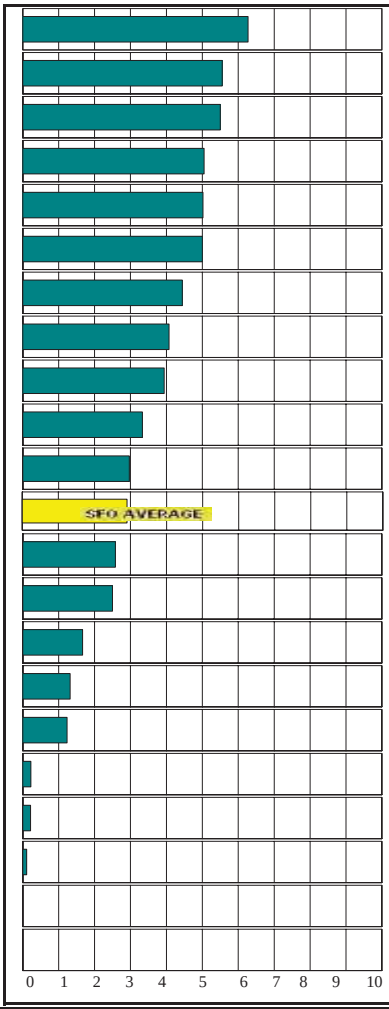


TOTAL	**4,575**	**92,588**		
SFO AVERAGE			**213**	**9.08**

Nighttime Preferential Runway Use - 2nd Quarter 2014

April 1 to June 30, 2014

Airline		Nighttime Departures (1:00 am to 6:00 am)						Nighttime Runway Use Rating
		Total	*10L/R*	*28L/R Shoreline*	*01L/R*	*28L/R Straight*	***Score***	
FLYFRONTIER.COM	FFT	**17**	0%	88%	12%	0%	***6.27***	
US AIRWAYS	AWE	**6**	0%	83%	0%	17%	***5.56***	
DELTA	DAL	**20**	0%	70%	25%	5%	***5.50***	
American Airlines	AAL	**33**	0%	67%	18%	15%	***5.05***	
UNITED	UAL	**89**	6%	60%	15%	20%	***5.02***	
suncountry airlines	SCX	**2**	0%	50%	50%	0%	***5.00***	
SkyWest	SKW	**3**	0%	67%	0%	33%	***4.44***	
AirTran	TRS	**9**	0%	33%	56%	11%	***4.07***	
jetBlue	JBU	**11**	0%	27%	64%	9%	***3.94***	
HAWAIIAN AIRLINES	HAL	**1**	0%	0%	100%	0%	***3.33***	
Avianca	TAI	**91**	4%	19%	38%	38%	***2.97***	
							2.91	SFO AVERAGE
AEROMEXICO	AMX	**84**	1%	17%	40%	42%	***2.58***	
NCA Nippon Cargo Airlines	NCA	**4**	25%	0%	0%	75%	***2.50***	
SOUTHWEST	SWA	**2**	0%	0%	50%	50%	***1.67***	
ASIANA AIRLINES	AAR	**53**	13%	0%	0%	87%	***1.32***	
KOREAN AIR	KAL	**89**	12%	0%	0%	88%	***1.24***	
EVA AIR	EVA	**118**	2%	1%	0%	97%	***0.23***	
CHINA AIRLINES	CAL	**92**	2%	0%	0%	98%	***0.22***	
CATHAY PACIFIC	CPA	**90**	1%	0%	0%	99%	***0.11***	
Philippines	PAL	**2**	0%	0%	0%	100%	***0.00***	
SINGAPORE AIRLINES	SIA	**91**	0%	0%	0%	100%	***0.00***	
TOTAL		**907**						
SFO AVERAGE			**3%**	**28%**	**22%**	**47%**	**2.91**	



Shoreline Departure Rating - 2nd Quarter 2014

April 1 to June 30,2014

Airline		Shoreline Departures					Shoreline Departure Rating
		Total	Successful	Marginal	Poor	Score	
ABX AIR	ABX	39	100%	0%	0%	*10.00*	
sun country airlines	SCX	97	99%	1%	0%	*9.95*	
FLYFRONTIER.COM	FFT	234	99%	0%	0%	*9.94*	
Compass Airlines	CPZ	395	97%	3%	0%	*9.87*	
WESTJET	WJA	73	97%	3%	0%	*9.86*	
AIR CANADA	ACA	476	97%	3%	0%	*9.81*	
Virgin america	VRD	1,320	97%	3%	0%	*9.81*	
Alaska Airlines	ASA	534	96%	4%	0%	*9.77*	
SOUTHWEST	SWA	465	95%	4%	1%	*9.72*	
AEROMEXICO	AMX	14	93%	7%	0%	*9.64*	
SkyWest	SKW	2,124	94%	5%	1%	*9.63*	
UNITED	UAL	4,994	89%	9%	1%	*9.42*	
AirTran	TRS	48	88%	13%	0%	*9.38*	
DELTA	DAL	1,200	88%	11%	1%	*9.33*	
American Airlines	AAL	996	87%	12%	1%	*9.29*	
Lufthansa	DLH	14	86%	14%	0%	*9.29*	
FedEx	FDX	55	89%	7%	4%	*9.27*	
US AIRWAYS	AWE	534	81%	17%	3%	*8.90*	
jetBlue	JBU	314	78%	21%	1%	*8.89*	
Avianca	TAI	17	82%	12%	6%	*8.82*	
Aer Lingus	EIN	12	83%	0%	17%	*8.33*	
						8.05	SFO AVERAGE
KLM	KLM	33	52%	39%	9%	*7.12*	
AIRFRANCE	AFR	4	25%	75%	0%	*6.25*	
XL Airways	XLF	4	50%	25%	25%	*6.25*	
EVA AIR	EVA	1	0%	100%	0%	*5.00*	
NCA Nippon Cargo Airlines	NCA	1	0%	100%	0%	*5.00*	
SINGAPORE AIRLINES	SIA	2	50%	0%	50%	*5.00*	
ASIANA AIRLINES	AAR	1	0%	0%	100%	*0.00*	
Philippines	PAL	1	0%	0%	100%	*0.00*	
TOTAL		**14,002**					
SFO AVERAGE			**72%**	**17%**	**11%**	**8.05**	

Gap Departure Climb Rating - 2nd Quarter 2014

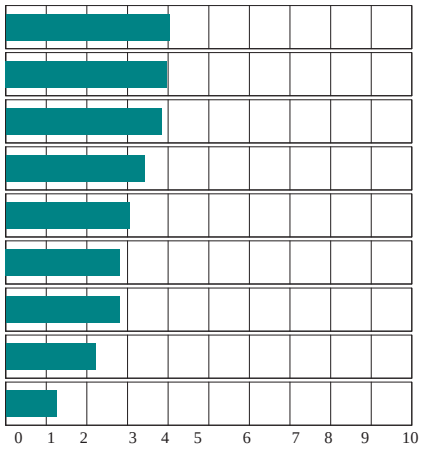
April 1 to June 30, 2014

Airline		Gap Departures Total	Gap Departures Score
XL Airways	XLF	8	10.00
中國東方航空 CHINA EASTERN	CES	88	9.82
Aer Lingus	EIN	47	9.15
ABX AIR	ABX	39	8.30
ANA	ANA	88	8.28
AIR CHINA	CCA	89	8.26
US AIRWAYS	AWE	297	6.78
SINGAPORE AIRLINES	SIA	179	6.28
FedEx	FDX	9	6.25
CATHAY PACIFIC	CPA	180	6.23
SkyWest Airlines	SKW	1714	6.10
EVA AIR	EVA	179	5.96
DELTA	DAL	88	5.84
Lufthansa	DLH	162	5.80
Emirates	UAE	89	5.72
SOUTHWEST	SWA	1650	5.55
Virgin america	VRD	1264	5.47
			5.36 SFO AVERAGE
KOREAN AIR	KAL	169	5.27
ASIANA AIRLINES	AAR	160	5.23
Scandinavian Airlines	SAS	79	5.22
Compass Airlines	CPZ	661	5.14
jetBlue	JBU	259	5.13
CHINA AIRLINES	CAL	166	5.07
JAPAN AIRLINES	JAL	78	5.06
Avianca	TAI	54	5.05
AIR CANADA	ACA	43	5.03
FLYFRONTIER.COM	FFT	4	5.00
AIR NEW ZEALAND	ANZ	91	4.96
virgin atlantic	VIR	89	4.93
AIRFRANCE	AFR	105	4.82
AEROMEXICO	AMX	156	4.81
NCA Nippon Cargo Airlines	NCA	77	4.25
Philippines	PAL	90	4.22
Alaska Airlines	ASA	282	4.16

Gap Departure Climb Rating - 2nd Quarter 2014

April 1 to June 30, 2014

Airline		Gap Departures		Gap Departure Quality Rating
		Total	Score	
WESTJET	WJA	22	*4.03*	
UNITED	UAL	4755	*3.97*	
KLM	KLM	29	*3.84*	
SWISS	SWR	91	*3.42*	
HAWAIIAN AIRLINES	HAL	48	*3.05*	
AirTran	TRS	4	*2.81*	
American Airlines	AAL	523	*2.80*	
BRITISH AIRWAYS	BAW	178	*2.21*	
suncountry airlines	SCX	1	*1.25*	

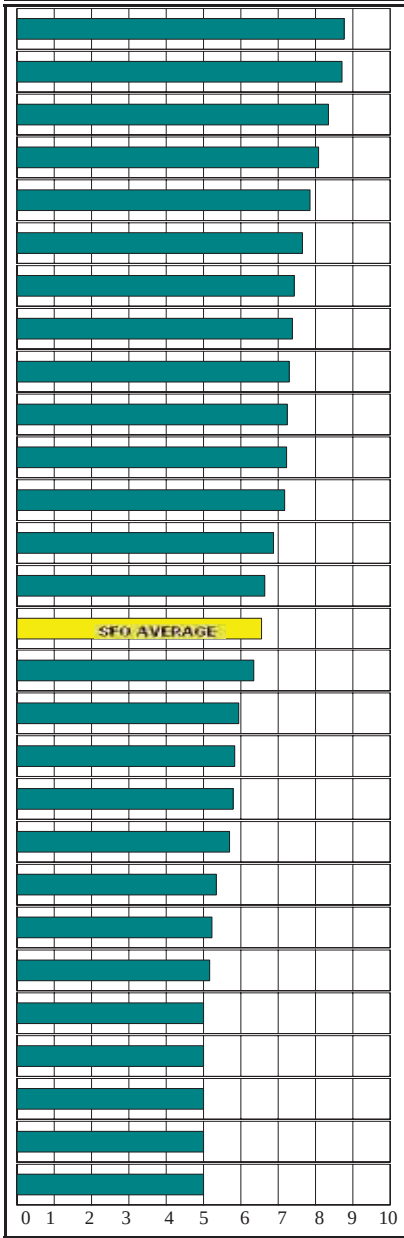


TOTAL	**14384**	
SFO Average		**5.36**

Foster City Arrival Rating - 2nd Quarter 2014

April 1 to June 30,2014

Airline		Foster City Arrivals					Foster City Arrival Rating
		Total	*Successful*	*Marginal*	*Poor*	*Score*	
AirTran	TRS	**77**	75%	25%	0%	***8.77***	
FLYFRONTIER.COM	FFT	**31**	74%	26%	0%	***8.71***	
US AIRWAYS	AWE	**157**	67%	33%	0%	***8.34***	
American Airlines	AAL	**245**	62%	38%	0%	***8.08***	
jetBlue	JBU	**170**	58%	41%	1%	***7.85***	
AIR CANADA	ACA	**68**	53%	47%	0%	***7.65***	
Virgin america	VRD	**140**	49%	51%	0%	***7.43***	
DELTA	DAL	**225**	48%	52%	0%	***7.38***	
ABX AIR	ABX	**48**	46%	54%	0%	***7.29***	
SOUTHWEST	SWA	**348**	46%	53%	1%	***7.24***	
EVA AIR	EVA	**9**	44%	56%	0%	***7.22***	
UNITED	UAL	**1,180**	44%	55%	1%	***7.17***	
sun country airlines	SCX	**8**	38%	63%	0%	***6.88***	
FedEx	FDX	**61**	33%	67%	0%	***6.64***	
						6.55	SFO AVERAGE
Avianca	TAI	**93**	28%	71%	1%	***6.34***	
AEROMEXICO	AMX	**85**	21%	76%	2%	***5.94***	
NCA Nippon Cargo Airlines	NCA	**6**	17%	83%	0%	***5.83***	
Compass Airlines	CPZ	**95**	16%	84%	0%	***5.79***	
SkyWest Airlines	SKW	**72**	19%	75%	6%	***5.69***	
ASIANA AIRLINES	AAR	**59**	7%	93%	0%	***5.34***	
KOREAN AIR	KAL	**89**	4%	96%	0%	***5.22***	
Alaska Airlines	ASA	**31**	3%	97%	0%	***5.16***	
CATHAY PACIFIC	CPA	**3**	0%	100%	0%	***5.00***	
HAWAIIAN AIRLINES	HAL	**1**	0%	100%	0%	***5.00***	
Philippines	PAL	**2**	0%	100%	0%	***5.00***	
SINGAPORE AIRLINES	SIA	**2**	0%	100%	0%	***5.00***	
WESTJET	WJA	**5**	0%	100%	0%	***5.00***	
TOTAL		**3,310**					
SFO AVERAGE			**32%**	**68%**	**0%**	**6.55**	



SFO

San Francisco International Airport

Boeing 747 Phase Out

Presented at the Airport/Community Roundtable Meeting October 1, 2014

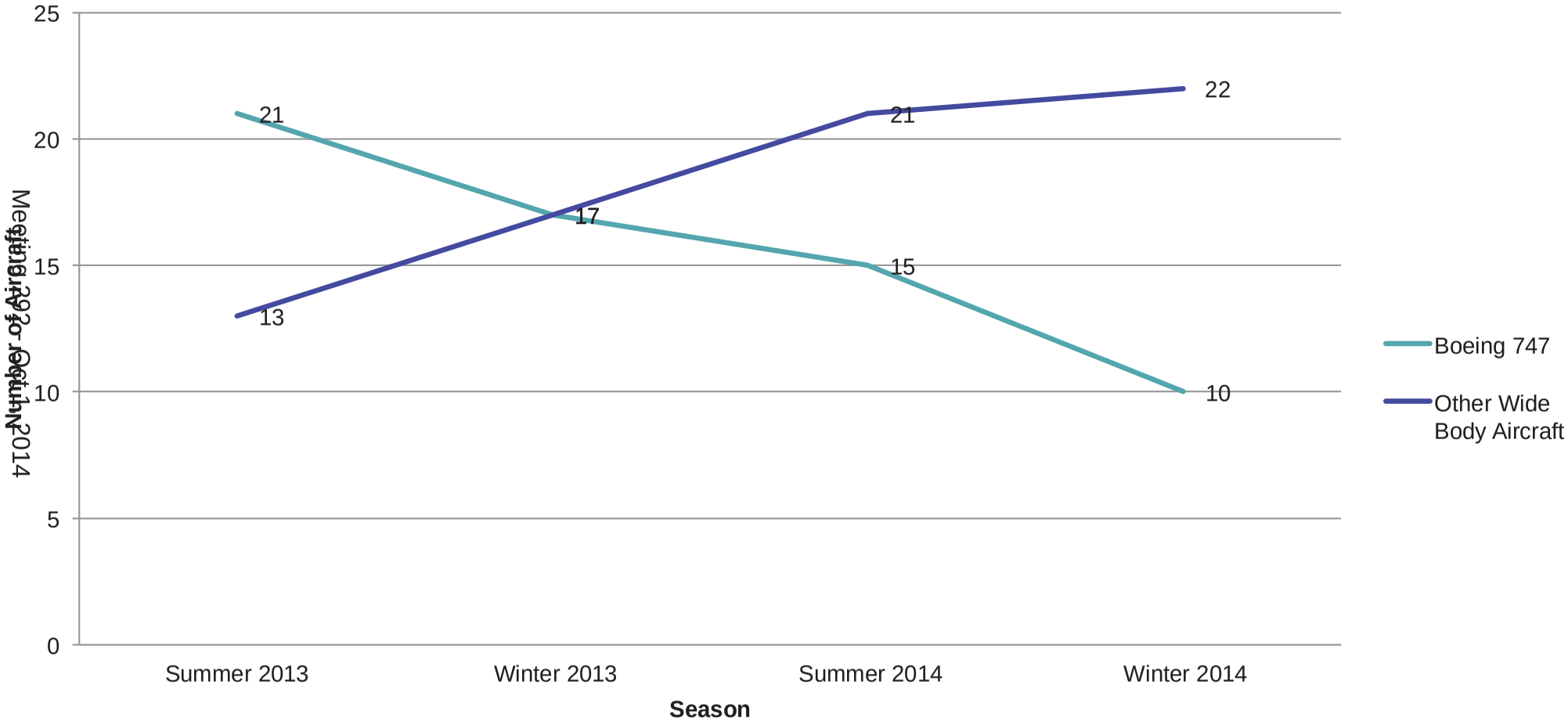
San Francisco International Airport

EQUIPMENT CHANGES

As more airlines worldwide opt to retire their 747s and replace them with 777s, SFO will see fewer of this iconic aircraft. The phasing out is already well underway…

San Francisco International Airport

Seasonal Daily Average of Wide Body Types at SFO



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San Francisco International
Airport/Community Roundtable

455 County Center, 2nd Floor
Redwood City, CA 94063
T (650) 363-1853
F (650) 363-4849
www.sforoundtable.org

October 1, 2014

TO: Roundtable Representatives and Alternates

FROM: James A. Castañeda, Program Coordinator

SUBJECT: Roundtable Work Program for 2014 – 2015

This agenda item contains the draft Work Program for 2014 – 2015. The following shows the status of the Work Program items for 2013 – 2014; all items except "Monitor PGL 12-09" are recommended to be carried forward with additional items for research.

Item	Completed	Carry Forward	Assignment
New Roundtable Website	Yes	Yes – updates as required	RT staff
New Member Packet	Ongoing	Yes	RT
Fly Quiet Update	Yes	Yes	Airport staff
Airport Updates	Yes	Yes	Roundtable staff
Outreach to OAK Noise Forum & SJC	Yes	Yes	RT staff
Include LAX & ORD RT Groups on dist. list	Yes	Yes	RT staff
Send RT Members to noise forum	Ongoing	Yes	RT staff & members
Monitor PGL 12-09	Yes	No	RT staff
Guest Speakers	Ongoing	Yes	RT staff
OPD	Ongoing	Yes	RT staff
CNEL Metric & 65 CNEL stanard	Ongoing	Yes	RT staff
Use of SEL metrics outside of 65 CNEL	Ongoing	Yes	RT staff
Norcal OAMP	Yes	Yes	Roundtable staff
Woodside OPD	Yes	Yes	RT staff
Porte 5 Departures	Ongoing	Yes	RT staff
Visit NorCal TRACON	Yes	Yes	RT staff & members

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San Francisco International Airport/Community Roundtable

Work Program 2014-2015

Work Program – Administrative Items

AI1. Roundtable Website Maintenance

Item Description:

Maintain the Roundtable (RT) website www.sforoundtable.org and update with new information as required for the public and informational page.

- Maintain existing website.
- Include historical information as required.
- Upload agendas, agenda packets, and subcommittee meeting information.
- Create an informational section containing Noise 101 presentations and noise metric videos.

Background:

The Roundtable updated its website as a Work Program item in 2013 – 2014 and was presented to the Roundtable at its September 2013 meeting. The updated included: finding a long term solution for the document upload process, website hosting, updated layout and associated graphics, include Twitter feed, include a member password-protected section, and reorganization of website to make it easily navigable.

This item has been changed from an update to maintenance. Roundtable staff and consultant staff will update the website on per-meeting with the agenda and agenda packet, upload subcommittee agendas, and update the website with appropriate documents, links, and tweets. The member-only page will also be updated with videos and information relative to how aircraft fly, airspace, and any other educational documents in the form of reports, PowerPoint presentations, and videos.

Present to Roundtable: As new information is uploaded.

Staff Assigned: Roundtable staff

Budget Allocated: No extra budget effort for RT staff is anticipated; updates will utilize existing staff resources where possible.

AI2. Fly Quiet Update

Item Description:

Continue receiving updates to the airport's Fly Quiet Program

Background:

The Roundtable and SFO launched the Fly Quiet Program in 2001. The Fly Quiet Program is a quarterly report of airline performance in specific categories. The Roundtable holds the Fly Quiet awards at the February meeting each year, inviting the overall winner and category winners to the Roundtable meeting for an official presentation of the awards. The awards presented are: Chairman's Award, Fly Quiet Award, and Most Improved. It is recommended the February meeting be held at the SFO airport museum to present the awards to airlines receiving them to celebrate their accomplishments.

Present to Roundtable: This item is anticipated to be presented to the Roundtable at meetings immediately following the closing of each reporting quarter, including information on fleet mix trends at SFO.

Staff Assigned: Airport staff

Budget Allocated: Budget expenditure to include refreshments and the existing budget for awards.

AI3. Airport Updates

Item Description:

Continue receiving updates from the airport Director or other staff on significant airport happenings, traffic levels, operations, and other data from the preceding months.

Background:

The airport provides information germane to the RT and noise issues at each meeting. The briefing is typically provided by the airport Director.

Present to Roundtable: This item is anticipated to be presented to the Roundtable at each meeting.

Staff Assigned: Airport staff

Budget Allocated: No extra budget effort anticipated.

AI4. Outreach to OAK Noise Forum and Potential Santa Clara County Noise Forum

Item Description:

Continue dialogue with the noise forums within the Bay Area at Oakland International Airport and Mineta San Jose International Airport to share information and best practices, discuss issues relating to Bay Area and national airport noise issues. Assist Santa Clara County with advice on implementing a noise forum.

Background:

The SFO RT has a history of maintaining interaction with fellow airport-sponsored noise organizations in the Bay Area. This has led to joint letters to the FAA and other organizations regarding noise mitigation issues, joint trip to NORCAL TRACON, and understanding how all three airports interact with regards to airspace and noise mitigation. Santa Clara County does not currently have a sanctioned group focused on aircraft noise issues. Mineta San Jose international Airport used to have a noise forum that met on a quarterly basis; the noise forum stopped meeting and all noise-related issues are heard at the SJC Airport Commission Meeting. The SFO RT, at its July 22, 2014 Subcommittee meeting, proposed to assist Santa Clara County in creating a group focused on noise issues from airports within Santa Clara County as well as overflight noise from aircraft transitioning the airspace from other regional airports.

Present to Roundtable: This item is anticipated to be presented to the Roundtable after any interactions or 'teaming' with OAK or SJC.

Staff Assigned: RT staff

Budget Allocated: No extra budget effort anticipated.

AI5. Include LAX and ORD Roundtable Groups on SFO RT Distribution List

Item Description:

Maintain contact with Roundtable organizations throughout the country via correspondence relating to Roundtable issues on a state and national level.

Background:

The SFO RT has a history of maintaining interaction with the fellow airport-sponsored noise organizations in the country through sharing correspondence relating to current noise issues including pending legislation, funding allocation, or new technology.

Present to Roundtable: This item is anticipated to be in the correspondence section of the RT packets as required.

Staff Assigned: RT staff

Budget Allocated: No extra budget effort anticipated.

AI6. Send RT Member(s) to Noise Forums or Technical Conference

Item Description:

Maintain knowledge base of the RT and its members by sending members to technical conferences or other noise forums.

Background:

The SFO RT has a history of maintaining a strong knowledge base of aircraft noise theory that is communicated to the membership. This has been done through conducting Noise 101 sessions, sending RT members to NORCAL TRACON, and to industry conferences.

Present to Roundtable: Fall 2014 meeting

Staff Assigned: RT staff

Budget Allocated: Anticipated budget of $2,000/member to attend the UC Davis Noise Symposium in Palm Springs in March 2015. Local meeting attendance not anticipated to have a budgetary impact.

AI7. Send RT Coordinator to LAX Roundtable Meeting

Item Description:

Continue to correspond and maintain understanding of the LAX Roundtable structure and issues by making a yearly site visit.

Background:

The SFO RT keeps in contact with other airport noise organizations, including the LAX Roundtable. In the past, the SFO RT has sent the RT Coordinator to an LAX Roundtable meeting to observe their practices and exchange information with their staff. The RT Coordinator and Technical Advisor will attend an LAX Roundtable meeting on an odd-numbered month in 2015.

Staff Assigned: RT staff and Technical advisor

Budget Allocated: Anticipated budget of $1,000 for the RT Coordinator.

AI8. Join National Organization to Insure a Sound Controlled Environment N.O.I.S.E.

Item Description:

Maintain understanding of regional and national aircraft noise issues and join with a national group to support legislation and research to quieter aircraft, procedures, and technology.

Background:

The (N.O.I.S.E.) is an advocacy group focused on reducing noise for communities surrounding airports. The Washington, D.C.-based organization works with major organizations including the National League of Cities to arrange meetings with federal agencies and Congressional offices. The County of San Mateo has historically been involved with N.O.I.S.E.

Present to Roundtable: As required and as legislative information is available.

Staff Assigned: RT staff

Budget Allocated: Anticipated budget of $5,000 to join N.O.I.S.E. and $2,000/member and/or RT staff to attend its Legislative Summit in a yet-to-be-determined location.

Work Program – Legislative Items

LI1. Research Federal, State, and International Noise Legislation

Item Description:

The Roundtable will continue its research of federal, state, and international proposed noise legislation, as well as existing legislation as it applies to operations at San Francisco International Airport.

Background:

The Roundtable keeps track of legislative issues on state, federal, and international level to determine the implications of legislation on operations and noise issues at San Francisco International Airport. This is done through a subscription to the Airport Noise Report (ANR) as well as monitoring legislation through the Federal Register and other list services. In addition to the RT monitoring noise issues on a federal level, the organization will monitor noise regulations suggested by CAEP/ICAO as voluntary or mandatory. The International Civil Aviation Organization (ICAO) is an organization that recommends best practices and adopts standards for the aviation industry, including noise as it relates to aircraft operations. This research could result in correspondence from the RT to the legislative sponsor regarding any positive or negative impact of the legislation.

Present to Roundtable: This item will be reviewed by the RT as required.

Staff Assigned: Roundtable staff

Budget Allocated: No extra budget effort for RT staff. The yearly subscription to ANR is $850

Work Program - Research Items

RI1. Guest Speaker

Item Description:

The Roundtable will continue its efforts to have guest speakers invited to RT meetings to present information regarding a topic of interest to the RT.

Background:

The Roundtable, in an effort to keep current on trends in noise and airports, set up a guest speaker item as part of the 2011-2012 Work Program. It is the goal of the RT to continue inviting speakers to the RT, increasing the membership and public's understanding of current issues. The RT and airport staff will recommend speakers, and the RT membership is encouraged to request experts in a specific topic to speak.

Present to Roundtable: This item will be reviewed by the RT as required.

Staff Assigned: Roundtable staff

Budget Allocated: No extra budget effort for RT staff, travel costs would be at the expense of the speaker.

RI2. Noise Effects of Aircraft – Traditional Arrival versus Optimized Procedure Descent (OPD)

Item Description:

Determine the difference, measured using a single event metric, of traditional aircraft arrivals versus aircraft utilizing published Optimized Procedure Descent (OPD) criteria.

Background:

As part of NextGen, aircraft will at times execute an OPD approach, which allows an aircraft to descend to an airport using idle power from cruise altitude instead of the standard step-down approach. This type of approach can bring aircraft in lower altitudes above residential areas on the Peninsula. Studies have been conducted in the Woodside area by the Airport Noise Abatement Office, as well as with the Boeing Corporation.

The Roundtable consultant presented a report of aircraft arrivals over the Woodside area comparing traditional to OPD approaches to the Subcommittee in June 2013 and to the full Roundtable in September 2013. This item should be continued as more aircraft become equipped to fly an OPD approach.

Present to Roundtable: This item will be reviewed by the RT as required.

Staff Assigned: Roundtable staff, in conjunction with Airport staff

Budget Allocated: Budget to be determined if additional studies need to be conducted beyond capabilities of Airport staff.

RI3. Airport Cooperative Research Program (ACRP) Participation

Item Description:

The Roundtable has the option to become involved with ACRP in three ways: submit a problem statement to the Airport Cooperative Research Program (ACRP) for an item to study in depth, submit applications to serve on an ACRP panel, or support research statements to carry forward.

Background:

ACRP is a subset of the Transportation Research Board (TRB) that studies issues relating to airport operations, including noise abatement. Each year ACRP solicits problem statements relating to a global issue that affect airports throughout the country. ACRP chooses the problem statements to then turn into research projects. Each research project is comprised of a panel of experts and a consultant that completes the research document under the guidance of the expert panel.

In addition to ACRP soliciting for proposals, expert panel members are also required each year. If there are research projects that are applicable to community noise groups or noise mitigation, members of the RT are encouraged to apply to these expert panels. The expert panels meet 2-3 times per project in Washington, D.C.

Present to Roundtable: It is anticipated that ACRP Problem Statements will be solicited in Summer 2014 for submittal in the Fall, with research support statements to follow, as well as applications to serve on ACRP panels.

Staff Assigned: Roundtable staff

Budget Allocated: No extra budget effort; all travel is paid by ACRP.

RI4. CNEL Noise Insulation Boundary Update

Item Description:

The Roundtable will receive updates on the status of the residential sound insulation program at SFO on a biannual basis to include items such as: number of homes within the currently-approved Noise Exposure Map that are not insulated, number of homes that declined participation in the program, and estimated number of homes being insulated.

Background:

The Roundtable has received updates from the airport over the course of the sound insulation program. The program's focus is to find and inform eligible homeowners that their residence can receive sound insulation treatments for being within the 65 CNEL noise contour, or Noise Exposure Map. The airport is in the process of updating its NEM.

Present to Roundtable: This item will be reviewed by the RT as required.

Staff Assigned: Roundtable and airport staff

Budget Allocated: No extra budget effort for RT staff.

RI5. Use of Single Event Noise Metrics to Evaluate Noise Outside of the 65 CNEL

Item Description:

The Roundtable will research the feasibility of using supplemental noise metrics outside of the 65 CNEL to determine the impact of aircraft operations.

Background:

The 65 CNEL is the federally and state accepted metric to determine impacts from aircraft noise as well as eligibility for sound insulation programs. As aircraft become quieter, the 65 CNEL noise contour has become smaller in size, reducing the "affected areas" as defined by federal and state standards. As a

response to this, airports have studied utilizing supplemental metrics, which show noise levels at various locations in the community utilizing metrics including Lmax and SENEL.

Present to Roundtable: This item will be reviewed by the RT as required.

Staff Assigned: Roundtable staff

Budget Allocated: No extra budget effort for RT staff.

RI6. Use of Unmanned Aerial System in the National Airspace System

Item Description:

The Roundtable will monitor legislation and research related to Unmanned Aerial Systems (UAS) within the National Airspace System (NAS) that is controlled by the Federal Aviation Administration.

Background:

UAS are any unmanned aerial vehicle, drone, or system that is flown remotely by a pilot or via an onboard computer system. Rules and regulations for UAS operations are in its infancy; these systems are not currently permitted for civilian commercial use within the United States, thus there are no noise regulations on their use. This program item will monitor uses of UAS and FAA regulations regarding their use and noise abatement regulations.

Present to Roundtable: This item will be reviewed by the RT as required.

Staff Assigned: Roundtable staff

Budget Allocated: No extra budget effort for RT staff.

Work Program – Aircraft Operations/ Airspace

AO1. NorCal Optimization of Airspace and Procedures in the Metroplex (Metroplex)

Item Description:

The Roundtable will monitor implementation of flight procedures in the NorCal Metroplex project specific to procedures and operations at San Francisco International Airport. This program, formerly referred to as “OAPM”, is now “Metroplex.”

Background:

The NorCal Metroplex is the update of the airspace in the bay area. Federal regulations required the FAA complete an Environmental Assessment (EA) for the project, determining any environmental impacts to the project study area. The EA was released in March 2014; the Record of Decision on the EA is anticipated for publication in July 2014 with implementation of the new procedures scheduled for fall 2014.

The Roundtable staff and its consultant will monitor implementation of the 14 new or enhanced procedures for SFO, with specific attention on the following:

- NIITE procedure enhancing the existing QUIET Standard Instrument Departure (SID)
- SERFR enhancing the existing BIG SUR & HADLY arrivals
- SSTIK procedure enhancing the existing PORTE and OFFSHORE SID

Present to Roundtable: This item will be reviewed by the RT as required and updates to the RT will be from RT staff or the FAA.

Staff Assigned: Roundtable staff

Budget Allocated: No extra budget effort for RT staff.

AO2. Woodside Optimized Profile Descents (OPD)

Item Description:

The Roundtable will receive briefings on the Woodside OPD

Background:

The Airport currently publishes the weekly Woodside VOR report on its website. This report shows the number of aircraft that flew over the Woodside VOR between the hours of 10:30 p.m. – 6:30 a.m. This Work Program item would require the Airport to provide a report on aircraft that utilized the OPD approach between these hours.

Present to Roundtable: This item will be reviewed by the RT as required.

Staff Assigned: Roundtable staff

Budget Allocated: No extra budget effort for RT staff.

AO3. PORTE 5 Departures

Item Description:

The Roundtable will continue to monitor operations on the PORTE 5 departure.

Background:

The PORTE 5 departure flies over portions of the City of Brisbane. In 2012-2013, the Roundtable resumed its work with NORCAL TRACON, SFO Tower, airlines, and SFO staff to determine why the number of aircraft flying over southern portions of Brisbane increased. This Work Program item will continue to monitor this issue and initiate outreach to stakeholders that can assist with mitigation. As the OAPM flight procedures are implemented, the PORTE 5 departures will be enhanced by the new SSTIK procedure referenced in Work Program Item AO1.

Present to Roundtable: This item will be reviewed by the RT as required.

Staff Assigned: Roundtable staff

Budget Allocated: No extra budget effort for RT staff.

AO4. Visit NORCAL TRACON

Item Description:

The Roundtable membership will visit the NORCAL TRACON facility in Mather, California.

Background:

NORCAL TRACON is a radar approach facility that controls aircraft movements in the bay area and other portions of Northern California and Nevada. NORCAL TRACON is a key stakeholder for the RT and has historically worked with the RT to implement noise abatement procedures when traffic allows. This site visit will provide members of the RT with an understanding of how NORCAL TRACON operates and watch aircraft movements in real time.

Present to Roundtable: Schedule trip in June 2014; present a trip report to the Roundtable in Fall 2014.

Staff Assigned: Roundtable staff

Budget Allocated: The Roundtable's contribution on previous joint trips with the Oakland Noise Forum has been approximately $550, which included transportation and meals for up to 10-12 Roundtable members.

AO5. Aircraft Use of Satellite Procedures

Item Description:

Monitor additional uses of satellite-based procedures to enhance operations as they are applicable to SFO.

Background:

As referenced in Work Program Item AO1, the airspace related to operations at SFO was part of the Metroplex airspace project. This project identified numerous Area Navigation (RNAV) procedures to enhance existing arrival and departure procedures. This Work Program item will further define procedures to help noise abatement efforts at SFO, including Required Navigation Performance (RNP). This item would be collaborative with the SFO Noise Abatement Office and at least one airline to assist with procedure enhancements. For this Work Program year, item AO5 will be informational; once Metroplex procedures are being flown on a regular basis and their affects known, the Roundtable can

then work with the airport to identify opportunities for any RNP or RNAV procedure implementation beyond Metroplex.

Present to Roundtable: As required.

Staff Assigned: Roundtable staff

Budget Allocated: No extra budget effort for RT staff.

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San Francisco International
Airport/Community Roundtable

455 County Center, 2nd Floor
Redwood City, CA 94063
T (650) 363-1853
F (650) 363-4849
www.sforoundtable.org

October 1, 2014

TO: Roundtable members and Interested Persons

FROM: James A. Castañeda, AICP, Roundtable Coordinator

SUBJECT: Service Performance Report and Proposed Roundtable Budget for FY 2014-2015

Staff has prepared a draft Roundtable Budget for the current FY 2014-2015 for the Roundtable to review and consider at the October 1, 2014 Regular Meeting.

On September 10, 2014, the Work Program Subcommittee discussed the draft budget, and directed staff on minor adjustments, mostly regarding allocations towards additional funds for TRACON field trips. Those adjustments are reflected within the draft budget contained within the memorandum.

As part of preparing the draft budget, staff also has prepared a brief review of the work and services provided by staff during the previous fiscal year, as well as an overview of the expenditures incurred during that time.

COUNTY SERVICE REPORT

BACKGROUND

On July 1, 2012, the City and County of San Francisco and the County of San Mateo entered into a three year agreement to provide coordinating services for the SFO Airport/Community Roundtable ("Roundtable") in their role to identify noise impacts and reduction measures. The agreement contract required 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 ("County") is compensated for the aforementioned requirements from the Roundtable Trust Fund, which the funding is contributed partially from the City and County of San Francisco Airport Commission ("SFO") and the Roundtable membership's annual dues.

As part of this agreement, the 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:

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 typical assigned Coordinator tasks performed and completed in FY 2013-2014 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.
- Retain and manage a technical consultant to provide technical support to the Roundtable (BridgeNet International).
- Coordinate, review, and approve the work products and monthly billing per the scopes of work of the technical consultant.
- 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.

In addition to the listed tasks necessary for typical Roundtable operations, the following tasks have also have either been completed or ongoing:

- Migration of all Roundtable administrative operations to the County
- Organization of Roundtable files (ongoing effort)
- Modernization of Roundtable operations (ongoing effort)
- Creation of a Roundtable alert e-mail distribution list for important announcements.
- Streamline Roundtable administrative operations for current staff structure of one half-time planner, technical consultant, and administrative support as required. (ongoing task)

B. Retain qualified technical consultant for technical support

This effort was conducted and completed in September 2012. On October 3, 2012, the Roundtable accepted a three-year agreement with BridgeNet International, who began technical support services to the Roundtable November 2012, and will continue to do so through November 2015. At that time, staff is required to circulate a Request for Proposal to review and evaluate potential qualified technical consultants.

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.

D. Roundtable Media Program, Media Support and Website Content

During the course of the current fiscal year, staff has maintained and updated the Roundtable's website where necessary with agendas, minutes, published reports, and other relevant information. Staff has created an e-mail distribution to lists to cities and other interested parties for important noise impact announcements. To supplement, staff utilizes Twitter to broadcast announcements as well. 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 that are not covered under County administrative support, such as Fly Quiet Award expenses, as well as independent data services and storage.

BUDGET EXPENDTURES FY 2013-2014

A. Income

In the previous fiscal year, all excepted sources of funding were received. This included contributions from SFO, Roundtable member cities, County of San Mateo and C/CAG Airport Land Use Committee. A remaining balance of $69,456 from FY 2012-2013 was carried over as a result of the allocated contingencies funds being utilized. Total funded balance in FY 2013-2014 was $309,707.

The trust balance results in a surplus due to a number of reasons. First, the amount San Francisco International Airport agreed to fund as part of their three-year contact in 2012 was such to assist the Roundtable through the expenditure overruns from previous years, and ensure financial stability for the forthcoming years while allowing cities to contribute half their normal rates. The amount within the contact agreement is $220,000 per year. Second, contingency allocations were adopted as part of the FY 2012-2013 budget for unanticipated additional staff and consultant work. Since late 2012, no significant overruns were encountered that would extensive use or depilation of such contingency funds. As a result, the funds rolled over to the following year's income. Other underutilized allocations, such as funds to send Roundtable members to the UC Davis Noise Symposium, were rolled over, and contributed to the surplus.

B. Expenditures

At the end of the previous fiscal year, FY 2013-2014, the Roundtable Trust Fund incurred approximately $190,826 in expenditures.

The expenditures included the allocated staff and consulting support cost of $185,862, which did not exceed allocated amounts as set from the adopted FY2013-2014 budget (only a small roll over invoiced amount of $2,862 from FY 2012-2013, which was allocated that fiscal year).

Roundtable administration/operational costs accounts for $2,988 of the allocated $4,800. Postage and printing did not meet or exceed the allocation, as no additional meetings were required, but also staff reduced cost by limiting printing of packets in black and white, limiting printed distribution, and encouraging use of the electronic version of the meeting packets. Website allocations were utilized to renew the Roundtable's domain, as well as pay the annual dues for webhosting. Data storage fees were not invoiced before the end of the fiscal year, but will be allocated. A total of $969 was used for general supplies, equipment exclusive for Roundtable's use, and reimbursement for FlyQuiet Awards trophies and event food.

During FY 2013-2014, allocations were established and utilized to allow the Roundtable coordinator to attend the UC Davis Noise Symposium; however, the amount allocated to send Roundtable members was not utilized, as no members were in attendance. In conjunction with the Oakland Noise Forum, the Roundtable participated in a joint field trip to the Norcal TRACON. The cost, which included transportation bus service and lunch for attendees, was spilt with Noise Forum. Roundtable's portion exceeded the allocated amount by $129.

Starting with the adoption of the budget for FY 2012-2013, contingency funds were allocated in order to cover unanticipated costs associated with additional work required of the technical consultants or other expenses not originally accounted for with the adoption of the budget during the course of the upcoming fiscal year. During the FY 2013-2014, none of the General and Aviation Consultant Contingency Funds was utilized, and will roll over as additional funds for FY 2014-2015.

PROPOSED FY 2014-2015 BUDGET

BACKGROUND

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, administer 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 (Roundtable Fund Balance) 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.

BUDGET DISCUSSION

The expected funding sources for the FY 2014-2015 include the following: 1) the San Francisco Airport Commission (contracted through 2015 at $220,000 per year), 2) Roundtable member cities (18 cities), 3) the County of San Mateo, and 4) the City/County Association of Governments of San Mateo County (C/CAG), for a representative of the C/CAG Airport Land Use Commission (ALUC), and 5) the estimated Roundtable fund balance from FY 2012-2013.

The Roundtable established fees for member cities, the County of San Mateo, and C/CAG's contribution as the following:

Member Cities (18 cities):	$1,500
County of San Mateo:	$12,000
C/CAG:	$1,500

This had been maintained through FY 2009-2010. In 2010, the Roundtable approved a one-time 50% reduction in annual Roundtable membership fees for all member agencies, except the SFO. This was done in order to provide some minor finance relief to municipalities and encourage active Roundtable membership and participation. As previously mentioned, the San Francisco Airport provided an additional contribution that provided sufficient funding that was to make up the lower contribution of the cities at this time, recover through the expenditure overruns from previous years, and ensure financial stability for the forthcoming years. The contributions were reflected as the following:

Member Cities (18 cities): $750
County of San Mateo: $6,000
C/CAG: $750

This structure was elected with the adoption for the budgets for FY 2010-2011, FY 2011-2012, FY 2012-2013, and FY 2013-2014. During the subcommittee's discussion on September 10, 2014, it was agreed to maintain the current expected funding allocations, but to reexamine the contribution amounts prior to the end of the contract SFO maintains with the County, which expires in July 2015.

Expected Funding Sources

A. Annual Funding from the San Francisco Airport Commission

Per the contact between SFO and the County from July 2012 to July 2015, the Commission's contribution for FY 2014-2015 is $220,000.

B. 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 for the C/CAG Airport Land Use Committee (ALUC)) will remain at 50% original normal fees, resulting in the following dues: Cities - $750 each; County - $6,000, and C/CAG - $750.

C. Estimated Roundtable Fund Balance from the Prior Fiscal Year

The estimated Roundtable fund balance from the previous fiscal year (FY 2013-2014) is $118,881. This is the balance after closeout of all prior contract obligations from that fiscal year, as well as contingencies funds that were not utilized.

Potential Funding Allocations for FY 2014-2015

A. Staff and Consultant Support Services - $183,000

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

1. **Roundtable Coordinator ($113,620)**. This amount represents a reimbursement to the County of San Mateo to provide half-time Planner support to the Roundtable. This fee is the half-time loaded wage rate for a Planner III provided from the county. This includes all administrative support to the coordinator. This amount is unchanged from FY 2013-2014.

2. **Roundtable Aviation Consultant for Technical Support ($70,000)**. This is not to exceed contract amount to provide the Roundtable with Aviation Technical Support. This amount is unchanged from FY 2013-2014.

B. Roundtable Administration/Operations - $4,300

1. **Postage/Photocopying ($2,500)**. This amount represents a reimbursement to the County of San Mateo for costs associated with reproduction of meeting materials and postage. This amount is considerate of electronic distribution of materials to offset costs when possible. This amount is lowered from the allocated amount from FY 2013-2014, as cost for publication has been lower than expected. The proposed reduction still allows for packets for additional meetings the Roundtable may elect to have as necessary.

2. **Website ($200)**. This amount represents a reimbursement to the County of San Mateo for costs associated with paying website hosting dues and renewal of domain registration. Maintenance of the website will be performed by the Roundtable Coordinator. This amount is unchanged from FY 2013-2014.

3. **Data Storage Services ($400)**. This amount represents a reimbursement to the County of San Mateo for the cost associated with moving and maintaining all of the Roundtable's files and archives to Internet based storage. This amount is unchanged from FY 2013-2014.

4. **Supplies/Equipment ($1,200)**. 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. This amount is a $200 increase from FY 2013-2014 to anticipated additional equipment or supplies exclusively for the Roundtable’s use, as well as cost associated with hosting the annual Fly Quiet meeting in the spring.

C. Projects, Programs, and Additional Allocations - $22,700

For FY 2013-2014, the Roundtable allocated additional funds to cover expenses associated with attendance at noise conferences, TRACON field trips, and subscription to aircraft noise publications. Per the proposed Work Program for FY 2014-2015 the Roundtable will also be considering for adoption, a few additional items have been added.

1. **Noise Conference Attendance, Coordinator ($3,000)**. This amount represents a reimbursement to the Coordinator for attendance to the annual UC Davis Noise Symposium held in the spring, and the National Organization to Insure a

sound Control Environment (N.O.I.S.E.) legislative summit. This amount is an increase of $1,000 to allow attendance to the N.O.I.S.E. summit, which was not included in the budget for FY 2013-2014.

2. **Additional Noise Conferences Attendees ($4,000).** This amount represents the cost associated with additional Roundtable member attendance of the UC Davis Noise Symposium held in the spring, and/or the National Organization to Insure a sound Control Environment (N.O.I.S.E.) legislative summit. Estimated cost per person is $2,000 and allows three or four members to attend one conference. This amount is a reduction from FY 2013-2014.

3. **TRACON Field Trip ($1,500).** 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. The Work Program Subcommittee discussed having additional field trips to TRACON, and that funding be appropriate for such. An increase of $1,00 in this allocation is necessary to cover the additional cost associated with transportation and lunch for attendees.

4. **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 FY 2013-2014.

5. **LAX Roundtable Attendance, Coordinator ($1,000).** This amount represents a reimbursement to the Coordinator to attend an LAX Roundtable meeting. In the past, the Roundtable has sent the Coordinator to observe their practices and exchange information with their staff. This is a new item as proposed within the Work Program for FY 2014-2015, which the Roundtable will also consider at the October 1, 2014 meeting. Estimated cost of expenses is $1,000.

6. **Join National Organization to Insure A Sound Control Environment ($5,000).** This amount represents the cost associated with membership with National Organization to Insure a sound Control Environment (N.O.I.S.E.). The County of San Mateo has historically been involved with N.O.I.S.E., and per the proposed Work Plan for FY 2014-2015, staff has included maintaining participation with the organization as a work plan item. Estimated cost of membership is $5,000.

D. Contingency Funds - $40,000

This amount will be reserved as a contingency for any unforeseen costs associated with any work that is unanticipated/out-of-scope for Roundtable staff and Aviation consultants for Technical Support. The total estimated amount is $40,000, which is split equally between a contingency for the Aviation Consultant and a General Contingency. This amount is unchanged from FY 2013-2014.

Attachments:
Proposed FY 2014-2015 Budget

SFO Airport/Community Roundtable - Proposed Budget FY 2014-2015

A	EXPECTED FUNDING	2013-2014	2014-2015
	FUND SOURCE:		
1	San Francisco Airport Commission	$220,000	$220,000
2	Roundtable Member Cities (18 Cities)	$13,500	$13,500
3	County of San Mateo	$6,000	$6,000
4	C/CAG Airport Land Use Committee	$750	$750
5	Estimated Fund Balance from Previous Year	$69,457	$118,881
	TOTAL:	**$309,707**	**$359,131**

B	POTENTIAL FUNDING ALLOCATIONS	2012-2013	2013-2014
	STAFF/CONSULTANT SUPPORT	**$183,000**	**$183,000**
1	Count of San Mateo Coordination Services	$113,000	$113,000
2	Roundtable Aviation Technical Consultant	$70,000	$70,000
	ADMINISTRATION / OPERATIONS	**$4,100**	**$4,300**
1	Postage / Printing	$2,500	$2,500
2	Website	$200	$200
3	Data Storage Services	$400	$400
4	Miscellaneous Office Expenses/Equipment	$1,000	$1,200
	PROJECTS, PROGRAMS, & ADDITIONAL ALLOCATIONS	**$15,350**	**$15,350**
1	Noise Conferences Attendance, Coordinator	$2,000	$3,000
2	Noise Conferences Attendance, Members	$12,000	$4,000
3	TRACON Field Trip(s)	$500	$1,500
4	Airport Noise Report subscription	$850	$850
5	N.O.I.S.E.	$0	$5,000
6	LAX Roundtable Attendance, Coordinator/Staff	$0	$1,000
	CONTINGENCY FUND	**$40,000**	**$40,000**
1	Aviation Consultant Contingency	$20,000	$20,000
2	General Contingency	$20,000	$20,000
	SUBTOTAL	**$242,450**	**$242,650**
	UNCOMMITTED FUNDS / YEAR END BALANCE	**$69,457**	**$116,481**

CORRESPONDENCES

Regular Meeting # 292
October 1, 2014

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JACKIE SPEIER
14TH DISTRICT, CALIFORNIA

211 CANNON HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-0512
(202) 225-3531
FAX: (202) 226-4183

155 BOVET ROAD, SUITE 780
SAN MATEO, CA 94402
(650) 342-0300
FAX: (650) 375-8270

WWW.SPEIER.HOUSE.GOV

Congress of the United States
House of Representatives
Washington, DC 20515-0512

COMMITTEE ON ARMED SERVICES
SUBCOMMITTEES:
READINESS
OVERSIGHT AND INVESTIGATION

COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM
SUBCOMMITTEES:
RANKING MEMBER, ENERGY POLICY, HEALTH CARE, AND ENTITLEMENTS
NATIONAL SECURITY

GUN VIOLENCE PREVENTION
TASK FORCE
Vice Chair

August 8, 2014

The Honorable Clarke Conway
Mayor, City of Brisbane
50 Park Place
Brisbane, CA 94005

Dear Mayor Conway:

As you know, I wrote to both Airport Director John Martin and Mr. Tony DiBernardo of the FAA, protesting Kalitta Air Flight CKS2837, a departure that understandably created tremendous concern amongst residents at approximately 3 a.m. on July 29th. The Airport Director immediately contacted Kalitta Air and the company has since agreed not to use the particular departure that was used that night, safety permitting. My understanding is that there was no safety issue on the night of July 29th and that these flights generally use a different departure route.

I received an apology to the people of Brisbane from the Chief Pilot of Kalitta Air in an email that was sent on August 5th. A copy of the email is enclosed.

While it is apparently true that the plane was in compliance with the rules of departure, it is also apparent that the rule allowed this incident to occur. I hope the FAA and the airport determine to their satisfaction whether an adjustment to the Fly Quiet departure needs to be made yet again. Perhaps this should be examined by the Roundtable.

Respectfully yours,

Jackie Speier

Enclosure: Letter from Congresswoman Speier
Letter from Airport Director
Email from Captain Paul Bishop

cc: Mr. John Martin, Airport Director
Mr. Tony DiBernardo, FAA
Airport Community Roundtable

KJS/bp

JACKIE SPEIER
14TH DISTRICT, CALIFORNIA

211 CANNON HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-0512
(202) 225-3531
FAX: (202) 226-4183

155 BOVET ROAD, SUITE 780
SAN MATEO, CA 94402
(650) 342-0300
FAX: (650) 375-8270

WWW.SPEIER.HOUSE.GOV

Congress of the United States
House of Representatives
Washington, DC 20515-0512

COMMITTEE ON ARMED SERVICES
SUBCOMMITTEES:
READINESS
OVERSIGHT AND INVESTIGATION

COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM
SUBCOMMITTEES:
RANKING MEMBER, ENERGY POLICY, HEALTH CARE, AND ENTITLEMENTS
NATIONAL SECURITY

GUN VIOLENCE PREVENTION TASK FORCE
Vice Chair

July 31, 2014

Mr. John Martin
Director
San Francisco International Airport
PO Box 8097
San Francisco, CA 94128-8097

Mr. Tony DiBernardo
Sierra Pacific District Manager
1027 Grumman Street
Oakland, CA 94621

Dear Mr. Martin and Mr. DiBernardo:

As you both know, Kalitta Air Flight 2837 flew over the City of Brisbane at approximately 3 a.m. on July 29th. The flight was so low and so loud that my office received many calls and messages from people who reported that they were terrified.

I have been informed by the airport's noise office that the flight was technically in compliance with the departure rules. I find it deeply troubling that an airplane operating within the rules can be so disruptive. My understanding is that this particular "Fly Quiet" departure was recently revised, and this incident suggests that it might need another revision. Since Kalitta Air operates fewer than ten flights per year out of SFO, it seems apparent that with so little experience at the airport, its pilots may not understand the rules or conditions very well and may therefore require additional training.

My staff has already requested that the airport noise office obtain evidence that Kalitta Air will not depart San Francisco International Airport in that manner ever again. I respectfully reiterate the request in this letter. I also ask for a written apology from the airline to the community, along with an explanation to both the community and myself regarding the steps the airline will take in order to prevent this incident from recurring.

I would appreciate your prompt response to this letter. I look forward to learning what steps will be taken to meet the reasonable expectations of all communities surrounding SFO.

All the best,

Jackie Speier

San Francisco International Airport

August 1, 2014

Rep. Jackie Speier

AUG 0 5

Received

The Honorable Jackie Speier
U.S. House of Representatives
155 Bovet Road, Suite 780
San Mateo, CA 94402

Dear Representative Speier:

Thank you for contacting me with your concern regarding the departure of Kalitta Air, LLC flight CKS2837 from San Francisco International Airport (SFO) at 2:57 a.m. on July 29, 2014. I was greatly concerned to learn about the unacceptable disturbance to residents in the cities near the Airport. I immediately asked my staff to investigate why this flight did not correctly adhere to the Airport's Fly Quiet Program nighttime noise abatement procedures.

As you know, Kalitta Air is an infrequent user of SFO, having operated 22 departures since 2010. These departures have all appropriately followed the Fly Quiet Program nighttime noise abatement procedures with the exception of the July 29, 2014 flight. To ensure that no exception to the Fly Quiet procedure is made in the future, SFO's Aircraft Noise Abatement manager Bert Ganoung reached out to Captain Paul Bishop, Chief Pilot at Kalitta Air, and emphasized the importance of the Fly Quiet Program that was established as an initiative of the San Francisco International Airport/Community Roundtable to benefit the neighboring communities. The Airport reiterated the elements of the Fly Quiet Program nighttime preferential runway use and noise abatement procedures, including rejecting procedures that may be difficult for specific aircraft types or pilots to execute correctly such as the QUIET SIX departure.

Captain Bishop has informed us he will communicate these procedures to Kalitta Air pilots operating at SFO through his pilots' briefing and will emphasize that, safety and winds permitting, a Runway 10L/R departure over the bay is preferred to a straight out Runway 28L/R departure and right turning departures towards Brisbane should not be used. Captain Bishop requested your contact information so that he may communicate directly with you and extend his regrets for this disturbance to your constituents.

SFO is committed to vigilantly monitoring airline conformance with the Fly Quiet Program and will continue to work to meet the reasonable expectations of the cities near SFO. Please know how seriously I take this matter.

Should you have any further questions, I would be happy to answer them.

Very truly yours,

John L. Martin
Airport Director

cc: The Honorable W. Clarke Conway, Mayor, City of Brisbane
The Honorable Terry O'Connell, Mayor Pro Tem, City of Brisbane
The Honorable Clifford R. Lentz, Councilmember, City of Brisbane
The Honorable Lori S. Liu, Councilmember, City of Brisbane
The Honorable Raymond C. Miller, Councilmember, City of Brisbane
Tony DiBernardo, FAA, Sierra Pacific District Manager
Don Kirby, FAA, NorCal TRACON Air Traffic Manager

Dear Representative Speier,

I would like to convey our sincere apologies to you and your constituency for the noise infringement of 29 July, 2014 by Kalitta Air flight CKS2837. Kalitta Air subscribes to the good neighbor policy and we strive for good community relations. We are changing our SFO departure procedures to comply with the recommendations of the SFO Aircraft Noise Abatement Office whenever possible.

The investigation by the SFO Noise Abatement Office found that the aircraft did comply with the published Quiet Six (CUIT6) departure procedures.

Respectfully

Paul Bishop
Chief Pilot
Kalitta Air, LLC

James A. Castañeda <jcastaneda@sforoundtable.org>

Short Term Aircraft Noise Monitor - South San Francisco

1 message

Dave Ong <Dave.Ong@flysfo.com> Tue, Sep 9, 2014 at 2:58 PM
To: "Tom.Carney@ssf.net" <Tom.Carney@ssf.net>
Cc: "mark.addiego@ssf.net" <mark.addiego@ssf.net>, "James A. Castañeda" <jcastaneda@sforoundtable.org>, Bert Ganoung <Bert.Ganoung@flysfo.com>, Ara Balian <Ara.Balian@flysfo.com>, John Hampel <John.Hampel@flysfo.com>

September 9, 2014

Mr. Tom Carney

66 Randolph Avenue

South San Francisco, CA 94080

Dear Mr. Carney:

Thank you for allowing San Francisco International Airport (SFO) Noise Abatement Office the opportunity to collect aircraft noise measurements at your residence. Please find attached Short Term Aircraft Noise Monitoring report #092014-P52-975. This document contains the results of the monitoring performed covering Tuesday, August 5 through Monday, August 18, 2014. Also attached is an Aircraft Noise Terminology & Metric Supplement to help explain some of the terms used in the report.

I have also copied Honorable Mark Addiego, South San Francisco's Airport Community Roundtable Representative to share the results with.

SFO will strive to improve aircraft noise abatement procedures to further reduce aircraft noise in your community and are continually developing initiatives to mitigate the impacts of aircraft noise by working with the Airport Community Roundtable, the Federal Aviation Administration, and the airlines operating here at SFO.

As always, please feel free to call me at (650) 821-5100 if you have any questions or would like to discuss this information.

Sincerely,

David Ong SFO

Noise Systems Manager | Aircraft Noise Abatement Office

San Francisco International Airport | P.O. Box 8097 | San Francisco 94128

Tel 650-821-5100 | www.flysfo.com | www.flyquietsfo.com

-

2 attachments

Aircraft Noise Monitoring Report - South San Francisco.pdf
6159K

Supplement Aircraft Noise Terminology Metric.pdf
589K

Short Term Aircraft Noise Monitoring

South San Francisco

Prepared for the Randolph Avenue – Green Ave Neighborhood
San Francisco International Airport Noise Abatement Office
P.O. Box 8097 San Francisco, CA 94128
(650) 821-5100
Technical Report #092014-P52-975

August 2014

The San Francisco International Airport (SFO) Noise Abatement Office conducted short term noise monitoring in South San Francisco at the request of a community resident, to determine the noise level within the neighborhood from aircraft operations at SFO. The equipment used to measure the sound level was an Environmental Monitor Unit 2200 noise monitor and Type 41DM-2 microphone manufactured by Bruel & Kjaer. The measurements consisted of monitoring the A-weighted decibels (dBA) in accordance with procedures and equipment which comply with International Electrotechnical Commission, and measurement standards established by the American National Standards Institute for Type I instrumentation. The microphone was calibrated prior to the start of the measurement. The monitor was housed in a weatherproof case and powered by a standard exterior electrical wall outlet. The microphone was mounted on a tripod at a height of approximately 7 feet (see Figure 1). The sound levels at the site were continuously monitored and the results stored on the onboard memory and periodically transferred to a removable memory stick for decoding. The decoded noise data were then processed in the Airport Noise and Operations Management System (ANOMS) for identification, noise to flight track matching and Community Noise Equivalent Level (CNEL) metric calculations.

Aircraft Noise Analysis

Noise measurements were taken on Randolph Avenue and Green neighborhood starting July 30, 2014 using a sound level threshold of 60dBA. Initial data collected were processed and evaluated on August 1. Results indicated numerous gaps in the one second dataset. The investigation of the system revealed an open ground at the electrical outlet powering the monitor, coupled with a failed onboard battery located inside the equipment case. As a result, the monitor was immediately replaced with a serviceable unit on August 4 to continue the monitoring. This report evaluates periods where full 24 hour days of data are available, from August 5 through August 18. There were 88 identified correlated aircraft noise events associated with other Bay Area airports and 2,424 identified correlated aircraft noise events associated with SFO operations over the 14 day period.

Table 1 below provides the resulting CNELs for this measurement period, while Table 2, 3 and 4 provides details of single event noise by day, evening and nighttime hours. For the 2,424 aircraft noise events, the average aircraft generated Maximum Noise Level (Lmax) was 67dBA, the average Sound Exposure Level (SEL) was 77dBA, and the average aircraft noise event duration was 25 seconds. The computed levels for the average **Aircraft CNEL** was 55dBA, the average **Community CNEL** was 63dBA, and the **Total CNEL** was 64dBA. For comparison purposes, the cumulative aircraft noise level at permanent noise monitor #3 located approximately .7 miles away was also 55dBA for the same period.

Table 1 - Aircraft Noise Climate over 14 Days

Community Noise Equivalent Level	Lowest Level (dBA)	Highest Level (dBA)	Average Level (dBA)
Aircraft	44	62	55
Community	59	75	63
Total	60	75	64

Table 2 - SFO Aircraft Noise Data (Single Events) – Day (7:00 a.m. to 7:00 p.m.)

1,778 Correlated Noise Events	Lowest Level (dBA)	Highest Level (dBA)	Average Level (dBA)
Aircraft Lmax	60	87	67
Aircraft SEL	65	95	77
Noise Event Duration (in seconds)	3	120	25

Table 3 - SFO Aircraft Noise Data (Single Events) – Evening (7:00 p.m. to 10:00 p.m.)

259 Correlated Noise Events	Lowest Level (dBA)	Highest Level (dBA)	Average Level (dBA)
Aircraft Lmax	61	81	66
Aircraft SEL	68	93	76
Noise Event Duration (in seconds)	8	101	22

Table 4 - SFO Aircraft Noise Data (Single Events) – Night (10:00 p.m. to 7:00 a.m.)

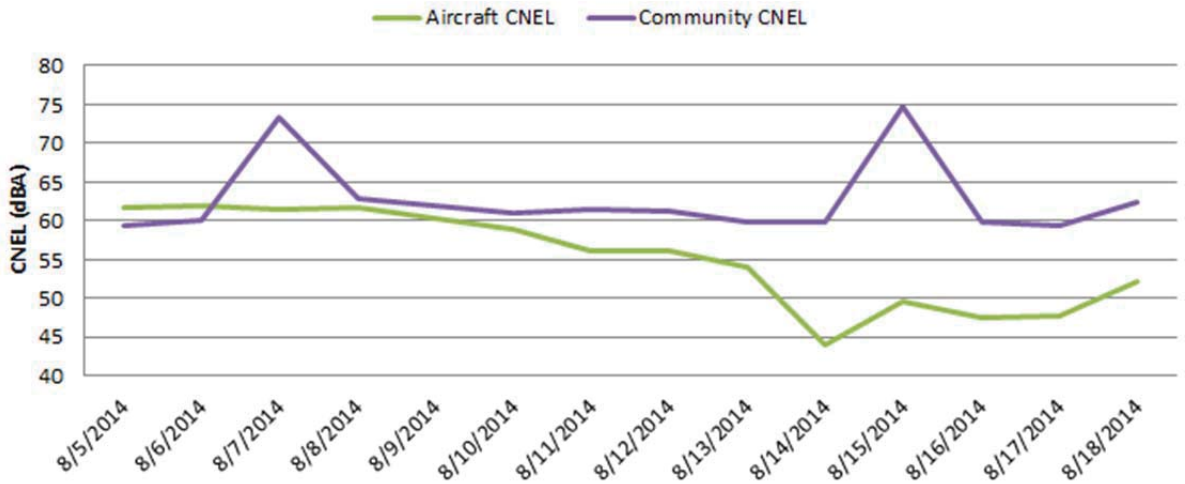
387 Correlated Noise Events	Lowest Level (dBA)	Highest Level (dBA)	Average Level (dBA)
Aircraft Lmax	60	82	69
Aircraft SEL	68	91	79
Noise Event Duration (in seconds)	8	76	25

Conclusion

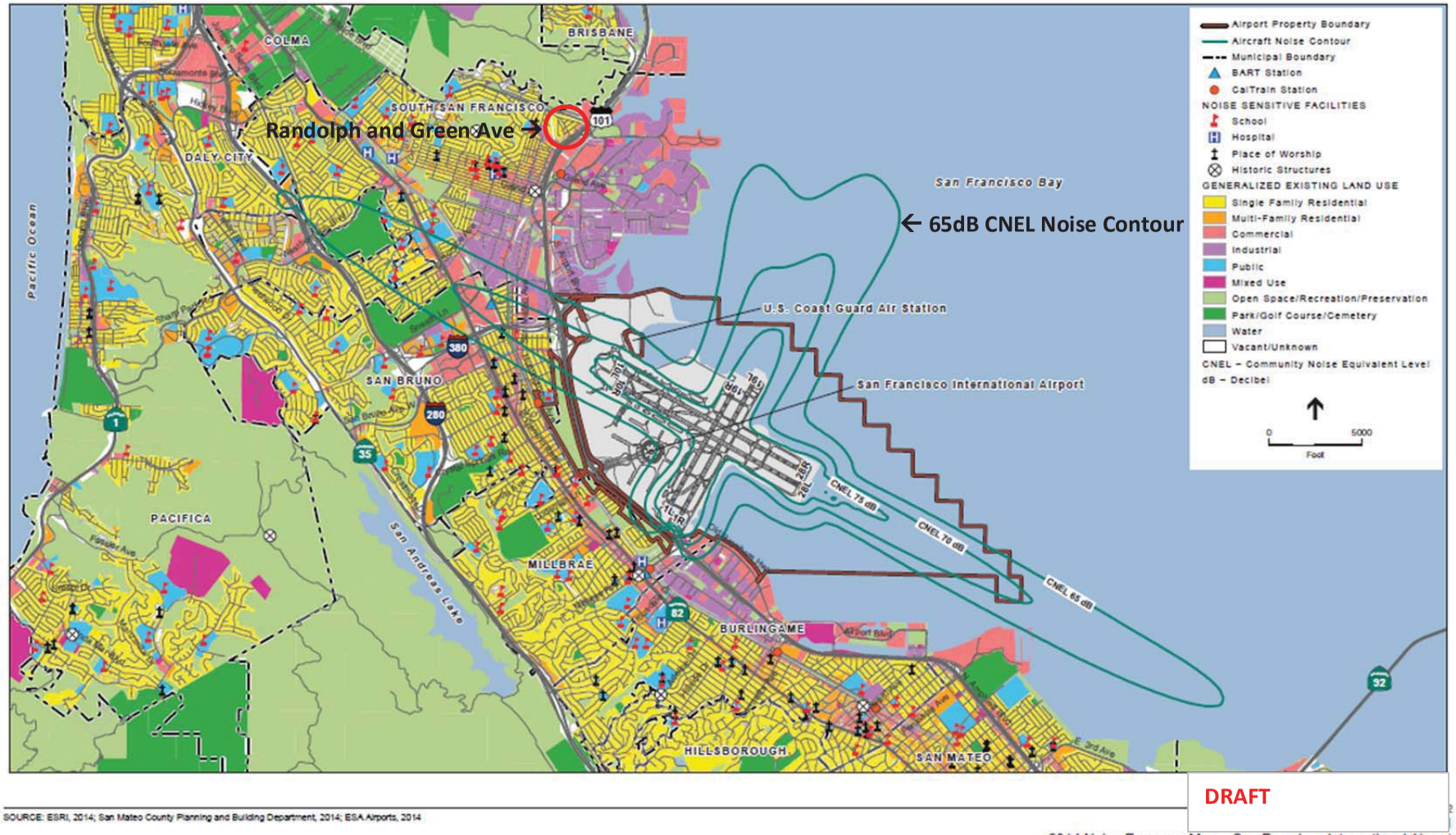
Aircraft noise levels at Randolph Avenue are at levels expected in a community that is approximately 2 miles away from a large hub airport, and below numerous departure corridors serving four main commercial use runways (28L, 28R, 1L, 1R) at SFO. Actual aircraft noise measurements contribute 1dBA additional noise to the total cumulative average noise level. The average Aircraft CNEL was 55dBA and the Community CNEL was 63dBA. When Aircraft noise is added to the Community noise the Total CNEL result in 64dBA.

The California Code of Federal Regulations, Title 21, Division 2.5, Chapter 6, paragraph 5012 states: "The standard for the acceptable level of aircraft noise for persons living in the vicinity of airports is hereby established to be a community noise equivalent level of 65 decibels." Since the average Aircraft CNEL was measured at 55dBA for Randolph Avenue, this residential area has an acceptable level of aircraft noise as defined by state law. The extent of the 65dBA CNEL noise impact contour at SFO is shown on page 3. This noise contour was generated using Federal Aviation Administration's Integrated Noise Model (version 7.0d) and is a working draft of a noise exposure map update under Federal Aviation Regulations Part 150. The results of the field monitoring validates the extent of the 65dBA CNEL noise impact boundary confirming Aircraft CNEL is less than 65dBA CNEL for this location.

SFO operates on two sets of parallel runways that intersect midfield at a ninety degree angle. Due to the prevailing westerly wind, approximately 85% of the time aircraft depart on either 01L or 01R (with larger, heavier airplanes using 28L or 28R) and all aircraft arriving on either 28L or 28R. This operation is called the "West Plan." About 15% of the time, usually when a low pressure weather system brings rain to the Bay Area, arriving aircraft land on Runways 19L and 19R and departing aircraft use Runways 10L and 10R. This flow plan is known as the "Southeast Plan." Graphics of both plans are depicted in Appendix 1. This summer, on May 17th both 01L and 01R were closed to complete a federally mandated Runway Safety Area improvement on those runway ends. This required all aircraft to use 28L and 28R to arrive and depart to the morning of August 10th when the project was completed and 01L/R were reopened. During this period communities west and northwest of the airport experienced more departures and noise. The graph below details daily Aircraft CNEL during this closure and after when operations returned to normal.



DRAFT – 2014 Noise Exposure Map

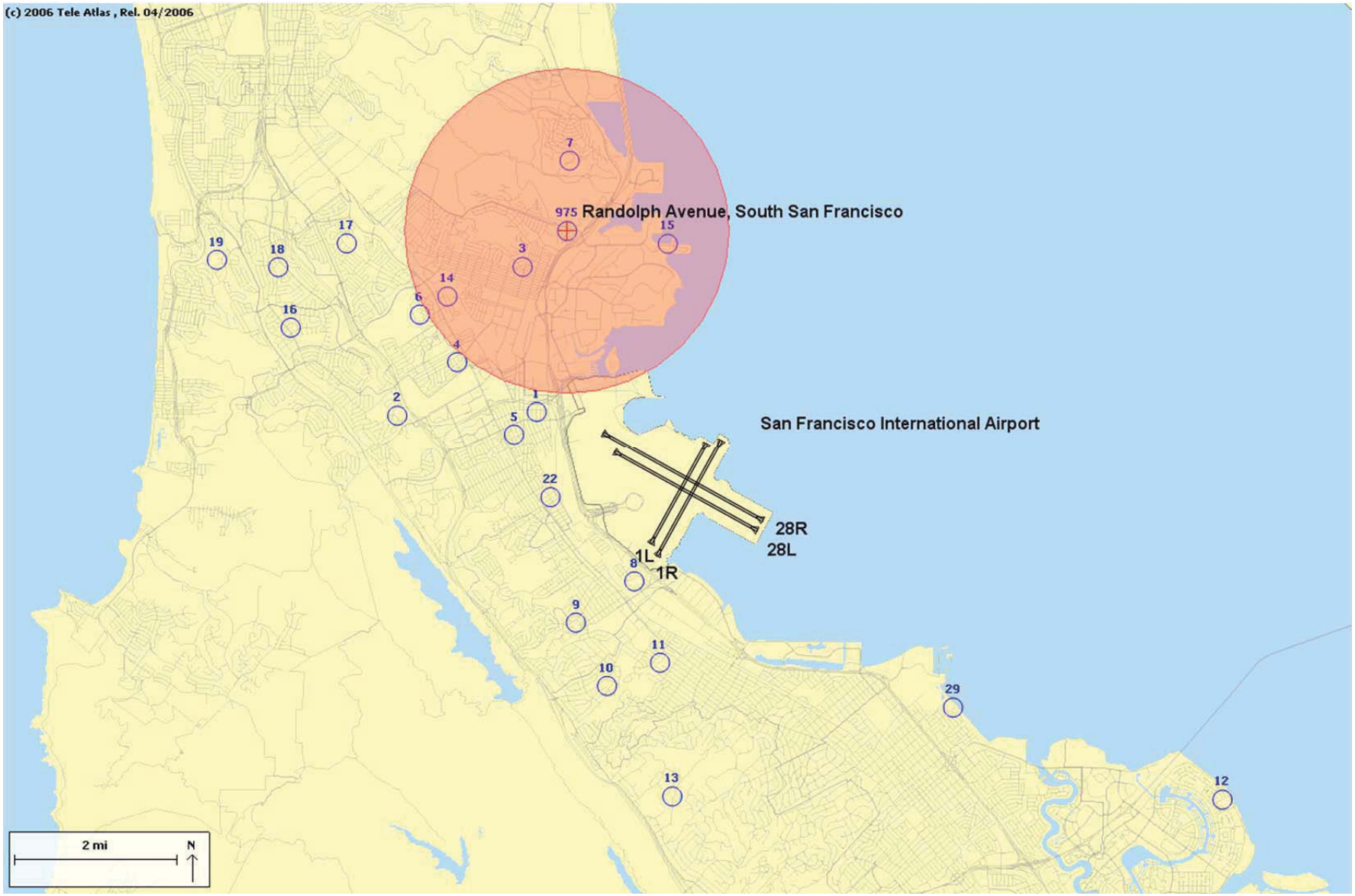


SOURCE: ESRI, 2014; San Mateo County Planning and Building Department, 2014; ESA Airports, 2014

2014 Noise Exposure Map – San Francisco International Airport

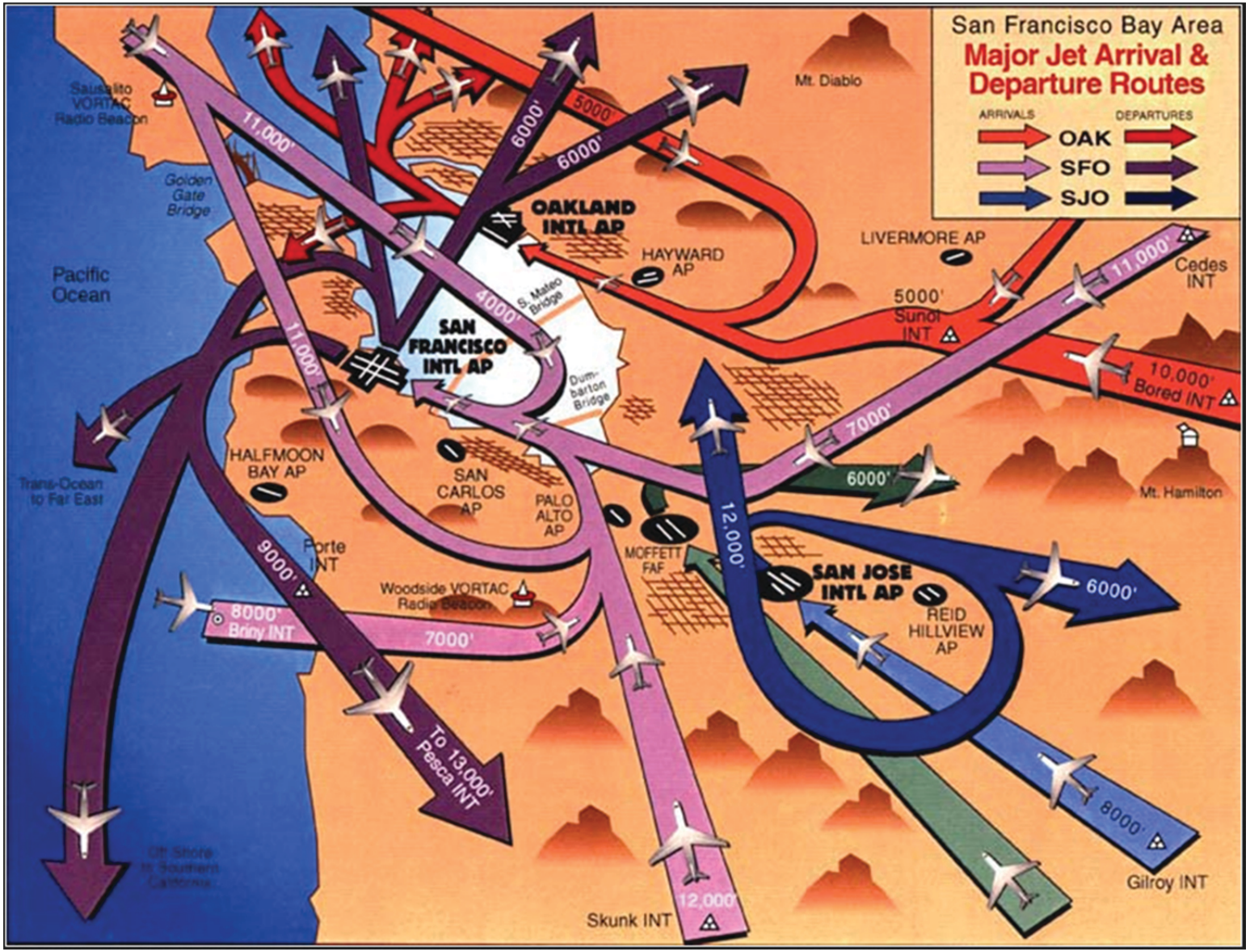
Figure 1 – Microphone and Tripod (left) and Monitor (right)

Noise Monitoring Location #975 (red colored circle - 2 mile radius) and Permanent Noise Monitor Sites

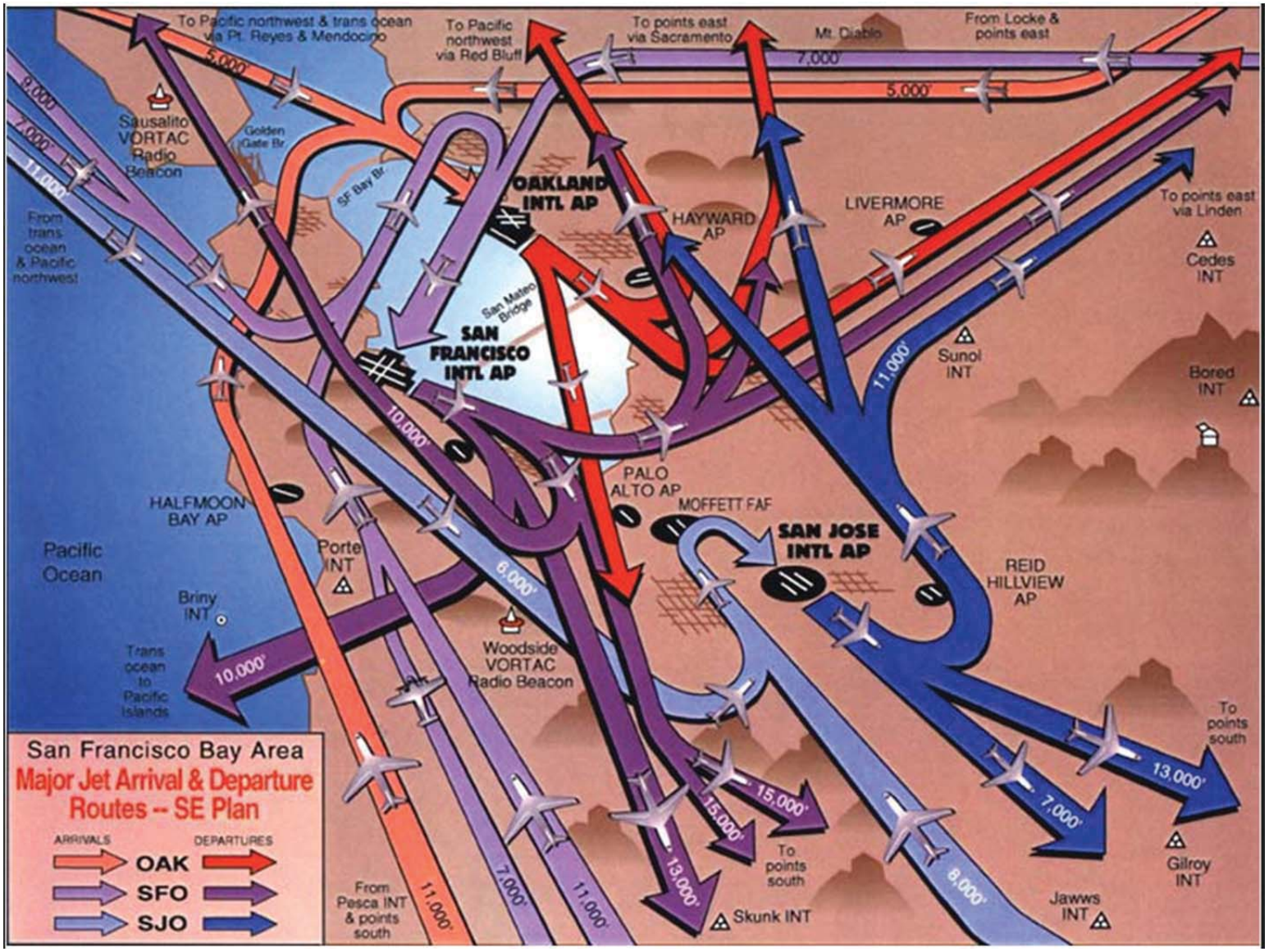


Appendix 1 – San Francisco Bay Area Major Jet Arrival and Departure Routes

West Flow Plan



Southeast Flow Plan



Aircraft Noise Terminology & Metric

Supplement

San Francisco International Airport Noise Abatement Office
P.O. Box 8097 San Francisco, CA 94128
(650) 821-5100

2014

Aircraft Noise Terminology & Metric

To assist in understanding the noise measurement results and the metric used in evaluating airport noise, this supplement provides a brief introduction to various acoustic terminologies used to express sound level. The terms discussed are the decibel (dB), A-weighted decibel (dBA), Maximum Noise Level (Lmax), Sound Exposure Level (SEL) and time-weighted, cumulative metric known as Community Noise Equivalent Level (CNEL).

The **decibel (dB)** is the unit used to represent the change in sound pressure as a direct measurement of changes in amplitudes on array of frequencies. Decibels measure a scale from the threshold of human hearing – 0 dB, 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 10 dB is perceived by our ears as a doubling of noise. Most sounds we experience in our day-to-day lives vary between 30 dB and 100 dB. Figure 1 depicts decibel levels of common sounds.

A-weighted decibel (dBA) is sound pressure levels filtered with an "A" weighted filter de-emphasizing level changes that occur at lower frequencies (those below 500 Hertz) and also at very high frequencies above 10,0000 Hertz where people generally do not hear as well. The normal frequency range of hearing for most people is from a low of 500 Hertz to a high of 10,000 Hertz. This filter closely matches our ears' sensitivity to sound. As a result, an aircraft noise event with a higher A-weighted sound level is perceived to be louder than an aircraft noise event with a lower A-weighted sound level. This correlation with our perception of loudness is the reason that A-weighted sound levels are used to evaluate environmental noise sources.

The sound level heard during an arrival or departure of an aircraft varies as a function of the distance from the aircraft to the person hearing the noise and as a function of the direction of the aircraft noise source. As the aircraft approaches the person, the sound level increases and as the aircraft moves away from the person, the sound level decreases. The effect of noise exposure during such an event can be described in terms of either the Maximum Sound Level or the Sound Exposure Level of an individual aircraft noise event.

The **Maximum Sound Level (Lmax)** represents the highest instantaneous noise level heard during a single aircraft overflight. However, it provides no information on the duration (length) of the noise exposure. Thus, two events with the exact Lmax may produce completely different total exposures. While some people will be annoyed by events having shorter duration, majority of people are more likely to be highly annoyed with longer events continuing for extended period of time. To account for differing durations of an event, Sound Exposure Level is used to quantify total noise exposure for a single aircraft overflight.

The **Sound Exposure Level (SEL)** is the total sound energy above an established threshold for a single event considering both intensity and length of the event all compressed into 1 second. The SEL of any noise event is the entire event's total energy expressed in a reference period time as though it had occurred within one second. A noise event having a Lmax of 80 dbA and lasting 1 second would have a SEL of 80 dBA. But if that event lasted 2 seconds long, the SEL would be 83 dBA. Two events with the same intensity but different durations can be differentiated with the longer duration event having a higher SEL. For locations relatively close to an airport, the SEL for most aircraft departures will usually be about 10 decibels higher than the corresponding Lmax. For example, an aircraft departure producing a maximum sound level of 70 dB at a particular location would be expected to produce an SEL value of about 80 dB at the same location. SEL gives us a common basis for comparing noise events that matches our instinctive impression – the higher the SEL, the more annoying it is likely to be. Figure 2 is a graphic representation of a typical aircraft noise event along with these terminologies.

In the example below, the SEL is calculated for an aircraft noise event that has a duration of 5 seconds and a Lmax of 65 dBA. This noise event is numerically equivalent to a SEL of 69.6 dBA.

Sound Exposure Level Formula:

$$SEL = 10 * \log_{10}\left(\sum_{i=1}^{n} 10^{L_i/10}\right)$$

Where SEL = sound exposure level
L_i = sound level for a given one second time period
n = number of seconds during the measurement period

SEL calculation example:

The rows below list the 1 second decibel levels and the corresponding energy levels of the 5 seconds duration aircraft noise event. The energy levels are summed together in order to calculate the SEL value of the aircraft noise event.

Seconds	Sound Level	Energy
1	60 dB	1000000.0
2	63 dB	1995262.3
3	65 dB (LMax)	3162277.7
4	63 dB	1995262.3
5	60 dB	1000000.0
	Total Energy	9152802.3
	Aircraft Noise Event's SEL	**69.6 dB**

The **Community Noise Equivalent Level (CNEL)** metric is used to assess and regulate aircraft noise exposure in communities surrounding airports located in California. Federal Government approved and defined in the California Airport Noise Standards, this cumulative metric represents the average daytime noise level during a 24-hour day and adjusted to an equivalent level to account for increased sensitivity to aircraft noise during evening and nighttime periods relative to the daytime. CNEL applies a 4.77 dBA weighting to all aircraft events occurring during the 3 evening hours from 7:00 p.m. to 9:59:59 p.m. and a 10 dBA weighting to all aircraft events during the 9 nighttime hours from 10:00 p.m. to 6:59:59 a.m.

Aircraft CNEL is then derived using the SELs from all aircraft events for the 24 hour day. The Total CNEL will include all aircraft events as well as other noise events generated in the community during the corresponding time period. Typically, Total CNEL in our environment ranges from a low of 40-45 dBA in very quiet locations to 80-85 dBA immediately adjacent to an active noise source – busy traffic route or active airport. Figure 3 shows representative values of CNEL in typically different environments. Aircraft CNEL greater than 65 dBA CNEL within a residential property line is incompatible to airport operations. CNEL is calculated using the following formula:

$$CNEL = 10 * \log_{10}\left(\left[\sum_{i=1}^{n} 10^{SEL_i/10} + \sum_{i=n+1}^{m} 10^{(SEL_i+4.8)/10} + \sum_{i=m+1}^{r} 10^{(SEL_i+10)/10}\right]\right) - 49.4$$

Day Evening Night

CNEL calculation example showing 10 aircraft noise events in a 24 hour period:

Time of Day	Hour	SEL (dB)	Weighting (dB)	Weighted SEL (dB)	Energy
Night	Midnight	86.1	10	96.1	4073802778.0
Night	1:00 a.m.		10		
Night	2:00 a.m.		10		
Night	3:00 a.m.		10		
Night	4:00 a.m.		10		
Night	5:00 a.m.	90.0	10	100.0	10000000000.0
Night	6:00 a.m.	86.1	10	96.1	4073802778.0
Day	7:00 a.m.		0		
Day	8:00 a.m.	93.6	0	93.6	2290867652.8
Day	9:00 a.m.		0		
Day	10:00 a.m.	82.6	0	82.6	181970085.9
Day	11:00 a.m.		0		
Day	Noon	90.3	0	90.3	1071519305.2
Day	1:00 p.m.		0		
Day	2:00 p.m.		0		
Day	3:00 p.m.		0		
Day	4:00 p.m.		0		
Day	5:00 p.m.	94.8	0	94.8	3019951720.4
Day	6:00 p.m.		0		
Evening	7:00 p.m.		4.77		
Evening	8:00 p.m.		4.77		
Evening	9:00 p.m.	86.1	4.77	90.9	1221799660.2
Night	10:00 p.m.	85.2	10	95.2	3311311214.8
Night	11:00 p.m.	89.5	10	99.5	8912509381.3
				Total Energy	38157534576.7
				Aircraft CNEL	**56.4 dB**

Figure 1 – Common Sound Levels

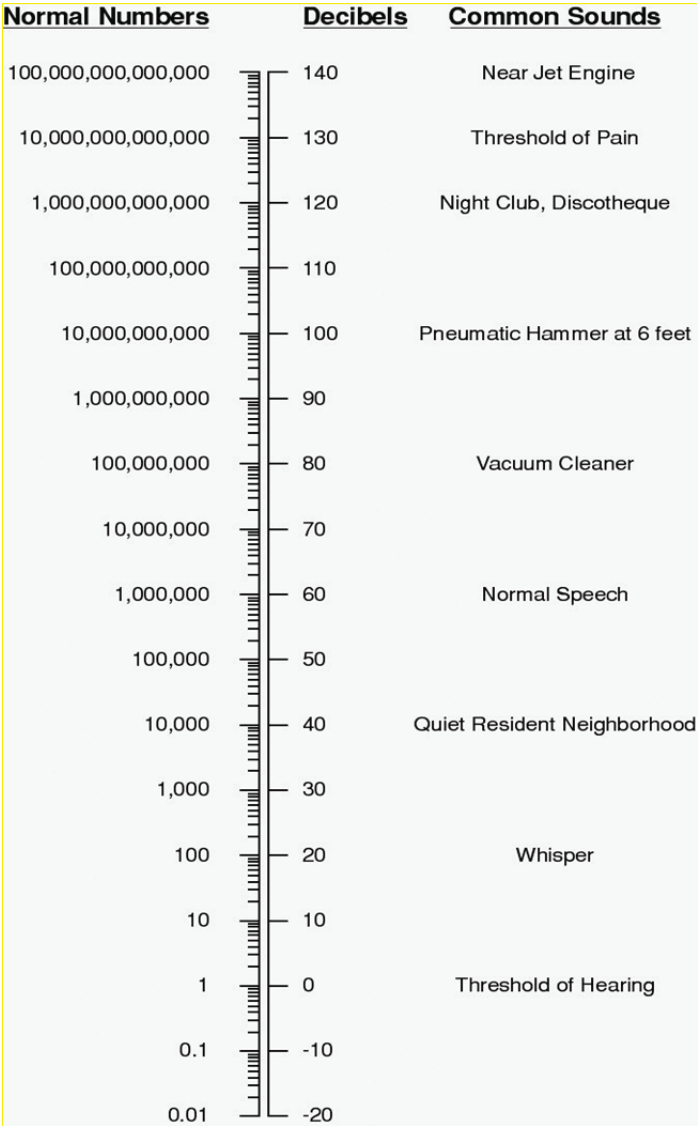


Figure 2 – Typical Aircraft Noise Event

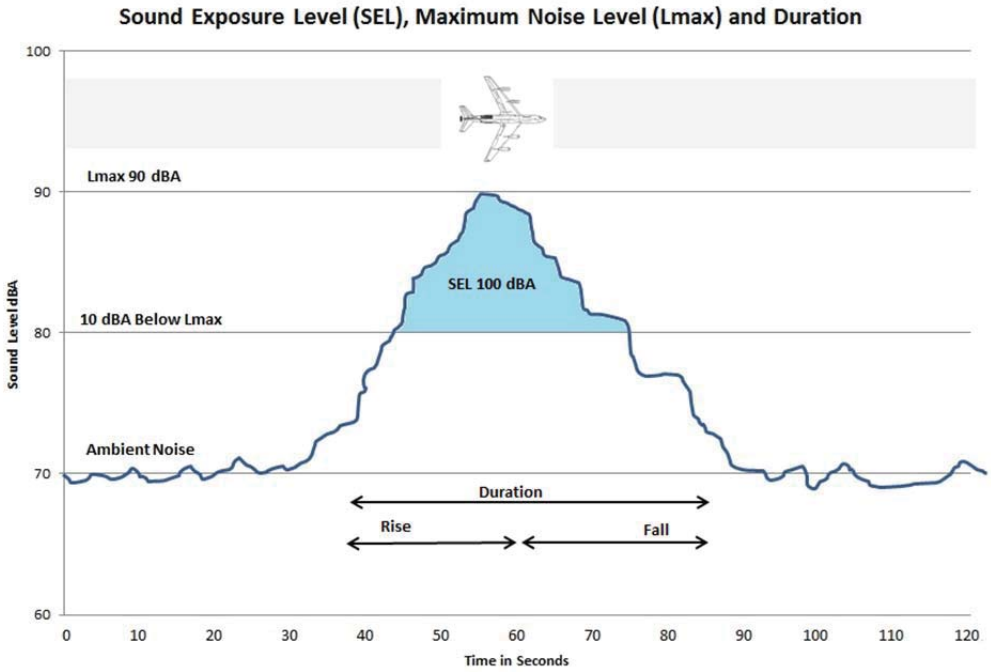
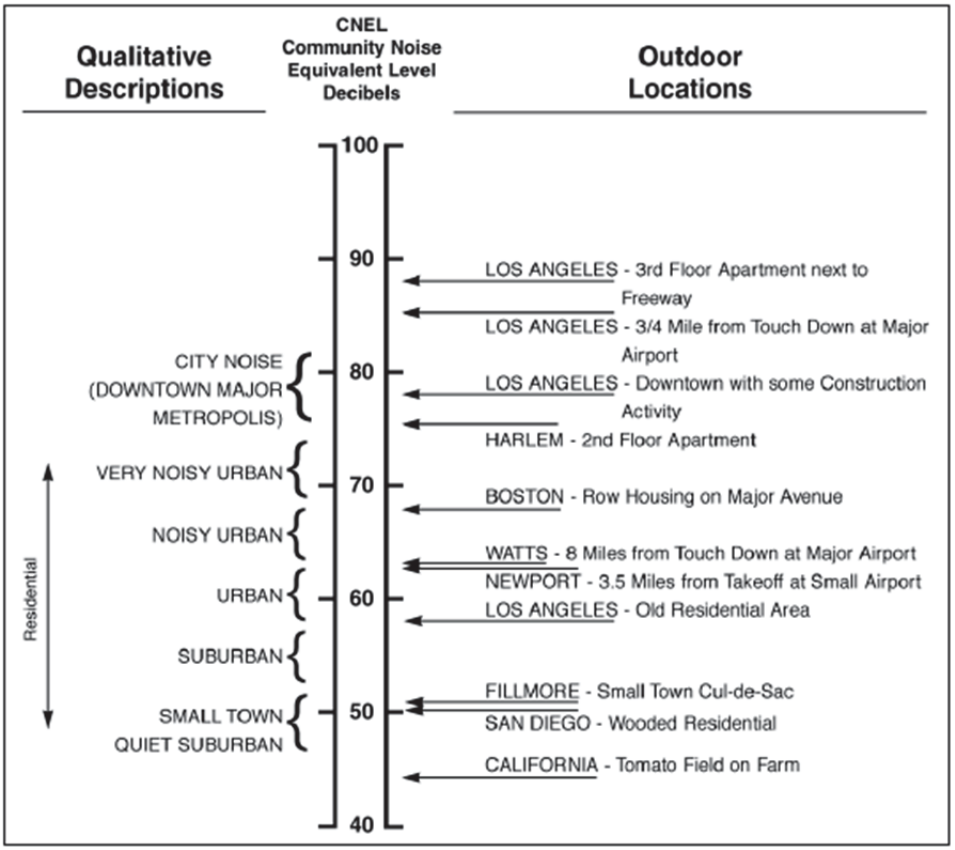


Figure 3 – Representative Cumulative Sound Levels



Congress of the United States
Washington, DC 20515

September 12, 2014

Michael P. Huerta
Administrator
U.S. Department of Transportation
Federal Aviation Administration
800 Independence Avenue, SW
Washington, DC 20591

Dear Administrator Huerta:

As Members of Congress who represent thousands of constituents negatively affected by airplane noise, we write to express our disappointment in the lack of progress on the part of the Federal Aviation Administration (FAA) to address growing noise pollution in our districts and the negative effects noise pollution has on the health, well-being, and property values of our constituents. Rather than addressing this issue piecemeal in fragmented areas of the nation, we believe it is time for the FAA to tackle this issue on a national level by changing the standard by which it determines acceptable noise pollution. The current 65 decibel Day-Night Average Sound Level (DNL) metric is outdated and disconnected from the real impact that air traffic noise is having on our constituents and should be lowered to a more reasonable standard of 55 decibel DNL.

Although we represent different airports with unique regulations and operating procedures, we are united in our call for lowering the current 65 DNL metric. We believe the 65 DNL, which has been in place since the late 1970s, is no longer a reliable measure of the true impact of aircraft noise. Since the 65 DNL was instituted by the FAA in its Aviation Noise Abatement Policy of 1976, airplane traffic has increased dramatically and will continue to do so over the next two decades. The FAA's own Aerospace Forecast projects that revenue passenger miles—the standard for measuring commercial air traffic volume—will nearly double over the next twenty years. Similarly, the number of operations at FAA and contract towers is expected to increase by more than 45 percent from current levels.

It is not just our communities that question the FAA's use of the 65 DNL. Support for a lower DNL standard, specifically 55 DNL, originates from a 1974 report from the U.S. Environmental Protection Agency (EPA) that was the beginning of a long line of studies – and a recent flurry of complaints – that support the need to lower the FAA's DNL standard. The FAA's use of 65 DNL may be based upon severe and immediate health impacts, but it is essential the FAA consider quality of life, long-term health impacts, home values and overall economic impact. As such, we urge the FAA to expedite its ongoing four-year-long review of the 65 DNL metric and institute overdue and much needed changes. Telling constituents that the FAA's study is not near completion after five years offers them cold comfort when jet noise is blanketing their communities.

We also urge the FAA to utilize Next Generation Air Transportation System (NextGen) technologies to minimize airplane noise. NextGen technologies offer incredible benefits when used correctly, including increased safety and efficiency in air travel for the airline industry and its passengers. However, it appears that the FAA has not fully considered the consequences of NextGen's implementation on airplane noise levels. It is imperative that the FAA properly balance emission and noise concerns. This includes variations of daily flight routes, continuous descent approaches, and rapid ascents. We have seen success using continuous descent in some areas and hope you will institute a national policy to improve the NextGen implementation, with an emphasis on reaching 55 DNL nationally.

We understand that air travel is a key component of the U.S. economy, and we appreciate that commercial aircraft are quieter than ever. However, each day many of our constituents are subjected to unreasonable levels of airplane noise. Economic growth—and efficient, safe air travel—should not be incompatible with vibrant, livable neighborhoods. By lowering its DNL standard, the FAA will greatly improve the lives of our constituents. We stand ready to assist you in achieving this goal, and ask you to inform us how we can help you in this task.

We look forward to your response and thank you in advance for working to achieve this important goal.

Sincerely,

STEVE ISRAEL
Member of Congress

MIKE QUIGLEY
Member of Congress

GRACE MENG
Member of Congress

MICHAEL E. CAPUANO
Member of Congress

JUDY CHU
Member of Congress

KATHERINE CLARK
Member of Congress

JOE CROWLEY
Member of Congress

TAMMY DUCKWORTH
Member of Congress

KEITH ELLISON
Member of Congress

ELIOT L. ENGEL
Member of Congress

ANNA G. ESHOO
Member of Congress

ALAN GRAYSON
Member of Congress

MICHAEL M. HONDA
Member of Congress

HAKEEM JEFFRIES
Member of Congress

JOHN LARSON
Member of Congress

ZOE LOFGREN
Member of Congress

STEPHEN F. LYNCH
Member of Congress

CAROLYN MCCARTHY
Member of Congress

GREGORY W. MEEKS
Member of Congress

JIM MORAN
Member of Congress

ELEANOR HOLMES NORTON
Member of Congress

JAN SCHAKOWSKY
Member of Congress

JOSE E. SERRANO
Member of Congress

JACKIE SPEIER
Member of Congress

MAXINE WATERS
Member of Congress

HENRY A. WAXMAN
Member of Congress

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AIRPORT NOISE NEWS

Regular Meeting # 292
October 1, 2014

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eTN Global Travel Industry News
Published on *eTurboNews (eTN)* (http://www.eturbonews.com)

Europe's first airline hub makes precision landing approaches possible

By *eTN Editor*
Created *4 Sep 2014 - 10:05pm*
Frankfurt Airport inaugurates new system
Source:
Frankfurt Airport

Photo from Frankfurt Airport

Frankfurt Airport (FRA) is the first international hub in Europe to commence regular operations of a satellite-supported precision approach system for aircraft called Ground Based Augmentation System (GBAS). A cooperative initiative of the airport, air traffic control, and the largest home-base carrier, GBAS was officially inaugurated on September 3 by Dr. Stefan Schulte, Fraport AG's executive board chairman; Robert Schickling, DFS Deutsche Flugsicherung GmbH's managing director of operations; and Kay Kratky, Deutsche Lufthansa AG's member of the board Passage.

"After only about 16 months of signing our cooperation agreement, we are pleased, together with our partners DFS and Lufthansa, officially to inaugurate GBAS at Frankfurt Airport," said Fraport AG executive board chairman Dr. Stefan Schulte at the launch ceremony. "GBAS underscores once again our international leadership in new technologies and also shows how we are consistently implementing elements of the catalog of measures being developed within the Alliance for Noise Abatement at Frankfurt," stressed Schulte.

"GBAS heralds a new age in flight navigation," declared DFS managing director of operations, Robert Schickling. "Together with Fraport and Lufthansa, we are proud to be operating this new satellite-supported landing system at the European continent's second largest airport. I am convinced that GBAS, in the long term, will eventually play a very important role at Frankfurt Airport and far beyond."

"After retrofitting of our Airbus A320 fleet with vortex generators as an active noise abatement measure, we are now commencing GBAS operations in cooperation with Fraport and DFS. Today, we are pleased that our Boeing 747-800 is the first plane officially to use this system for landing at our largest hub. Soon, more than thirty Lufthansa Airbus A380 and Boeing B747-8 jets will be using GBAS to land," said Kay Kratky, Deutsche Lufthansa AG's member of the board Passage for the Frankfurt hub and operations.

The inauguration of GBAS by the three partners once again underlines how Frankfurt Airport is serving as an international role model in the area of active noise abatement initiatives and technologies. Fraport, DFS and Deutsche Lufthansa expect GBAS to play an important part for increasing efficiency and achieving noise-reducing approach procedures. The primary advantage of GBAS is that a wide range of approach procedures can be offered with a single system. Up to 49 approach flights to different runways can be now be supported by a single GBAS station. Because of the diversity of flight approach options, there is the opportunity to develop new approach route solutions, thereby relieving noise blight for area residents. Furthermore, GBAS requires far less testing than an ILS system that has to be checked and calibrated regularly with the aid of specially-equipped aircraft.

In the long term, the new landing approach system will also be able to facilitate segmented landing approaches – with the goal of further reducing the impact of aircraft noise in the region. In the medium term, GBAS also will make it possible to introduce steeper approaches on all of FRA's landing runways, increasing from currently 3 degrees to 3.2 degrees – up until now only possible for Runway Northwest. Along with the GBAS installation on the ground, it is necessary for aircraft to be equipped with the corresponding receivers. To first utilization potential of the system is possible with GBAS-capable aircraft types such as the Airbus A380, Boeing 747-8, 787, and 737-NG. The cost for installing and operating the GBAS ground station runs at about €5 million, while equipping the aircraft for GBAS also requires investment in the millions of euros.

For precision approach flights, GBAS provides digital guidance and works using the so-called Differential Global Positioning System (DGPS) procedure. The new technology delivers considerable advantages compared to the existing approach procedure used at FRA. For example, satellite navigation based on the American Global Positioning System (GPS) offers accuracy within 10 meters. Furthermore, this accuracy can be increased with the aid of GBAS a ground station. Signals transmitted by the GPS satellites are received by the GBAS system on the ground, compared with its own position, and then transmitted to the landing aircraft as a

corrected signal with approach coordinates. In this manner, the approaching aircraft can determine its own position with much more accuracy.

When all aircraft in the future are equipped with the corresponding GBAS onboard receivers, then GBAS will be able to fully replace the instrument landing system (ILS) technology.

PHOTO: Frankfurt Airport's GBAS partners (DFS, Fraport & Lufthansa) officially launch the GBAS satellite-supported precision approach system on September 3, 2014; from left to right: Kay Kratky (Lufthansa's Passage Board Member), Robert Schickling (DFS Deutsche Flugsicherung's Managing Director – Germany's air navigation services company) and Dr. Stefan Schulte (Fraport's CEO).

Europe & Israel

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As aircraft become quieter, health concerns about noise grow louder

Published: 15/07/2014 - 08:29 | **Updated:** 17/07/2014 - 16:46

The Russian-built IL-76 airliner, banned from Europe due to its high noise signature. [Colin Cooke/Flickr]

Millions of urban Europeans are exposed to aviation noise that contributes to stress, high blood pressure and even weight gain, say health specialists who want stronger measures to make flying quieter.

While new-generation jet engines are on average 75% quieter than than their 20th century predecessors, the advance in technology has been offset by a steady rise in flights and a demand for bigger passenger planes.

Stephen Stansfeld, a noise expert who heads the Centre for Psychiatry at Queen Mary University of London, says there is little doubt that “repeated and prolonged exposure” to the commotion of aviation is linked to heart and blood pressure problems, and can cause diminished learning in children.

People’s annoyance with air traffic also seems to be rising, “and it’s not entirely understood why that should be, whether it is greater sensitivity to airport operations, or whether it’s due to the fact there is more change around airports in terms of noise exposure which could sensitise people,” Stansfeld told EurActiv in a telephone interview. “The noise level from individual aircraft has gone down, but of course there are many more of them.”

Marie-Eve Héroux, technical officer on air quality and noise at the World Health Organization’s Centre for Environment and Health in Bonn, points to “significant research” into the health impact of transportation noise in general. As examples, she cites sleep disturbance, annoyance, cognitive impairment, ringing sounds in ears, as well as a rise in cardiovascular diseases, hearing impairment and adverse birth outcomes.

“Compelling evidence points at a significant burden of disease from noise and provides convincing arguments for strong action to properly manage noise sources, including aircraft noise,” she told EurActiv in an e-mail.

Medical researchers at the Karolinska Institutet in Stockholm added weight to the potential impact of noise on public health. In a study of people living near the Swedish capital's Arlanda Airport, the research team found that prolonged exposure to aircraft noise caused a "statistically significant" increase in waist sizes.

New noise regulations

Policymakers have not been deaf to public health concerns. A new EU law (Regulation 598) is due to take effect on June 13, 2016, putting the EU in line with the International Civil Aviation Organization's "balanced approach" to reduce noise by encouraging airlines to capitalise on a new generation of quieter engines, improving airport planning and - as a last resort - imposing restrictions on night flights.

It remains to be seen how effective those measures will be.

Civic groups have expressed dismay that the EU did not set verifiable reduction targets or impose bans on nighttime operations, and continue to make their own noise. This spring, for instance, landing patterns over Brussels became a hot potato in parliamentary elections, while protesters held their 100th demonstration at Frankfurt Airport, accusing Europe's third largest aerodrome of harming neighbours' health and demanding measures to reduce noise levels.

Roads and rails make noise, too

Yet aviation alone is far from a lone culprit in transport noise pollution.

Overall, annual noise pollution from roads, rails and runways erase one million years of healthy living among urban residents of EU countries, and that may be a conservative estimate, according to a 2011 study by the World Health Organization (WHO) and the European Commission's Joint Research Centre (JRC).

The UN body uses a disability-adjusted life year - the gap between current and ideal health conditions - to measure environmental impacts on humans. When it comes to noise-induced problems from all forms of transporation, it calculates that 903,000 years are lost to disturbed sleep, 61,000 to cardiovascular disease, 45,000 to learning impairment in children, and 22,000 to tinnitus - or hearing-related problems.

The WHO-JRC study showed that about half of Europe's 285 million urban dwellers were regularly exposed to traffic noise above 55-decibels (dB) - a level WHO considers to be unacceptably high. That compares to five percent (14.3 million) for rail and four percent (11.4 million) for air traffic. More conservative industry estimates put the latter figure at closer to 3.5 million.

Still, a far higher percentage of people complained to the WHO-JRC researchers of being "highly annoyed" by airport noise, consistent with the findings of leading academic studies on noise pollution and particularly on the nighttime disturbances that trigger the biggest concerns.

WHO guidelines set 40 dB as the recommended nighttime outdoor target "to protect the public, including the most vulnerable groups such as children, the chronically ill and the elderly." The health organisation says 55 dB "is recommended as an interim target for the countries where the [nighttime guideline] cannot be achieved in the short term for various reasons, and where policy-makers choose to adopt a stepwise approach.

Making peace

Driven by confrontations with angry citizens, bad press and legislation, airports and airlines have taken steps to reduce their noise footprint. London's Heathrow has instituted a Noise Action Plan and public outreach programme that have won kudos even from traditional critics. Copenhagen's airport has imposed requirements on airlines - including restrictions on engine use during taxiing and requiring parked aircraft to connect to ground power rather than use onboard generators - steps designed to reduce noise and air pollution.

Meanwhile, airlines are investing in flying machines with quieter engines/components and aerodynamic features. The shift is not purely altruistic, though - planes that are quieter to operate also tend to gulp less fuel.

>> Read: [Heavy metal thunder: Aircraft grow quieter as rock drones on]()

Queen Mary University's Stansfeld acknowledges that aircraft are becoming quieter and that airports are more accommodating to complaints. Yet health problems associated with aviation noise have not declined and - alluding to the controversial plans for a third runway at London Heathrow - he says public health may be taking a back seat to economics.

"It seems to me the economic considerations - rightly or wrongly - are predominating at the moment and the environmental considerations take rather a second place," he said, while pointing out that jobs are important too. "Obviously [there are] positive effects on health from full employment and airports do provide full employment or at least a very good source of employment."

Finding a balance between healthy people and a sound economy aren't simple, he says. "Ultimately, what one is hoping is that there will be much quieter aircraft."

POSITIONS:

Asked about the new EU airport noise regulation that is due to take effect in 2016, **Marie-Eve Héroux, technical officer on air quality and Noise at the World Health Organization's Centre for Environment** and Health in Bonn, told EurActiv by e-mail: "WHO welcomes strengthened action from the European Union (EU) in assessing the exposure of its citizens to environmental noise, with a specific process to limit aircraft noise. The new EU regulation incorporates the international rules introduced by the International Civil Aviation Organization, which is a United Nations specialised agency. It also highlights the continued need to measure and manage noise pollution according to EU Directives 2002/49/EC. As it does not focus on specific levels of exposure to noise in the population, it cannot be directly compared to existing WHO guidelines on noise."

Karolinska Institutet medical researchers Charlotta Eriksson, Agneta Hilding, Andrei Pyko, Gösta Bluhm, Göran Pershagen and Claes-Göran Östenson - the authors of a study in a study published in the July 2014 issue of the journal *Environmental Health Perspectives* - said: "Although there is a lack of epidemiological studies linking long-term noise exposure to overweight or obesity, substantial evidence links noise to a stress response and also links chronic stress to impaired metabolic functions. In addition, noise exposure is commonly associated with sleep disturbances, which are known to have metabolic complications."

TIMELINE:

- **June 14-20:** Farnborough International Airshow
- **June 13, 2016:** EU regulation on airport noise takes effect

EXTERNAL LINKS:

Research

- WHO/EU: Burden of disease from environmental noise (2011)
- WHO: Guidelines for community noise (2009)
- Joint Research Center: ENNAH – European Network on Noise and Health (2013)
- European Heart Journal: Cardiovascular effects of environmental noise exposure
- HYENA: Hypertension and Exposure to Noise near Airports (2002-2006)
- Karolinska Institutet (Stockholm): Long-Term Aircraft Noise Exposure and Body Mass Index, Waist Circumference, and Type 2 Diabetes: A Prospective Study

European Union

- Eurocontrol: Seven-Year Forecast (February 2014)

- European Commission: 'Better Airports' Package (December 2011) [FR] [DE]
- Official Journal of the EU: Regulation 598/2014 ('noise-related operating restrictions at airports') [EN]
- EU: Environmental Noise Directive (2002)

International organisations

- ICAO: A balanced approach to aviation noise
- IATA: Balanced approach to aircraft noise

Trade and industry

- Farnborough International Airshow: Homepage
- Copenhagen Airports: Environment

EurActiv.com

Sections:
AVIATION TRANSPORT HEALTH & CONSUMERS

Locations:
FARNBOROUGH AIRSHOW

Topics:
NOISE POLLUTION AVIATION AIRPORTS NOISE REDUCTION AIRPORTS

BACKGROUND

Airports at London, Frankfurt, Paris, Amsterdam, Istanbul, Madrid and Munich rank among the world's 30 busiest in passenger volume and air traffic is forecast to grow steadily, according to the Airports Council International's quarterly Preliminary World Airport Traffic and Rankings.

Eurocontrol, the multinational civil-military air traffic management and safety organisation, forecasts that the number of flights will grow at an annual 2.7% clip starting in 2015, while the 2008 peak of 10.1 million flights expected to be reached again in 2016 in the 28 EU states plus 12 other Eurocontrol participating countries. The growth rate for 2014 is forecast at 1.2%.

Airport Noise Report

A weekly update on litigation, regulations, and technological developments

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Noise Policy

24 MEMBERS OF CONGRESS ASK FAA TO REVISE NATIONAL NOISE POLICY; LOWER 65 DNL TO 55

Some 24 members of Congress urged FAA Administrator Michael Huerta in a Sept. 12 letter to lower the current 65 dB DNL threshold for residential compatibility around airports to "a more reasonable standard" of 55 dB DNL.

"As Members of Congress who represent thousands of constituents negatively affected by airplane noise, we write to express our disappointment in the lack of progress on the part of the Federal Aviation Administration to address growing noise pollution in our districts and the negative effects noise pollution has on the health, well-being, and property values of our constituents," the congressional representatives wrote.

Most of those signing the letter represent districts near JFK and LaGuardia airports in New York, Chicago O'Hare International, Los Angeles International, Minneapolis-St. Paul International, and Boston Logan International where residents have mobilized politically to try to roll back recent air route changes done to increase airport capacity.

(Continued on p. 119)

Environmental Review

FAA ISSUES GUIDANCE ON DOCUMENTING CATEX'S REVIEWED BY OFFICE OF AIRPORTS

On Oct. 1, the Federal Aviation Administration's first Standard Operating Procedure (SOP) on CATEX Determinations will become effective.

The new SOP provides guidance to FAA Airport Planning and Programming personnel and personnel in FAA regional offices on how to document a Categorical Exclusion (CATEX) for airport actions reviewed by the Office of Airports.

The SOP will be of interest to airport sponsors, airport consultants, and state aeronautical agencies. However, it does not apply to the two new categorical exclusions provided for Performance-based Navigation Procedures in the FAA Modernization and Reform Act of 2012, known as CatEx1 and CatEx2. These CATEXs are administered through the FAA Air Traffic Organization.

Council on Environmental Quality regulations provide for Categorical Exclusions (CATEXs) under the National Environmental Policy Act where there is no potential for significant impacts, including significant noise impacts.

A CATEX is not an exemption or waiver from NEPA review, the SOP explains; it is a level of NEPA review. An Environmental Assessment (EA) or Environmental Impact Statement (EIS) is not required if a proposed action falls within the scope of

(Continued on p. 120)

In This Issue…

65 DNL, from p. 119

The joint letter is an indication that these citizen groups are now beginning to coalesce to augment their political power.

"Rather than addressing this issue piecemeal in fragmented areas of the nation, we believe it is time for the FAA to tackle this issue on a national level by changing the standard by which it determines acceptable noise pollution," the congressional representatives told Huerta.

"The current 65 decibel Day-Night Average Sound Level (DNL) metric is outdated and disconnected from the real impact that air traffic noise is having on our constituents and should be lowered to a more reasonable standard of 55 decibel DNL."

"Although we represent different airports with unique regulations and operating procedures, we are united in our call for lowering the current 65 DNL metric. We believe the 65 DNL, which has been in place since the late 1970s, is no longer a reliable measure of the true impact of aircraft noise.

… "We urge the FAA to expedite its ongoing four-year-long review of the 65 DNL metric and institute overdue and much needed changes. Telling constituents that the FAA's study is not near completion after five years offers them cold comfort when jet noise is blanketing their communities."

The congressional representatives also urged the FAA to utilize Next Generation Air Transportation System (NextGen) technologies to minimize airplane noise, telling Huerta "it appears that the FAA has not fully considered the consequences of NextGen's implementation on airplane noise levels."

"It is imperative that the FAA properly balance emission and noise concerns. This includes variations of daily flight routes, continuous descent approaches, and rapid ascents. We have seen success using continuous descent in some areas and hope you will institute a national policy to improve the NextGen implementation, with an emphasis on reaching 55 DNL nationally," they wrote.

The letter was signed by the following congressional representatives; all Democrats: Steve Israel (NY), Grace Meng (NY), Eliot Engel (NY) Hakeem Jeffries (NY), Carolyn McCarthy (NY), Gregory Meeks (NY), Jose Serrano (NY), Mike Quigley (IL), Tammy Duckworth (IL), Jan Schakowsky (IL), Michael Capuano (MA) Katherine Clark (MA), Stephen Lynch (MA), Keith Ellison (MN), Judy Chu (CA), Anna Eshoo (CA), Michael Honda (CA), Zoe Lofgren (CA), Jackie Speier (CA), Maxine Waters (CA), Henry Waxman (CA), John Larson (CT), Jim Moran (VA), and Eleanor Holmes Norton (D.C.)

"The constant barrage of airplane noise over my district in Queens, New York, continues to ruin the quality of life of my constituents," said Rep. Meng (D-NY) in a press release issued with the letter.

"Time and again, the FAA has carelessly ignored the needs and concerns of the communities I represent by doing virtually nothing to address the problem of increased aircraft noise. That is why it's time to take this fight to the national level, and demanding a lower DNL is the best approach to securing relief from the blistering airplane noise that has plagued our area for far too long."

"Airplane noise is having a significant negative impact on the quality of life of too many of my constituents in Queens and Nassau County, and I know the problem isn't just confined to my district," added Rep. Steve Isreal (D-NY).

"That's why I'm joining colleagues from across the country who also have constituents suffering to call on the FAA to change the national standard at which the agency determines an acceptable level of noise from aircraft. It's time for the FAA to listen to the needs of our constituents and our communities, and we will continue fighting until they do so."

"My constituents back home in Chicago are facing unprecedented noise pollution that is eroding their quality of life and impacting their health," said Rep. Mike Quigley (D-IL).

"Our residents can't get a decent night's sleep or even enjoy quality time outside with their children. These are families, not statistics, and they deserve a national standard that properly addresses the unacceptable amount of noise pollution they've come to experience day in and day out."

The congressional representatives want the current 65 dB DNL threshold that FAA uses to determine significant noise impact lowered to 55 dB DNL to increase eligibility for airport sound insulation programs. However, even if that would occur, Congress would need to increase funding for airport sound insulation programs, which it has been decreasing in recent years.

Annoyance Survey

PUBLIC COMMENTS INVITED ON FAA REQUEST TO DO SURVEY

The public has until Oct. 14 to submitted comments regarding the Federal Aviation Administration's intention to seek Office of Management and Budget (OMB) approval to conduct a nation-wide survey to update the relationship between aircraft noise exposure and its effect on communities around U.S. airports.

The survey will be conducted in communities around 20 unidentified airports. FAA will use the survey findings to determine whether it needs to update its national aviation noise policy, which is based on a 65 dB DNL threshold of residential compatibility with airports.

Some 12,147 residents near airports will be surveyed via mail and telephone. It is expected to take respondents five minutes to conduct the mail survey and 20 minutes to complete the telephone survey, which will be administered to selected respondents. The "estimated total annual burden" of the survey is 1,544 hours.

In a Sept. 12 *Federal Register* announcement, FAA asked the public to comment on any aspect of the survey, including:

• Whether the proposed collection of information is necessary for FAA's performance;

• The accuracy of the estimated burden;

• Ways for FAA to enhance the quality, utility and clarity of the information collection; and

• Ways that the burden could be minimized without reducing the quality of the collected information.

The FAA will summarize and/or include the comments it receives in its request for OMB's clearance of this information collection.

On June 12, FAA issued an earlier request for public comment on the paperwork burden of its planned annoyance survey. It received seven comments in response to that notice.

Comments should reference "Neighborhood Environmental Survey" and be addressed to the attention of the Desk Officer, Department of Transportation/FAA, and sent via electronic mail to oira_submission@omb.eop.gov, or faxed to (202) 395–6974, or mailed to the Office of Information and Regulatory Affairs, Office of Management and Budget, Docket Library, Room 10102, 725 17th Street NW., Washington, DC 20503.

For further information, contact Kathy DePaepe at tel: (405) 954-9362; email: Kathy.DePaepe@faa.gov

Sound Insulation

INGLEWOOD, L.A. COUNTY, MIDWAY GET INSULATION FUNDING

Rep. Maxine Waters (D-CA) announced on Sept. 11 that the Federal Aviation Administration has awarded a $10 million grant to the city of Inglewood for residential noise mitigation.

"Although Inglewood has previously received noise mitigation funds, not all residents have been covered and many have been waiting for years for soundproofing for their homes," Waters said.

The grant may be used to provide residential noise mitigation for up to 480 dwellings in the city, which is situated below the LAX flight path.

In related news, the Los Angeles Board of Airport Commissioners on Aug. 21 authorized a Letter of Agreement between Los Angeles World Airports and Los Angeles County for its Residential Sound Insulation Grant Program and to release $15.42 million for an eligible noise-mitigation project.

The LAWA grant, combined with a $5-million grant from the FAA, will enable the County of Los Angeles to soundproof 624 dwelling units in the Athens, Del Air, and Lennox communities that are impacted by operations at Los Angeles International Airport (LAX).

The project cost covers acoustical, architectural, engineering, construction and administrative activities. Construction contractors typically install double-paned windows, solid-core doors, fireplace doors and dampers, attic baffles, insulation, and other elements to achieve a targeted interior noise level of 45 decibels. The work is expected to take less than 15 months to complete.

To date, LAWA has awarded $66 million in sound-insulation grants and the FAA has awarded $62 million to the county, for a total of $128 million.

The grant is in accordance with the LAX Master Plan Stipulated Settlement Agreement reached in February 2006. The agreement calls for LAWA, the Los Angeles City department that owns and operates LAX, to provide up to $22.5 million annually through 2015 to the County of Los Angeles and the cities of El Segundo and Inglewood for noise-mitigation grants.

Midway Sound Insulation Grant

In related news, Rep. Dan Lipinski (D-IL) announced Sept. 15 that the FAA has awarded a $10 million grant for noise mitigation measures around Midway Airport, which will provide sound insulation for 364 homes.

"Midway Airport is a well-run, economic engine in the region, serving millions of passengers a year and nearby communities," said Rep Lipinski. "While the airport is a boon for area residents, having grown up less than a mile from Midway I know that issues such as airplane noise are a downside. That is why I am happy to help bring more federal funding for soundproofing area homes."

CATEX, from p. 118

a CATEX described in FAA Order 1050.1E (Environmental Impacts: Policies and Procedures) and FAA Order 5050.4B (National Environmental Policy Act Implementing Instructions for Airport Projects) and the following conditions can be met:

• There are no extraordinary circumstances; and

• Any extraordinary circumstances that are present can be eliminated or resolved through conservation measures included in the project design; or

• Any extraordinary circumstances that are present can be otherwise resolved through the completion of special purpose law requirements.

Section 5-2 of FAA Order 1050.1E lists 12 circumstances that constitute extraordinary circumstances under NEPA. The following two pertain to aircraft noise:

• An impact on noise levels of noise-sensitive areas.

• Effects on the quality of the human environment that are likely to be highly controversial on environmental grounds. The term "highly controversial" means a substantial dispute exists as to the size, nature, or effect of a proposed Federal action.

The effects of an action are considered highly controversial "when reasonable disagreement exists over the project's risks of causing environmental harm. Mere opposition to a project is not sufficient to be considered highly controversial on environmental grounds. Opposition on environmental grounds by a Federal, state, or local government agency or by a tribe or a substantial number of the persons affected by the action should be considered in determining whether or not reasonable disagreement regarding the effects of a proposed

action exists." If either of these circumstances are present, a CATEX designation cannot be given.

FAA's new SOP includes Appendix A which poses questions on a range of environmental impacts, including noise, that must be answered in order to determine if a CATEX determination is warranted.

The SOP is available online at http://www.faa.gov/airports/resources/sops/media/arp-SOP-500-catex.pdf

Guidance Does Not Apply to CatEx1 or 2

The guidance in FAA's new SOP applies only to the agency's Airports Division actions and "has no bearing whatsoever" on the two new categorical exclusions for PBN procedures provided in the FAA Modernization and Reform Act of 2012, an FAA spokeswoman said.

On Dec. 6, 2012, FAA issued a memorandum (FAA Order 1050.1E, Change 1, Guidance Memo #5) providing guidance on implementing Section 213(c)(1) of the FAA Modernization Act, which states: "Navigation performance and area navigation procedures developed, certified, published, or implemented under this section shall be presumed to be covered by a categorical exclusion (as defined in setion 1508.4 of title 40, Code of Federal Regulations) under chapter 3 of FAA Order 1050.1E unless the Administrator determines that extraordinary circumstances exist with respect to the procedure."

FAA's memo notes that this categorical exclusion (dubbed "CatEx1") applies only to RNAV and RNP procedures to be "developed, certified, published, or implemented" at the 29 large hub (Core) airports plus Memphis International Airport as well as at medium and small hub airports located within the same metroplex area as the Core Airports.

FAA's guidance on CatEx1 ended the requirement that environmental assessments be prepared for two categories of procedures that previously required an EA:

• New instrument approach procedures, departure procedures, en route procedures, and modifications to currently approved instrument procedures which routinely route aircraft over noise sensitive areas at less than 3,000 feet above ground level (AGL); and

• New or revised air traffic control procedures which routinely route air traffic over noise sensitive areas at less than 3,000 feet AGL.

The FAA is still in the process of developing a method for determining how to comply with Section 213(c)(2) of the Act, known as "CatEx2."

It provides a CATEX for PBN procedures if they would result "in measurable reductions in fuel consumption, carbon dioxide emissions, and noise on a per flight basis as compared to aircraft operations that follow existing instrument flight rule procedures in the same airspace."

FAA's Air Traffic Organization makes the determination as to whether PBN procedures qualify for CatEx1 or CatEx2.

AIRPORT NOISE REPORT

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San Francisco International Airport

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.

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

Center – See ARTCC.

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;00 PM – 9:59 PM) and nighttime (10 pm – 6:59 am) 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 thought there were ten. This results in a 4.77 and 10 decibel penalty

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.

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, Environ 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.

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.

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

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.

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.

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:	**650.821.5112**
Noise Complaint Line:	**650.821.4736**
Toll Free Noise Complaint Line:	**877.206.8290**
Noise Complaint E-mail:	**sfo.noise@flysfo.com**
Airport Web Page:	**www.flysfo.com**
Noise Abatement Web Page:	**http://www.flysfo.com/community-environment/noise-abatement**
Roundtable Web Page:	**www.sforoundtable.org**