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. 294

Wednesday, February 4, 2015 - 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. Adoption of Resolutions recognition of departing Representatives — ACTION
Cliff Lentz, Roundtable Chairperson

3. Elections of Roundtable Chairperson for Calendar Year 2015 — ACTION
Roundtable Chairperson

4. Elections of Roundtable Vice-Chairperson for Calendar Year 2015 — ACTION
Roundtable Chairperson

5. Approval of Resolution 15-01: Designating Roundtable Meeting Dates, Time and Place for Calendar Year 2015 — ACTION
Roundtable Chairperson — pg. 59

6. 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.

7. Review of Airport Director's Reports for: — ACTION
November 2014 — pg. 11
December 2014 — pg. 19

REGULAR AGENDA

8. Review of SFO FlyQuiet Report for Q4 2014 — ACTION
Bert Ganoung, Manager - Aircraft Noise Abatement Office — pg. 29

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

REGULAR AGENDA – WORK PROGRAM ITEMS

10. Consideration of establishing North and South County Subcommittees — ACTION
Roundtable Chairperson — pg. 57

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

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

13. Update, Metroplex — INFORMATION
Cindy Gibbs, Roundtable Aviation Technical Consultant

OTHER MATTERS

14. Upcoming 2015 Noise 101 — INFORMATION
Cindy Gibbs, Roundtable Aviation Technical Consultant

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

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

17. Adjourn — ACTION
Cliff Lentz, Roundtable Chairperson

Correspondences pg. 63
Airport Noise Industry News pg. 73
Glossary of Common Acoustic & Air Traffic Control Terms pg. 83

Next Regular Roundtable Meeting Date: Wednesday, April 1, 2015

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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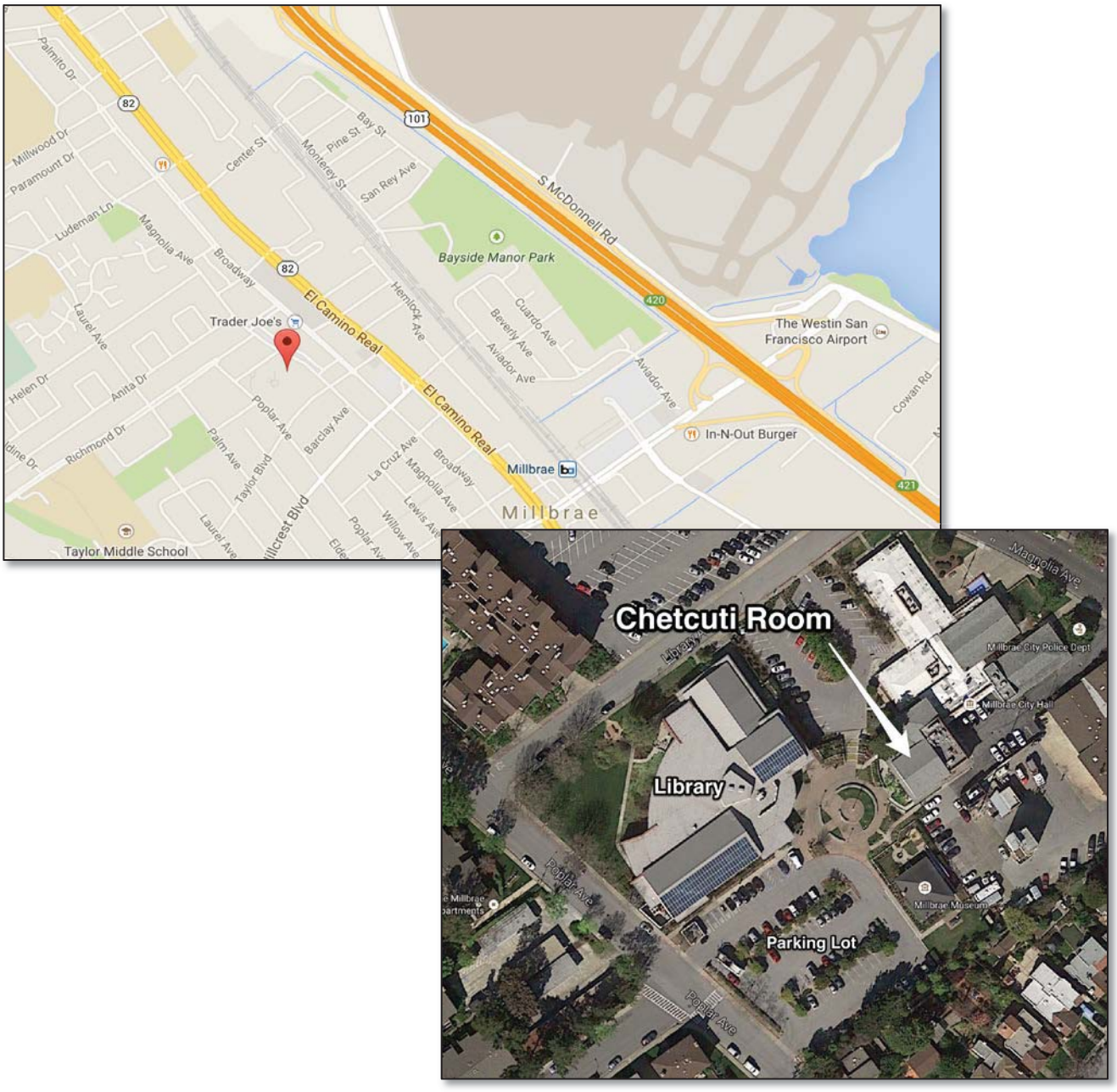
REGULAR MEETING LOCATION

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 FEBRUARY 2015
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: Cathy Wright
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 FEBRUARY 2015

CITY OF DALY CITY
Raymond Buenaventura, Mayor
Alternate: Vacant

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

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

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

CITY OF MENLO PARK
Peter Ohtaki, Council Member
Alternate: Vacant

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 FEBRUARY 2015

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 # 294
February 4, 2015

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San Francisco International Airport

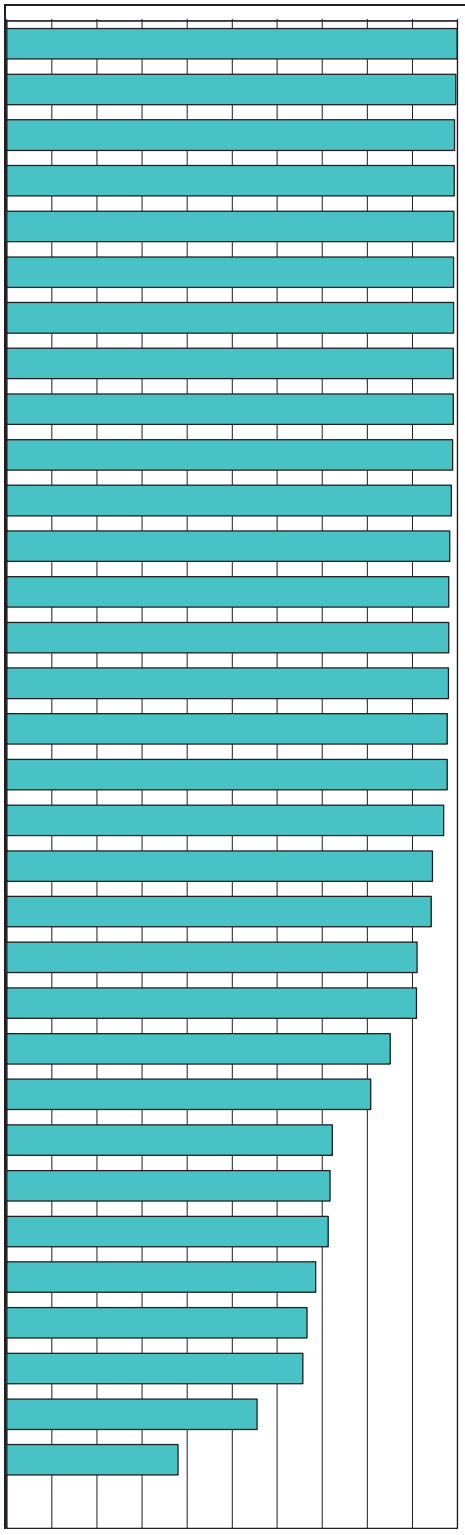
Airport Director's Report

Presented at the February 4, 2015
Airport Community Roundtable Meeting
SFO Aircraft Noise Abatement Office
November 2014

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

Airline		Noise Exceedances: *Total Noise Exceedances*	*Total Operations per Month*	*Exceedances per 1,000 Operations*	***Score***
SkyWest Airlines	SKW	13	7,114	2	***9.99***
Mesa Airlines	ASH	1	137	7	***9.96***
Compass Airlines	CPZ	13	1,109	12	***9.93***
Hawaiian Airlines	HAL	1	75	13	***9.93***
Frontier Airlines	FFT	4	272	15	***9.92***
Southwest	SWA	38	2,357	16	***9.91***
Virgin America	VRD	45	2,742	16	***9.91***
Alaska Airlines	ASA	17	1,006	17	***9.91***
Delta	DAL	25	1,434	17	***9.90***
Air Canada	ACA	8	401	20	***9.89***
American Airlines	AAL	43	1,769	24	***9.86***
United	UAL	288	9,226	31	***9.83***
Air China	CCA	2	58	34	***9.81***
British Airways	BAW	4	115	35	***9.81***
jetBlue	JBU	23	643	36	***9.80***
US Airways	AWE	36	879	41	***9.77***
Aeromexico	AMX	7	167	42	***9.77***
Swiss	SWR	3	54	56	***9.69***
UPS	UPS	1	10	100	***9.44***
ABX Air	ABX	8	76	105	***9.41***
Avianca	TAI	14	87	161	***9.10***
FedEx	FDX	11	67	164	***9.09***
Etihad	ETD	7	26	269	***8.50***
Nippon Cargo Airlines	NCA	18	52	346	***8.07***
Cargolux	CLX	1	2	500	***7.22***
Philippines	PAL	32	63	508	***7.17***
Cathay Pacific	CPA	62	120	517	***7.13***
EVA Air	EVA	77	136	566	***6.85***
Korean Air	KAL	72	120	600	***6.66***
Singapore Airlines	SIA	74	120	617	***6.57***
Skalittae Air	CKS	12	15	800	***5.55***
Asiana Airlines	AAR	107	96	1,115	***3.80***
China Airlines	CAL	178	99	1,798	***0.00***
TOTAL		**1,245**	**30,647**	**8,600**	

Noise Exceedance Quality Rating



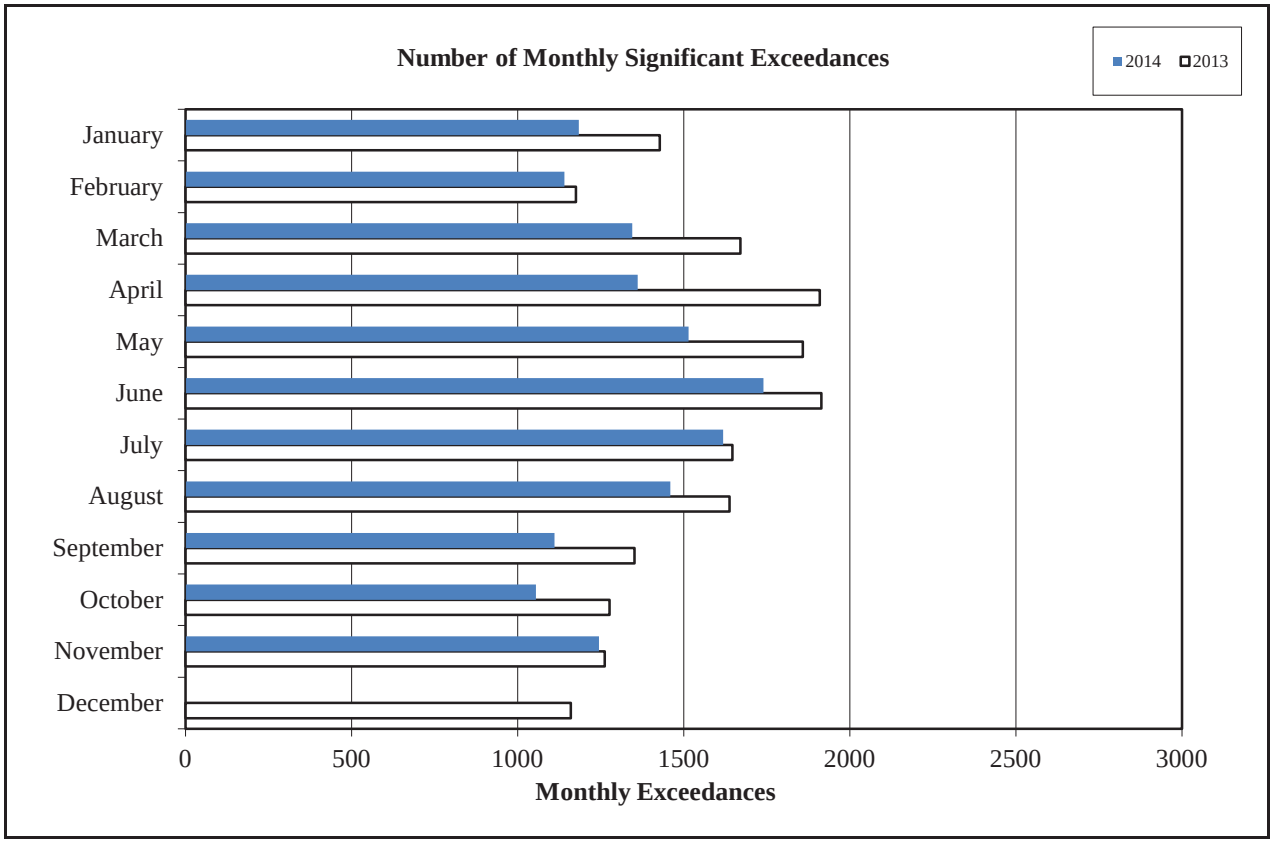
Source: SFO Noise Abatement Office

Historical Significant Exceedances Report
San Francisco International Airport -- Director's Report
Period: **November 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	1111	**-241**
October	1537	1572	1689	1277	1055	**-222**
November	1599	1575	1421	1262	1245	**-17**
December	1411	1447	1439	1160		**0**
Annual Total	20071	20628	21256	18295	14777	
Year to Date Trend	**20071**	**20628**	**21256**	**18295**	**13532**	**-2358**

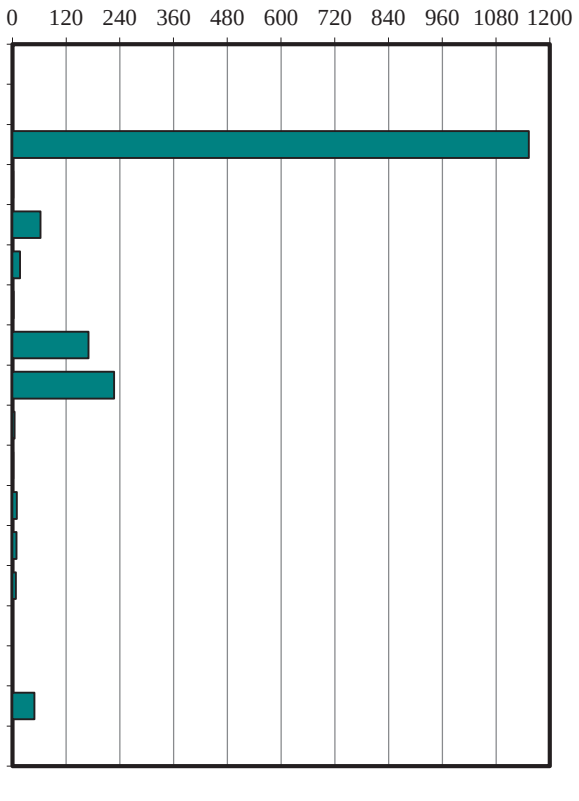
* Revised with correct amount of exceedance - 4/30/10
** Revised with correct amount of exceedance - 8/5/13
*** No data available from Site 7, August 1-26



Monthly Calls by Community

Source: Airport Noise Monitoring System

Community	Total Complaints	Total Number of Callers
Roundtable Communities		
Atherton	1	1
Belmont	1	1
Brisbane	1,153	14
Burlingame	2	1
Daly City	63	6
Menlo Park	17	4
Millbrae	3	2
Pacifica	170	7
Portola Valley	227	9
San Bruno	5	2
San Carlos	2	1
San Francisco	10	8
South San Francisco	9	5
Woodside	8	2
Other Communities		
El Cerrito	1	1
Palo Alto	49	16
Richmond	1	1
Total	**1,722**	**81**

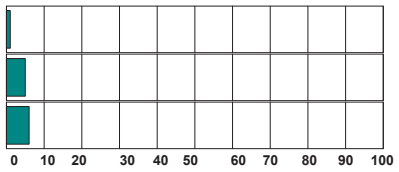


Monthly Noise Complaint Summary Map November 2014

Caller Location and Amount of Complaints

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

Airline	Code	Number of Runups	Runups Per 1,000 Departures	Percentage of Runups
NETJETS	EJA	2	11.1	13%
UNITED	UAL	6	1.3	40%
American Airlines	AAL	7	7.8	47%
Total		**15**		



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.

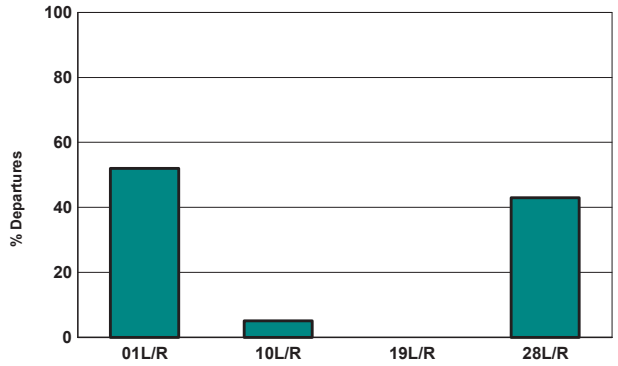
Late Night Preferential Runway Use Report
San Francisco International Airport -- Director's Report
Period: November 2014
Time of Day: Late Night (1 am to 6 am)

Runway Utilization (1 am to 6 am)

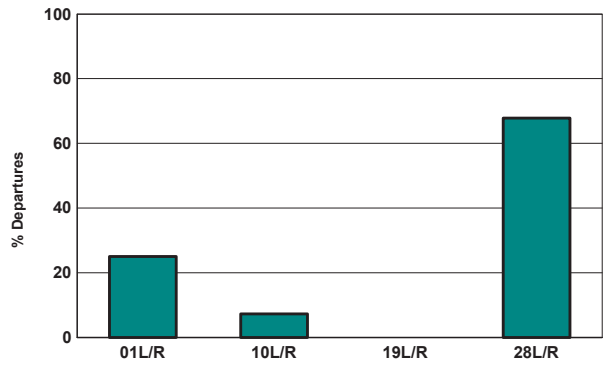
Monthly Jet Departures

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
01L/R	110	51	92	72	47	-	-	88	130	123	92	-	805
10L/R	45	68	57	28	8	5	-	2	-	10	9	-	232
19L/R	-	-	-	-	-	-	-	-	-	-	-	-	0
28L/R	40	60	121	196	258	357	381	275	206	213	76	-	2,183
Total	**195**	**179**	**270**	**296**	**313**	**362**	**381**	**365**	**336**	**346**	**177**	**-**	**3,220**
01L/R	56%	28%	34%	24%	15%	0%	0%	24%	39%	36%	52%	0%	25%
10L/R	23%	38%	21%	9%	3%	1%	0%	1%	0%	3%	5%	0%	7%
19L/R	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
28L/R	21%	34%	45%	66%	82%	99%	100%	75%	61%	62%	43%	0%	68%

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

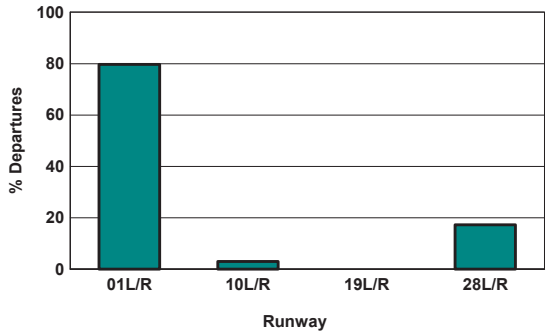
Air Carrier Runway Use Summary Report
San Francisco International Airport -- Director's Report
Period: November 2014
Time of Day : All Hours

Runway Utilization (All Hours)

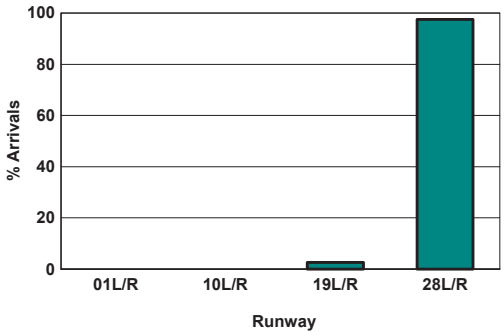
Source: Airport Noise Monitoring System

	Runway Utilization				Total
	01L/R	*10L/R*	*19L/R*	*28L/R*	
Total Monthly Operations					
Departures	12,829	485	0	2,786	16,100
Arrivals	0	0	394	15,215	15,609
Percentage Utilization					
Departures	79.7%	3.0%	0.0%	17.3%	100%
Arrivals	0.0%	0.0%	2.5%	97.5%	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

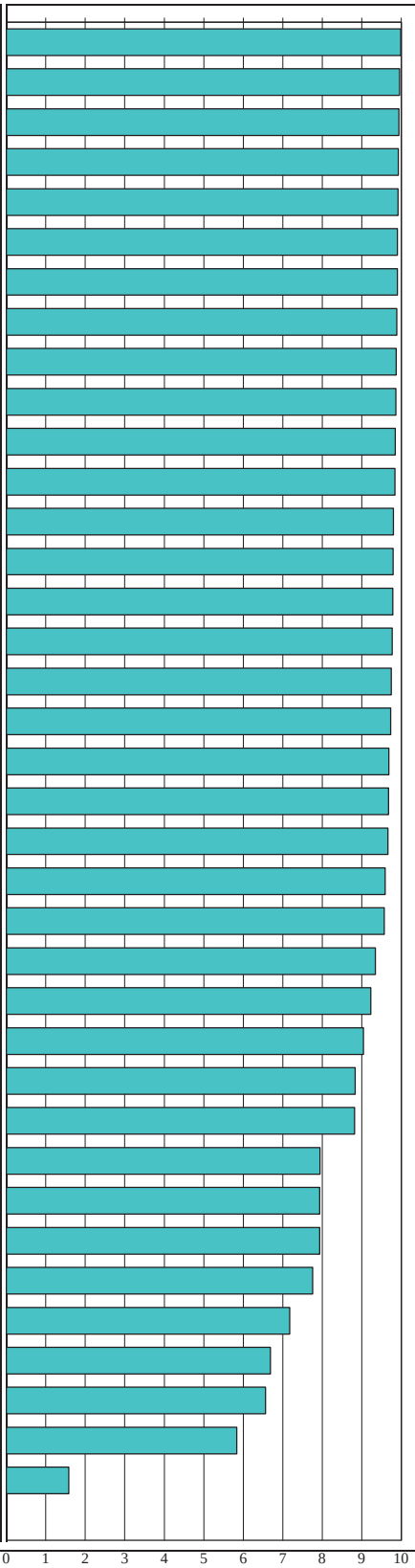
Airport Director's Report

Presented at the February 4, 2015
Airport Community Roundtable Meeting
SFO Aircraft Noise Abatement Office
December 2014

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

Airline		Noise Exceedances: *Total Noise Exceedances*	*Total Operations per Month*	*Exceedances per 1,000 Operations*	***Score***
SkyWest	SKW	23	6,891	3	***9.98***
Mesa	ASH	1	111	9	***9.96***
Air New Zealand	ANZ	1	80	13	***9.94***
Sun Country Airlines	SCX	2	123	16	***9.92***
Air France	AFR	1	60	17	***9.92***
Alaska Airlines	ASA	20	956	21	***9.90***
Compass	CPZ	22	1,037	21	***9.90***
Aer Lingus	EIN	1	42	24	***9.89***
Southwest	SWA	65	2,381	27	***9.87***
Delta	DAL	42	1,458	29	***9.86***
Air Canada	ACA	14	437	32	***9.85***
Virgin America	VRD	95	2,841	33	***9.84***
Frontier	FFT	14	333	42	***9.80***
United	UAL	411	9,554	43	***9.80***
American Airlines	AAL	82	1,791	46	***9.78***
US Airways	AWE	44	900	49	***9.77***
Aeromexico	AMX	10	186	54	***9.75***
Hawaiian	HAL	6	107	56	***9.73***
JetBlue	JBU	42	637	66	***9.69***
Lufthansa	DLH	7	102	69	***9.67***
China Southern	CSN	1	14	71	***9.66***
Swiss	SWR	5	58	86	***9.59***
UPS	UPS	4	44	91	***9.57***
FedEx	FDX	12	87	138	***9.35***
Avianca	TAI	15	92	163	***9.23***
British Airways	BAW	24	119	202	***9.04***
Etihad	ETD	15	61	246	***8.84***
ABX Air	ABX	22	88	250	***8.82***
Nippon Cargo Airlines	NCA	20	46	435	***7.94***
Japan Airlines	JAL	27	62	435	***7.94***
Cathay Pacific	CPA	55	126	437	***7.93***
Korean Air	KAL	54	114	474	***7.76***
Singapore Airlines	SIA	74	124	597	***7.17***
EVA Air	EVA	98	140	700	***6.68***
Philippines	PAL	61	84	726	***6.56***
Asiana Airlines	AAR	94	107	879	***5.84***
China Airlines	CAL	167	94	1,777	***1.58***
Kalitta Air	CKS	19	9	2,111	***0.00***
TOTAL		**1,670**	**31,496**	**10,486**	

Noise Exceedance Quality Rating



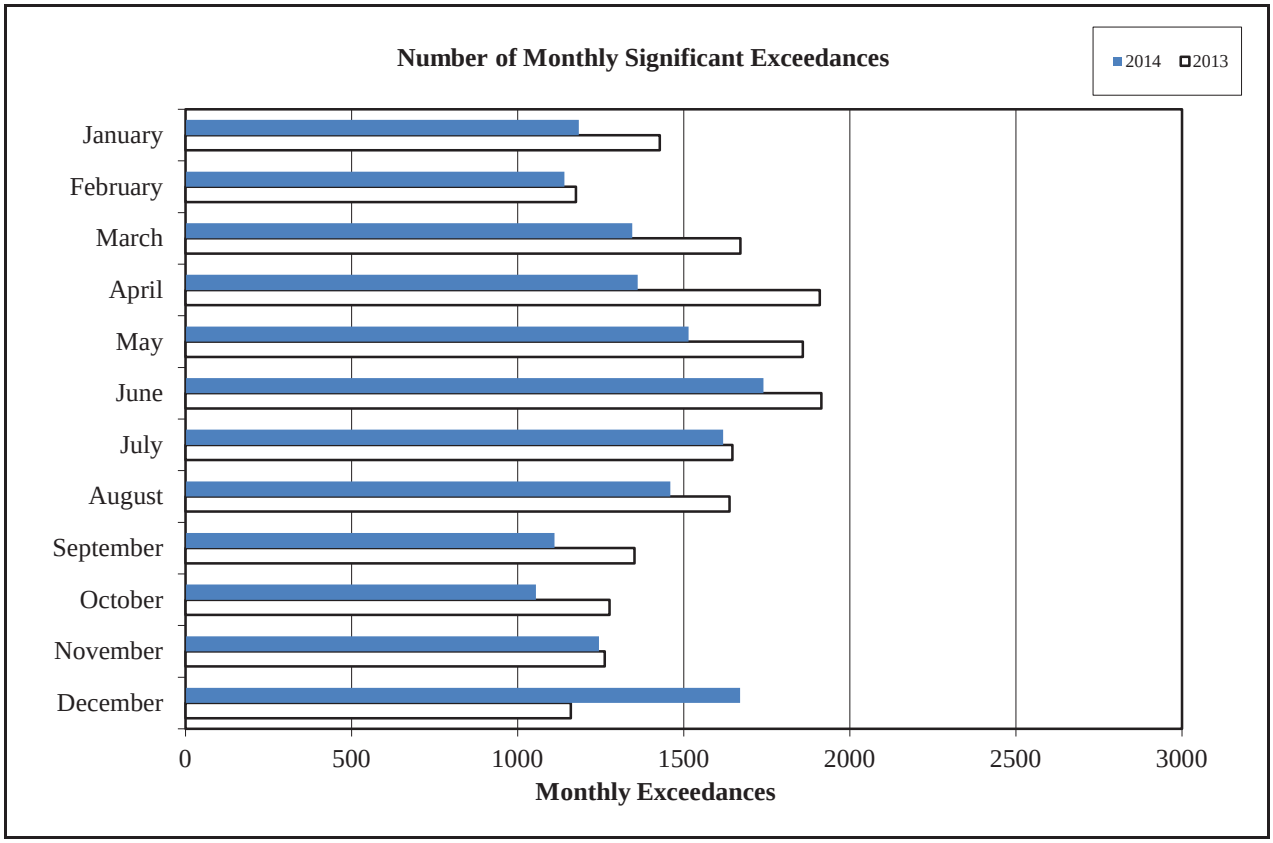
Source: SFO Noise Abatement Office

Historical Significant Exceedances Report
San Francisco International Airport -- Director's Report
Period: **December 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	1111	**-241**
October	1537	1572	1689	1277	1055	**-222**
November	1599	1575	1421	1262	1245	**-17**
December	1411	1447	1439	1160	1670	**510**
Annual Total	20071	20628	21256	18295	16447	
Year to Date Trend	**20071**	**20628**	**21256**	**18295**	**13532**	**-1848**

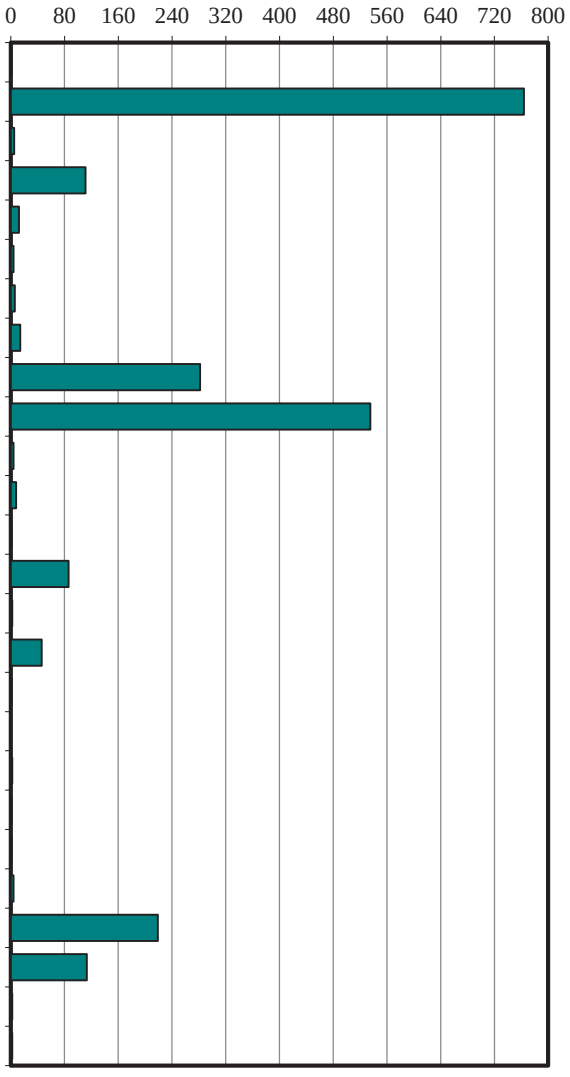
* Revised with correct amount of exceedance - 4/30/10
** Revised with correct amount of exceedance - 8/5/13
*** No data available from Site 7, August 1-26



Monthly Calls by Community

Source: Airport Noise Monitoring System

Community	Total Complaints	Total Number of Callers
Roundtable Communities		
Atherton	1	1
Brisbane	764	15
Burlingame	5	5
Daly City	111	7
Foster City	12	2
Hillsborough	4	3
Menlo Park	6	2
Millbrae	14	4
Pacifica	282	6
Portola Valley	535	28
Redwood City	4	2
San Bruno	8	5
San Carlos	1	1
San Francisco	86	11
San Mateo	2	2
South San Francisco	46	5
Woodside	1	1
Other Communities		
Alameda	2	2
El Cerrito	1	1
Mill Valley	1	1
Oakland	4	2
Palo Alto	219	18
Richmond	113	1
San Ramon	2	1
Tiburon	2	1
Total	**2,226**	**127**

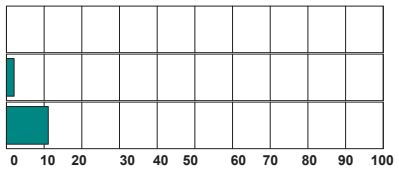


Monthly Noise Complaint Summary Map December 2014

Caller Location and Amount of Complaints

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

Airline	Code	Number of Runups	Runups Per 1,000 Departures	Percentage of Runups
SkyWest Airlines	SKW	1	0.3	6%
United	UAL	3	0.6	19%
American Airlines	AAL	12	13.2	75%
Total		**16**		



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.

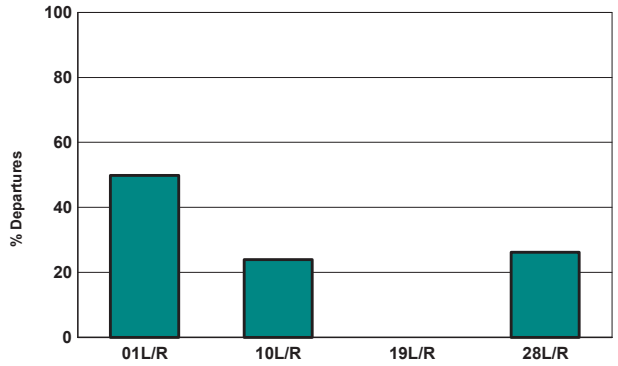
Late Night Preferential Runway Use Report
San Francisco International Airport -- Director's Report
Period: December 2014
Time of Day: Late Night (1 am to 6 am)

Runway Utilization (1 am to 6 am)

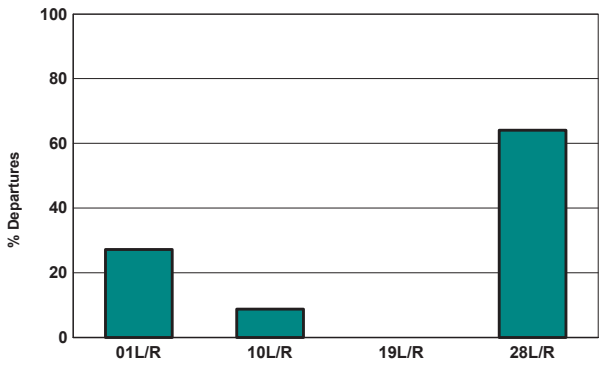
Monthly Jet Departures

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
01L/R	110	51	92	72	47	-	-	88	130	123	92	156	961
10L/R	45	68	57	28	8	5	-	2	-	10	9	75	307
19L/R	-	-	-	-	-	-	-	-	-	-	-	-	0
28L/R	40	60	121	196	258	357	381	275	206	213	76	82	2,265
Total	**195**	**179**	**270**	**296**	**313**	**362**	**381**	**365**	**336**	**346**	**177**	**313**	**3,533**
01L/R	56%	28%	34%	24%	15%	0%	0%	24%	39%	36%	52%	50%	27%
10L/R	23%	38%	21%	9%	3%	1%	0%	1%	0%	3%	5%	24%	9%
19L/R	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
28L/R	21%	34%	45%	66%	82%	99%	100%	75%	61%	62%	43%	26%	64%

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

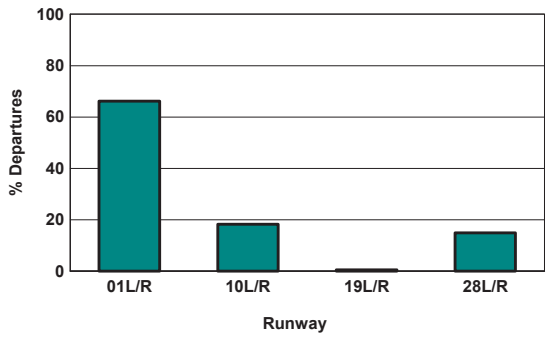
Air Carrier Runway Use Summary Report
San Francisco International Airport -- Director's Report
Period: December 2014
Time of Day : All Hours

Runway Utilization (All Hours)

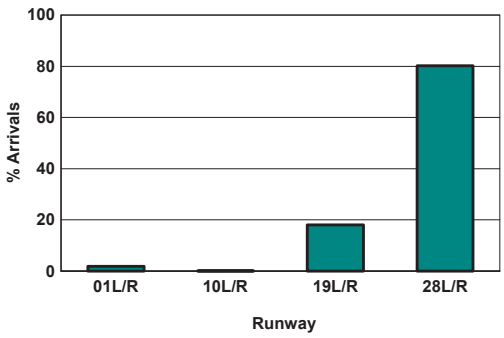
Source: Airport Noise Monitoring System

	Runway Utilization				Total
	01L/R	*10L/R*	*19L/R*	*28L/R*	
Total Monthly Operations					
Departures	10,791	2,976	84	2,443	16,294
Arrivals	282	5	2,871	12,744	15,902
Percentage Utilization					
Departures	66.2%	18.3%	0.5%	15.0%	100%
Arrivals	1.8%	0.0%	18.1%	80.1%	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

REGULAR AGENDA

Regular Meeting # 294
February 4, 2015

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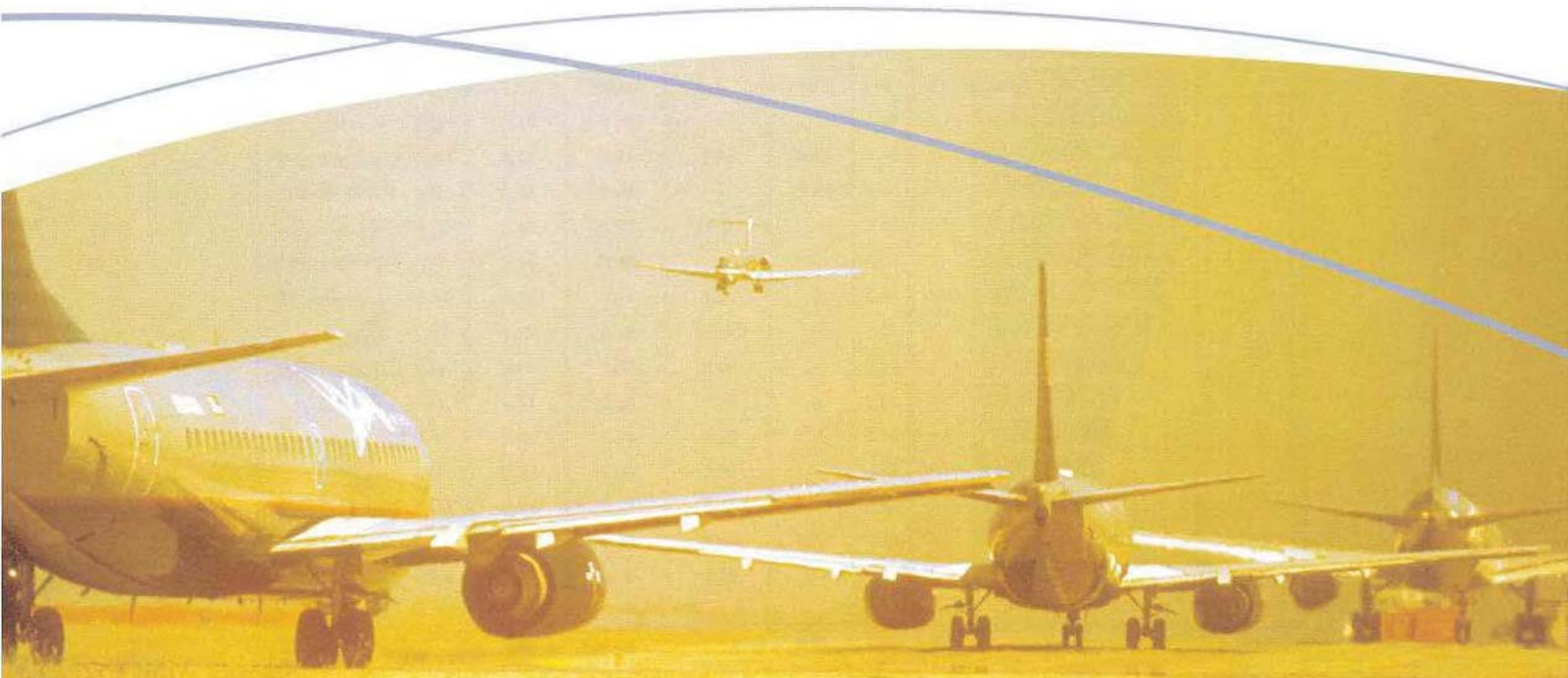
San Francisco International Airport

Fly Quiet Report

Presented at the February 4, 2015
Airport Community Roundtable Meeting
SFO Aircraft Noise Abatement Office
Fourth Quarter 2014



San Francisco International Airport

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.

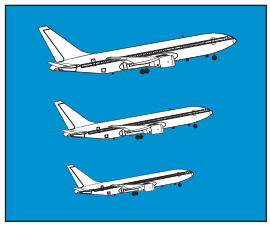
Program Reports

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.

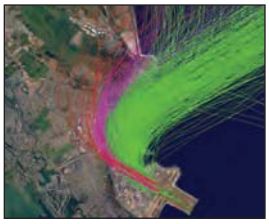
Noise Exceedance

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

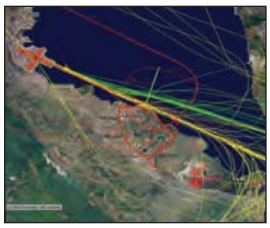
Aircraft departing SFO using Runways 28L and 28R are also considered by the Fly Quiet grading system whenever they use the Shoreline Departure Procedure. This predominately VFR (visual flight rules) departure steers aircraft to the northeast shortly after takeoff in an attempt to keep aircraft and aircraft 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 - 4th Quarter 2014

October 1 to December 31, 2014

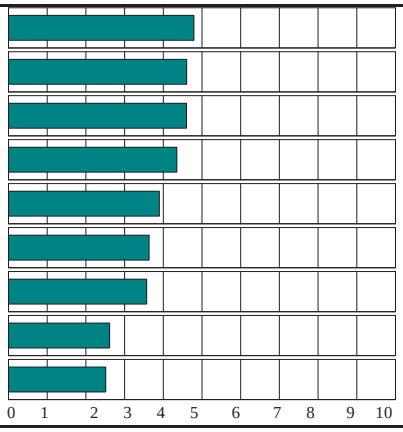
Airline		Fleet Noise Quality	Noise Exceedance	Nighttime Runway Use	Departures Shoreline	Departures Gap	Arrivals Foster City	Final Score	Airline Fly Quiet Rating
中国南方航空	CSN	10.00	9.62	-	-	4.79	-	8.14	
AIR CHINA	CCA	7.15	9.94	-	-	7.05	-	8.05	
MESA	ASH	10.00	9.95	-	-	5.65	5.96	7.89	
AirTran	TRS	5.82	9.83	-	10.00	3.75	10.00	7.88	
ANA	ANA	7.15	10.00	-	-	6.43	-	7.86	
Lufthansa	DLH	9.14	9.79	-	7.50	4.84	-	7.82	
Scandinavian Airlines	SAS	8.17	10.00	-	-	5.24	-	7.80	
sun country airlines	SCX	5.82	9.96	10.00	9.62	2.29	8.75	7.74	
UPS	UPS	5.42	9.50	-	-	10.00	5.50	7.61	
SWISS	SWR	8.17	9.75	-	-	4.78	-	7.57	
AIR CANADA	ACA	5.58	9.87	10.00	9.09	4.06	6.29	7.48	
SkyWest	SKW	10.00	9.99	4.44	9.07	5.47	5.89	7.48	
AIR NEW ZEALAND	ANZ	6.74	9.97	-	-	5.34	-	7.35	
Compass	CPZ	10.00	9.92	3.33	10.00	4.39	5.86	7.25	
FRONTIER	FFT	6.32	9.87	3.70	10.00	3.31	7.71	6.82	
JAPAN AIRLINES	JAL	9.02	9.18	3.59	-	7.28	5.00	6.81	
AIRFRANCE	AFR	6.86	9.97	-	3.33	6.73	-	6.72	
FedEx	FDX	3.68	9.22	-	9.00	4.73	6.77	6.68	
Alaska Airlines	ASA	5.20	9.91	6.67	9.39	3.83	5.00	6.67	
DELTA	DAL	6.33	9.90	4.74	7.31	3.75	7.84	6.64	
Southwest	SWA	5.73	9.91	3.90	9.02	4.11	7.01	6.61	
American Airlines	AAL	5.82	9.86	4.17	8.51	3.04	7.83	6.54	
Virgin America	VRD	5.17	9.89	4.85	9.04	4.21	5.79	6.49	
Avianca	TAI	5.37	9.30	3.73	10.00	3.86	6.30	6.43	
中國東方航空 CHINA EASTERN	CES	4.05	10.00	-	-	5.14	-	6.40	
US AIRWAYS	AWE	4.76	9.77	3.33	7.07	5.71	7.45	6.35	
jetBlue	JBU	4.83	9.77	3.75	7.00	4.56	7.67	6.26	
UNITED	UAL	5.84	9.82	4.11	7.96	3.15	6.65	6.26	
virgin atlantic	VIR	3.43	9.85	-	-	5.38	-	6.22	
								6.21	SFO AVERAGE
KLM Royal Dutch Airlines	KLM	3.86	10.00	-	7.50	3.24	-	6.15	
AEROMEXICO	AMX	5.82	9.79	3.39	-	5.12	6.29	6.08	
ABX AIR	ABX	4.86	9.16	0.00	10.00	5.45	6.84	6.05	
HAWAIIAN AIRLINES	HAL	4.04	9.65	-	-	4.77	5.00	5.87	
WESTJET	WJA	5.82	9.89	-	6.25	1.25	5.00	5.64	
NCA Nippon Cargo Airlines	NCA	9.73	7.97	0.00	-	3.53	6.43	5.53	
KOREAN AIR	KAL	8.09	7.10	1.41	-	5.61	5.13	5.47	
Emirates	UAE	8.14	10.00	-	0.00	3.13	-	5.32	
CATHAY PACIFIC	CPA	7.15	7.60	0.00	-	6.42	-	5.29	

Airline Fly Quiet Summary Report - 4th Quarter 2014

October 1 to December 31, 2014

Airline		*Fleet Noise Quality*	*Noise Exceedance*	*Nighttime Runway Use*	*Departures Shoreline*	*Departures Gap*	Arrivals Foster City	*Final Score*
EVA AIR	EVA	6.70	7.00	0.49	-	3.77	6.00	*4.79*
ASIANA AIRLINES	AAR	4.78	4.90	0.65	-	7.15	5.54	*4.61*
Aer Lingus	EIN	4.05	9.96	0.00	5.00	3.99	-	*4.60*
Philippines	PAL	7.30	6.54	0.00	-	2.91	5.00	*4.35*
BRITISH AIRWAYS	BAW	3.43	9.46	-	0.00	2.71	-	*3.90*
ETIHAD	ETD	7.15	8.64	0.00	0.00	2.39	-	*3.63*
SINGAPORE AIRLINES	SIA	7.15	6.86	0.00	0.00	3.85	-	*3.57*
CHINA AIRLINES	CAL	3.43	1.00	0.79	0.00	5.47	5.00	*2.61*
KALITTA AIR	CKS	3.31	0.00	0.77	-	2.65	5.83	*2.51*
SFO Average		**6.31**	**8.93**	**2.92**	**6.73**	**4.60**	**6.38**	**6.21**

Airline Fly Quiet Rating

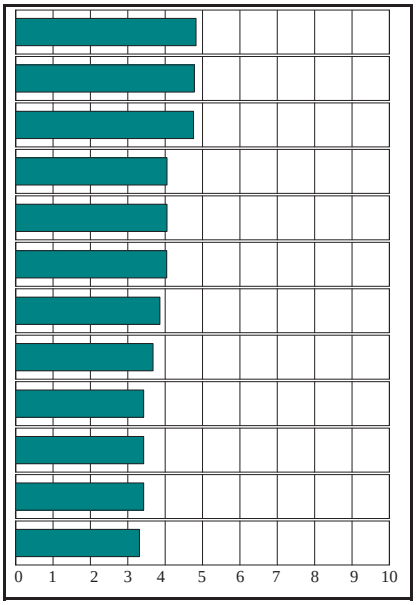


Fleet Noise Quality - 4th Quarter 2014

October 1 to December 31, 2014

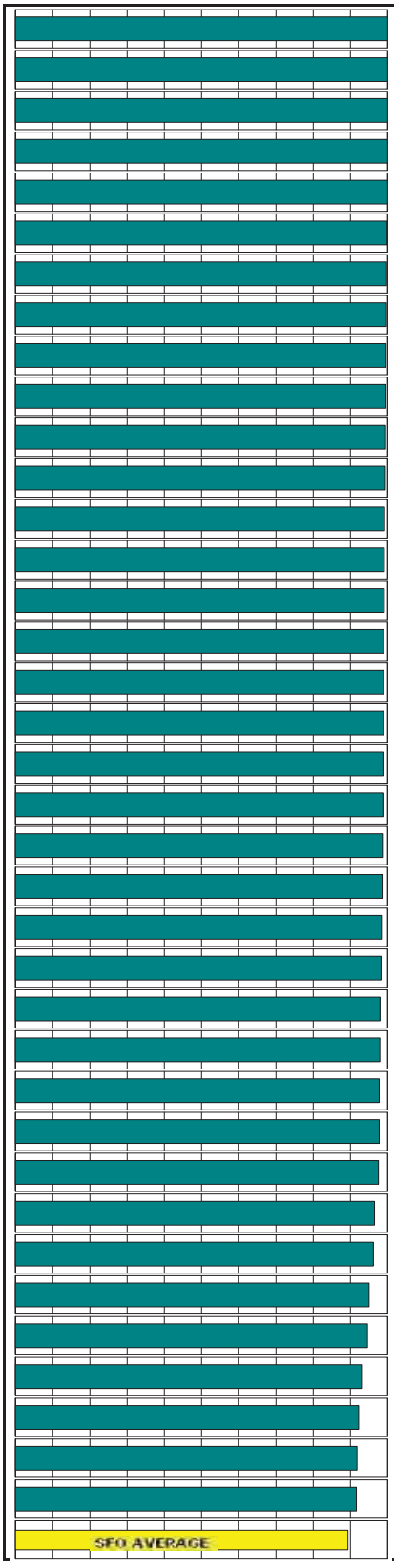
Airline		Nationwide Fleet Noise Quality Rating	San Francisco Average Daily Jet Operations	San Francisco Score	Fleet Noise Quality Rating
中国南方航空 CHINA SOUTHERN AIRLINES	CSN	5.64	0	10.00	
MESA AIRLINES	ASH	10.00	2	10.00	
Compass Airlines	CPZ	10.00	18	10.00	
SkyWest AIRLINES	SKW	10.00	81	10.00	
NCA Nippon Cargo Airlines	NCA	3.90	1	9.73	
Lufthansa	DLH	6.09	2	9.14	
JAPAN AIRLINES	JAL	4.20	1	9.02	
Scandinavian Airlines	SAS	4.96	1	8.17	
SWISS	SWR	5.17	1	8.17	
Emirates	UAE	7.89	1	8.14	
KOREAN AIR	KAL	4.05	2	8.09	
Philippines	PAL	5.09	1	7.30	
ANA	ANA	5.43	1	7.15	
AIR CHINA	CCA	3.46	1	7.15	
CATHAY PACIFIC	CPA	4.18	2	7.15	
SINGAPORE AIRLINES	SIA	5.93	2	7.15	
ETIHAD	ETD	0.00	0	7.15	
AIRFRANCE	AFR	5.49	1	6.86	
AIR NEW ZEALAND	ANZ	4.00	1	6.74	
EVA AIR	EVA	5.05	2	6.70	
DELTA	DAL	4.92	25	6.33	
FRONTIER AIRLINES	FFT	6.41	5	6.32	
				6.31	SFO AVERAGE
UNITED	UAL	5.83	158	5.84	
American Airlines	AAL	3.94	30	5.82	
AEROMEXICO	AMX	5.54	3	5.82	
suncountry airlines	SCX	5.82	2	5.82	
AirTran	TRS	6.97	0	5.82	
WESTJET	WJA	5.82	1	5.82	
Southwest	SWA	5.70	40	5.73	
AIR CANADA	ACA	6.75	8	5.58	
UPS	UPS	5.51	0	5.42	
Avianca	TAI	5.18	1	5.37	
Alaska Airlines	ASA	5.10	16	5.20	
Virgin america	VRD	5.31	46	5.17	
ABX AIR	ABX	1.52	1	4.86	

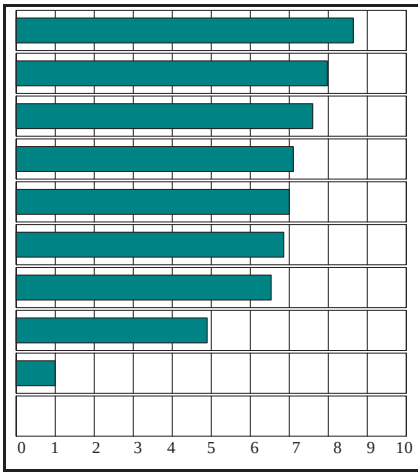
Airline		*Nationwide* *Fleet Noise Quality Rating*	*San Francisco* *Average Daily Jet Operations*	*Score*	Fleet Noise Quality Rating
jetBlue	JBU	6.13	10	***4.83***	
ASIANA AIRLINES	AAR	3.93	2	***4.78***	
US AIRWAYS	AWE	5.67	15	***4.76***	
Aer Lingus	EIN	4.05	1	***4.05***	
中國東方航空 CHINA EASTERN	CES	4.63	1	***4.05***	
HAWAIIAN AIRLINES	HAL	6.21	1	***4.04***	
KLM Royal Dutch Airlines	KLM	4.67	1	***3.86***	
FedEx	FDX	2.80	1	***3.68***	
BRITISH AIRWAYS	BAW	4.34	2	***3.43***	
CHINA AIRLINES	CAL	3.62	2	***3.43***	
virgin atlantic	VIR	5.84	1	***3.43***	
KALITTA AIR	CKS	0.60	0	***3.31***	
AVERAGE		**5.18**	**11**	**6.31**	



Airline	Noise Exceedances: *Total Noise Exceedances*	*Total Quarterly Operations*	*Exceedances per 1000 Operations*	***Score***
ANA	0	184	0	***10.00***
CES	0	185	0	***10.00***
KLM	0	164	0	***10.00***
SAS	0	148	0	***10.00***
UAE	0	187	0	***10.00***
SKW	41	14,835	3	***9.99***
ANZ	1	202	5	***9.97***
AFR	1	178	6	***9.97***
EIN	1	131	8	***9.96***
SCX	3	362	8	***9.96***
ASH	4	400	10	***9.95***
CCA	2	181	11	***9.94***
CPZ	50	3,404	15	***9.92***
ASA	48	2,990	16	***9.91***
SWA	120	7,315	16	***9.91***
DAL	85	4,512	19	***9.90***
WJA	2	101	20	***9.89***
VRD	170	8,423	20	***9.89***
FFT	20	859	23	***9.87***
ACA	33	1,382	24	***9.87***
AAL	142	5,486	26	***9.86***
VIR	5	182	27	***9.85***
TRS	2	65	31	***9.83***
UAL	961	29,144	33	***9.82***
AMX	20	523	38	***9.79***
DLH	13	336	39	***9.79***
JBU	81	1,931	42	***9.77***
AWE	116	2,760	42	***9.77***
SWR	8	174	46	***9.75***
HAL	16	244	66	***9.65***
CSN	1	14	71	***9.62***
UPS	5	54	93	***9.50***
BAW	36	358	101	***9.46***
TAI	35	268	131	***9.30***
FDX	33	228	145	***9.22***
JAL	28	183	153	***9.18***
ABX	40	256	156	***9.16***
				8.93

Noise Exceedance Quality Rating



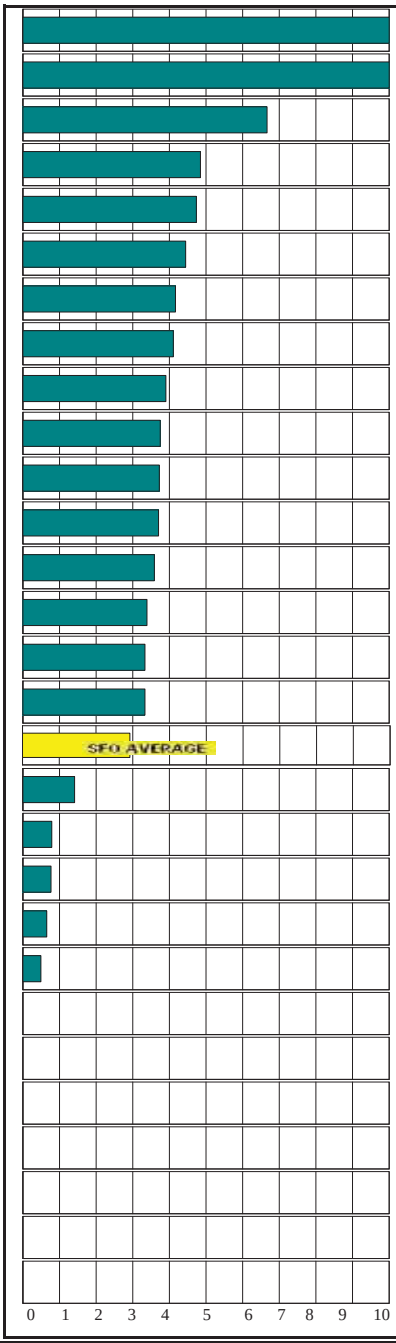
Airline		Noise Exceedances				Noise Exceedance Quality Rating
		Total Noise Exceedances	*Total Quarterly Operations*	*Exceedances per 1000 Operations*	***Score***	
ETIHAD	ETD	22	87	253	***8.64***	
NCA Nippon Cargo Airlines	NCA	55	146	377	***7.97***	
CATHAY PACIFIC	CPA	165	370	446	***7.60***	
KOREAN AIR	KAL	193	358	539	***7.10***	
EVA AIR	EVA	234	419	558	***7.00***	
SINGAPORE AIRLINES	SIA	215	368	584	***6.86***	
Philippines	PAL	134	208	644	***6.54***	
ASIANA AIRLINES	AAR	282	297	949	***4.90***	
CHINA AIRLINES	CAL	494	295	1675	***1.00***	
KALITTA AIR	CKS	93	50	1860	***0.00***	

TOTAL	**4,010**	**90,947**		
SFO AVERAGE			**198**	**8.93**

Nighttime Preferential Runway Use - 4th Quarter 2014

October 1 to December 31, 2014

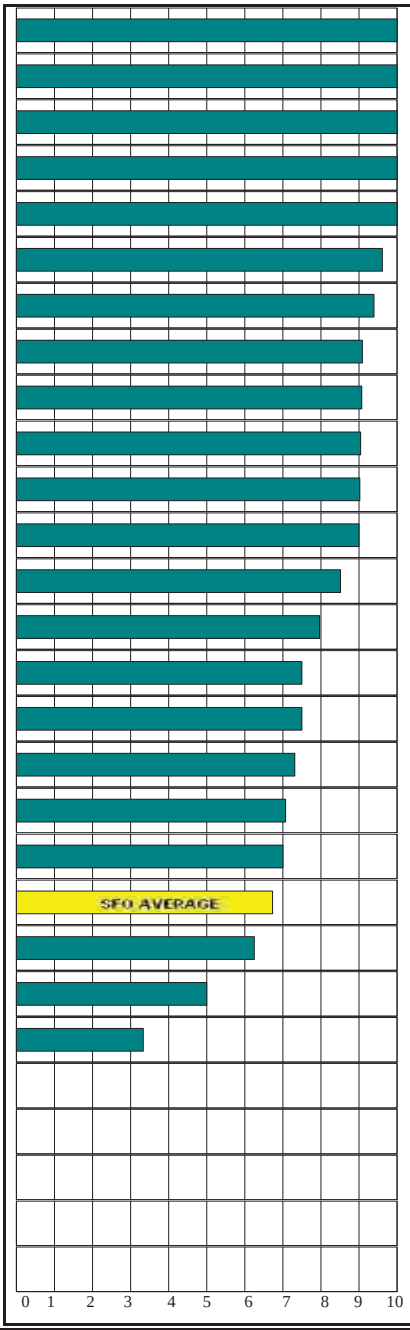
Airline		Nighttime Departures (1:00 am to 6:00 am)						Nighttime Runway Use Rating
		Total	*10L/R*	*28L/R Shoreline*	*01L/R*	*28L/R Straight*	***Score***	
AIR CANADA	ACA	**1**	100%	0%	0%	0%	***10.00***	
sun country airlines	SCX	**1**	100%	0%	0%	0%	***10.00***	
Alaska Airlines	ASA	**2**	50%	0%	50%	0%	***6.67***	
Virgin america	VRD	**11**	27%	0%	64%	9%	***4.85***	
DELTA	DAL	**19**	21%	0%	79%	0%	***4.74***	
SkyWest	SKW	**6**	17%	0%	83%	0%	***4.44***	
American Airlines	AAL	**52**	13%	2%	81%	4%	***4.17***	
UNITED	UAL	**168**	16%	2%	71%	11%	***4.11***	
Southwest	SWA	**35**	9%	0%	91%	0%	***3.90***	
jetBlue	JBU	**8**	13%	0%	75%	13%	***3.75***	
Avianca	TAI	**68**	9%	1%	82%	7%	***3.73***	
FRONTIER AIRLINES	FFT	**18**	6%	0%	94%	0%	***3.70***	
JAPAN AIRLINES	JAL	**13**	31%	0%	15%	54%	***3.59***	
AeroMexico	AMX	**61**	5%	2%	84%	10%	***3.39***	
US AIRWAYS	AWE	**1**	0%	0%	100%	0%	***3.33***	
Compass Airlines	CPZ	**3**	0%	0%	100%	0%	***3.33***	
							2.92	SFO AVERAGE
KOREAN AIR	KAL	**85**	14%	0%	0%	86%	***1.41***	
CHINA AIRLINES	CAL	**38**	8%	0%	0%	92%	***0.79***	
KALITTA AIR	CKS	**13**	8%	0%	0%	92%	***0.77***	
ASIANA AIRLINES	AAR	**46**	7%	0%	0%	93%	***0.65***	
EVA AIR	EVA	**61**	5%	0%	0%	95%	***0.49***	
ABX AIR	ABX	**1**	0%	0%	0%	100%	***0.00***	
CATHAY PACIFIC	CPA	**25**	0%	0%	0%	100%	***0.00***	
Aer Lingus	EIN	**1**	0%	0%	0%	100%	***0.00***	
ETIHAD	ETD	**1**	0%	0%	0%	100%	***0.00***	
NCA Nippon Cargo Airlines	NCA	**1**	0%	0%	0%	100%	***0.00***	
Philippines	PAL	**3**	0%	0%	0%	100%	***0.00***	
SINGAPORE AIRLINES	SIA	**33**	0%	0%	0%	100%	***0.00***	
TOTAL		**775**						
SFO AVERAGE			**16%**	**0%**	**38%**	**45%**	**2.92**	



Shoreline Departure Rating - 4th Quarter 2014

October 1 to December 31,2014

Airline		Shoreline Departures					Shoreline Departure Rating
		Total	Successful	Marginal	Poor	Score	
ABX AIR	ABX	4	100%	0%	0%	*10.00*	
Compass Airlines	CPZ	32	100%	0%	0%	*10.00*	
FRONTIER AIRLINES	FFT	25	100%	0%	0%	*10.00*	
Avianca	TAI	1	100%	0%	0%	*10.00*	
AirTran	TRS	3	100%	0%	0%	*10.00*	
sun country airlines	SCX	13	92%	8%	0%	*9.62*	
Alaska Airlines	ASA	66	91%	6%	3%	*9.39*	
AIR CANADA	ACA	33	85%	12%	3%	*9.09*	
SkyWest	SKW	275	83%	16%	1%	*9.07*	
Virgin america	VRD	115	82%	17%	1%	*9.04*	
Southwest	SWA	46	85%	11%	4%	*9.02*	
FedEx	FDX	5	80%	20%	0%	*9.00*	
American Airlines	AAL	111	75%	21%	5%	*8.51*	
UNITED	UAL	523	66%	27%	7%	*7.96*	
Lufthansa	DLH	6	67%	17%	17%	*7.50*	
KLM Royal Dutch Airlines	KLM	4	50%	50%	0%	*7.50*	
DELTA	DAL	121	58%	31%	12%	*7.31*	
US AIRWAYS	AWE	41	49%	44%	7%	*7.07*	
jetBlue	JBU	25	40%	60%	0%	*7.00*	
						6.73	SFO AVERAGE
WESTJET	WJA	4	50%	25%	25%	*6.25*	
Aer Lingus	EIN	1	0%	100%	0%	*5.00*	
AIRFRANCE	AFR	3	0%	67%	33%	*3.33*	
BRITISH AIRWAYS	BAW	1	0%	0%	100%	*0.00*	
CHINA AIRLINES	CAL	1	0%	0%	100%	*0.00*	
ETIHAD	ETD	2	0%	0%	100%	*0.00*	
SINGAPORE AIRLINES	SIA	2	0%	0%	100%	*0.00*	
Emirates	UAE	2	0%	0%	100%	*0.00*	
TOTAL		**1,465**					
SFO AVERAGE			**57%**	**20%**	**23%**	**6.73**	



Gap Departure Climb Rating - 4th Quarter 2014

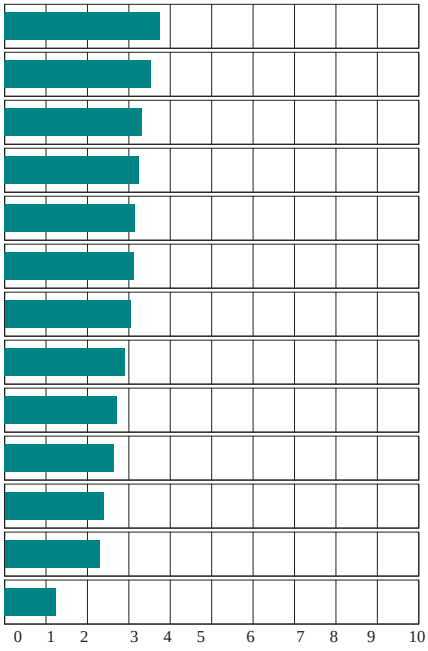
October 1 to December 31, 2014

Airline		Gap Departures		Gap Departure Quality Rating
		Total	Score	
UPS	UPS	1	*10.00*	
JAPAN AIRLINES	JAL	34	*7.28*	
ASIANA AIRLINES	AAR	133	*7.15*	
AIR CHINA	CCA	83	*7.05*	
AIRFRANCE	AFR	55	*6.73*	
ANA	ANA	82	*6.43*	
CATHAY PACIFIC	CPA	169	*6.42*	
U·S AIRWAYS	AWE	111	*5.71*	
MESA AIRLINES	ASH	21	*5.65*	
KOREAN AIR	KAL	156	*5.61*	
SkyWest AIRLINES	SKW	417	*5.47*	
CHINA AIRLINES	CAL	137	*5.47*	
ABX AIR	ABX	33	*5.45*	
virgin atlantic	VIR	66	*5.38*	
AIR NEW ZEALAND	ANZ	93	*5.34*	
Scandinavian Airlines	SAS	68	*5.24*	
中国東方航空 CHINA EASTERN	CES	82	*5.14*	
AEROMEXICO	AMX	21	*5.12*	
Lufthansa	DLH	148	*4.84*	
中国南方航空 CHINA SOUTHERN AIRLINES	CSN	6	*4.79*	
SWISS	SWR	79	*4.78*	
HAWAIIAN AIRLINES	HAL	11	*4.77*	
FedEx	FDX	14	*4.73*	
			4.60	SFO AVERAGE
jetBlue	JBU	63	*4.56*	
Compass Airlines	CPZ	154	*4.39*	
Virgin america	VRD	306	*4.21*	
Southwest	SWA	302	*4.11*	
AIR CANADA	ACA	32	*4.06*	
Aer Lingus	EIN	52	*3.99*	
Avianca	TAI	11	*3.86*	
SINGAPORE AIRLINES	SIA	167	*3.85*	
Alaska Airlines	ASA	80	*3.83*	
EVA AIR	EVA	195	*3.77*	
DELTA	DAL	113	*3.75*	

Gap Departure Climb Rating - 4th Quarter 2014

October 1 to December 31, 2014

Airline		Gap Departures		Gap Departure Quality Rating
		Total	Score	
airTran	TRS	1	3.75	
NCA Nippon Cargo Airlines	NCA	63	3.53	
FRONTIER AIRLINES	FFT	17	3.31	
KLM Royal Dutch Airlines	KLM	22	3.24	
UNITED	UAL	2725	3.15	
Emirates	UAE	82	3.13	
American Airlines	AAL	192	3.04	
Philippines	PAL	95	2.91	
BRITISH AIRWAYS	BAW	154	2.71	
KALITTA AIR	CKS	25	2.65	
ETIHAD	ETD	33	2.39	
suncountry airlines	SCX	6	2.29	
WESTJET	WJA	4	1.25	



TOTAL	**6914**	
SFO Average		**4.60**

Foster City Arrival Rating - 4th Quarter 2014

October 1 to December 31,2014

Airline		Foster City Arrivals					Foster City Arrival Rating
		Total	*Successful*	*Marginal*	*Poor*	*Score*	
AirTran	TRS	**3**	100%	0%	0%	***10.00***	
sun country airlines	SCX	**4**	75%	25%	0%	***8.75***	
DELTA	DAL	**178**	57%	43%	0%	***7.84***	
American Airlines	AAL	**217**	57%	42%	0%	***7.83***	
FRONTIER AIRLINES	FFT	**35**	54%	46%	0%	***7.71***	
jetBlue	JBU	**180**	53%	47%	0%	***7.67***	
US AIRWAYS	AWE	**100**	50%	49%	1%	***7.45***	
Southwest	SWA	**162**	41%	57%	1%	***7.01***	
ABX AIR	ABX	**49**	37%	63%	0%	***6.84***	
FedEx	FDX	**48**	35%	65%	0%	***6.77***	
UNITED	UAL	**871**	33%	66%	0%	***6.65***	
NCA Nippon Cargo Airlines	NCA	**35**	29%	71%	0%	***6.43***	
						6.38	SFO AVERAGE
Avianca	TAI	**77**	26%	74%	0%	***6.30***	
AIR CANADA	ACA	**35**	26%	74%	0%	***6.29***	
AEROMEXICO	AMX	**35**	29%	69%	3%	***6.29***	
EVA AIR	EVA	**5**	20%	80%	0%	***6.00***	
MESA	ASH	**78**	19%	81%	0%	***5.96***	
SkyWest	SKW	**62**	21%	76%	3%	***5.89***	
Compass Airlines	CPZ	**58**	19%	79%	2%	***5.86***	
KALITTA AIR	CKS	**12**	17%	83%	0%	***5.83***	
virgin america	VRD	**120**	16%	84%	0%	***5.79***	
ASIANA AIRLINES	AAR	**46**	11%	89%	0%	***5.54***	
ups	UPS	**10**	10%	90%	0%	***5.50***	
KOREAN AIR	KAL	**78**	3%	97%	0%	***5.13***	
Alaska Airlines	ASA	**38**	3%	95%	3%	***5.00***	
CHINA AIRLINES	CAL	**1**	0%	100%	0%	***5.00***	
HAWAIIAN AIRLINES	HAL	**2**	0%	100%	0%	***5.00***	
JAPAN AIRLINES	JAL	**1**	0%	100%	0%	***5.00***	
Philippines	PAL	**1**	0%	100%	0%	***5.00***	
WESTJET	WJA	**1**	0%	100%	0%	***5.00***	
							0 1 2 3 4 5 6 7 8 9 10
TOTAL		**2,542**					
SFO AVERAGE			**28%**	**72%**	**0%**	**6.38**	

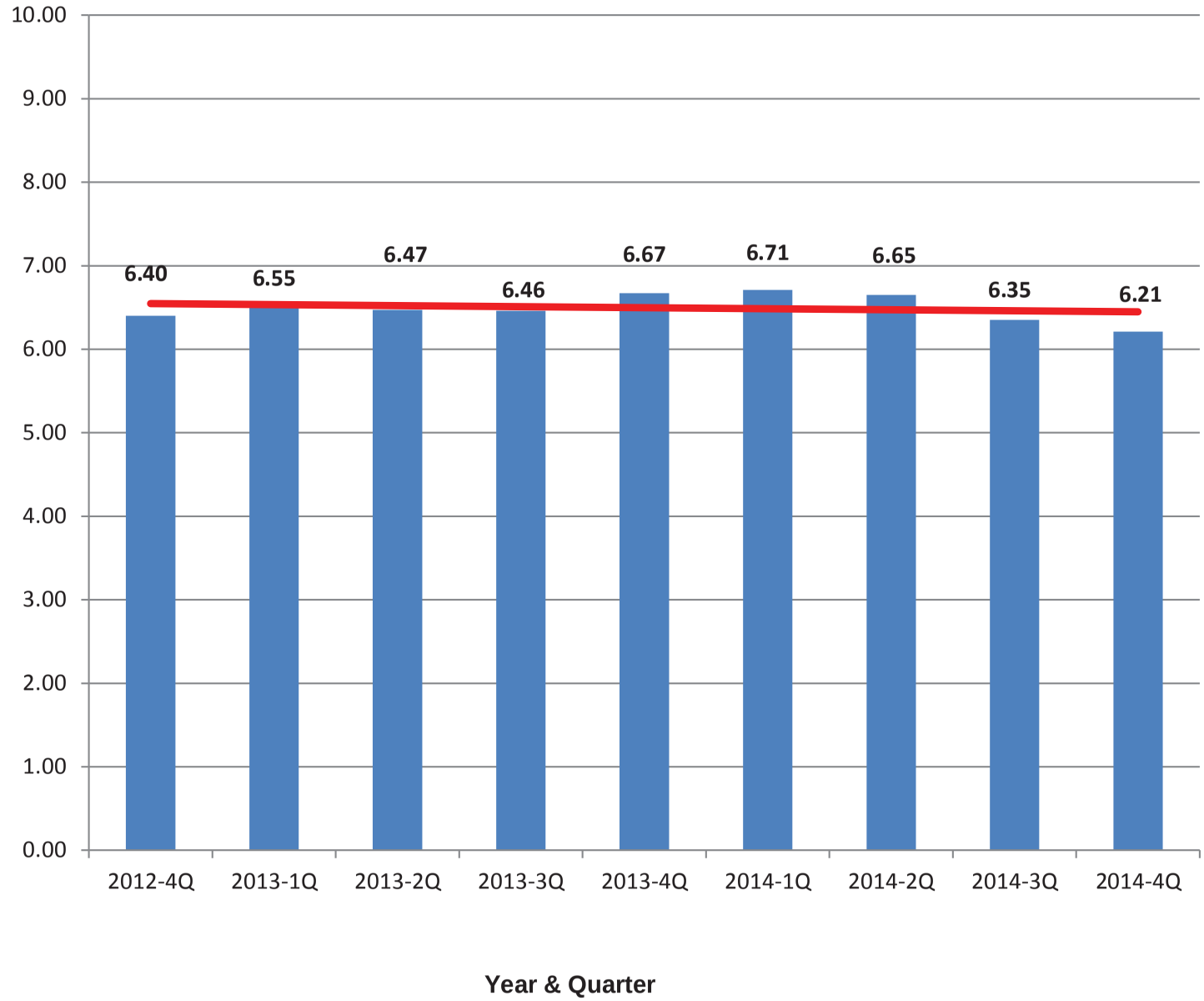
San Francisco International Airport

Fly Quiet Report

Presented at the February 4, 2015
Airport Community Roundtable Meeting
SFO Aircraft Noise Abatement Office
Fourth Quarter 2014

Fly Quiet Summary Averages

San Francisco International Airport

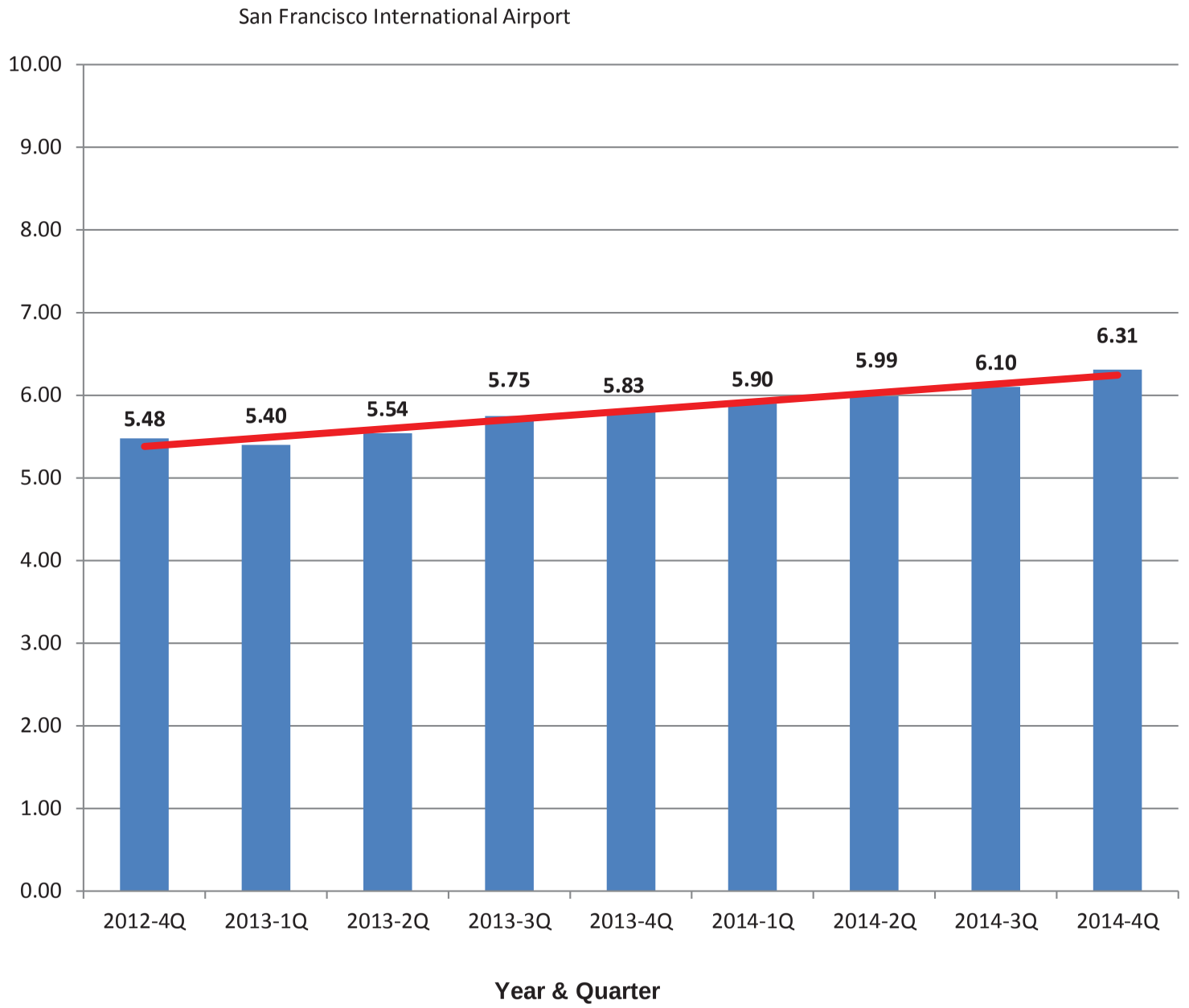


Top 5

Bottom 5

Average of Quarterly Averages, Airline Rankings are for top 5 and bottom 5 performers for this category for current quarter, new airlines to top and bottom 5

Fleet Noise Quality Averages

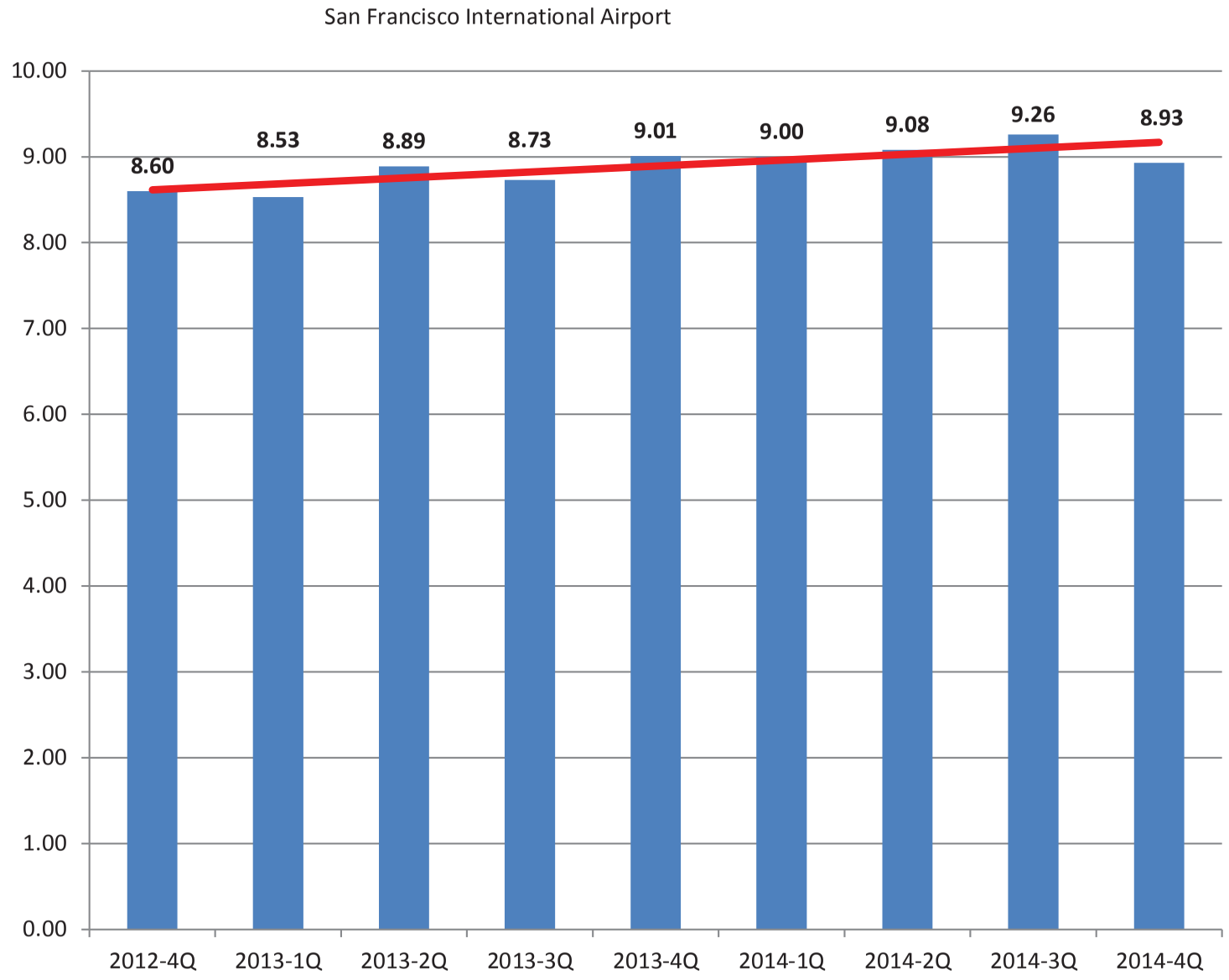


Top 5

Bottom 5

Average of Quarterly Averages, Airline Rankings are for top 5 and bottom 5 performers for this category for current quarter, new airlines to top and bottom 5

Noise Exceedance Rating Averages



Top 5

Emirates

SkyWest Airlines

Air New Zealand

Aer Lingus

Mesa Airlines

Bottom 5

Singapore Airlines

Philippines

Asiana Airlines

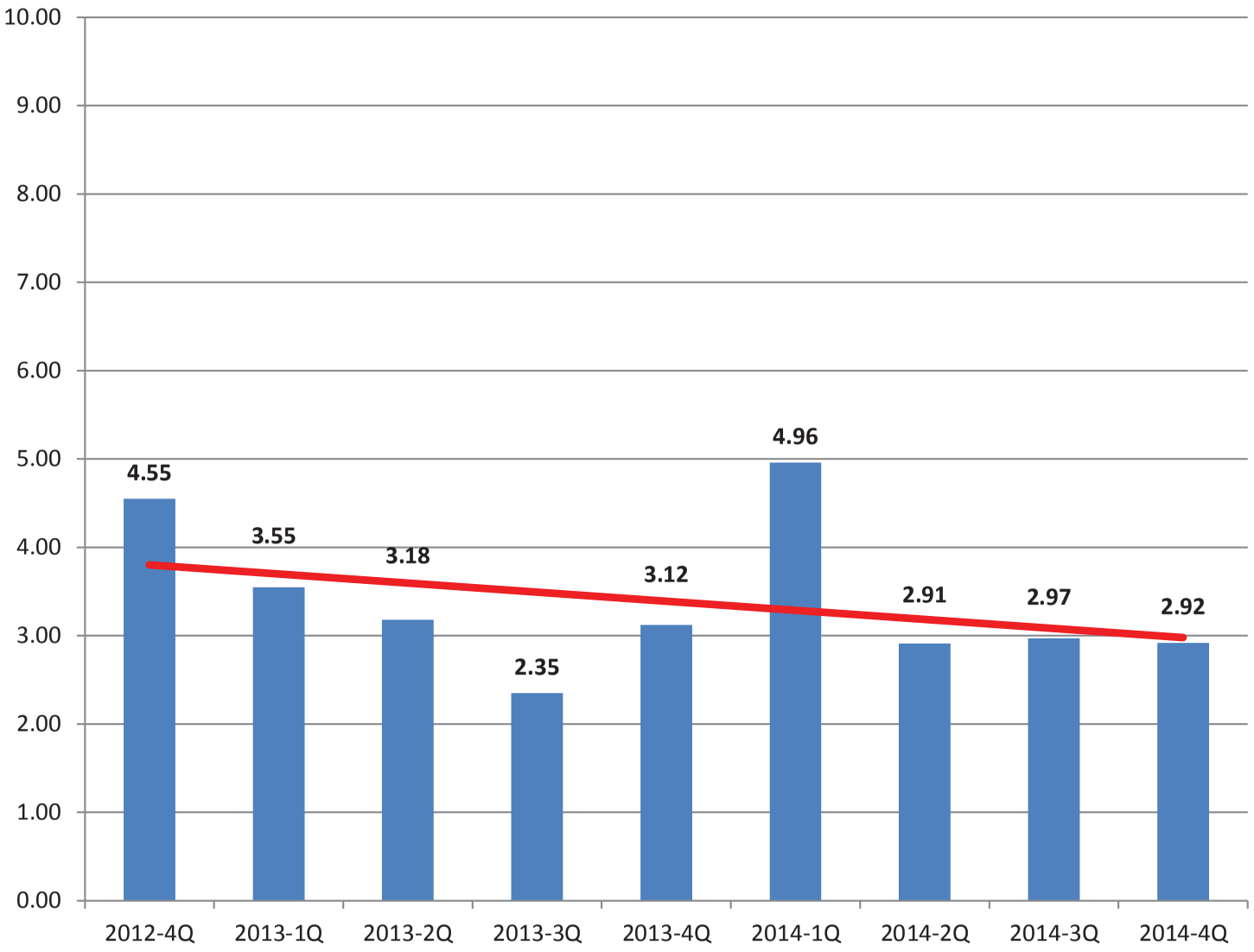
China Airlines

Kalitta Air

Average of Quarterly Averages, Airline Rankings are for top 5 and bottom 5 performers for this category for current quarter, new airlines to top and bottom 5

Nighttime Preferential Runway Use Averages

San Francisco International Airport



Top 5

AIR CANADA

Alaska Airlines

Virgin america

DELTA

SkyWest AIRLINES

Bottom 5

CHINA AIRLINES

KALITTA AIR

ASIANA AIRLINES

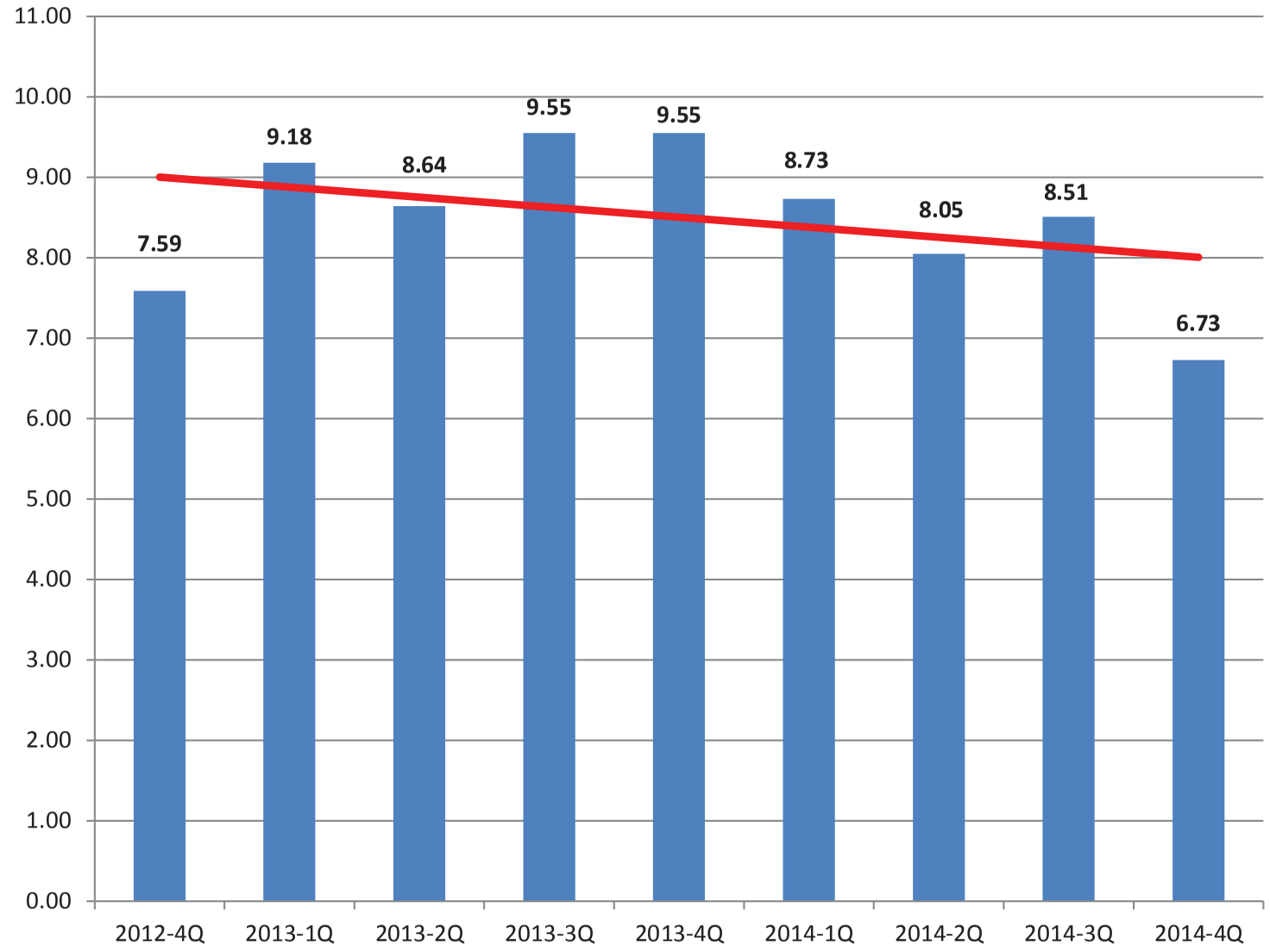
CATHAY PACIFIC

SINGAPORE AIRLINES

Average of Quarterly Averages, Airline Rankings are for top 5 and bottom 5 performers for this category for current quarter, new airlines to top and bottom 5

Shoreline Departure Rating Averages

San Francisco International Airport



Top 6

Compass Airlines

FRONTIER AIRLINES

sun country airlines

Alaska Airlines

AIR CANADA

SkyWest AIRLINES

Bottom 6

jetBlue

WESTJET

AIRFRANCE

ETIHAD AIRWAYS

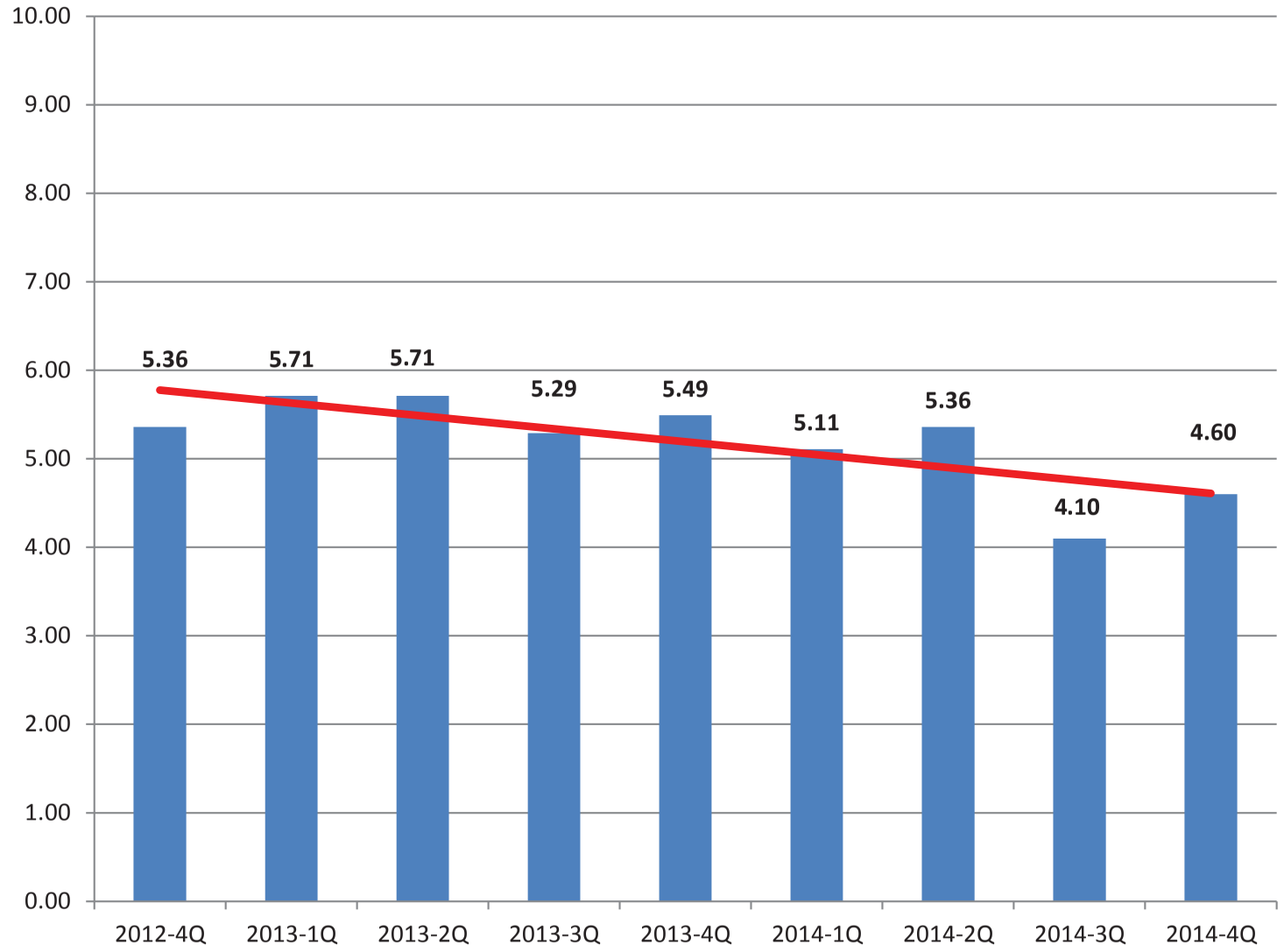
SINGAPORE AIRLINES

Emirates

Average of Quarterly Averages, Airline Rankings are for top 5 and bottom 5 performers for this category for current quarter, new airlines to top and bottom 5

Gap Departure Climb Rating Averages

San Francisco International Airport



Top 5

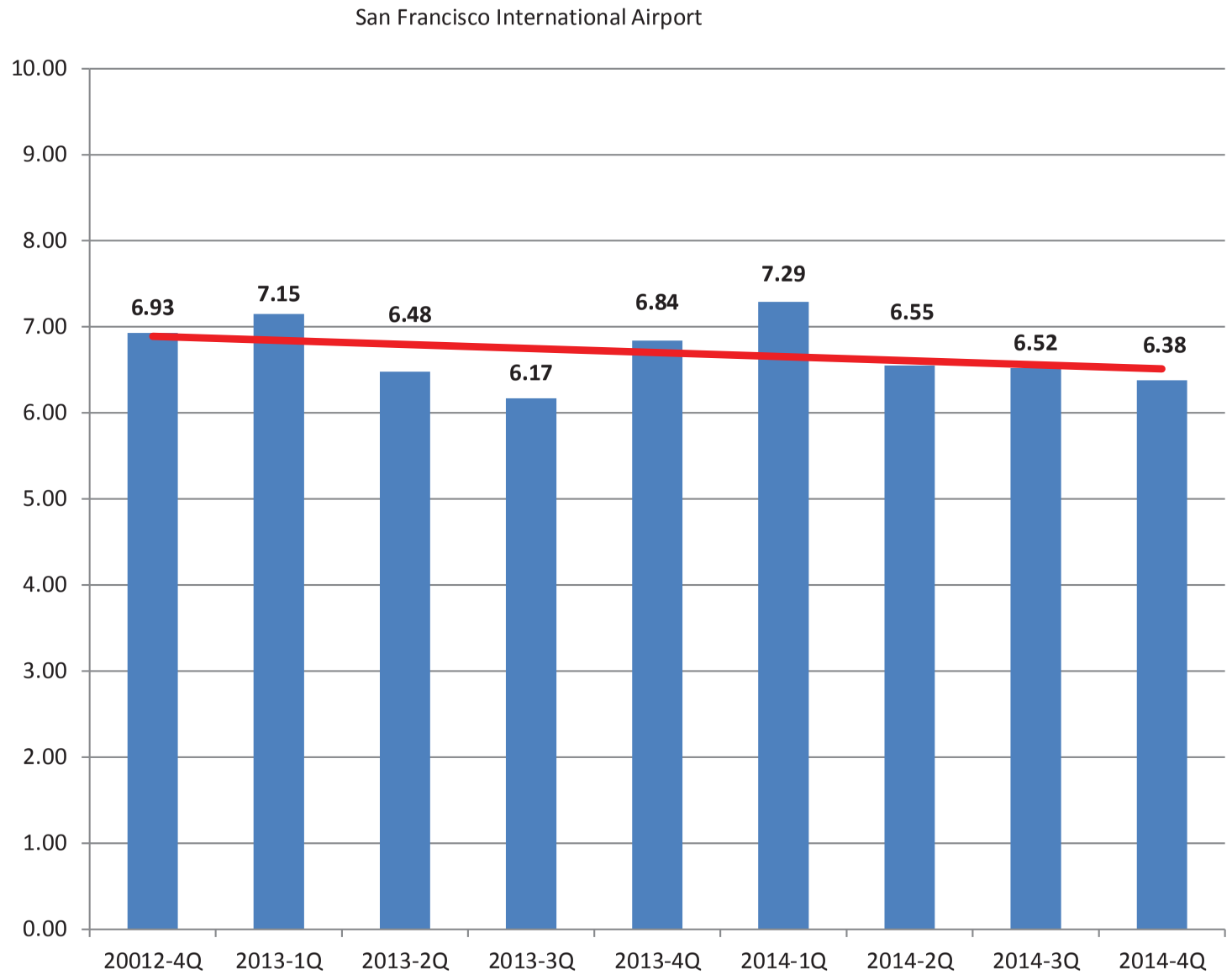
Bottom 5

Average of Quarterly Averages, Airline Rankings are for top 5 and bottom 5 performers for this category for current quarter, new airlines to top and bottom 5

Meeting of Feb 5, 2015
Packet Page 49
Gap Departure Climb Rating Averages

Foster City Arrival Rating Averages

San Francisco International Airport



Top 5

Bottom 5

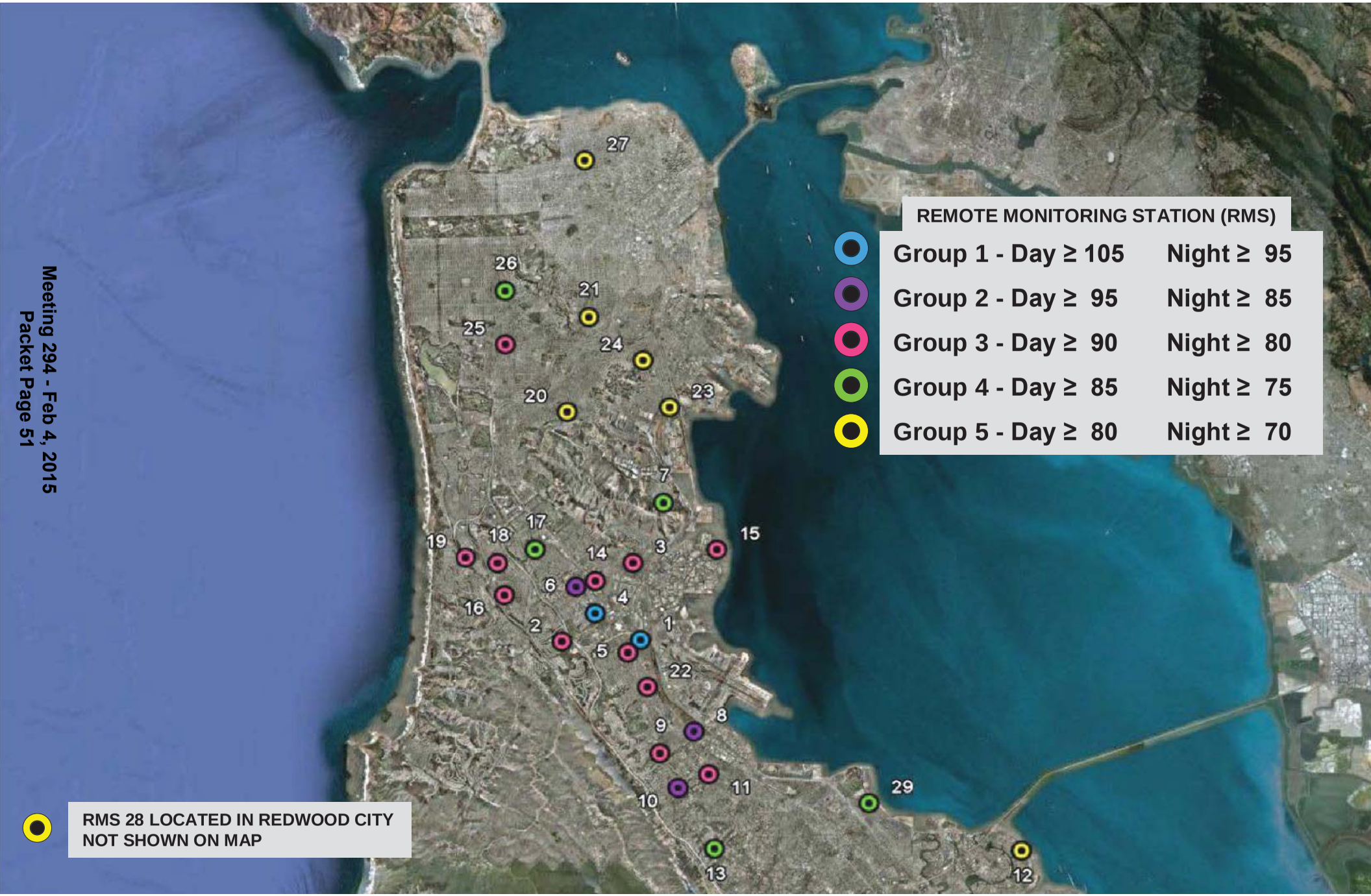
Average of Quarterly Averages, Airline Rankings are for top 5 and bottom 5 performers for this category for current quarter, new airlines to top and bottom 5

Noise Exceedance Rating

Noise Monitor Day/Night Thresholds

San Francisco International Airport

San Francisco International Airport



Nighttime Preferential Runway Use

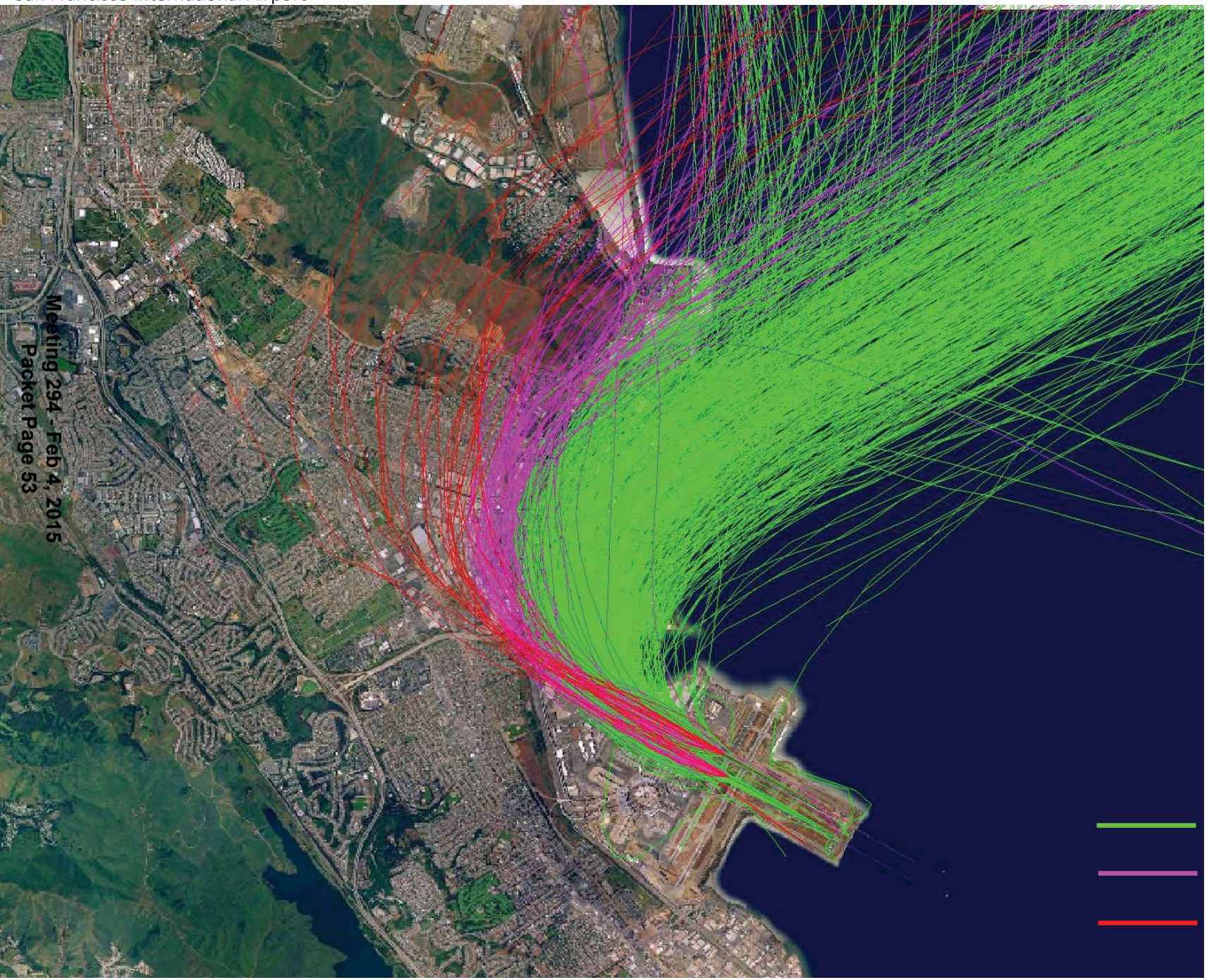
San Francisco International Airport

Meeting 294 - Feb 4, 2015
Packet Page 52

Shoreline Departure Rating

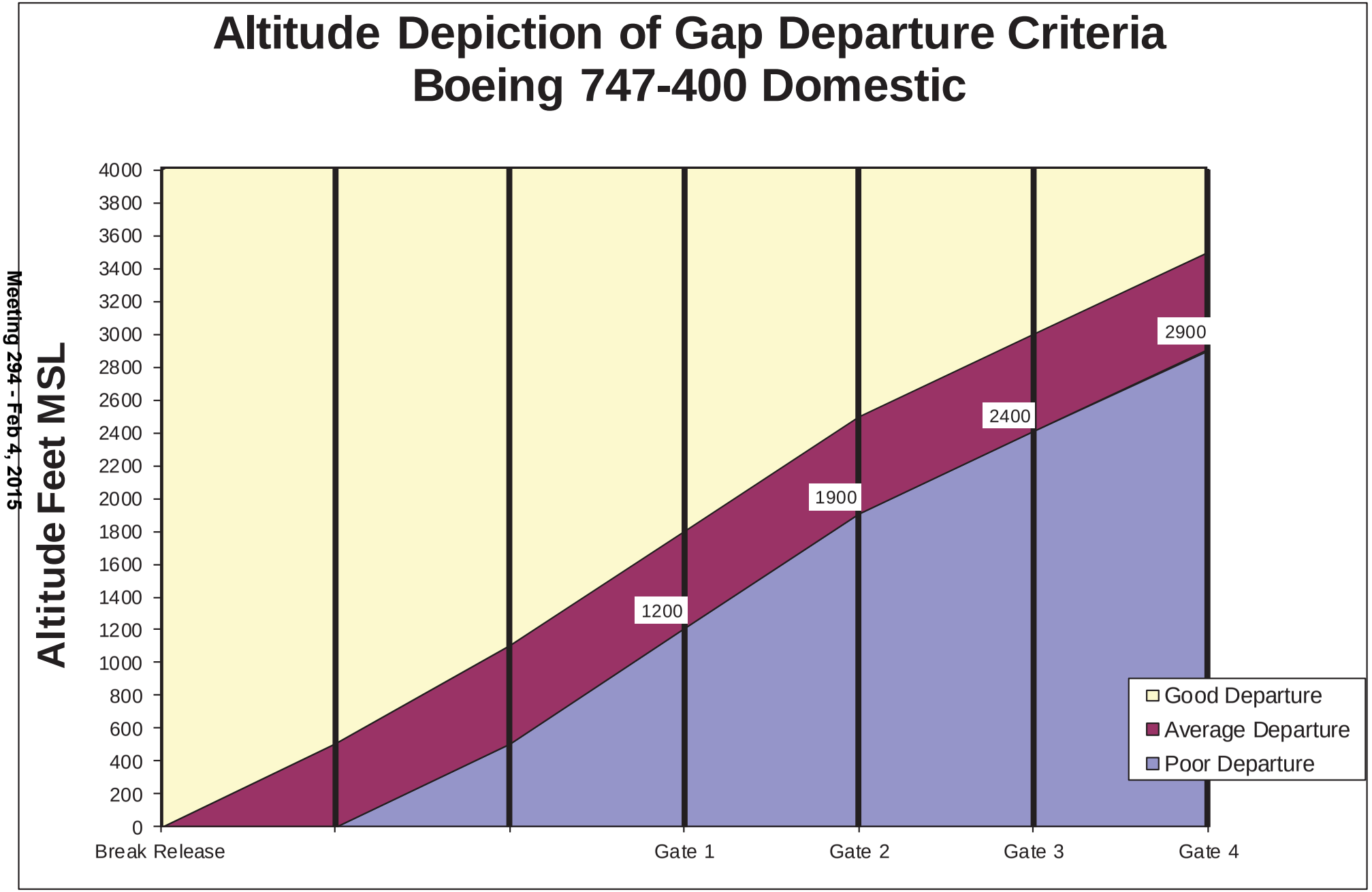
San Francisco International Airport

San Francisco International Airport



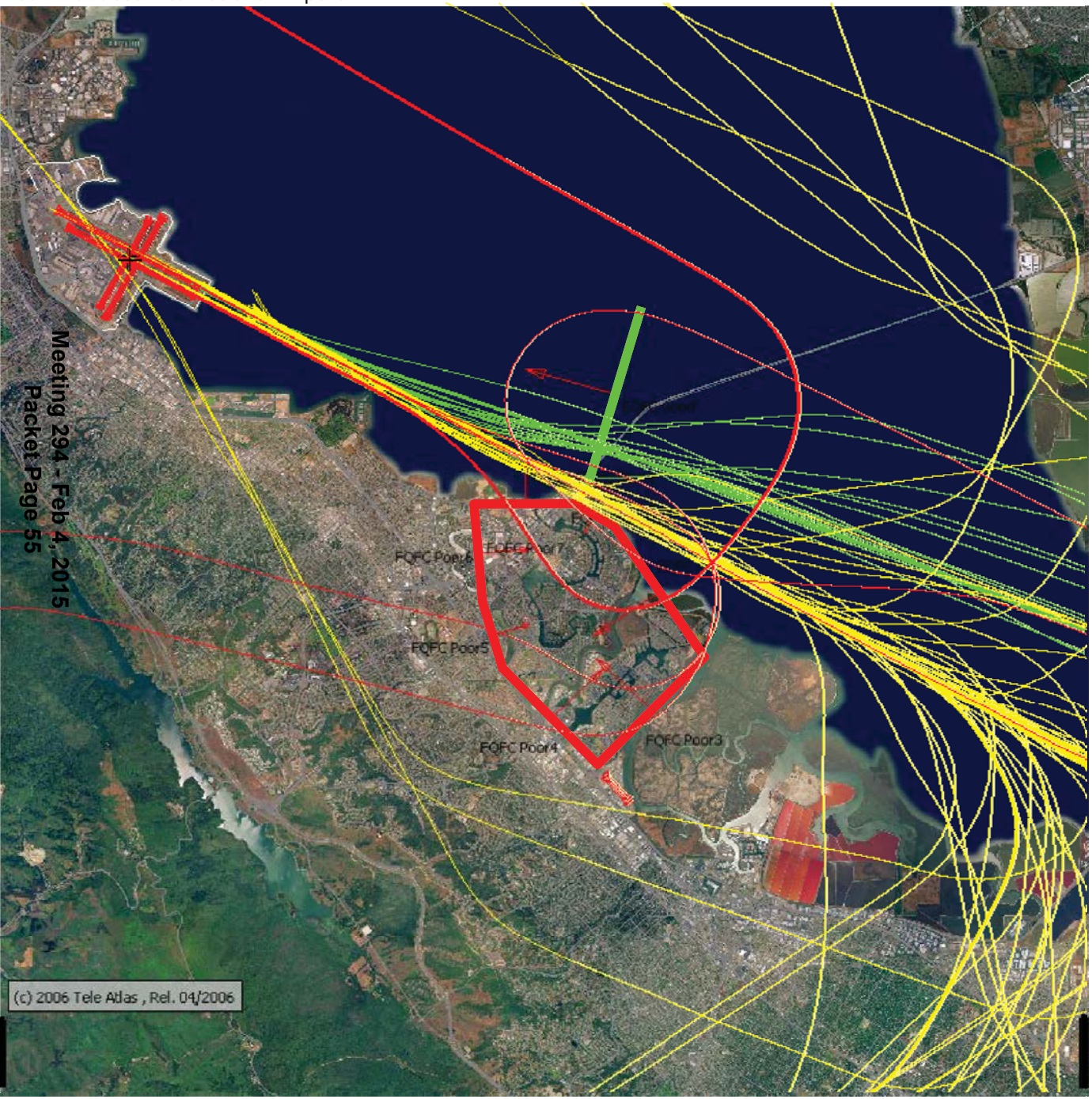
Gap Departure Rating

San Francisco International Airport



Foster City Arrival Rating

San Francisco International Airport



Good (+2 points)

Marginal (+1 points)

Poor (0 points)

Meeting 294 - Feb 4, 2015
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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

February 4, 2015

TO: Roundtable Representatives, Alternatives, and Interested Persons

FROM: James A. Castañeda, AICP, Roundtable Coordinator

SUBJECT: North and South Peninsula Subcommittee Formation

Subcommittee Formation
At the regular Roundtable meeting on December 3, 2014, the Roundtable approved formation of two subcommittees to discuss issues in the north and south of San Mateo County, respectively. According to the Roundtable Purpose and By-Laws Article VII. Section 2., Creation of a Standing Subcommittee or an Ad Hoc Subcommittee may be created by a majority vote of the Roundtable/Alternates present at a Regular Meeting. The Chairperson shall have the discretion to propose the formation of a subcommittee.

Goals

- Create a knowledge base among the Roundtable membership.
- Enhance and strengthen stakeholder relationships to help mitigate noise issues in San Francisco and San Mateo Counties.
- Use as forums to discuss Work Program items in depth.

Meeting Organization

- The North and South Subcommittees will be held at least 3 times per year.
- Meetings shall be held on a day that allows Roundtable staff to present the meeting summary at the next regular meeting of the Roundtable.
- The first meeting of the Subcommittees shall be in the same location occurring consecutively.
- At the decision of each Subcommittee, subsequent meetings may be held closer to the geographic location of the Subcommittee area, i.e. North Subcommittee shall be held in a location north of Burlingame and South Subcommittee shall be held in a location south of Burlingame.
- Meetings are open to the public, subject to the Brown Act
- Teleconferencing will be available for participants unable to be at the meeting in person.
- Attendance of technical representatives by stakeholders will be encouraged.

Discussion Topics – North Peninsula

- Departures
- Metroplex Procedures
- Gap Departures
- Work Program Item AO3. PORTE 5 Departures
- Shoreline Departures (City of San Francisco)

Discussion Topics – South Peninsula

- Arrivals
- Metroplex Procedures
- Work Program Item AO2. Woodside Optimized Profile Descents
- Work Program Item RI2. Noise Effects of Aircraft – Traditional Arrival versus Optimized Procedure Descent

San Francisco International
Airport/Community Roundtable

455 County Center, 2nd Floor
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T (650) 363-1853
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www.sforoundtable.org

February 4, 2015

TO: Roundtable Representatives, Alternatives, and Interested Persons

FROM: James A. Castañeda, AICP, Roundtable Coordinator

SUBJECT: Review/Approval of Resolution 15-01: Designating Roundtable Meeting Dates, Time, and Place for Calendar Year 2015

RECOMMENDATION:

Adopt the attached Roundtable Resolution No. 15-01 that specifies the day, time, and place for holding Regular Meetings of the SFO Airport/Community Roundtable, as required by the Brown Act and the Roundtable Bylaws for calendar year 2015.

BACKGROUND:

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

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

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

DISCUSSION

The proposed dates are reflective of maintaining approximately five to six meetings per fiscal year. Regular Meetings for calendar year 2015 are to be held at 7:00pm on the first Wednesday of the following months: February, April, June, October, and December, and therefor with adoption of Roundtable Resolution 15-01, the Regular Meetings would be scheduled as follows:

- **February 4, 2015**
- **April 1, 2015**
- **June 3, 2015**
- **October 2, 2015**
- **December 2, 2015**

The meetings will continue to be held at the David Chetcuti Community Room at 450 Poplar Street, Millbrae, CA. This does not preclude any additional meetings the Roundtable finds necessary.

ATTACHED: Resolution 15-01

jac

San Francisco International
Airport/Community Roundtable

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RESOLUTION No. 15-01

* *

A RESOLUTION PROVIDING FOR THE DAY, TIME, AND PLACE FOR HOLDING REGULAR MEETINGS OF THE SAN FRANCISCO INTERNATIONAL AIRPORT/COMMUNITY ROUNDTABLE FOR CALENDAR YEAR 2015

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

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

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

NOW, THEREFORE BE IT RESOLVED, that the Regular Meetings of the Roundtable shall be scheduled as follows: the first Wednesday of February, April, June, October, and December 2015, at 7:00 p.m. in the David Chetcuti Community Room at Millbrae City Hall, 450 Poplar Avenue, Millbrae, California. Special Meetings and workshops may be scheduled and held, as needed, in accordance with the relevant provisions in the Brown Act and the adopted Roundtable Bylaws.

* *

PASSED, APPROVED, AND ADOPTED ON FEBURARY 4, 2015.

Roundtable Chairperson

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CORRESPONDENCES

Regular Meeting # 294
February 4, 2015

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RESOLUTION NO. 14-06

A Resolution to Express Sincere Thanks from the Members of the San Francisco International Airport/Community Roundtable to

Naomi Patridge

Upon Her Departure from the San Francisco International Airport/Community Roundtable

WHEREAS, the San Francisco International Airport/Community Roundtable (Roundtable) was established in 1981 to provide a forum for the public, local elected officials, Airport management, FAA, and airline representatives to address community noise issues related to aircraft operations at San Francisco International Airport (SFO); and

WHEREAS, Councilmember **Naomi Patridge** has been a member of the Half Moon Bay City Council since 1985, serving as Mayor for seven terms during 1985 – 2001 and as Mayor for two terms during 2005 – 2014, and is retiring from public office after a record sixth term and twenty-five years of public service; and

WHEREAS, Councilmember **Naomi Patridge** has represented the Roundtable, the City of Half Moon Bay, and County of San Mateo on numerous key commissions, committees, and panels including, but not limited to, the Airport Land Use Commission (ALUC) and the Comprehensive Airport/Land Use Compatibility Plan (CLUP) for the San Francisco International Airport; and

WHEREAS, Councilmember **Naomi Patridge** is recognized by her colleagues and constituents in the County of San Mateo as a leader in the fields of aircraft noise mitigation, airport and community land use compatibility, and for her efforts as an active participant in the production of the Roundtable's Fly Quiet Video and furthering the Fly Quiet Program, both joint initiatives of the Airport and the Roundtable.

NOW, THEREFORE BE IT RESOLVED, that the members of the Roundtable do hereby express their sincere appreciation to Councilmember **Naomi Patridge** for her support to the Roundtable since 1986, and tireless efforts in working with community representatives, Airport officials, government officials and airlines on successful aircraft noise mitigation policies in the San Francisco Airport environs. The Roundtable wishes her great success in her future endeavors.

UNANIMOUSLY PASSED, APPROVED, AND ADOPTED BY THE MEMBERS OF THE SAN FRANCISCO INTERNATIONAL AIRPORT/COMMUNITY ROUNDTABLE ON DECEMBER 3, 2014.

Cliff Lentz, Roundtable Chairperson

San Francisco International
Airport/Community Roundtable

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December 15, 2014

TO: Roundtable Representatives and Alternates

FROM: James Castañeda, AICP

SUBJECT: ACRP Survey

The Roundtable has an opportunity to fulfill its Work Program item RI3 "Airport Cooperative Research Program (ACRP) Participation" through a questionnaire for an ongoing ACRP Project. The Roundtable has been asked by the ACRP for its members to answer a 15-20 minute questionnaire regarding stakeholder engagement in the implementation of NextGen; for the bay area, this includes implementation of the Bay Area Metroplex. The questionnaire should be completed by the end of the year.

The following paragraphs describe the research project from the researchers:

> The Transportation Research Board, which is part of the National Academies of Science, is overseeing research on the most effective ways to engage airport stakeholders on the implementation of NextGen. For more project information, please refer to:
>
> http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3692.
>
> We hope that this questionnaire will allow you to provide input on effective ways to engage airport stakeholders on NextGen initiatives. We would appreciate it if you would take approximately 15-20 minutes to share your experience, knowledge, and advice with us. The information you share will be kept confidential, and all responses will be aggregated to preserve confidentiality.
>
> Within the survey, we also request referrals to colleagues who could provide relevant information and feedback on NextGen and effective communication strategies. Your assistance with this critical aviation research project is greatly appreciated.

There is one technical question with a list of options regarding NextGen in the survey; please find guidance on it below. The most applicable answers are highlighted. For the rest of the survey, the answers relate to how NextGen has impacted us as an organization. If you have any specific questions on the survey, please contact Cindy Gibbs, Roundtable Technical Consultant at 909-522-6740 or cindyg@airportnetwork.com.

7. Please indicate which NextGen initiatives have or will impact your organization? Please check all that apply:

☐ Collaborative Air Traffic Management (CATM) - Collaborative Decision Making (CDM)

☐ Low Vis Approaches - Advanced Enhanced Flight Visions System (EFVS)

☐ Low Vis Approaches - Enhanced Flight Visions System (EFVS)

☐ Low Vis Approaches - Global Navigation Satellite System Landing System (GLS) I

☐ Low Vis Approaches - Global Navigation Satellite System Landing System (GLS) II & III

☑ Multiple Runway Ops - Separation Standards Reduced of Closely Spaced Parallel Operations (CSPO)

☐ On-Demand NAS Info - National Airspace System (NAS) information to stakeholders (Near-Term)

☐ Performance Based Navigation (PBN) - Advanced Performance Based Navigation (PBN)

☑ Performance Based Navigation (PBN) - Performance Based Navigation (PBN) procedures in Metroplex areas

☐ Performance Based Navigation (PBN) - Performance Based Navigation (PBN)/Required Navigation Performance (RNP) Authorization Required (AR) (non-Optimization of Airspace & Procedures in the Metroplex (OAPM) and single site)

☐ Separation Management - Controller-Pilot Data Link Communications (CPDLC), Weather Reroute (Data Communications (DataComm), Future Air Navigation Systems (FANS) 1/A

☑ Separation Management - New Data Communications (DataComm) Applications

☐ Separation Management - Separation Services (reduced separation) Automatic Dependent Surveillance – Broadcast (ADS-B) Out

☑ Separation Management - Wake Re-Categorization & Wake Separation

☐ Surface / Terminal - Surface/Terminal Alerting (Automatic Dependent Surveillance – Broadcast (ADS-B) In

☐ Surface Ops - Automatic Dependent Surveillance – Broadcast (ADS-B) - Situational Awareness

☐ Surface Ops - Data sharing of surface movements

☑ Time Based Flow Management (TBFM) - Advanced Flight Deck Interval Management

☐ Time Based Flow Management (TBFM) - Interval Management (IM) Automatic Dependent Surveillance – Broadcast (ADS-B) and Arrivals (Area Navigation (RNAV)/Required Navigation Performance (RNP) with 3-Dimensional and Required Time of Arrival (RTA)

☐ Time Based Flow Management (TBFM) - Metering/Merging/Spacing (Enroute and Terminal)(Ground-Based)

☐ Other (please describe) Please enter an 'other' value for this selection.

☐ I am not familiar with any of these NextGen initiatives

☐ I am familiar with some of these NextGen initiatives, but do not feel they affect my organization or that we have any influence on their implementation.

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January 7, 2015

Mr. Michael P. Huerta
Administrator
Federal Aviation Administration
800 Independence Avenue SW
Washington, DC 20591

Re: Congressional Letter to FAA Administrator Michael Huerta dated September 12, 2014

Dear Mr. Huerta:

Since 1981, the San Francisco International Airport/Community Roundtable (Roundtable) has provided a forum for citizens and communities within San Mateo County and the City and County of San Francisco to voice concerns regarding aircraft noise from operations at San Francisco International Airport. The Roundtable consists of elected representatives from 21 cities within San Mateo County and the City and County of San Francisco. Over the past 33 years, the Roundtable has worked with stakeholders at a regional, state, and national level to address aircraft and airport noise related issues for its citizens and communities, including Representatives Jackie Speier and Anna Eshoo. Their support of the Roundtable member entities has been critical for national support of implementing new procedures that address noise issues in San Mateo County and the City and County of San Francisco.

We support the efforts of Representatives Speier and Eshoo to address the 65 DNL benchmark, as we too have requested that the FAA evaluate lowering its 65 DNL standard and we eagerly await the FAA review of the 65 DNL metric.

During the comment period for the NOR CAL Metroplex Environmental Assessment, the SFO Roundtable repeatedly called for the NextGen system to incorporate airplane noise reduction beyond an annual average as part of its efficiency strategy. We believe that reductions in fuel emissions and airplane noise can be compatible with each, and urge the FAA to consider noise impacts when it evaluates the newly implemented RNAV procedures.

The Roundtable supports the recently-created Quiet Skies Caucus. This congressional caucus, with representatives from communities throughout the country, has the capacity to work with leading stakeholders to ensure: new satellite-based procedures reduce noise for communities around airports, don't result in a shift of noise, and verify the FAA is using the most appropriate metrics to define noise thresholds related to aircraft operations.

Best Regards,

James A. Castañeda, AICP, Program Coordinator, on behalf of

Cliff Lentz, Councilmember
City of Brisbane
Chair, San Francisco Airport/Community Roundtable

Cc: The Honorable Jackie Speier, United States House of Representatives
The Honorable Anna Eshoo, United States House of Representatives
Benny Lee, Co-Chair, Oakland Community Noise Forum
Walt Jacobs, Co-Chair, Oakland Community Noise Forum
Denny Schneider, Chairman, LAX Community Roundtable

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January 7, 2015

Julie Pierce
President, Association of Bay Area Governments
101 8th Street
Oakland, California 94607

Re: Association of Bay Area Government Regional Airport Planning Committee

Dear Ms. Pierce:

Since 1981, The San Francisco International Airport/Community Roundtable's (Roundtable) has provided a forum for citizens in San Mateo County and the City and County of San Francisco to voice concerns regarding aircraft noise from operations at San Francisco International Airport. The Roundtable consists of elected representatives from 21 cities within San Mateo County and the City and County of San Francisco. Over the past 33 years, the Roundtable has worked with stakeholders at a regional, state, and national level to address aircraft and airport noise related issues, through this community and citizen focused organization.

With three major hub airports within close geographical proximity, airspace congestion within the bay area has continued to increase over time. This is evident now more than ever with the recent Northern California Optimization of Airspace and Procedures (Metroplex) Environmental Assessment and subsequent FONSI-ROD. Airspace issues from one airport affect adjacent counties and municipalities, and concerns from these overflights cross county and city lines. Due to the airspace interdependencies in the bay area and related noise concerns from citizens, we request RAPC to re-capture its role as the region's forum to address noise issues on a regional level, and suggest reconvening quarterly meetings in order to regain its position as a regional body. The Roundtable will ensure a representative will attend RAPC's next meeting and show our support, which is tentatively scheduled for January 30, 2015. While the FAA remains focused on the development of the Metroplex from a regional perspective, RAPC's role providing regional community representation is key to the citizens and communities potentially impacted by this critical ongoing airspace re-design.

Best Regards,

James A. Castañeda, AICP, Program Coordinator, on behalf of

Cliff Lentz, Councilmember
City of Brisbane
Chair, San Francisco Airport/Community Roundtable

Cc: Rich Garbarino, Vice Chair, RAPC
Brad Paul, ABAG Deputy Executive Director
Benny Lee, Co-Chair, Oakland Community Noise Forum
Walt Jacobs, Co-Chair, Oakland Community Noise Forum

AIRPORT NOISE NEWS

Regular Meeting # 294
February 4, 2015

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Airport Noise Report

A weekly update on litigation, regulations, and technological developments

Volume 27, Number 3 January 23, 2015

ACRP

PROJECTS WILL MODEL SPACEPORT NOISE, DO GUIDE ON GIS FOR LAND USE PLANNING

On Jan. 21, the Transportation Research Board issued Requests for Proposals (RFPs) seeking contractors for two new Airport Cooperative Research projects:

• ACRP 02-66: Commercial Space Operations and Sonic Boom Modeling and Analysis – a $600,000, 22-month project authorized to begin in August 2015 (RFP closing date is March 18); and

• ACRP 03-37, Using GIS for Collaborative Land Use Compatibility Planning Near Airports – a $350,000, 15-month project set to begin in July 2016 (RFP closing date is March 17).

Model for Spaceport Noise, Sonic Boom

"Commercial space launch vehicle activities are expected to increase, and as they begin testing and become operational there are many noise issues as well as the effects from sonic booms that need to be evaluated," the RFP explains.

"Those impacts on the community are dependent upon such factors as the num-

(Continued on p. 10)

Phoenix Sky Harbor Int'l

PHOENIX CITY COUNCIL DEMANDS THAT FAA REVERSE RNAV DEPARTURE FLIGHT PATHS

At a mid-December meeting, the Phoenix City Council unanimously demanded that the Federal Aviation Administration reverse flight path changes made under an RNAV departure procedure put into effect last September at Sky Harbor International Airport, which sparking hundreds of noise complaints and caught city officials and citizens off guard.

The Council told city officials to take whatever action necessary to reverse the flight path changes. Several City Council members suggested that the city file a lawsuit against the FAA.

Angry that FAA had not informed them of the flight path changes, City Council members directed City Manager Ed Zuercher to request that the agency release all documents related to the RNAV departure, which directed aircraft over historic neighborhoods of Phoenix and led to fears of property devaluation and loss of quality of life from the constant noise impact.

Aviation Department officials were aware that FAA planned to implement an RNAV departure procedure at Sky Harbor but thought it was only in the draft stages and also were surprised when it was implemented.

(Continued on p. 12)

In This Issue…

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Phoenix Sky Harbor Int'l ... City Council demands that FAA reverse RNAV departure flight paths - p. 9

Boston Logan Int'l ... FAA resumes head-to-head departures that take aircraft over Boston Harbor - p. 10

Europe ... Coalition of 140 community groups in 10 countries petitions European Parliament to ban all night flights at EU airports - p. 11

Los Angeles Int'l ... LAWA authorizes up to $44.3 million to fund sound insulation in Inglewood - p. 11

In Brief ... FAA reviewing San Antonio Int'l's Part 150 Program ... On Feb. 3, proposed noise restrictions for East Hampton Airport will be announced ... Tweed New Haven Airport selects homes for pilot SIP - p. 11

ACRP, from p. 9

ber of operations, the launch pad configuration, and the type of launch vehicle among others. There are four known types of launch vehicles: those that take-off horizontally with a rocket igniting later launching the vehicle, those that take-off horizontally under rocket power, those that are attached to an aircraft that take-off and later released, and those that take-off vertically.

"Currently airports use the Integrated Noise Model (INM) to evaluate the effects of aircraft noise. INM will soon be replaced with the Aviation Environmental Design Tool (AEDT) but neither tool has the ability to predict noise and sonic boom from commercial space operations.

"As commercial space launches are still maturing, data has not yet been compiled of the noise parameters of launch vehicles, nor has there been a method(s) developed that can be used with AEDT for environmental analysis."

The objectives of this research are to:

• Develop a set of noise and sonic boom model(s) suitable for environmental analysis of commercial space operations and airport/space launch site facilities that are compatible with, or can be integrated into AEDT;

• Develop a database of existing rocket/engine/motor data for commercial space launch operations; and

• Describe the approval process for the noise and sonic boom evaluations from airport/space launch operations.

The RFP is at http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3839

Use of GIS for Land Use Planning

"GIS is well-documented as a suitable and powerful tool for addressing not only the technical and analytical aspects of land use planning, but also for enhancing the opportunity for collaborative planning among stakeholders," the RFP notes.

"Yet these benefits have not been fully realized with airport land use compatibility to date. Research is needed to assist airports, local governments, and other stakeholders in using GIS to help protect safety, health, quality of life, and public investments related to airports in or near their jurisdictions. This guidance will help foster greater collaboration among stakeholders."

The objectives of this research are to develop guidance and resources for using GIS for land use compatibility planning in the vicinity of airports, including, but not be limited to:

• A guidebook of evidence-based best practices;

• Training materials (e.g. webcast, brochures) summarizing the best practices provided in the guidebook; and

• Sample outreach materials to foster ongoing stakeholder collaboration through the use of GIS to enhance land use compatibility around airports.

The RFP is at http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3842

Boston Logan Int'l

HEAD-TO-HEAD DEPARTURES OVER WATER RESUME AT BOSTON

The Federal Aviation Administration has resumed late night and early morning "head-to-head" operations, weather permitting, at Boston Logan International Airport that direct aircraft departures over Boston Harbor in order to reduce noise impact on communities near the airport, the Massachusetts Port Authority said Jan. 15.

The announcement was a victory for the "Youth Crew" of the non-profit Neighborhood of Affordable Housing (NOAH), which conducted a survey of 445 residents living in six areas under the Logan departure path following the nationwide suspension of head-to-head operations in 2012. The survey found that nighttime sleep disruption was as high as 48 percent in some areas under the flight path.

NOAH describes itself as "an East Boston-based community development corporation structured to collaborate with and support residents and communities in their pursuit of affordable housing strategies, environmental justice, community planning, leadership development, and economic development opportunities."

Massport got behind the organization last fall and urged FAA to reinstate head-to-head operations at Logan, which had been a successful noise abatement procedure developed by Massport and its Community Advisory Committee, and agreed to by FAA, over a decade ago.

FAA suspended head-to-head procedures nationwide in 2012 to conduct a safety review following an incident at Washington, DC, Reagan National Airport after three aircraft came within one mile of each other as air traffic controllers were in the process of changing the operational configuration of the airport.

Under head-to-head operations at Boston Logan, air traffic controllers send departing flights over the water on take off while arriving flights, which are quieter, land on the same runway from the opposite direction coming in over communities.

"We thank the FAA for its safety review of the [head-to-head] procedure and for the decision to include it in its air traffic procedures because it is effective in reducing noise,'' said Ed Freni, Massport Director of Aviation. "For decades, Massport has worked to reduce the impacts of noise on residents near the airport.''

Said MA state Sen. Anthony Petruccelli, whose constituents are under the Logan flight path, "I'd like to thank the FAA for doing their due diligence in completing a full review of this procedure. I applaud the FAA and Massport's continuous efforts in putting both our community safety and comfort as a top priority, while exceeding expectations put forth by the regulatory guidelines. I'd also like to thank NOAH's Youth Crew for their hard work conducting the sleep study and bringing their findings to the community. Their efforts helped bring the plight of residents in Eagle Hill

affected by late night airport noise to the community at large."

"This is great news," said Chris Marchi, NOAH's Community building and Environment Department Director. "NOAH's youth worked hard on this project to represent East Boston family's interests. I'm just glad they were able to help. So often people will say, 'Why bother? We can't do anything about it anyway.' What we're trying to do is say, 'Yes we can.' I think it's also important to recognize that we appreciate Massport's efforts to expedite their work with the FAA and get this thing resolved. I think this is a good example of how citizen activism, youth, and agencies can work together toward shared goals."

Massport said that the head-to-head operations have been resumed at airports nationwide following FAA's safety review.

Europe

COALITION ASKS EU PARLIAMENT FOR BAN ON ALL NIGHT FLIGHTS

A coalition of 140 community anti-noise groups from 10 European countries presented a petition to European Parliament representatives on Nov. 18, 2014, demanding a ban on night flights at EU airports.

They also called on legislators to strip the aviation sector of the tax exemptions it currently enjoys.

The coalition presented members of the European Parliament with a petition entitled "Taming Aviation" that formally asks the European Parliament to take action.

During the meeting, Taming Aviation co-founder Susanne Heger said that aircraft noise poses serious health threats for people living near airports.

The petition demands that all airports have an uninterrupted eight-hour ban on nighttime flights, in order to comply with minimum health standards set by the World Health Organization.

A German Court ruled in favour of a night flight ban at Frankfurt Airport in 2012, in response to complaints from local residents. Taming Aviation hopes for the same result across Europe, and said that unless the EU forces all airports to close down at night, the situation will not change.

"Individual airports are reluctant to ban night flights, because the night flights will go to a competitor airport," said John Stewart, chair of Heathrow Association for the Control of Aircraft Noise (HACAN).

Coalition representatives have raised these problems with local and airport authorities but have been unsuccessful in finding a common ground. They decided to call on the European Parliament to take these concerns in consideration through amendments when adopting future laws.

Parliament will now assess the request, and forward it to the European Commission.

Taming Aviation claims to represent a quarter of a million citizens in Austria, Belgium, The Netherlands, Luxembourg, Switzerland, France, Spain, Germany, Italy, and the UK.

Los Angeles Int'l

LAWA AUTHORIZES UP TO $44.3 M FOR INSULATION IN INGLEWOOD

On Jan. 15, the Los Angeles Board of Airport Commissioners authorized a Letter of Agreement with the City of Inglewood that will result in the release of up to $44.3 million in Los Angeles World Airports (LAWA) funding for sound insulation in that city.

This funding will enable the City of Inglewood to design and sound-insulate an additional 1,030 units, consisting of 689 single-family and 341 multi-family homes. 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.

Inglewood has participated in the LAX Noise Compatibility Program since the 1980s, and has received noise mitigation funds from both LAWA and the Federal Aviation Administration since 1985.

To date, LAWA has awarded $164 million and the FAA has awarded $236 million to Inglewood, for a total of $400 million. Nearly 18,000 homes around LAX have been soundproofed, and more than 5,300 of those homes are located in Inglewood.

In Brief…

San Antonio Part 150 Under Review

San Antonio International Airport's proposed Part 150 Airport Noise Compatibility Program is under review by the FAA, the agency announced Jan. 22.

The program will be approved or disapproved by July 11.

FAA also said that noise exposure maps submitted by the City of San Antonio for the airport meet federal requirements.

The public comment period of the airport's proposed Part 150 program and noise exposure maps ends on March 13.

For further information, contact John MacFarlane, an environmental specialist in FAA's Southwest Region; tel: (817) 222-5681.

E. Hampton Noise Restrictions To Be Unveiled

After weighing input from the community, consultants, and the East Hampton Airport Planning Committee's noise subcommittee, the East Hampton Town Board plans to unveil proposed noise restrictions for East Hampton Airport at a Feb. 3 meeting.

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The restrictions will likely focus on helicopters because those operations have been identified as causing the most noise complaints. The Town is being extremely careful about how it crafts its noise restrictions, which are expected to be challenged by aviation interests.

On Jan. 1, the Town came out from under FAA grant obligations, which, among other things, required the Town to provide aviation services on a "reasonable" and "not unjustly discriminatory" basis.

Tweed New Haven Pilot SIP

Tweed New Haven Regional Airport has selected 12 homes to participate in its pilot residential sound insulation program. Planning and design for the broader SIP, which includes the homes in the pilot program, is being funded by an $849,582 federal grant. Construction costs for the pilot program are funded under a separate $660,000 federal grant.

Some 187 homes are included in the airport's SIP, which is an element of its Part 150 Airport Noise Mitigation Program.The Jones Payne Group is managing the SIP.

Phoenix, from p. 9

The City Council instructed them to bring future flight path changes to its attention within 30 days of learning about them, whether they be in draft or final stages.

Phoenix officials enlisted the aide of the Arizona congressional delegation for help in rolling back the new RNAV departure procedure.

Former congressman Ed Pastor (D-AZ), who retired from Congress at the end of December, managed to add language to the fiscal 2015 omnibus funding bill passed by Congress last month requiring FAA to submit a report to Congress within 90 days documenting FAA's progress in mitigating the noise problem caused by the RNAV departure (26 ANR 185).

Asked what progress FAA has made in addressing the noise problem caused by the new RNAV departure at Sky Harbor, Ian Gregor, Public Affairs Manager in FAA's Western Pacific Region, told ANR, "We are committed to working with the city to explore possible adjustments to the new procedures."

The congressional language directs FAA "to continue to work expeditiously to identify appropriate mitigation measures and to enforce adherence to flight procedures, unless specific flight modifications are necessary for safety purposes, in order to avoid impacts on nearby residential neighborhoods. The FAA is expected to provide a progress report on these measures to the House and Senate Committees on Appropriations within 90 days of enactment of this Act."

The 90-day period ends in mid-March.

AIRPORT NOISE REPORT

Anne H. Kohut, Publisher

Published 44 times a year at 43978 Urbancrest Ct., Ashburn, Va. 20147; Phone: (703) 729-4867; FAX: (703) 729-4528.
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Federal Aviation Administration

Fact Sheet – The FAA Airport Noise Program

For Immediate Release

January 13, 2015
Contact: Marcia Alexander-Adams
Phone: (202) 267-3488

Background
The FAA continues to work with the aviation industry to continue to reduce aircraft noise. The number of people exposed to significant airport noise in the United States has decreased from 7 million people in 1975 to approximately 309,000 people in 2012.

The FAA actively supports a number of initiatives that have helped reduce the number of people exposed to significant aviation noise. Some of these initiatives include improving aircraft engine and airframe technology to reduce noise, fuel burn, and emissions. The FAA also works with communities to eliminate or mitigate incompatible land use near airports and provides federal funds to mitigate the adverse impacts of aircraft noise in homes and schools near airports.

Part 150
Airports may collaboratively address noise near airports by using a voluntary program called Airport Noise Compatibility Planning or Part 150. The program is known as Part 150 because the Aviation Safety and Noise Abatement Act of 1979 created the program under 14 CFR Part 150. The program began in 1981. It provides a structured approach for airport operators, airlines, pilots, neighboring communities, and the FAA to work together to reduce the number of people who live in significantly noise-impacted areas. Operators of public use airports, including heliports, are eligible to participate.

Through the Part 150 process, airport operators may consider a variety of different strategies to reduce noise. Changes in operational procedures such as take-offs or landings or routing flight paths over less noise sensitive areas can lower noise levels. Airports also may choose to purchase land near airports to maintain compatible land use or provide sound insulation for homes, schools and other buildings near the airport that meet the required standards.

Currently 275 airports have entered into this voluntary program since its beginning. Of the original 275 participants, 134 have updated their plans and other airport operators are working on updates.

How It Works

A Part 150 Program has two parts. The first step is to develop noise exposure maps that identify the compatible and non-compatible land uses around the airport. The maps help communities understand the areas affected by different levels of noise in a consistent and scientific way. This enables better land-use planning and noise mitigation efforts in the second step of the Part 150 process, which leads to a Noise Compatibility Program (NCP). The NCP identifies specific measures to reduce incompatible land uses.

When the program identifies the compatible land uses such as industrial or commercial areas, large highways or water, the FAA can develop air traffic arrival or departure procedures that help reduce noise by routing flights over those less-populated, less noise-sensitive areas.

The airport operator may also provide sound insulation for homes, schools and places of worship that meet specific criteria or construct noise barriers such as concrete walls or earthen berms. In some cases where homes are severely affected by noise near the airport, the program may identify opportunities for an airport operator to purchase property to convert to more compatible land uses. It can also identify areas where the airport operator can work with local officials to ensure zoning policies are in place to ensure compatible land use near the airport.

Airports that participate in the Part 150 program are eligible to receive AIP funds to help with noise mitigation for non-compatible land uses and sound insulation.

Sound Insulation

The noise exposure maps developed in the first part of the Part 150 process help identify neighborhoods in which buildings are eligible for sound insulation because of the outside noise levels. However, a building also must have a specific interior noise level to meet the eligibility requirements for sound insulation and must be the type of construction that can successfully be sound-insulated. Not all homes or schools near an airport are eligible for sound insulation.

The FAA can provide Airport Improvement Program (AIP) grant funding for an airport operator's Part 150 sound insulation program. The grant program requires a local match from the airport or other grant recipient, and has a number of other federal requirements. Airports also can seek FAA approval to use Passenger Facility Charge revenues for noise mitigation, including funding for the local share of AIP grants. Airports may also use airport revenue for noise mitigation in noise-impacted areas.

Public Participation

The Part 150 program requires that members of the public have an opportunity for active and direct participation in the process through public meetings and hearings, and to provide comments in response to required public notices including local newspapers and *Federal Register* notices. The Part 150 program also provides opportunities for people living in noise impacted areas to participate on technical committees and general committees.

Airport operators do not have to use the Part 150 program to reduce noise. Many airports have established highly successful noise abatement or mitigation programs outside of the Part 150 process, by working proactively with neighboring communities and user groups to address the same objectives. In some cases, airport operators simply prefer to work more directly with the various stakeholders without relying upon a federal regulatory process.

You may access both the program and regulation by going to
http://www.faa.gov/airports/environmental/airport_noise/

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This page was published at: http://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=18114

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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

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