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

ROUNDTABLE REGULAR MEETING

Meeting No. 287 Wednesday, September 4, 2013 - 7:00 p.m.

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

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

AGENDA

- 1. Call to Order / Roll Call / Declaration of a Quorum Present ACTION Jeff Gee, Roundtable Chairperson / James A. Castaneda, AICP, Roundtable Coordinator
- 2. Public Comments on Items NOT on the Agenda INFORMATION Speakers are limited to two minutes. Roundtable members cannot discuss or take action on any matter raised under this item.

CONSENT AGENDA ITEMS

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

3.	Review of Airport Director's Reports for: May 2013 June 2013 July 2013	ACTION pg. 9 pg. 17 pg. 25
4.	Review of Roundtable Regular Meeting Overview for June 5, 2013	ACTION pg. 33
REC	OULAR AGENDA – PRESENTATION ITEMS	
5.	Review of SFO FlyQuiet Report for Q2 2013	ACTION

Bert Ganoung, Manager - Aircraft Noise Abatement Office 6. Airport Director's Comments - INFORMATION

John Martin, Director - San Francisco International Airport

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pg. 43



REGULAR AGENDA – WORK PROGRAM ITEMS

7.	SFO Construction Update and Departure/Arrival affects Bert Ganoung, Manager – Aircraft Noise Abatement Office	INFORMATION
8.	Update on FAA's PORTE Departure Analysis Jeff Gee, Roundtable Chairperson	INFORMATION
9.	Work Program Subcommittee recommendations: Oceanic Arrivals Over the Woodside VOR Cindy Gibbs, Roundtable Aviation Technical Consultant	INFORMATION pg. 57
10.	Report, Optimization of Airspace & Procedures in the Metroplex (OAPM) Environmental Review Jeff Gee, Roundtable Chairperson	ACTION pg. 59
11.	Website Update James Castañeda, Roundtable Coordinator Cindy Gibbs, Roundtable Aviation Technical Consultant	INFORMATION
12.	Airport Noise Briefing Cindy Gibbs, Roundtable Aviation Technical Consultant	INFORMATION
13.	Member Communications / Announcements Roundtable Members and Staff	INFORMATION
14.	Adjourn Jeff Gee, Roundtable Chairperson	ACTION
Corr	espondences	pg. 61

Airport Noise Industry News	pg. 117
Glossary of Common Acoustic & Air Traffic Control Terms	pg. 130

Next Regular Roundtable Meeting Date: Wednesday, November 6, 2013

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.

Regular Meeting No. 287 Packet Page 2

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 LOCATION

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

Access through Millbrae Library parking lot on Poplar Avenue



Library 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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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

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 September 2013

<u>Chairperson:</u> JEFFREY GEE Representative, City of Redwood City (650) 780-7221

Roundtable Coordinator: JAMES A. CASTAÑEDA, AICP County of San Mateo Planning & Building Department (650) 363-1853 / jcastaneda@sforoundtable.org Vice-Chairperson: NAOMI PATRIDGE Representative, City of Half Moon Bay (650) 726-8270

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CONSENT AGENDA

Regular Meeting # 287 September 4, 2013

Agenda Items 3 & 4

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San Francisco International Airport

airport director's report

Presented at the September 4, 2013

Airport Community Roundtable Meeting

SFO Aircraft Noise Abatement Office

May 2013



Monthly Noise Exceedance Report (Revision 1)

San Francisco International Airport -- Director's Report Period: May 2013



* Revised with correct amount of Exceedance - 8/5/13

SFO

Historical Significant Exceedances Report (Revision 1)



San Francisco International Airport -- Director's Report Period: May 2013

San Francisco International Airport

Month	Number of M	onthly Sign	ificant Excee	dances		Change from
	2009	2010	2011	2012	2013	Last Year
January	1459	1312*	1580	1378	1428	50
February	1161 (2)	1297*	1429	1581	1176	-405
March	1991	1778	1681	1703	1671	-32
April	2258	1449	1900	1870	1910**	40
May	1917	2042	2024	1912	1859**	-53
June	2428	2177	1947	2355		0
July	2039	1743	2017	2621		0
August	1725	2090	1847	1823		0
September	1554	1636	1609	1464		0
October	1724	1537	1572	1689		0
November	1400*	1599	1575	1421		0
December	1494*	1411	1447	1439		0
Annual Total	21150	20071	20628	21256	8044	
Year to Date Trend	21150	20071	20628	21256	8044	-400

(#) Number of new noise monitors - EMUs

* Revised with correct amount of exceedance - 4/30/10

** Revised with correct amount of exceedance - 8/5/13



Monthly Noise Complaint Summary San Francisco International Airport -- Director's Report Period: May 2013



San Francisco International Airport



Monthly Noise Complaint Summary Map May 2013



Caller Location and Amount of Complaints

Monthly Nighttime Power Runups Report (85-06-AOB)

San Francisco International Airport -- Director's Report Period : **May 2013** Time of Day : From 10 pm through 7 am



San Francisco International Airport

Airline	Code	Number of Runups	Runups Per 1,000 Departures	Percentage of Runups
AIRLINGS-	HAL	1	32.3	3%
DELTA	DAL	2	2.8	6%
American Airlines	AAL	14	15.5	41%
UNITED	UAL	17	3.5	50%
Total		34		0 10 20 30 40 50 60 70 80 90 10

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.

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Late Night Preferential Runway Use Report

San Francisco International Airport -- Director's Report **Period: May 2013** Time of Day: Late Night (1 am to 6 am)



San Francisco International Airport

Runway Utilization (1 am to 6 am) **Monthly Jet Departures** Jan Feb Mar May Jul Oct Nov Dec YTD Apr Jun Aug Sep 01L/R 77 82 126 124 122 531 10L/R 181 42 37 48 18 36 _ _ _ _ 19L/R 4 4 --_ -29 28L/R 30 549 90 185 215 _ _ _ _ _ Total 149 148 268 327 373 1,265 -----01L/R 52% 47% 33% 0% 0% 0% 42% 55% 38% 0% 0% 0% 0% 10L/R 28% 25% 18% 6% 10% 0% 0% 0% 0% 0% 0% 0% 14% 19L/R 0% 1% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 28L/R 20% 20% 34% 57% 58% 0% 0% 0% 0% 0% 0% 0% 43%











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Air Carrier Runway Use Summary Report

San Francisco International Airport -- Director's Report **Period:** May 2013 Time of Day : All Hours



San Francisco International Airport

Runway Utilization (All Hours) Source: Airport Noise Monitoring System **Runway Utilization** Total 01L/R 10L/R 19L/R 28L/R **Total Monthly Operations** Departures 10,543 554 0 5,779 16,876 Arrivals 0 0 518 16,136 16,654 Percentage Utilization Departures 62.5% 3.3% 0.0% 34.2% 100% Arrivals 0.0% 3.1% 100% 0.0% 96.9%





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San Francisco International Airport

airport director's report

Presented at the September 4, 2013 Airport Community Roundtable Meeting SFO Aircraft Noise Abatement Office June 2013



Monthly Noise Exceedance Report

San Francisco International Airport -- Director's Report Period: **June 2013**

		Noise Exce	eedances		
Airline	Total	Total	Exceedances		Noise Exceedance Quality Rating
	Noise	Operations per Month	per 1,000 Operations	Score	
	Execcutivees	permonin	operations	50070	
Skyllest SKW	53	8397	6	9.9 8	
FRONTIER FFT	3	240	13	9.96	
KLM KLM	1	60	17	9.94	
Alayka Airliney ASA	16	833	19	<i>9.93</i>	
American Airlines 🍾 🗛 🕹	47	1776	26	<i>9.91</i>	
AIR CANADA 🏵 ACA	15	564	27	<i>9.91</i>	
america VRD	83	2949	28	9.90	
jetBlue JBU	22	734	30	9.89	
SOUTHWEST AFILINES SWA	82	2554	32	9.89	
デ AIR CHINA CCA	2	60	33	9.88	
📥 DELTA DAL	61	1683	36	9.8 7	
airTran TRS	7	174	40	<i>9.86</i>	
AIRFRANCE / AFR	5	120	42	9.85	
LAN 🗶 LPE	1	21	48	<i>9.83</i>	
I U'S AIRWAYS AWE	45	931	48	9.83	
UNITED 🔝 UAL	528	10165	52	9.82	
BRITISH AIRWAYS BAW	7	121	58	9.80	
WESTJETZ WJA	8	120	67	9.77	
AEROMEXICO. AMX	5	60	83	9.71	
TACA	8	87	92	9.68	
anas and GTI	4	40	100	9.65	
FedEx. FDX	9	51	176	9.3 8	
ABX	9	42	214	9.25	
NCA Nippon Cargo Airlines NCA	14	52	269	9.05	
	23	60	383	8.65	
CATHAY PACIFIC CPA	53	125	424	8.51	
SIA SIA	55	122	451	8.42	
EVAAIR DEVA	65	119	546	8.08	
KSREAN AIR KAL	117	126	929	6.74	
ASIANA AIRLINES	115	114	1,009	6.46	
AIR NEW ZEALAND 🖨 ANZ	91	60	1,517	4.67	
Schina Airlines 🌍 CAL	193	110	1,755	3.84	
APhilippines PAL	168	59	2,847	0.00	
					0 1 2 3 4 5 6 7 8 9 10
ΤΟΤΑΙ	1.015	32 720	11 /10		

Regular Meeting No. 287 Packet Page 18 Source: SFO Noise Abatement Office

SFO



San Francisco International Airport -- Director's Report Period: **June 2013**

San Francisco International Airport

Month	Number of M	onthly Sign	ificant Excee	dances		Change from
	2009	2010	2011	2012	2013	Last Year
January	1459	1312*	1580	1378	1428	50
February	1161 (2)	1297*	1429	1581	1176	-405
March	1991	1778	1681	1703	1671	-32
April	2258	1449	1900	1870	1910**	40
May	1917	2042	2024	1912	1859**	-53
June	2428	2177	1947	2355	1915	-440
July	2039	1743	2017	2621		0
August	1725	2090	1847	1823		0
September	1554	1636	1609	1464		0
October	1724	1537	1572	1689		0
November	1400*	1599	1575	1421		0
December	1494*	1411	1447	1439		0
Annual Total	21150	20071	20628	21256	9959	
Year to Date Trend	21150	20071	20628	21256	9959	-840

(#) Number of new noise monitors - EMUs

* Revised with correct amount of exceedance - 4/30/10

** Revised with correct amount of exceedance - 8/5/13



Monthly Noise Complaint Summary San Francisco International Airport -- Director's Report Period: June 2013



San Francisco International Airport



Monthly Noise Complaint Summary Map June 2013



Caller Location and Amount of Complaints

Page 4

Monthly Nighttime Power Runups Report (85-06-AOB)

San Francisco International Airport -- Director's Report Period : **June 2013** Time of Day : From 10 pm through 7 am



San Francisco International Airport

Airline	Code	Number of Runups	Runups Per 1,000 Departures	Percentage of Runups
A DELTA	DAL	4	4.8	13%
American Airlines	AAL	11	12.3	37%
UNITED	UAL	15	2.9	50%
Total		30		0 10 20 30 40 50 60 70 80 90 100

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.

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Late Night Preferential Runway Use Report

San Francisco International Airport -- Director's Report **Period: Mune 2013** Time of Day: Late Night (1 am to 6 am)



San Francisco International Airport

5 onthly	y MetJep	artures											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
01L/R	77	82	126	124	122	175	-	-	-	-	-	-	704
10L/R	42	57	48	18	56	56	-	-	-	-	-	-	217
13L/R	-	-	4	-	-	-	-	-	-	-	-	-	4
28L/R	50	23	30	189	219	270	-	-	-	-	-	-	813
Total	149	148	268	327	373	479	-	-	-	-	-	-	1,744
01L/R	92%	99%	47%	58%	55%	56%	0%	0%	0%	0%	0%	0%	40%
10L/R	28%	29%	18%	6%	10%	8%	0%	0%	0%	0%	0%	0%	12%
13L/R	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
28L/R	20%	20%	54%	97%	98%	96%	0%	0%	0%	0%	0%	0%	47%











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Air Carrier Runway Use Summary Report

San Francisco International Airport -- Director's Report **Period:** June 2013 Time of Day : All Hours



San Francisco International Airport

Runway Utilization (All Hours) Source: Airport Noise Monitoring System **Runway Utilization** Total 01L/R 10L/R 19L/R 28L/R **Total Monthly Operations** Departures 11,068 381 0 5,543 16,992 Arrivals 0 0 366 16,485 16,851 Percentage Utilization Departures 65.1% 2.2% 0.0% 32.6% 100% Arrivals 0.0% 0.0% 2.2% 97.8% 100%





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San Francisco International Airport

airport director's report

Presented at the September 4, 2013 Airport Community Roundtable Meeting SFO Aircraft Noise Abatement Office July 2013



Monthly Noise Exceedance Report

San Francisco International Airport -- Director's Report Period: July 2013

		Noise Exce	edances		
Airline	Total Noise	Total Operations	Exceedances		Noise Exceedance Quality Rating
	Exceedances	per Month	Operations	Score	
Skyllest SKW	45	8165	6	9.97	
Alaska Airliney ASA	13	842	15	9.92	
American Airlines 🍾 AAL	28	1743	16	9.91	
ANA ANA	1	62	16	9.91	
C Lufthansa DLH	2	124	16	9.91	
Emirates UAE	1	62	16	9.91	
virgin atlantic VIR	1	62	16	9.91	
jet Blue JBU	15	714	21	<i>9.89</i>	
U'S AIRWAYS AWE	21	930	23	9.88	
SOUTHWEST APPLINES	59	2479	24	<i>9.</i> 87	
WESTIETZ WJA	3	124	24	9.87	
FRONTIER FFT	6	236	25	9.87	
america VRD	83	3056	27	9.86	
airTran TRS	5	179	28	9.85	
📥 DELTA DAL	55	1857	30	9.84	
SWISS SWR	2	62	32	<i>9.83</i>	
AIR CANADA 🌸 ACA	21	633	33	9.82	
UNITED 🔝 UAL	503	10656	47	9.75	
KLM KLM	3	62	48	9.74	
AIRFRANCE / AFR	8	124	65	9.66	
BRITISH AIRWAYS BAW	8	123	65	9.66	
TACA TAI	8	114	70	9.63	
Seandinavian Airlines SAS	4	52	77	9.59	
AEROMEXICO. AMX	10	95	105	9.44	
FedEx. FDX	11	45	244	8.70	
ABX	14	48	292	8.45	
anas GTI	13	44	295	8.43	
NCA Nippon Cargo NCA	16	52	308	8.37	
	43	124	347	8.16	
EVA AIR DEVA	51	129	395	7.90	
	25	62	403	7.86	
	60	128	469	7.52	
1 AAR	71	112	634	6.64	
ASIANA AIRINES KAL	80	124	645	6.58	
AIR NEW ZEALAND ANZ	86	60	1,433	2.40	
CAL	155	100	1,550	1.79	
Philippines PAL	117	62	1,887	0.00	
			,		0 1 2 3 4 5 6 7 8 9 10
TOTAL	1,647	33,646	9,749	· I	1

Source: SFO Noise Abatement Office

Regular Meeting No. 287 Packet Page 26

SFO



San Francisco International Airport -- Director's Report Period: **July 2013**

San Francisco International Airport

Month	Number of M	onthly Sign	ificant Excee	dances		Change from
	2009	2010	2011	2012	2013	Last Year
January	1459	1312*	1580	1378	1428	50
February	1161 (2)	1297*	1429	1581	1176	-405
March	1991	1778	1681	1703	1671	-32
April	2258	1449	1900	1870	1910**	40
May	1917	2042	2024	1912	1859**	-53
June	2428	2177	1947	2355	1915	-440
July	2039	1743	2017	2621	1647	-974
August	1725	2090	1847	1823		0
September	1554	1636	1609	1464		0
October	1724	1537	1572	1689		0
November	1400*	1599	1575	1421		0
December	1494*	1411	1447	1439		0
Annual Total	21150	20071	20628	21256	11606	
Year to Date Trend	21150	20071	20628	21256	11606	-1814

(#) Number of new noise monitors - EMUs

* Revised with correct amount of exceedance - 4/30/10

** Revised with correct amount of exceedance - 8/5/13



Monthly Noise Complaint Summary San Francisco International Airport -- Director's Report Period: July 2013



San Francisco International Airport



Monthly Noise Complaint Summary Map July 2013



Caller Location and Amount of Complaints

Monthly Nighttime Power Runups Report (85-06-AOB)

San Francisco International Airport -- Director's Report Period : **July 2013** Time of Day : From 10 pm through 7 am



San Francisco International Airport

Airline	Code	Number of Runups	Runups Per 1,000 Departures		Percentage of Runups
A DELTA	DAL	2	2.2	9%	
American Airlines	AAL	6	6.8	26%	
UNITED	UAL	15	2.8	65%	
Total		23			0 10 20 30 40 50 60 70 80 90 100

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.

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Late Night Preferential Runway Use Report

San Francisco International Airport -- Director's Report **Period: Muly 2013** Time of Day: Late Night (1 am to 6 am)



San Francisco International Airport

Runway Utilization (1 am to 6 am)													
5 onthly Met J epartures													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
01L/R	77	82	126	124	122	173	275	-	-	-	-	-	979
10L/R	42	37	48	18	36	36	10	-	-	-	-	-	227
19L/R	-	-	4	-	-	-	5	-	-	-	-	-	9
28L/R	30	29	90	185	215	270	188	-	-	-	-	-	1,007
Total	149	148	268	327	373	479	478	-	-	-	-	-	2,222
01L/R	52%	55%	47%	38%	33%	36%	58%	0%	0%	0%	0%	0%	44%
10L/R	28%	25%	18%	6%	10%	8%	2%	0%	0%	0%	0%	0%	10%
19L/R	0%	0%	1%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
28L/R	20%	20%	34%	57%	58%	56%	39%	0%	0%	0%	0%	0%	45%











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Air Carrier Runway Use Summary Report

San Francisco International Airport -- Director's Report **Period:** Jul2 013T mif e oyDa2 : All Hours



San Francisco International Airport

Runway Utilization (All Hours)

Source: Airport Noise Monitoring System

		Total			
	01L/R	10L/R	19L/R	28L/R	
Total Monthly Opera	tions				
Departures	3, 6854	39	03,	0688.	346789
Arrivals	1	1	088	3569.9	34638T
Percentage Utilizatio	n				
Departures	9T%7	1%37	3%07	3, %47	3117
Arrivals	1%7	1%7	3%87	. 9%87	3117





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SFO Airport/Community Roundtable

Meeting No. 286 Overview Wednesday, June 5, 2013

I. Call to Order / Roll Call / Declaration of Quorum Present

Roundtable Chairperson Jeffrey Gee called the Regular Meeting of the SFO Airport/Community Roundtable to order, at approximately 7:06 PM, in the David Chetcuti Community Room at the Millbrae City Hall. James A. Castañeda, AICP, Roundtable Coordinator called the roll. A quorum (at least 12 Regular Members) was present as follows:

REGULAR MEMBERS PRESENT

Doug Yakel (alternate) - City & County of San Francisco Airport Commission Dave Pine - County of San Mateo Board of Supervisors Richard Newman - C/CAG Airport Land Use Committee (ALUC) Elizabeth Lewis - Town of Atherton Cliff Lentz - City of Brisbane Michael Brownrigg - City of Burlingame Carol Klatt (alternate) - City of Daly City Alvin Royse - Town of Hillsborough Robert Gottschalk - City of Millbrae Sue Digre - City of Pacifica Ann Wengert - Town of Portola Valley Jeffrey Gee, Roundtable Chairperson - City of Redwood City Ken Ibarra - City of San Bruno Pradeep Gupta - City of South San Francisco David Burow - Town of Woodside

REGULAR MEMBERS ABSENT

City & County of San Francisco Board of Supervisors (Vacant) City & County of San Francisco Mayor's Office City of Belmont City of Foster City City of Half Moon Bay City of Menlo Park City of San Carlos City of San Mateo

ADVISORY MEMBESR PRESENT

Don Kirby - Northern California TRACON Glen Morse - United Airlines Regular Meeting Overview June 5, 2013 / Meeting No. 286 Page 2 of 7

ROUNDTABLE STAFF

James A. Castañeda, AICP - Roundtable Coordinator Cindy Gibbs - Roundtable Technical Support (Consultant) Harvey Hartmann - Roundtable Technical Support (Consultant)

SAN FRANCISCO INTERNATIONAL AIRPORT STAFF

John Bergener, Planning & Environment Bert Ganoung, Noise Abatement Manager Ara Balian, Noise Abatement Specialist David Ong, Noise Abatement Systems Manager

Chairperson Gee, with the Roundtable's permission, set the agenda to hear certain agenda items out of order. This meeting overview is reflective of the order in which agenda items occurred at the meeting.

V.E. Work Program for FY 2013-2014

Cindy Gibbs, Roundtable Technical Consultant, provided a brief overview of the draft Work Program and the efforts by the subcommittee to develop the document.

<u>COMMENTS/DISCUSSION</u>: Various comments were presented by Roundtable members, which were summarized by Chairman Gee as 1) formulize meetings with other noise forums (i.e. Oakland Noise Forum) in order to outreach, discuss and share information, 2) prioritize items within the Work Program and consider the use of a matrix, and 3) consider the possibility of submitted a problem statement dealing with the Oakland and San Francisco departures as possible Airport Cooperative Research Project. Bert Ganoung, Noise Abatement Manager, suggested finding similarities in other regions to broaden the problem statement in order to increase the likelihood of the proposal to be considered.

<u>ACTION:</u> Richard Newman **MOVED** the approval of the Work Plan, with the suggestions recommendations, for fiscal year 2013-2014. The motion was seconded by Ken Ibarra and **CARRIED**, unanimously.

V.F. Budget for FY 2013-2014

Roundtable Coordinator James Castañeda provided an overview of the proposed budget for the upcoming fiscal year. The history of the Roundtable's budget from 1999 was illustrated in order to give Roundtable member an understand of the funding and expenditures associated with the budget over the years.

<u>COMMENTS/DISCUSSION</u>: For the benefit of new members, James Castañeda explained the staffing history of the Roundtable and the associated costs. Member Elizabeth Lewis asked for an estimated cost per meeting in order to get an understanding of the number of meetings the Roundtable can maintain before running down reserves. James Castañeda responded that while difficult to sector out the cost of tasks only associated with the preparation of meetings, as well as the variability of meeting items, an educated guess would be approximately \$7,000 to \$9,000 per meeting.

Chairperson Gee expressed working with staff on looking forward on goals and items contained in the Work Program on a roll schedule to anticipate additional efforts and resources on specific long term tasks, and as such the associated cost.

Roundtable Consultant Cindy Gibbs indicated that the fees for member cities (which at current is 50%) will return back to 100% in FY 2014-2015.

<u>ACTION:</u> Elizabeth Lewis **MOVED** the approval of the budget for fiscal year 2013-2014. The motion was seconded by Sue Digre and **CARRIED**, unanimously.

II. Public Comments on items NOT on the Agenda

None

III. Consent Agenda Items

- III.A. Review of Airport Director's Report for March 2013
- III.B. Review of Airport Director's Report for April 2013
- III.C. Review of SFO FlyQuiet Report Q1 2013
- III.D. Review of Roundtable Regular meeting Overview for April 3, 2013

COMMENTS/DISCUSSION: None

<u>ACTION:</u> Pradeep Gupta **MOVED** the approval of the Consent Agenda items. The motion was seconded by Dave Pine and **CARRIED**, unanimously.

IV.A. Airport Director's Comments

Airport Public Information Officer, Doug Yakel, indicated that the FlyQuiet report for the first quarter have been completed and distributed. An update was provided regarding the series of runway closures; two were remaining for late June. Coordination with the Oakland Noise Abatement office has begun in order to conduct a joint noise monitoring exercise in Woodside. It was indicated that the SFO Noise Abatement Office will be hosting a booth at the "San Carlos Airport day" on June 22, 2013. And finally, Mr. Yakel announced he has accepted the permanent position as Public Information Officer at SFO.

V.A. SFO Construction Update & Departure/Arrival affects

Bert Ganoung, Noise Abatement Manager, indicated that next 48-hour runway closure will occur at the end of the month on the weekend of June 26-28, 2013. FAA will also be doing flight checks at the end of the month on the runway to confirm the equipment operations, so it should be expected to see numerous over flights of a Learjet during that time.

<u>COMMENTS/DISCUSSION</u>: Chairperson Gee ask for clarification on the landing/departure effects as a result of the runway closure. Mr. Ganoung indicated that delays would be expected with arriving aircraft, and that the airport will operate with single runway operations as efficiently as able to.

V.B. Update on FAA's PORTE Departure Analysis

Chairperson Gee indicated with the approved Work Plan, the Work Program Subcommittee will proceed to work with on this effort. It was indicated that he would like to work with the FAA in investigating the additional flights during the 10PM to 6AM period, and work on returning those to pervious levels.

V.C. Report and assignment to subcommittee, Oceanic Arrivals Over the Woodside VOR

Chairperson Gee indicated that the Work Program subcommittee will begin research and investigation for possible ways to recommend addressing the issues as part of a Work Plan objective.
Regular Meeting Overview June 5, 2013 / Meeting No. 286 Page 5 of 7

<u>COMMENTS/DISCUSSION</u>: Woodside resident Jim Lyons wished to make a few remarks regarding the oceanic arrivals over the Woodside VOR. It was expressed that the FAA has been ignoring its own rules on noise abatement in accordance to those indicated on NCT 711.65U document, which specifies that all oceanic jet arrival inbound from the west shall cross the VOR at or above 8,000 feet mean sea level, traffic/weather permitting. Mr. Lyons recounted his observation from Memorial Day weekend where 15 oceanic arrivals flew over the Woodside VOR in a 24-hour period below 8,000 feet. It was suggested that the Roundtable add to their agenda discussion on how to engage with the FAA to ensure that they meet their own obligations and rules.

Portola Valley resident Tina Nguyen took an opportunity to recount her experiences on Memorial Day weekend, and presented data and research she conducted on the Portola Valley over flights. She found that within a 24-hour period, 183 flights flew over Portola Valley at an altitude of less than 10,000 feet, of which 78% where arriving SFO from destinations such as London, Paris, Munich, Dubai, and Japanese cities. The average altitude of these flights was 6,028 feet above sea level. Ms. Nguyen also expressed issue with the constant stream of flights between midnight and 1:00 AM, and suggested the FAA consider routing over the ocean like other airports do. Lastly, Ms. Nguyen indicated that as a recipient of a portable noise monitoring station, two of the ten days of the deployment were "reverse flow" days, and not representative of an overcast day over the peninsula.

Bruce Fitzgerald, who manages properties in the Kings Mountain/Woodside area, shared qualitative observations from a resident of increase over flights. He expressed support of the Roundtable to continue working on a solution to the noise impacts of the area.

Airport Noise Abatement Manager Bert Ganoung indicated that the weekend of Memorial Day did experience weather conditions resulting in delayed vectoring that resulting increased over flights throughout Woodside and Portola Valley. Mr. Ganoung illustrated the flights Mr. Lyons had indicated and broke down the various vectors and holding patterns.

Woodside representative David Burrow asked if it is possible to include the number of flights below 8,000 feet at the Woodside VOR as a scoring metric within the FlyQuiet program. Mr. Ganoung indicated that, while possible, the flights below 8,000 feet that account for less than 4% of total flights. Roundtable technical consultant Cindy Gibbs expressed that the monthly Director's Report might be the more appropriate place to consider such recordation of flights below 8,000 feet at the Woodside VOR.

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Roundtable technical consultant Harvey Hartmann indicated that additional sitdown education of the air traffic capabilities would benefit Roundtable members, and would be happy to entertain such.

San Mateo County Board of Supervisor representative Dave Pine asked for clarification in regards to the next steps on the issue, and what should be the expectations. Ms. Gibbs indicated that the Work Program subcommittee will now look into the issue further, and come back to the Roundtable with data analysis that will help determine what might be appropriate metrics to suggest as goals to work towards in address the issues.

Daly City alternate representative Carol Klatt reminded Roundtable members of the progress the Roundtable has made over the years to implement change, and the improved partnership with the airport she's observed since her involvement beginning in 1994.

V.D. Report and assignment of subcommittee, Optimization of Airspace & Procedures in the Metroplex (OAPM) Environmental Review

This item will be discussed at a future meeting.

IV.B. Noise 101, PART 3

This item was postponed to a future meeting.

VI. Airport Noise Briefing

Roundtable technical consultant Cindy Gibbs updated the Roundtable on 1) the impacts of Sequestration, 2) overview of the ICAO CAP program, 3) new engines in development by Pratt & Whitney with increased bypass ratio of 12 to 1, and 4) the allowance of non-voting city members on the Minneapolis-St Paul noise committee.

VII. Member Communications / Announcements

None.

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VIII. Adjourn

The meeting was adjourned in memory of Millbrae vice-mayor Nadia Holober at approximately 9:00 PM.

*Roundtable meeting overviews are considered <u>draft</u> until approved by the Roundtable at a regular meeting.

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REGULAR AGENDA

Regular Meeting # 287 September 4, 2013

Agenda Items 5 - 14

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San Francisco International Airport

Fly Quiet Report

Presented at the September 4, 2013 **Airport Community Roundtable Meeting** SFO Aircraft Noise Abatement Office Second Quarter 2013



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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 night-time 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.







Airline Fly Quiet Summary Report - 2nd Quarter 2013

Airline		Fleet Noise Ouality	Noise Exceedance	Nighttime Runwav Use	<u>Depart</u>	t <u>ures</u>	<u>Arrivals</u>	Final Score	Airline Fly Quiet Rating
0.000		2	1		Snorelin	e Gap	Foster City		
C Lufthansa	DLH	9.09	9.97	-	10.00	4.94	-	8.50	
ANA	ANA	7.15	10.00	-	-	8.22	-	8.45	
SWISS	SWR	8.17	10.00	-	10.00	4.19	-	8.09	
JAPAN AIRLINES	JAL	5.64	10.00	-	-	8.57	-	8.0 7	
CHINA EASTERN	CES	4.05	9.97	-	-	9.76	-	7 .9 3	
Skyllest	SKW	10.00	9.97	5.21	9.73	7.08	5.46	7.91	
FRONTIER	FFT	6.42	9.93	-	9.88	5.00	8.11	7.87	
Scandinavian Airlines	SAS	8.17	10.00	-	-	5.24	-	7.80	
redex	FDX	4.10	9.13	10.00	10.00	6.67	6.88	7.79	
Emirates	UAE	7.15	10.00	-	-	5.83	-	7.66	
Alayka Atrilines	ASA	5.34	9.91	10.00	9.85	5.25	5.00	7.56	
BXAIR	ABX	4.87	9.10	-	-	9.13	6.30	7.35	
'≣ U·S AIRWAYS	AWE	4.81	9.87	4.57	9.52	7.27	7.90	7.32	
DELTA	DAL	6.70	9.88	4.03	9.19	6.35	7.65	7.30	
AIRFRANCE	AFR	6.51	9.92	-	7.50	5.13	-	7.26	
Airways	XLF	4.05	10.00	-	5.00	10.00	-	7.26	
WESTJET	WJA	5.82	9.82	-	9.42	6.25	5.00	7.26	
Var america	VRD	5.16	9.90	5.52	9.80	6.44	6.67	7.25	
<i>air</i> Tran	TRS	5.82	9.94	4.07	9.14	5.42	8.57	7.16	
American Airlines 🔪	AAL	5.72	9.89	4.64	9.65	4.65	7.60	7.02	
SOUTHWEST AFILINES	SWA	5.76	9.87	3.00	9.74	6.82	6.77	7.00	
ATLAS	GTI	4.81	9.22	3.33	9.00	8.75	6.79	6.98	
TACA	TAI	5.53	9.68	3.33	10.00	5.77	6.70	6.84	
jetBlue	JBU	4.85	9.87	4.44	9.17	4.89	7.65	6.81	
	AMX	5.82	9.46	3.11	10.00	5.97	6.32	6.78	
KLM	KLM	3.43	9.96	-	8.33	5.30	-	6.76	
UNITED	UAL	5.90	9.81	3.83	9.22	4.19	6.84	6.63	
AIR CANADA 🋞	ACA	7.13	9.88	3.33	9.61	3.00	6.34	6.55	
								6.47	SFO AVERAGE
	CCA	3.43	9.94	-	-	5.49	-	6.29	
virgin atlantic	VIR	3.43	10.00	-	-	5.37	-	6.27	
Sun Country Airlines	SCX	5.82	9.97	1.67	9.71	4.38	5.00	6.09	
LAN	LPE	3.84	9.95	-	-	4.02	-	5.94	
	EVA	6.44	8.11	0.65	-	6.05	5.00	5.25	
BRITISH AIRWAYS	BAW	3.43	9.86	-	-	2.46	-	5.25	
	СРА	5.25	8.31	0.32	-	6.07	6.11	5.21	
HAWAIIAN	HAL	4.04	8.87	_	-	2.83	5.00	5.19	
NCA Nippon Cargo Airlines	NCA	5.49	8.54	0.00	-	5.33	6.00	5.07	
KSREAN AIR	KAL	7.50	7.09	1.80	2.50	5.31	5.73	4.99	
ASIANA AIRLINES	AAR	4.83	6.85	0.94	-	5.38	5.96	4.79	

San Francisco International Airport Fly Quiet Program

April 1 to June 30, 2013

Airline Fly Quiet Summary Report - 2nd Quarter 2013

Airline		Fleet Noise Quality	Noise Exceedance	Nighttime Runway Use	<u>Depar</u> ^e Shorelin	<u>tures</u> e Gap	<u>Arrivals</u> Foster City	Final Score	Airline Fly Quiet Rating
AIR NEW ZEALAND	ANZ	4.98	5.35	-	-	3.23	-	4.52	
	SIA	7.14	8.24	0.29	0.00	6.10	-	4.35	
SOUTHERN AIR	soo	3.43	1.40	0.91	-	3.69	7.05	3.29	
CHINA AIRLINES 🛞	CAL	3.51	3.57	0.43	-	5.46	-	3.24	
M Philippines	PAL	3.43	0.00	0.00	-	4.15	-	1.89	
									0 1 2 5 4 5 0 7 6 7 10
SFO Average		5.54	8.89	3.18	8.64	5.71	6.48	6.47	

Fleet Noise Quality - 2nd Quarter 2013

April 1 to June 30, 2013

		Nationwide	San Frai	ncisco	Elizad Naciona On altica Dadria a	
Airline		Fleet Noise Quality Rating	Jet Operations	Score	Fleet Noise Quality Rating	
SkyWest	SKW	10.00	89	10.00		
🕙 Lufthansa	DLH	6.09	2	9.09		
Scandinavian Airlines	SAS	4.96	1	8.17		
SWISS	SWR	5.17	1	8.17		
KSREAN AIR	KAL	4.05	2	7.50		
ANA	ANA	5.43	1	7.15		
Emirates	UAE	7.89	1	7.15		
	SIA	5.93	2	7.14		
AIR CANADA 🋞	ACA	6.75	8	7.13		
DELTA	DAL	4.92	24	6.70		
AIRFRANCE	AFR	5.49	2	6.51		
	EVA	5.05	2	6.44		
FRONTIER	FFT	6.41	4	6.42		
UNITED	UAL	5.83	158	5.90		
	AMX	5.54	1	5.82		
Sun Country Airlines	SCX	5.82	1	5.82		
airTran	TRS	6.97	2	5.82		
WESTJET	WJA	5.82	1	5.82		
SOUTHWEST ARLINES	SWA	5.70	41	5.76		
American Airlines 🍾	AAL	3.94	29	5.72		
JAPAN AIRLINES	JAL	4.20	1	5.64		
				5.54	SFO AVERAGE	
TACA	TAI	5.18	1	5.53		
NCA Nippon Cargo Airlines	NCA	3.90	1	5.49		
Aluyku Atriliney	ASA	5.10	14	5.34		
CATHAY PACIFIC	СРА	4.18	2	5.25		
america	VRD	5.31	48	5.16		
AIR NEW ZEALAND	ANZ	4.00	1	4.98		
BXAIR	ABX	1.52	1	4.87		
jet Blue	JBU	6.13	11	4.85		
ASIANA AIRLINES	AAR	3.93	2	4.83		
ATLAS	GTI	0.93	1	4.81		
🗏 U·S AIRWAYS	AWE	5.67	15	4.81		
redex	FDX	2.80	1	4.10		
CHINA EASTERN	CES	4.63	1	4.05		
Airways	XLF	4.05	0	4.05		
HAWAIIAN	HAL	6.21	1	4.04		

San Francisco International Airport Fly Quiet Program

Airline		Nationwide Fleet Noise Quality Rating	San Fra. Average Daily Jet Operations	ncisco Score	Fleet Noise Quality Rating
LAN	LPE	4.38	0	3.84	
AIRLINES 🛞	CAL	3.62	2	3.51	
BRITISH AIRWAYS	BAW	4.34	2	3.43	
	CCA	3.46	1	3.43	
KLM	KLM	4.67	1	3.43	
M Philippines	PAL	5.09	1	3.43	
51 SOUTHERN AIR	SOO	0.60	0	3.43	
virgin atlantic	VIR	5.84	1	3.43	
AVERAGE		4.94	11	5.54	

Noise Exceedance Rating Report - 2nd Quarter 2013

			Noise Exceeda			
Airline		Total	Total	Exceedances		Noise Exceedance Quality Rating
		Noise	Quarterly Operations	per 1000 Operations	Score	
		Exceedances	Operations	Operations		
ANA	ANA	0	182	0	10.00	
JAPAN AIRLINES	JAL	0	182	0	10.00	
sus Scandinavian Airlines	SAS	0	140	0	10.00	
SWISS	SWR	0	182	0	10.00	
Emirares	UAE	0	183	0	10.00	
virgin atlantic	VIR	0	181	0	10.00	
Airways	XLF	0	16	0	10.00	
CHINA EASTERN	CES	1	131	8	9.97	
SkyWest	SKW	131	16,190	8	9.97	
🕤 Lufthansa	DLH	3	358	8	9.97	
Sun Country Airlines	SCX	2	233	9	9.97	
KUM	KLM	2	182	11	9.96	
LANA	LPE	1	68	15	9.95	
	CCA	3	181	17	9.94	
<i>Air</i> Tran	TRS	7	418	17	9.94	
FRONTIER	FFT	13	699	19	9.93	
AIRFRANCE	AFR	7	306	23	9.92	
Alusku Atrilines	ASA	65	2,463	26	9.91	
america	VRD	231	8,660	27	9.90	
American Airlines	AAL	169	5,328	32	9.89	
A DELTA	DAL	143	4,452	32	9.88	
AIR CANADA 🋞	ACA	47	1,452	32	9.88	
SOUTHWEST AIRLINES	SWA	263	7,530	35	9.87	
	AWE	96	2,687	36	9.87	
JetBlue	JBU	77	2,066	37	9.87	
BRITISH AIRWAYS	BAW	14	364	38	9.86	
WESTJET	WJA	13	254	51	9.82	
	UAL	1,538	28,794	53	9.81	
inch	TAI	23	259	89	9.68	
	AMX	28	187	150	9.46	
ATLAS AIR	GTI	29	134	216	9.22	
redex	FDX	35	144	243	9.13	
BX AIR	ABX	33	132	250	9.10	
HAWAIIAN					8.89	SEGAVERAGE
Nippon	HAL	57	182	313	8.87	
Airlines	NCA	62	153	405	8.54	
	СРА	178	379	470	8.31	
	SIA	179	366	489	8.24	
EVAAID	EVA	174	331	526	811	

San Francisco International Airport Fly Quiet Program

Noise Exceedance Rating Report - 2nd Quarter 2013

			Noise Exceed			
Airline		Total Noise Exceedances	Total Quarterly Operations	Exceedances per 1000 Operations	Score	Noise Exceedance Quality Rating
KSREAN AIR	KAL	307	380	808	7.09	
ASIANA AIRLINES	AAR	253	289	875	6.85	
AIR NEW ZEALAND	ANZ	235	182	1291	5.35	
AIRLINES 🛞	CAL	575	322	1786	3.57	
54	SOO	110	46	2391	1.40	
M Philippines	PAL	503	181	2779	0.00	
TOTAL		5,607	87,549			
SFO AVERAGE				309	8.89	

Nighttime Preferential Runway Use - 2nd Quarter 2013

		Ni	ghttime Dep	artures (1:	Nighttime Runway Use Rating			
Airline		Total	10L/R	28L/R Shoreline	01L/R	28L/R Straight	Score	
Allayku Atriliney	ASA	1	100%	0%	0%	0%	10.00	
FedEx	FDX	1	100%	0%	0%	0%	10.00	
america	VRD	32	25%	16%	59%	0%	5.52	
Skyllest	SKW	16	13%	38%	44%	6%	5.21	
American Airlines 🍾	AAL	56	9%	27%	59%	5%	4.64	
Ⅲ U·S AIRWAYS	AWE	27	7%	26%	63%	4%	4.57	
jetBlue	JBU	27	11%	15%	70%	4%	4.44	
<i>air</i> Tran	TRS	9	0%	22%	78%	0%	4.07	
📥 D E L T A	DAL	53	4%	21%	68%	8%	4.03	
UNITED	UAL	168	7%	9%	77%	7%	3.83	
AIR CANADA 🋞	ACA	1	0%	0%	100%	0%	3.33	
ATLAS	GTI	1	0%	0%	100%	0%	3.33	
TACA	TAI	89	6%	3%	76%	15%	3.33	
							3.18	SFO AVERAGE
AEROMEXICO	AMX	89	4%	3%	73%	19%	3.11	
SOUTHWEST APRILINES	SWA	10	10%	0%	60%	30%	3.00	
KSREAN AIR	KAL	89	18%	0%	0%	82%	1.80	
Sun Country Airlines	SCX	2	0%	0%	50%	50%	1.67	
ASIANA AIRLINES	AAR	53	9%	0%	0%	91%	0.94	
SOUTHERN AIR	SOO	22	9%	0%	0%	91%	0.91	
	EVA	108	6%	0%	0%	94%	0.65	
CHINA AIRLINES 🛞	CAL	93	4%	0%	0%	96%	0.43	
CATHAY PACIFIC	СРА	93	3%	0%	0%	97%	0.32	
	SIA	91	2%	1%	0%	97%	0.29	
NCA Nippon Cargo Airlines	NCA	3	0%	0%	0%	100%	0.00	
M Philippines	PAL	2	0%	0%	0%	100%	0.00	
								0 1 2 3 4 5 6 7 8 9 10
TOTAL		1,136						
SFO AVERAGE			14%	7%	39%	40%	3.18	

Shoreline Departure Rating - 2nd Quarter 2013

Airline			Sh	oreline Depar	Shoreline Departure Bating		
		Total	Successful	Marginal	Poor	Score	
	AMX	3	100%	0%	0%	10.00	
🕙 Lufthansa	DLH	16	100%	0%	0%	10.00	
FedEx	FDX	21	100%	0%	0%	10.00	
SWISS	SWR	1	100%	0%	0%	10.00	
TACA	TAI	3	100%	0%	0%	10.00	
FRONTIER	FFT	80	99%	0%	1%	9.88	
Alayku Aterliney	ASA	199	97%	3%	0%	9.85	
america	VRD	485	96%	3%	0%	9.80	
SOUTHWEST APILINES	SWA	117	97%	2%	2%	9.74	
SkyWest	SKW	1,050	95%	4%	1%	9.73	
Sun Country Airlines	SCX	35	94%	6%	0%	9.71	
American Airlines 🍾	AAL	353	94%	5%	1%	9.65	
AIR CANADA 🋞	ACA	140	92%	8%	0%	9.61	
≡ U·S AIRWAYS	AWE	135	91%	8%	1%	9.52	
WESTJET	WJA	26	88%	12%	0%	9.42	
UNITED	UAL	1,877	86%	12%	2%	9.22	
DELTA	DAL	365	87%	10%	3%	9.19	
jetBlue	JBU	120	85%	13%	2%	9.17	
<i>Air</i> Tran	TRS	29	90%	3%	7%	9.14	
ATLAS	GTI	20	85%	10%	5%	9.00	
1.00						8.64	SEO AVERAGE
KLM	KLM	18	72%	22%	6%	8.33	
AIRFRANCE	AFR	2	50%	50%	0%	7.50	
Airways	XLF	2	50%	0%	50%	5.00	
KSREAN AIR	KAL	2	0%	50%	50%	2.50	
	SIA	1	0%	0%	100%	0.00	
TOTAL]	5,100	<u>.</u>		<u>.</u>		
SFO AVERAGE			82%	9%	9%	8.64	

Airline		Gap Dej	partures	Gap Departure Quality Rating			
		Total	Score				
XL	XLF	1	10.00				
	CES	62	9.76				
RX AIP	ABX	10	9.13				
ATLAS	GTI	4	8.75				
JAPAN AIRLINES	JAL	71	8.57				
ANA	ANA	89	8.22				
III U'S AIRWAYS	AWE	155	7.27				
Skyllest	SKW	945	7.08				
SOUTHWEST APLINES	SWA	722	6.82				
FedEx	FDX	6	6.67				
Va america	VRD	512	6.44				
📥 D E L T A	DAL	179	6.35				
WESTJET	WJA	1	6.25				
	SIA	178	6.10				
	СРА	183	6.07				
	EVA	158	6.05				
AEROMEXICO	AMX	18	5.97				
Emirates	UAE	90	5.83				
TACA	TAI	13	5.77				
			5.71	SFO AVERAGE			
	CCA	89	5.49				
CHINA AIRLINES 🛞	CAL	144	5.46				
<i>Clir</i> Tran	TRS	9	5.42				
ASIANA AIRLINES	AAR	137	5.38				
Virgin atlantic	VIR	81	5.37				
NLA Cargo Airlines	NCA	72	5.33				
KSREAN AIR	KAL	168	5.31				
KLM	KLM	29	5.30				
Allașku Altrlineș	ASA	89	5.25				
Scandinavian Airlines	SAS	69	5.24				
AIRFRANCE	AFR	120	5.13				
FRONTIER	FFT	2	5.00				
Unit Diver	DLH	158	4.94				
Jerbiue	JBU	130	4.89				
American Airlines	AAL	222	4.65				
Airlines	SCX	6	4.38				

Airline	•	Gap De	partures	Gap Departure Quality Rating					
		Total Score							
UNITED	UAL	3190	4.19						
SWISS	SWR	89	4.19						
M Philippines	PAL	88	4.15						
LAN	LPE	37	4.02						
54 SOUTHERN AIR	SOO	21	3.69						
AIR NEW ZEALAND 😴	ANZ	89	3.23						
AIR CANADA 🛞	ACA	10	3.00						
	HAL	15	2.83						
BRITISH AIRWAYS	BAW	171	2.46						
				0 1 2 3 4 5 6 7 8 9 10					
TOTAL		8632							
SFO Average			5.71						

Foster City Arrival Rating - 2nd Quarter 2013

Airline			F	oster City Arr	ivals		Foster City Arrival Rating
		Total	Successful	Marginal	Poor	Score	
airTran	TRS	21	71%	29%	0%	8.57	
FRONTIER	FFT	37	62%	38%	0%	8.11	
Ⅲ U·S AIRWAYS	AWE	164	58%	42%	0%	7.90	
jetBlue	JBU	179	54%	46%	1%	7.65	
DELTA	DAL	200	55%	43%	2%	7.65	
American Airlines 🍾	AAL	262	53%	47%	1%	7.60	
54 SOUTHERN AIR	SOO	22	41%	59%	0%	7.05	
FedEx	FDX	56	39%	59%	2%	6.88	
UNITED	UAL	1,098	39%	58%	3%	6.84	
ATLAS	GTI	14	36%	64%	0%	6.79	
SOUTHWEST AFILINES	SWA	319	37%	61%	2%	6. 77	
TACA	TAI	91	37%	59%	3%	6.70	
america	VRD	230	34%	66%	0%	6.67	
						6.48	SFO AVERAGE
AIR CANADA 🛞	ACA	41	29%	68%	2%	6.34	
AEROMEXICO	AMX	76	28%	71%	1%	6.32	
BX AIR	ABX	46	30%	65%	4%	6.30	
CATHAY PACIFIC	СРА	9	22%	78%	0%	6.11	
NCA Cargo Airlines	NCA	25	20%	80%	0%	6.00	
ASIANA AIRLINES	AAR	52	21%	77%	2%	5.96	
KSREAN AIR	KAL	89	15%	85%	0%	5.73	
Skywest	SKW	151	12%	85%	3%	5.46	
Allayku Attribucy	ASA	31	0%	100%	0%	5.00	
	EVA	3	0%	100%	0%	5.00	
	HAL	3	0%	100%	0%	5.00	
Airlines	SCX	1	0%	100%	0%	5.00	
WESTJETA	WJA	7	0%	100%	0%	5.00	
TOTAL		3,227	l			I	
SEO AVEDACE		0,227	310/	680/	10/	6.49	
SFU AVERAGE			J1 70	UO 70	1 70	0.40	



DATE:	August 27, 2013
TO:	James A. Castañeda, AICP Roundtable Coordinator
FROM:	Cindy Gibbs, Roundtable Technical Consultant
SUBJECT:	Work Program Subcommittee, Woodside Oceanic Arrivals Discussion Summary and Action Items

Introduction

The Work Program Subcommittee met on June 25, 2013 to discuss aircraft arrivals in the vicinity of the Woodside VOR as well as the noise monitoring results from late spring/early summer 2012. Attached is the Subcommittee's meeting outline. The meeting was attended by five Roundtable members, including; Sue Dirge, Dave Pine, Ann Wengert, Dave Burrow, and Cliff Lentz. Airport staff and consultants in attendance included; Bert Ganoung, Cynthia Gibbs, and Harvey Hartmann.

Discussion

The meeting was convened to discuss aircraft operations in the vicinity of the Woodside VOR, as well as the analysis of noise monitoring conducted at the VOR in May – July 2012. The following items were recommended by the Subcommittee for vote by the Roundtable.

1. Monitor aircraft noise on a quarterly basis near the Woodside VOR

The Subcommittee suggests requesting the SFO ANAO to conduct noise monitoring at a suitable location near (within 1 nautical mile) the Woodside VOR. It is suggested the noise monitoring be conducted for 10-14 days during each quarter; the dates selected should be as close as possible to the prior year in order to accurately compare data year-to-year. The noise office staff with work with County and local officials to determine a suitable location that will capture aircraft noise and isn't subject to excessive background noises such as a fire station. The location will be considered "semi-permanent" in that the same location will be used each quarter.

²⁰²⁰¹ SW Birch, Suite 250, Newport Beach, CA 92660 | 949.250.1222 | www.airportnetwork.com

The following decibel levels are recommended noise monitoring thresholds at the Woodside VOR. These thresholds are suggested to account for the low ambient noise levels in the area. The portable noise monitoring equipment utilized by SFO can be programmed for a noise threshold of 50 dB; it is unclear if the equipment can be programmed to capture events below 50 dB. While the Woodside Subcommittee is aware of the equipment limitations, we would like to carry forward recommending the lower nighttime threshold, should the SFO ANAO procure equipment in the future with these capabilities.

- Daytime (7:00 a.m. 10:00 p.m.)– 52 dB
- Nighttime (10:01 p.m. 6:59 a.m.)– 42 dB (10 dB lower to account for quieter night hours)

The noise monitoring results will be analyzed for the following data:

- CNEL the average noise level for the time period
- SEL single event noise information
- Average aircraft altitude of: Oceanic arrivals, Ocean Tailored Arrivals, and Vector flights along with the delta for each.
- 2. Analyze Oceanic, Ocean Tailored Arrival (OTA), and vector flights

The Woodside Subcommittee recommends its acoustic consultant, BridgeNet International, analyze the flight tracks for three types of arrival flights that operate in the vicinity of the Woodside VOR: Oceanic, OTA, and vector flights. These flights will be analyzed for the time period of May 11 – July 8, 2012 to determine the following information for each flight over the Woodside VOR:

- Altitude
- Noise level
- Average altitude of each type of flight

This information will be available prior to the November 2013 meeting of the Roundtable to allow review by the Work Program subcommittee. At this time, BridgeNet continues to analyze the data.

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



September 4, 2013

Ms. Patty Daniel Federal Aviation Administration Project Manager Northern California OAPM Design & Implementation

Re: OAPM Environmental Assessment Public Involvement Process

Dear Ms. Daniel:

The Roundtable has been monitoring the OAPM EA process and looks forward to the publication of the Environmental Assessment, hopefully early in 2014. As a well-established airport community group in San Mateo County, we'd like to extend our assistance with your public involvement process; the Roundtable and its membership welcome the opportunity to partner with the FAA to arrange for a comprehensive public outreach process.

We encourage the FAA to hold meetings in multiple locations on the peninsula, including north peninsula near Brisbane, mid-peninsula at a Roundtable meeting, and south peninsula near Menlo Park. We would be happy to assist your team in locating facilities large enough to accommodate your public meetings in these locations, as well as ensure your mailing list covers the appropriate agencies in San Mateo County. Given the high involvement of stakeholders in the Bay Area, we encourage the FAA to expand the public process from the minimum required by the EA to a public process that is inclusive of the stakeholders, such as holding meetings during evening hours and providing adequate time for the public to comment on the draft document.

On behalf of the SFORT, I look forward to assisting you as we can to make the OAPM public process successful. If you have any questions, please do not hesitate to let me know; I may be reached directly at 650-483-7412.

Regards,

Jeffrey Gee, Vice Mayor City of Redwood City Chair, San Francisco Airport/Community Roundtable

Cc: Senator Boxer Congresswoman Eshoo Congresswoman Speier

Working together for quieter skies

State Senator Hill Assemblyman Gordon Assemblyman Mullin San Francisco Airport/Community Roundtable

CORRESPONDENCES

Regular Meeting # 287 September 4, 2013

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Subject: Short Term Aircraft Noise Monitoring – Pacifica
From: Dave Ong <Dave.Ong@flysfo.com>
Date: Fri, 28 Jun 2013 23:30:40 +0000
To: molly muller <molly62sf@gmail.com>, "rerpac@aol.com" <rerpac@aol.com>
CC: "Sue Digre (digres@ci.pacifica.ca.us)" <digres@ci.pacifica.ca.us>, "James A. Castañeda"
<jcastaneda@sforoundtable.org>, "CindyG@AirportNetwork.com" <CindyG@AirportNetwork.com>, Doug Yakel
<Doug.Yakel@flysfo.com>, Bert Ganoung <Bert.Ganoung@flysfo.com>

Dear Mrs. Molly Muller and Mr. Ray Ramos:

Thank you for allowing San Francisco International Airport Noise Abatement Office the opportunity to collect aircraft noise measurements at your residence. Please find attached report #032013-P50971-P52972. This document contains the results of the monitoring. Portable Environmental Monitoring Unit 50 (Grand Teton Drive) and 52 (Tioga Way) were on location from March 1, 2013 to March 18, 2013. Noise data used to generate the report is needed for a full 24 hour period; therefore the enclosed report is for days that we had 24 hours of noise data: March 2, 2013 through March 17, 2013.

I have also copied Honorable Sue Digre, the City of Pacifica's Airport Community Roundtable Representative and James Castaneda the Roundtable Coordinator to share the results with.

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

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

Sincerely,

David Ong SFO Noise Systems Manager | Aircraft Noise Abatement Office San Francisco International Airport | P.O. Box 8097 | San Francisco 94128 Tel 650-821-5100 | www.flysfo.com | www.flyquietsfo.com



Attachments:	
image001.jpg	0 bytes
image002.jpg	0 bytes
image003.jpg	0 bytes

image004.jpg	0 bytes
image005.jpg	0 bytes
image006.jpg	0 bytes
Short Term Aircraft Noise Monitoring - Pacifica.pdf	8.2 MB

Due to the size and color reproduction necessary for the aforementioned report, the document is made available for download at:

http://sforoundtable.org/assets/issues/201306_Pacifica_STANM.pdf

Subject: RE: Short Term Aircraft Noise Monitoring – Pacifica
From: Dave Ong <Dave.Ong@flysfo.com>
Date: Mon, 22 Jul 2013 22:15:13 +0000
To: "rerpac@aol.com" <rerpac@aol.com>
CC: "digres@ci.pacifica.ca.us" <digres@ci.pacifica.ca.us>, "jcastaneda@sforoundtable.org"
<jcastaneda@sforoundtable.org>, "CindyG@AirportNetwork.com" <CindyG@AirportNetwork.com>, Doug Yakel
<Doug.Yakel@flysfo.com>, Bert Ganoung <Bert.Ganoung@flysfo.com>, "molly62sf@gmail.com"

Hello Ray,

Please find attached the 32 flight track maps along with the ½ second dataset used in the investigation. The result description is also provided below. It appears to be static discharge. What are your thoughts?

Description:

Investigation found a single 130db second at 2312:44UTC (investigation xlsx of 1s/tof etc dta attached)

The halfsec prior shows the spike in high frequencies - there was no significant after event revibrations - levels were back to normal within 1second Using the crude but accurate enough for purposes calculation of doubling time reducing db level by 3db I get the following results:

0.5s:130 = 1s:127 = 2s:124 = 4s:121 = 8s:118 = 15s:115 = 30s:112 = 1m:108 = 2m:105 = 4m:102 = 8m:98 = 15m:95 = 30m:92 = 1h:89

Checked database and found the 14-Apr 1600 hourly has a TLEQ of 91.5 which is comparable with the approx 89db for the hour that the 0.5s spike would have contributed.

Thank you,

Dave

From: rerpac@aol.com [mailto:rerpac@aol.com]
Sent: Monday, July 22, 2013 1:01 PM
To: Dave Ong
Cc: digres@ci.pacifica.ca.us; jcastaneda@sforoundtable.org; CindyG@AirportNetwork.com; Doug Yakel; Bert Ganoung; molly62sf@gmail.com
Subject: Re: Short Term Aircraft Noise Monitoring – Pacifica

Hi Dave,

Please forgive me for the delay in responding. I will look forward to receiving the 16 flight track maps (total 32 maps) and the response from your system provider doing further investigation to provide feedback related to the CNEL exceedance on 14 March 2013. Regards,

Ray

-----Original Message-----From: Dave Ong <<u>Dave.Ong@flysfo.com</u>> To: rerpac <<u>rerpac@aol.com</u>> Cc: digres <<u>digres@ci.pacifica.ca.us</u>>; jcastaneda<<u>jcastaneda@sforoundtable.org</u>>; CindyG <<u>CindyG@AirportNetwork.com</u>>; Doug Yakel <<u>Doug.Yakel@flysfo.com</u>>; Bert Ganoung <<u>Bert.Ganoung@flysfo.com</u>>; molly62sf <<u>molly62sf@gmail.com</u>> Sent: Mon, Jul 8, 2013 4:25 pm Subject: RE: Short Term Aircraft Noise Monitoring – Pacifica

Good Afternoon Ray,

Per your request #1, I have attached two Excel books containing data similar to the information in the table on page 15 of the report. Since there were 1,170 correlated aircraft noise events at Grand Teton (Location ID 971) and 1,029 at your location (Location ID 972) generating flight track maps would be a challenge and not provided at this time. Perhaps I can provide flight track maps of the correlated operations for each day monitored? You will receive 16 flight track maps for each monitor location, a total of 32 maps. This would dramatically reduce our workload. Please let me know if this will work for you.

Thank you for pointing out the unusual Community CNEL reading for March 14th. I do apologize this was not researched further for accuracy and explanation. In evaluating the processed data, it appears that there was a ½ second or a 1 second unusual energy spike during the 4 p.m. hour. As a result, the Community CNEL was 77.7 decibel for that day. I have reached out to our system provider for further investigation and will report back when more information is available.

Total recorded data along with date time stamps for correlated aircraft events and community events for the 24 hour periods has been provided in the attached books.

Please let me know if you have any questions.

Thank you,

Dave

From: rerpac@aol.com [mailto:rerpac@aol.com]
Sent: Tuesday, July 02, 2013 7:49 AM
To: Dave Ong
Cc: digres@ci.pacifica.ca.us; jcastaneda@sforoundtable.org; CindyG@AirportNetwork.com; Doug Yakel; Bert
Ganoung; molly62sf@gmail.com
Subject: Re: Short Term Aircraft Noise Monitoring – Pacifica

Good Morning Dave,

Thank you for providing your report. It does stimulate some questions:

(1) Would it be possible to get data similar to Page 15 chart (inclusive of flight track maps) for dates 3/9/13 through 3/17/13 which were in the monitored period of 3/2-3/17 2013, <u>but not included in the report</u>?

(2) Can you provide more information as to the reasons for the <u>exceedance of the Community CNEL Noise Standard</u> shown on Page 9 Figure 6 and Page 10 Figure 7?

(3) Is it possible for you to provide the total recorded data (with time for event) for the day(s) of the <u>exceedance</u> <u>noted</u> in question (2) along with flight track maps for aircraft most likely that contributed to exceedance?

Regards,

Ray Ramos (Tioga Way, Pacifica)

-----Original Message-----From: Dave Ong <<u>Dave.Ong@flysfo.com</u>> To: molly muller <<u>molly62sf@gmail.com</u>>; rerpac <<u>rerpac@aol.com</u>> Cc: Sue Digre (<u>digres@ci.pacifica.ca.us</u>) <<u>digres@ci.pacifica.ca.us</u>>; "James A. Castañeda " <<u>jcastaneda@sforoundtable.org</u>>; CindyG <<u>CindyG@AirportNetwork.com</u>>; Doug Yakel <<u>Doug.Yakel@flysfo.com</u>>; Bert Ganoung <<u>Bert.Ganoung@flysfo.com</u>> Sent: Fri, Jun 28, 2013 4:35 pm Subject: Short Term Aircraft Noise Monitoring – Pacifica

Dear Mrs. Molly Muller and Mr. Ray Ramos:

Thank you for allowing San Francisco International Airport Noise Abatement Office the opportunity to collect aircraft noise measurements at your residence. Please find attached report #032013-P50971-P52972. This document contains the results of the monitoring. Portable Environmental Monitoring Unit 50 (Grand Teton Drive) and 52 (Tioga Way) were on location from March 1, 2013 to March 18, 2013. Noise data used to generate the report is needed for a full 24 hour period; therefore the enclosed report is for days that we had 24 hours of noise data: March 2, 2013 through March 17, 2013.

I have also copied Honorable Sue Digre, the City of Pacifica's Airport Community Roundtable Representative and James Castaneda the Roundtable Coordinator to share the results with.

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

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

Sincerely,

David Ong SFO Noise Systems Manager | Aircraft Noise Abatement Office San Francisco International Airport | P.O. Box 8097 | San Francisco 94128 Tel 650-821-5100 | www.flysfo.com | www.flyquietsfo.com



-Attachments: ----

image001.jpg	0 bytes
image002.jpg	0 bytes
image003.jpg	0 bytes
image004.jpg	0 bytes
image005.jpg	0 bytes
image006.jpg	0 bytes
SFO-0.5s data-14-Mar 1600 (2300UTC) - 130db for single second found.xlsx	1.6 MB
Correlated Flight Operations for Location 971.docx	4.2 MB

Due to the size and color reproduction necessary for the attachments mentioned in the previous email correspondence, those attachments are made available upon request.

Ruid 8/6/13

Aug 1, 2013

Dear Mr. Gee,

I'm writing to make you aware of disruptive airplane noise over our town, with the hope that you can help solve this problem.

We've lived in Portola Valley for 10 years, purposely for the quiet and rural atmosphere here. We just moved to a house in central Portola Valley from the Corte Madera area. The airplanes seem to be routed directly over our new house at times (which wasn't mentioned by the previous owners so I think this is a new or escalating problem).

A couple of mornings ago I was startled awake to the sound of jet engines. Our baby woke up screaming a couple nights ago, sometime between 10 and 11 because a noisy airplane passed over our house. Last night I was awakened after I fell asleep by a jet. The airplane noise is unpredictable & stressful when it wakes us up, not to mention I'm concerned about being so near landing planes. What if they have an engine problem over our house or our neighbors? Loud and unpredictable noises no doubt can cause health problems, especially when waking children and babies.S

Could you please work to have the planes directed elsewhere, even if it means they have to spend more on gas to go around us? At the least please limit the noise to hours when children (and adults) aren't sleeping; this would only be part of the solution since it wouldn't take care of the daytime noise & concerns about about an airplane having a problem and having to land on us or our neighbors.

Please try to help us with this problem. Thank you for taking the time to read my letter.

Sincerely,

Briana Hermann brane Hermana



San Francisco International Airport/Community Roundtable

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

August 14, 2013

Ms. Brianna Hermann 158 Pinon Drive Portola Valley, CA 94028

Dear Ms. Hermann:

I have received your letter of August 1, 2013 concerning aircraft noise over your residences in Portola Valley. I will be sharing your letter with the San Francisco International Airport/Community Roundtable (Roundtable) and specifically, the Directors from our south San Mateo County community members (Portola Valley, Woodside, and Atherton).

The Roundtable is actively working with Congresswoman Eshoo's office, the San Francisco Airport, the Oakland Airport, the airlines and the FAA in developing solutions to the noise issues affecting our communities in the south county area. While these efforts are underway, resolution will take time. Rerouting aircraft to other areas in the Bay Area will have consequences to the flight paths at Oakland, San Jose and other regional airports.

I can also assure you that your neighbors in the community have raised this issue and are being very diligent in trying to find solutions to the issue.

Regards,

Jeffrey Gee, Vice Mayor, Redwood City Chair, San Francisco Airport Community Roundtable

Cc: Congresswoman Eshoo SFO Airport/Community Roundtable Members Lawrence Galindo, Oakland Airport Noise & Environmental Affairs

Working together for quieter skies
Subject: FW: Memorandum re Aircraft Noise, Data Set, PV Resident Responses, and Eshoo Letter
From: Council-Jeff Gee <jgee@redwoodcity.org>
Date: Mon, 26 Aug 2013 16:02:54 -0700
To: James A. Castañeda <jcastaneda@sforoundtable.org>, Cynthia Gibbs <cindyg@airportnetwork.com>

FYI. For your the Roundtable correspondence.

Jeff

Jeff Gee Vice Mayor City of Redwood City (c) 650-483-7412 1017 Middlefield Road Redwood City, CA 94063

From: Tina Nguyen [tnps2008@gmail.com]
Sent: Monday, August 26, 2013 11:12 AM
To: Bert Ganoung; SFO Noise
Cc: Council-Jeff Gee; awengert@portolavalley.net; Jim Lyons; Victor Schachter
Subject: Memorandum re Aircraft Noise, Data Set, PV Resident Responses, and Eshoo Letter

Dear Bert and David,

As part of our ongoing efforts toward noise abatement for our communities, Vic, Jim and I sent Congresswoman Eshoo's Chief of Staff Karen Chapman an email with the attached documents.

We were overwhelmed with constant streams of commercial airplane noise this entire summer irrespective of the weather. I posted a survey on the Portola Valley forum in late July asking whether residents were bothered by the airplane noise. To date, over 60 residents either emailed or called me on my cell phone to tell me that are very bothered by the increasing noise pollution. I cut and pasted all of the email responses into a word document and removed residents' identifying information until we receive everyone's formal consent.

I very much appreciate David's time, expertise, and cooperation with fulfilling my requests for 3 days worth of flight information. It saved me a tremendous amount of time from manually entering the data.

Sincerely, Tina Nguyen

Attachments: Eshoo_May_12,_2000,_letter].pdf MEMORANDUM_-_Chapman.docx SFO_Arriving_Flights_over_Portola_Valley_24_hrs_7.28,_8.4,_8.11_+_Evenings_7.31,_8.5,_8.9,_8.21(1).xlsx KB PV_Residents_Responses.docx KB

MEMORANDUM

August 25, 2013

TO: Karen Chapman

FROM: Vic Schachter

Tina Nguyen

Jim Lyons

RE: The Continuing Burden of Aircraft Noise over Portola Valley, Woodside VOR Areas, and Other South Bay Communities

We are writing to apprise you of data on aircraft overflights that we have recently obtained and complaints from our neighbors that we have recently received, both of which demonstrate how the Portola Valley/ Woodside VOR areas continue to suffer from burdensome, excessive and disruptive noise caused by low-flying aircraft over our communities.

A. Aircraft Flight Data

Dr. Nguyen has gathered more data (which we attach in an Excel format) showing the significant increase in commercial aircraft arrival flights over Portola Valley on their way to landing at SFO. Two types of data are included: (1) twentyfour hour flight data over Portola Valley for three recent Sundays -- July 28, August 4, and August 11 obtained from the SFO Noise Abatement Office and (2) flight data

for four weekdays limited to evening hours for July 31, August 5, August 9, and August 21. You may recall that in a letter from Congresswoman Eshoo dated May 12, 2000 (a copy is attached), Congresswoman Eshoo announced an agreement to raise the altitude of arriving commercial aircraft over the mid-Peninsula. She noted that at the time, there were 70 daily flights that were routed across the 14th Congressional District and into SFO. Based on published arrival routes at the time, it appears that less than 50 percent of these flights flew over Portola Valley in 2000. Data obtained by Dr. Nguyen from the SFO Noise Abatement Office for three Sundays in July and August show that aircraft traffic over the mid-Peninsula (Portola Valley) has now increased by **over 220 percent**.

On July28, 2013 (7 am to 7am), according to the Noise Abatement Office, there were 121 arriving flights over Portola Valley on their way to SFO. On August 4, 2013, there were 109 such flights. On August 11, 2013, there were 107 such flights.

Especially disruptive was the excessive noise generated by the low altitude of these flights. On July 28, more than 45 percent of the flights (a total of 55) were at less than 6,000 feet above sea level. Because Portola Valley is located at about 700 above sea level (several areas are higher and a few are lower), these flights were about 5,300 feet above ground level. On August 4, 58 flights (53 percent of the total) were less than 6,000 feet above sea level. August 11 flights totaled 51 below 6,000 feet above sea level (51 percent of the total). These numbers average to 54 flights per Sunday under 6,000 feet.

Dr. Nguyen also prepared data from flight information provided by a website maintained by San Jose International Airport tracking all flights over the Peninsula (<u>http://webtrak.bksv.com/sjc</u>). This data for the four weekday evenings in July and

August also show an intensive bombardment of low-flying aircraft at times that are particularly intrusive to family life and personal well-being.

During the hours of 7 pm to 11 pm on July 31, there were 35 SFO arriving flights over Portola Valley at an average altitude of 5,973 feet above sea level. This figure includes 17 flights between 10 pm and 11pm.

August 5 presented 31SFO arriving flights between 9 pm and 12:30 am (or 9 per hour) at an average altitude of 5,733 feet above sea level.

On August 9, there were 45 SFO arriving flights between 8 pm and 1 am, including 15 flights between 10 pm and 11 pm, at an average altitude of 5,813 feet above sea level.

The evening of August 21 between 6 pm and 11 pm shows 51 SFO arriving flights flew over Portola Valley (10 flights per hour) at an average altitude of 5656 feet above sea level. On this day, there were 14 flights between 7 pm and 8 pm.

It appears to us that the dramatic increase in air traffic over Portola Valley must be the result, at least in part, of a shifting of air traffic from other arrival routes to Portola Valley. Although we recognize that air traffic at SFO has increased as a result of the recovering economy, but the total amount of this increase from 2000 is only about 45 percent. This increase would not account for a 220 percent increase in air traffic over Portola Valley bound for SFO. The difference has to be the result of a determination by the FAA and SFO to shift arriving flights from other routes onto Portola Valley.

We have also received data from the Noise Abatement Office concerning arriving SFO flights over the Woodside VOR for July 28, August 4 and August 11. This data

(which appear incomplete)¹ reconfirms that arriving flights over the Woodside VOR continue to be at altitudes far below the 8,000 foot minimum altitude established by Congresswoman Eshoo's 2001 agreement with the FAA. The data also establish that the FAA is routinely violating its own regulation requiring flights arriving from the Pacific to maintain a minimum 8,000 foot altitude over the VOR, traffic permitting. FAA Northern California TRACON Order NCT 7110.65U, ¶5-8(a)(2)(f). You may recall that the Woodside VOR sits at an elevation of about 2,300 feet above sea level. Therefore, an aircraft flying over the VOR at 8,000 feet would be 6,700 feet above ground level.

On July 28, 41 of the 50 commercial flights arriving into SFO over the Woodside VOR were at less than 8,000 feet above sea level (82 percent) and 28 of those flights were below 6,500 feet above sea level (56 percent). This means that more than half the flights were 4,200 feet or less above ground level.

On August 4, 40 of the 46 commercial flights inbound to SFO were less than 8,000 feet in altitude over the Woodside VOR (87 percent) and 22 of those flights (48 percent) were at altitudes of less than 6,500 feet. One SkyWest flight (No. 5654) flew over the VOR at less than 4,000 feet above sea level.

On August 11, 45 of the 52 commercial flights inbound to SFO (90 percent) over the VOR were at less than 8,000 feet above sea level and 23 of those flights (44 percent) were at less than 6,500 feet.

In our view, there is no possibility that air traffic on these three Sundays required the FAA's air traffic controllers to violate the Eshoo Agreement and the FAA's own

¹ Our review of this data indicates that several flights over the Woodside VOR on these days were not included in the NAO's data, based on information supplied by San Jose Airport's webtrak website.

regulations in such a wholesale manner. Instead, it appears that the FAA is simply ignoring its obligations as a convenience to itself and the airlines. In the meantime, the residents affected by these low and excruciatingly noisy flights are having their lives and well-being disrupted.

B. Our neighbors' recent complaints about aircraft noise

Between July 22 and August 4, Dr. Nguyen has received over forty complaints from neighbors about the increase in air traffic and aircraft noise over Portola Valley. Several of the neighbors noted that a principal reason they chose to live in our community "is the peace and quiet of our neighborhood." Some have been in Portola Valley or nearby communities for 40 years. None has ever witnessed so many loud, intrusive low-flying commercial planes. We have attached a set of the emails Dr. Nguyen received through the Portola Valley Forum. We have removed the full names from this set, but that can be provided to you and Congresswoman Eshoo if necessary.

Here are a few of the highlights:

One neighbor complained that the noise from low-flying aircraft "causes me literal pain" and another noted that the planes have caused "a real degradation in my quality of life."

Several noted that they "noticed a lot more noise and low flying planes in the last few years." One said, "I cannot ever remember so many planes!!! And so constant."

The noise is described as "surprising loud and frequent" and "loud enough as to drown out conversation, radio, etc."

Several also commented that the complaint process at the Noise Abatement Office is useless, describing it as "too cumbersome to use" and simply declaring that "I gave up after a while."

5

We believe that these candid comments from people directly affected by the increase in low-flying air traffic show that the impact of these noisy commercial flights is significantly harmful to our community. It is also completely avoidable. Commercial aircraft should be directed back to their original approach routes into SFO and those that remain should fly at higher altitudes over Portola Valley and the Woodside VOR.

Given all of the foregoing, we request Congresswoman Eshoo to immediately intervene with the FAA or other appropriate authorities to achieve a meaningful remedy to these excessive, disruptive and unwarranted intrusions of aircraft noise in our communities. In addition, we again request an in-person meeting with Congresswoman Eshoo at the earliest possible time to review and further explain the enclosed data, related conclusions and need for immediate action.

Thank you for your consideration.

V.Schachter, T. Nguyen, and J. Lyons, on behalf of the Ad Hoc Citizens Committee on Noise Abatement in the South Bay From: Date: Thu, Aug 1, 2013 at 3:47 PM Subject: Airplane noise... To: Tina Nguyen <tnps2008@gmail.com>

Hi, Tina.

Thanks for your hard work on this important issue.

I have lived in Los Trancos Woods since 1981. I have seen an exponential increase in the air traffic and noise over past 30 years. One of the chief reasons why I chose the Los Trancos Woods area for a home is the peace and quiet of the neighborhood. Now I cannot sit on my deck enjoying the beautiful scenery without regular interruptions of loud, low-flying airplanes.

Although time and health issues prevent my intensive involvement in your efforts, please be aware I would happily support you where I can (e.g. sign petitions, etc.)

Thanks again for your efforts!

Best Wishes, Gwen

From:

Date: Mon, Jul 22, 2013 at 8:12 PM Subject: [PVForum] Re: Commercial Airplane Noise over PV To: <u>PVForum@yahoogroups.com</u>

Dear Tina,

Thank you very much for the survey. It is certainly escalating and it is time to be more vocal about it. To me it seems that it is happening on every day and not only on certain days and I am very bothered by that and I know the rest of my family is as well. Some days it seems non stop with hardly any time in between and some of them are flying really low. We live on top of the hill and the noise is probably stronger there and my husband says it wakes him up at night.

The ever increasing airplane pollution is definitely a threat to a rural quality of our town and we need to find a way to try for a solution.

Please let us know how we can help. Marie

From: Sarah Date: Mon, Jul 22, 2013 at 5:34 PM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: tnps2008 <tnps2008@gmail.com>

I have lived here for almost 30 years and as I sit here outside on Cervantes road I am amazed by all of the planes.

I recently moved from Corte Madera road and for a series of evenings in June, I entertained outside 3 nights in a row. The planes were overhead non-stop and were very, very loud. I was amazed by how irritating and loud they were...

From: Date: Thu, Jul 25, 2013 at 6:40 PM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: Cc: "PVForum@yahoogroups.com" <PVForum@yahoogroups.com>

I think that when you buy property in the cities near the airport, it is very clear that you are buying into the noise. We moved here to get away from being under the evening SoCal - SFO commute path in Palo Alto. **The change in flight patterns and altitudes is a real degradation of my quality of life,** never mind the impact on property values. It's important to push back while the changes are fresh and we have more leverage. **They changed from a system that had significantly less impact on our area to a system that on many days generates nonstop noise (we are on a low ridge in Ladera).**

I have an illness that causes intense and lasting ear pain from noises that are only mildly annoying to others. It is very hard for other people to understand the pain noise can cause, but if you knew someone with leprosy, I think you'd be careful not to poke their open wounds. The louder air traffic causes me literal pain, which is a misery on days when I am not well enough to leave the house.

I don't have the stamina to be an advocate on this issue and I am hugely grateful to those who are working on it. It's not a NIMBY issue for me, it's a health and wellness issue. (I don't watch TV or listen to music, especially through ear buds, because of the tiresome pain).

Anybody remember that era in the '70s when people cared about noise pollution?

Thank you,

Carol

From

Date: Mon, Jul 22, 2013 at 9:00 PM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: tnps2008 <tnps2008@gmail.com>

On Bear Gulch Drive, near Valencia, we hear a lot of loud airplane noise. For a while, I tried to use the SFO ANAO File Noise Complaint website, but it was too cumbersome to use, and the flights are so darn frequent that it is a pain to report each one. I think they want a lot of personal data, which must be re entered for every report, and then they want to know flight numbers or whether it is military of not, which is stuff I don't know.

Keep me in the loop about this, please. I would report more if it were easier to do so, perhaps through a town website, which reported in bulk to SFO??

Debbie

From:

Date: Fri, Jul 26, 2013 at 2:49 PM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: Tina Nguyen <u>tnps2008@gmail.com</u>

Although a Woodside resident (Still Creek Rd) I am in PV school district hence subscribe to PVForum.

I used to receive notices from SFO roundtable, and used to call their complaint line, but gave up when it became how useless they were.

I do still (rarely) call Palo Alto airport when a private single-engine plane is in my opinion excessively low.

One item I have not seen mentioned in the public replies to your thread is the public meeting held in PV Town Center (old school house) about ??8 years ago. It was a packed and vocal audience

The first takeaway for me was that we have no power through formal channels; that the airlines have zero incentive to assist; that "name and shame" offenders or "name and praise" quiet airlines would probably achieve nothing. Hence we need to pressure elected officials.

The second takeaway was that there is only a weak correlation between height and noise - far more important are aircraft design, and whether aircraft are actively braking (using flaps) to control their descent. The former can't be addressed, except by the decadal-time-scale modernising of the commercial airlines' fleets. The latter could be addressed by a (presumably federally mandated) regional flight plan addressing SFO-OAK-SJC simultaneously forcing most aircraft to commence their mandated approaches from far further out than is conventional, along glide paths that would be far more fuel efficient and quieter (I hope I have this science right, don't quote me!).

Simon

From: Date: Thu, Aug 1, 2013 at 10:59 AM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: Tina Nguyen <tnps2008@gmail.com>

When I first moved here in 1996 I continually called the Airport Noise Complaint number when a loud, low flying plane flew over my house. I gave up after a while. It seemed like the number of planes declined in the early 2000's, but I do notice a lot more noise and low flying planes in the last few years. I definitely am annoyed by them and find that they are lower and more frequent. I would not want to have the number of these planes increase and I think that they should bring them in at a higher altitude when over our homes, and descend at a steeper angle over the water...where they would not be over any homes. Thank you for your work on this matter....

Anne

From: Date: Mon, Jul 22, 2013 at 10:00 PM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: tnps2008 <tnps2008@gmail.com>

Tina,

Thank you so much for sending this incredibly helpful message. We live on Ramona up near Vista Verde and have also experience a big increase in noise over the last several years – and really this summer has been much worse – noticing it some nights almost non stop it seems!

It would be awesome to understand better how we can channel our feedback and concerns and hope the our elected officials can help too.

Based on the amount of comments and feedback I'm guessing you've received LOTS!!! Super interesting and helpful and **good to know that we're not alone in our concerns!** Thanks again!

Best, Sandra

From: Date: Mon, Jul 22, 2013 at 6:25 PM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: tnps2008 <tnps2008@gmail.com> Cc: "pvforum@yahoogroups.com" <PVForum@yahoogroups.com>

Hi Tina!

The planes are loud now as I write this! We live on Valencia Court, which is off Bear Gulch. I think the noise is heard mostly by the residents living in the Alpine Hills neighborhood, and possibly the Westridge area as well. We used to live in Woodside, up by Skyline and we had an occasional flight fly too low over the hill and create a disturbance, but it was only when the weather was fairly severe.. I was shocked when we moved to Valencia Court last year on how many and how loud the planes are. It is very loud, a shadow of the plane crosses the patio and makes the windows shake. It's precisely the reason we didn't move to Hillsborough years ago. I would be interested to see responses by areas of PV and would support any campaign put together.

Alison

From: Date: Mon, Jul 22, 2013 at 6:39 PM Subject: RE: [PVForum] Commercial Airplane Noise over PV To: tnps2008 <tnps2008@gmail.com> Cc: "pvforum@yahoogroups.com" <PVForum@yahoogroups.com>

The noise is very bad on Cheyenne Pt, near Ormondale. We are on a west facing hill and hear the planes constantly and loudly when we are outside. It has been getting worse and worse every year.

Rebecca

From:

Date: Mon, Jul 22, 2013 at 7:00 PM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: tnps2008@gmail.com Cc: PVForum@yahoogroups.com

Yes, residing near the top of Alpine Hills, on Golden Oak Drive, we are aware of unusually noisy aircraft; increasingly so during particular weather fronts, perhaps. Jeanne

From: Justin Date: Mon, Jul 22, 2013 at 8:55 PM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: tnps2008 <tnps2008@gmail.com>

Routinely bothered by airplane noise whenever their routes shift. We file complaints on the SJC website every time, just so they have it on the record. The 11pm-12am ones are the worst.

From: Ragni Date: Thu, Aug 1, 2013 at 1:08 PM Subject: [PVForum] Re: Commercial Airplane Noise over PV To: PVForum@yahoogroups.com

You can put us on the complainants list as well. We live in Central Portola Valley (Palmer Lane) and have noticed an increase in low-lying and noisy planes heading for SFO.

From:

To: Tina Nguyen <<u>tnps2008@gmail.com</u>> Sent: Sunday, August 4, 2013 10:43 AM Subject:Re: [PVForum] Re: Commercial Airplane Noise over PV

Tina:

I am one of those who hasn't responded but who gets airplane noise and lights coming into my bedroom window (one of several reasons I'm considering changing that room to an office since I don't like being awakened), particularly certain hours and functions, such as the engine when flaps are being lowered (which causes that very big sound like no other) to slow the plane and lose altitutude before landing I am located

between Fawn and Cervantes near Peak. If you need more "evidence", please let me know. From time to time on a few occasions I've kept hours and times most prevalent. It seemed there had been ample evidence.

Peg

From:

Date: Mon, Jul 22, 2013 at 6:11 PM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: tnps2008 <tnps2008@gmail.com>

Tina,

We live in the western edge of a hill in Ladera, on Dedalera. The noise is obnoxious, especially on warm days. I had thought the noise increase was due to the planes starting their descent earlier, before they were over the bay.

If the issue is where they do their turn, it certainly seems they could go a bit further east and do it over the un-inhabited radar-dish hill!

Thanks again for working on this.

Carol

From: Date: Mon, Jul 22, 2013 at 9:04 PM Subject: [PVForum] Re: Commercial Airplane Noise over PV To: PVForum@yahoogroups.com **We, too, have noticed surprisingly loud and frequent plane noise day and night on Corte Madera Rd.** Thanks for raising this!

T.S.

From: Date: Mon, Jul 22, 2013 at 10:22 PM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: tnps2008 <tnps2008@gmail.com> Cc: <u>PVForum@yahoogroups.com</u>

We definitely hear the planes; we live on Corte Madera Rd. I notice that we can hear the Priory sports noise quite easily, but can't hear Portola Rd at all, which is actually closer. I guess the "micro-noise-climates" are at work. I also can see the planes lining up from my bedroom window at night. Not the look I thought I'd have living in Portola Valley.

Andie

From: Date: Tue, Jul 23, 2013 at 12:44 PM Subject: Re: Commercial Airplane Noise over PV To: tnps2008 <tnps2008@gmail.com>

Hi Tina,

Yes, it bothers me - we live in central PV on Pinon. **I've woken up startled at 6:25 or so to the sound of jet engines (granted the windows were partly open), and I also notice it goes on after I'm trying to sleep sometimes (after 10:30).** It could be that there is some canyontype echo where we live. There are also some small planes that seem to be practicing emergency procedures over our house but I haven't gotten any tail numbers. Thank you! Briana

From: Date: Wed, Jul 24, 2013 at 5:00 PM Subject: Re: [PVForum] Commercial Airplane Noise over PV To:

Cc: "PVForum@yahoogroups.com" <PVForum@yahoogroups.com>, tnps2008 <tnps2008@gmail.com>, Victor Schachter <VSchachter@fenwick.com>

A plane flew so low over my house on Old La Honda yesterday and it was so loud approaching, I actually went out to see what it was. Definitely more air noise in the last few weeks. Lauren Sent from my iPhone

From:

Date: Thu, Jul 25, 2013 at 10:03 AM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: Tina Nguyen <tnps2008@gmail.com>

Hi Tina,

Sorry this is late, but we live on Wayside and I have been surprised since moving here seven years ago that there have been days when the aircraft noise is loud enough as to drown out conversation, radio, etc. Unpleasant to say the least.

Don

From: Date: Thu, Jul 25, 2013 at 11:27 AM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: Tina Nguyen <tnps2008@gmail.com>

You can add us to hearing the noise and waking up on Cervantes/Meadowood.

Lisa

From: **Sue** Date: Thu, Jul 25, 2013 at 9:10 PM Subject: [PVForum] Airplane noise To: PV Forum <pvforum@yahoogroups.com>

When this topic came on the forum,

We were on holiday and on return, for the last 3 days the planes have been non-stop every 3-5 minutes. I am sitting outside now under a colored buttermilk sky. In forty years here. (From Burlingame Hills... Canyon and Tiptoe lane.) I cannot ever remember so many planes!!!! And so constant. The full moon about to be visible. I guess I need to go inside to enjoy it. Too noisy

The pattern seems to be-----1 over Alpine Hills next one over Ladera. The next one over Westridge dr Ford Field toward San Jose. **Here is another one#%\!**

Sent from my IPad

From: Sue

Date: Thu, Jul 25, 2013 at 10:11 PM

Subject: Re: [PVForum] Re: Commercial Airplane Noise over PV

To: Tina Nguyen <tnps2008@gmail.com>

I just posted a rather "nice comment "on the forum. I am about to be furious. This seems to be a very crucial matter if it continues. is it because of the one runway closure? Which of course can and will always be in progress, thru the years

I can remember issues over the years. The Woodside vortex. A big political struggle to change and/or alleviate that

Please list me as very angry in your survey. We moved here for the peace and quiet. My Husband grew up in The Park. We lived in Burlingame. We knew there was noise. We were near an airport! We moved away from that. I realize it is a bigger busier world. I thought I read there would be fewer planes but FULL. What happened. Thanks for your work Happy to help you

Sent from my IPad

From: Date: Thu, Jul 25, 2013 at 7:54 PM Subject: Commercial Airplane Noise over PV To: Tina Nguyen <tnps2008@gmail.com>

Tina,

We have lived in Ladera for over 20 years. We find there is more airplane noise in the last two years. Especially Saturday and Sunday mornings. The planes appear to be flying at a lower altitude.

Now the tally is 42 reporting residents.

Thanks

Chris

From:

Date: Fri, Jul 26, 2013 at 3:19 PM Subject: RE: [PVForum] Commercial Airplane Noise over PV To: Tina Nguyen <tnps2008@gmail.com> Cc: "PVForum@yahoogroups.com" <PVForum@yahoogroups.com>

Put me on your complaint list too!! All evening long there have been low-flying commercial aircraft coming in from the West travelling extremely low and loud. Their landing lights are almost illuminating my backyard they are so close!

- Jim

From:

Date: Thu, Aug 1, 2013 at 11:26 AM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: Tina Nguyen <tnps2008@gmail.com> Cc: "PVForum@yahoogroups.com" <PVForum@yahoogroups.com>

We are on Mapache Dr. I have noticed an increase in noise over the past year or so. And the noise does seem louder when they fly by.

Sandy

From:

Date: Thu, Aug 1, 2013 at 3:12 PM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: Tina Nguyen <tnps2008@gmail.com>

I'd also like to be on the complaint list. We live on Cervantes. I'm dismayed and annoyed by the frequency, volume and duration of the noise from aircraft. There's been a significant change; I was naively hoping it was due to the runway repairs, but it seems to be continuing (and maybe getting worse).

If you still have it, could you re-forward your original email (which solicited input from PV residents) to me? I was traveling when you sent it out, and I seem to have inadvertently deleted it.

Thanks Janet

From:

Date: Thu, Aug 1, 2013 at 4:52 PM Subject: Re: [PVForum] Commercial Airplane Noise over PV To: tnps2008 <tnps2008@gmail.com>

Hi Tina,

We live up the hills on Vista Verde Way and yes, very bothersome noise. Even wakes my dog up at 4am, then wakes me up. When I'm on the deck I can see what airline is flying overhead. Please sign me up on the noise complaints list. I think the more of us complaining, the better our chances of being heard. Perhaps the folks who don't hear the planes are hard of hearing....Thanks, Carolina

From: Date: Thu, Jul 25, 2013 at 4:10 PM Subject: Re: Commercial Airplane Noise over PV To: "tnps2008@gmail.com" <tnps2008@gmail.com>

Thanks for doing this!

We have lived in PV Ranch since 1986 and I have noticed a significant increase in noise and lower flying planes. I think that one of my neighbors on Valley Oak has been in contact with the airports.

One place to check in with is the Portola Ranch Assn Office at 851-1811 to find out if they are hearing more complaints from our 210 residents.

Thanks again,

Deborah

From: Date: Thu, Jul 25, 2013 at 4:05 PM Subject: Re: Commercial Airplane Noise over PV To: tnps2008@gmail.com

Hi

I would like to add my experience to the pile.

I am living on a south facing slope with direct exposure to the skyline ridge. Airplane noise is certainly a reality. Just as I type I hear an airplane flying over.

Sometimes the noise from airplanes is really terrible.

One particular bad case happened about a month ago, when several planes could be heard roaring over my house, just before and after midnight. It was really jarring. The night was otherwise still, no wind and clear skies.

But I really appreciate your effort to do something about it. Best

-- elin

From: Date: Mon, Jul 22, 2013 at 10:02 PM Subject: Airplane noise To: tnps2008@gmail.com

Hi Tina,

I live in Ladera, off La Cuesta very close to Alpine Road, and the airplane noise is increasing! Last October, I mentioned this to my husband because I noticed planes passing directly overhead (Ladera, PV, Woodside) every 1-3 minutes. There was a point where I could see planes one after the other in the sky. My husband, an optical physicist, commented that the westward winds in October were particularly bad & the noise was more noticeable as a result against the surrounding hills up to Skyline Road.

Here's my inquiry: is there a new flight path over Stanford/Ladera/PV? Over the last few months, I've noticed a dramatic increase of airplanes flying over my house at intervals of 2 minutes or less. One explanation I've received is that the October offshore breeze was blowing planes closer to Portola Valley. I've heard helicopters, commercial aircraft, search & rescue missions practicing (for several hours, seemingly a few blocks away, late at night), low-flying World War II-esque aircraft descending upon our neighborhood. Is this my imagination?

As I write this email, I just hear 3 plans pass overhead. I will support any campaign you put together and please keep me posted on the progress of such. We residents should be more vocal about these issues instead of living with the illusion that we have perfect children and perfect neighborhoods with no noise. Best regards,

Alana

From:

Date: Mon, Jul 22, 2013 at 8:10 PM Subject: Re: [PVForum] Digest Number 3816[2 Attachments] To: Cc: "PVForum@yahoogroups.com" <PVForum@yahoogroups.com>

We live in Blue Oaks, on Redberry Ridge, and we have noticed that the Airplane Noise is getting progressively worth.

Sometimes it is so bad at night, that it wakes us up. We have lived in Blue Oaks for ten years, and the fly over was never so intense as it is now.

From: Date: Mon, Jul 22, 2013 at 5:56 PM Subject: Re: Commercial Airplane Noise over PV To: "tnps2008@gmail.com" <tnps2008@gmail.com>

I was unconcerned about the noise until June when I did hear a number of loud planes very low, late at night. I would be interested in signing a petition or registering a complaint if you can provide specific instructions about how to do so. I know it has been on the forum, but life has been extremely hectic these last two months with my mother-in-law breaking her hip and so I am way behind with lots of issues and details. Many thanks for taking the time to write the email to all of us! Sincerely,

Cornelia

From:

Date: Wed, Jul 24, 2013 at 9:29 PM Subject: Re: [PVForum] Planes LOUD tonight Cc: "PVForum@yahoogroups.com Moderator" <PVForum@yahoogroups.com>

Yes! We even heard them on Meadowood!

On Jul 24, 2013, at 9:10 PM, Danna wrote:

Planes LOUD tonight!

Sent from my iPad

From: Date: Thu, Jul 25, 2013 at 8:41 AM Subject: Fwd: [PVForum] Commercial Airplane Noise over PV To: tnps2008@gmail.com

Hi Tina.

I hear planes frequently from my house on Ramoso in the Westridge area and it has gotten progressively worse over the past several years. In fact, I hear one right now!

Thank you for having the stamina and courage to stand up and push back on this.

--maryann

From: Date: Thu, Aug 1, 2013 at 4:41 PM Subject: [PVForum] Re: Commercial Airplane Noise over PV To: "PVForum@yahoogroups.com" <PVForum@yahoogroups.com>

Last evening, the planes were quite loud. We're off Alpine near Los Trancos. I read that SFO has runways closed for repairs/updates. Could that be a contributing factor to the recent noise increase? Jerrie

From: Date: Fri, Aug 2, 2013 at 1:59 PM Subject: [PVForum] Re: Commercial Airplane Noise over PV To: "PVForum@yahoogroups.com" <PVForum@yahoogroups.com>

We have noticed more noise and really low flying planes on Stonegate.

Bryan

From: Date: Mon, Jul 22, 2013 at 9:38 PM Subject: Re: Commercial Airplane Noise over PV To: "tnps2008@gmail.com" <tnps2008@gmail.com>

Tina,

The noise is terrible. There are folks in town working on the issue. Vic Shachter is one of the chairs of the committee. Search for his name in this document for more information. http://www.portolavalley.net/Modules/ShowDocument.aspx?documentid=5158

Regards, Hector

From: Date: Mon, Jul 22, 2013 at 9:19 PM Subject: [PVForum] Re; commercial airplane noise over PV To: pvforum@yahoogroups.com

Dear Tina,

Thank you very much for your efforts. We live above Corda Madera School, and have found the airplane noise to be increasingly bothersome during the past year. It can be

problematic at any hour, it often wakes us up at night. The noise is present during a variety of weather conditions.

The airplane noise really is getting worse. If there is something that can be done to ameliorate the situation, we sure would be interested. Thanks again.

Candy

From:

Date: Sun, Aug 4, 2013 at 1:13 PM Subject: Re: Commercial Airplane Noise over PV To: tnps2008@gmail.com

You can add us to your plane noise list (we are in Ladera).

Linda and Ken

Sunda	y 7	/28/13	SFO A	Arriving	Commercial	Aircrafts	over	Portola	Valle	V
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Flight Time over PV	Flight No	Altitudo (ft) ASI	Aircraft Typ	e Origination	Airport ID	# Elights/Hour	Column1
07/28/2013 07·07	SKW5460	6 007	F120		SEO	# Flights/ Hour	columni
07/28/2013 07:09	SKW6397	5 985	CRI2	Fugene OR	SEO		
07/28/2013 07:12	1141414	5 927	B752	Los Angeles CA	SEO		
07/28/2013 07:12	UAI 1664	5 219	B739	Seattle WA	SEO		
07/28/2013 07:17	SKW5308	6.937	F120	Kern County, CA	SEQ		
07/28/2013 07:22	UAI 1553	6,067	B738	Portland OR	SEO		
07/28/2013 07:29	SKW6261	5 891	CRIZ	San Antonio TX	SEO		
07/28/2013 07:30	UAI 1731	5,933	B738	San Diego, CA	SEO		
07/28/2013 07:38	SKW5435	5,442	CRI2	Franklin County, WA	SEO		
07/28/2013 07:53	IBU736	6.374	A320	Long Beach, CA	SEQ	10	
07/28/2013 08:03	AAI 1921	5,697	B738	Los Angeles, CA	SEQ	10	
07/28/2013 08:23	UAL858	6.147	B744	Shangai. China	SFO		
07/28/2013 08:48	SKW6400	6.700	CRJ2	Eugene. OR	SFO		
07/28/2013 09:07	UAL862	5,955	B744	Hong Kong, China	SFO		
07/28/2013 09:19	UAL404	4,519	A320	Houston, TX	SFO		
07/28/2013 09:21	SKW6421	5,965	CRJ7	Edmonton, Canada	SFO		
07/28/2013 09:28	SKW6270	6,822	CRJ7	Austin, TX	SFO		
07/28/2013 09:31	UAL838	7,143	B744	Tokyo, Japan	SFO		
07/28/2013 09:33	SKW311F	6,064	CRJ2	Boise, ID	SFO		
07/28/2013 09:44	SKW6369	5,932	CRJ7	Tucson, AZ	SFO		
07/28/2013 09:51	UAL1526	5,971	B737	Calgary, Canada	SFO		
07/28/2013 09:54	CES589	7,865	A332	Shangai, China	SFO	9	
07/28/2013 10:50	SKW5374	7,642	CRJ2	Ontario, CA	SFO		
07/28/2013 10:57	UAL1123	5,989	B739	Houston, TX	SFO		
07/28/2013 11:00		6,727	BE40	Orange County, CA	SFO		
07/28/2013 11:02	UAL870	7,348	B744	Sydney, Australia	SFO		
07/28/2013 11:04	SKW5366	5,987	E120	San Luis, CA	SFO		
07/28/2013 11:06	UAL892	6,051	B744	Seoul, South Korea	SFO		
07/28/2013 11:12	SWA3126	5,968	B737	Phoenix, AZ	SFO		
07/28/2013 11:19	SKW5655	6,012	CRJ2	Burbank, CAbank, CA	SFO		
07/28/2013 11:21	ACA560	7,525	E190	Vancouver, Canada	SFO		
07/28/2013 11:25	AAL431	5,643	B763	Miami, FL	SFO		
07/28/2013 11:27	AMX668	6,471	B737	Mexico City, Mexico	SFO		
07/28/2013 11:31	QXE635	3,940	DH8D	Portland, OR	SFO		
07/28/2013 11:32	SKW5603	6,066	CRJ2	Phoenix, AZ	SFO		
07/28/2013 11:33	SKW5581	5,969	CRJ2	Vancouver, Canada	SFO		
07/28/2013 11:35	UAL430	5,951	A320	Los Angeles, CA	SFO		
07/28/2013 11:37	SKW6484	6,677	CRJ7	Reno, NV	SFO		
07/28/2013 11:43	AAR214	6,037	B772	Seoul, South Korea	SFO		
07/28/2013 11:46	KLM281	7,291	B744	Amsterdam, Netherland	SFO		
07/28/2013 12:00	UAL302	6,811	A319	Portland, OR	SFO		
07/28/2013 12:00	OPT730	7,981	C750	Los Angeles, CA	SFO	18	
07/28/2013 12:03	VRD953	7,006	A320	San Diego, CA	SFO		
07/28/2013 12:13	SKW5640	6,482	E120	Santa Barbara, CA	SFO		
07/28/2013 12:16	AWE467	3,958	A321	Charlotte, NC	SFO		
07/28/2013 12:17	CDA870	5,980	B703	Hong Kong, China	SFO		
07/28/2013 12:18		8,037	C750		SEO		
07/28/2013 12:20		6 803	V388	Frankfurt Germany	SEO		
07/28/2013 12:23		5 /09	R729	Houston TY	SEO	Q	
07/28/2013 12:30	KAL023	8 548	B77\/	Seoul South Korea	SEO	0	
07/28/2013 13:20	UAI 1575	5 967	B738	Seattle, WA	SEO		
07/28/2013 13:23	WIA1508	5,978	B737	Calgary, Canada	SEO		
07/28/2013 13:40	SKW5309	5.975	CRI2	North Bend, OR	SEO		
07/28/2013 14:04	UAL72	7,535	B764	Honolulu, Oahui, HI	SFO		
07/28/2013 14:17	SKW6304	6,494	CRJ7	Burbank, CA	SFO		
07/28/2013 14:18	BAW11M	7,219	B744	London, UK	SFO		

	SWA804	5,452	B737	Orange County, CA	SFO
07/28/2013 14:23	UAL1219	5.885	B737	Los Angeles, CA	SFO
07/28/2013 15:01	SKW5646	6,110	F120	Santa Barbara, CA	SEQ
07/28/2013 16:01	454318	6.045	B73/	Seattle WA	SEO
07/28/2013 16:33	F\/A18	5 510	B77\//	Tainei Taiwan	SEO
07/20/2013 10.33		5,510	D7/VV		5F0
07/28/2013 16:48	BAW287	5,894	B/44	London, UK	SFO
0//28/2013 17:29	SKW6287	4,589	E120	Santa Barbara, CA	SFO
07/28/2013 17:42	SWA3399	5,939	B737	San Diego, CA	SFO
07/28/2013 17:56	SKW5645	5,877	E120	Santa Barbara, CA	SFO
07/28/2013 18:09	ASA309	6,038	B737	Palm Springs, CA	SFO
07/28/2013 18:11	SKW4609	5,024	CRJ7	Los Angeles, CA	SFO
07/28/2013 18:16	SKW6232	5,732	E120	Monterey, CA	SFO
07/28/2013 18:34	AFR080	6,013	B772	Paris, France	SFO
07/28/2013 18:37	SKW5528	7,224	CRJ2	Reno, NV	SFO
07/28/2013 18:40	VRD279	5,177	A320	Los Cabos, Mexico	SFO
07/28/2013 18:42	SWA812	6.000	B733	San Diego, CA	SEO
07/28/2013 18:44	SKW6234	5 754	CRI2		SEO
07/28/2013 18:44	VRD963	5,018	A320	San Diego CA	SEO
07/20/2013 10.46		5,010	A320		SEO
07/28/2013 18:52		5,027	A320	Lus Angeles, CA	SFU
07/28/2013 18:53	SKW6410	5,684	CRJ7	Burbank, CA	SFO
07/28/2013 19:27	UAL258	7,393	B752	Anchorage, AK	SFO
07/28/2013 20:10	DAL2177	5,401	B738	Los Angeles, CA	SFO
07/28/2013 20:24	SKW5615	5,360	E120	Santa Barbara, CA	SFO
07/28/2013 20:29	UAL1556	6,878	B739	Newark, NJ	SFO
07/28/2013 20:33	SKW6269	6,106	CRJ7	Calgary, Canada	SFO
07/28/2013 20:41	SKW6252	5,715	CRJ2	Eugene, OR	SFO
07/28/2013 20:43	SWA235	5,819	B737	San Diego, CA	SFO
07/28/2013 20:45	SKW5451	5.862	E120	San Luis, CA	SFO
07/28/2013 20:46	SIA2	7.019	B77W	Hong Kong, China	SEO
07/28/2013 20:51	VRD945	4 785	Δ320	Los Angeles CA	SEO
07/28/2013 20:53		6.031	R752	Kona Big Island HI	SEO
07/20/2013 20:53	SN/A151	6 261	D733	Orango County CA	510
07/20/2013 20.37	CERCI	7 220		Victoria Canada	510
07/20/2015 21.21		7,550	LJ45	Victoria, Carlada	3F0
		/ 11/13	A320	vancouver, Canada	SFO
07/28/2013 21:23	UAL498	7,045			
07/28/2013 21:23	UAL498 UAL362	6,038	B752	Lihue, Kauai, HI	SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36	UAL362 SKW5303	6,038 5,487	B752 E120	Lihue, Kauai, HI Kern County, CA	SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38	UAL362 SKW5303 SKW5529	6,038 5,487 4,034	B752 E120 E120	Lihue, Kauai, HI Kern County, CA Rogue, OR	SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38	UAL362 SKW5303 SKW5529 UAL834T	6,038 5,487 4,034 6,036	B752 E120 E120 A320	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV	SFO SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:43	UAL362 SKW5303 SKW5529 UAL834T UAL247	6,038 5,487 4,034 6,036 5,897	B752 E120 E120 A320 B752	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA	SFO SFO SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:43 07/28/2013 21:46	UAL362 SKW5303 SKW5529 UAL834T UAL247 UAL995	6,038 5,487 4,034 6,036 5,897 6,025	B752 E120 E120 A320 B752 A320	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR	SFO SFO SFO SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:43 07/28/2013 21:46 07/28/2013 21:50	UAL362 SKW5303 SKW5529 UAL834T UAL247 UAL995 SKW5416	6,038 5,487 4,034 6,036 5,897 6,025 6,042	B752 E120 E120 A320 B752 A320 CRJ2	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA	SFO SFO SFO SFO SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:43 07/28/2013 21:46 07/28/2013 21:50 07/28/2013 22:09	UAL362 SKW5303 SKW5529 UAL834T UAL247 UAL995 SKW5416 SKW6354	6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036	B752 E120 A320 B752 A320 CRJ2 CRJ2	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV	SFO SFO SFO SFO SFO SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:43 07/28/2013 21:46 07/28/2013 21:50 07/28/2013 22:09 07/28/2013 22:13	UAL362 SKW5303 SKW5529 UAL834T UAL247 UAL995 SKW5416 SKW6354 SKW6426	6,038 6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036 6,091	B752 E120 A320 B752 A320 CRJ2 CRJ2 CRJ2	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV Seattle, WA	SFO SFO SFO SFO SFO SFO SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:43 07/28/2013 21:46 07/28/2013 21:50 07/28/2013 22:09 07/28/2013 22:13 07/28/2013 22:17	UAL498 UAL362 SKW5303 SKW5529 UAL834T UAL247 UAL995 SKW5416 SKW6426 AAL1807	6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036 6,091 7,642	B752 E120 A320 B752 A320 CRJ2 CRJ2 CRJ2 CRJ2 B738	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV Seattle, WA Los Angeles, CA	SFO SFO SFO SFO SFO SFO SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:43 07/28/2013 21:46 07/28/2013 21:50 07/28/2013 22:09 07/28/2013 22:13 07/28/2013 22:17 07/28/2013 22:17	UAL362 SKW5303 SKW5529 UAL834T UAL247 UAL995 SKW5416 SKW6354 SKW6354 SKW6426 AAL1807 AAL321	6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036 6,091 7,642 7,642	B752 E120 A320 B752 A320 CRJ2 CRJ2 CRJ2 CRJ2 B738 B738	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV Seattle, WA Los Angeles, CA Dallas Fort Worth TX	SFO SFO SFO SFO SFO SFO SFO SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:43 07/28/2013 21:46 07/28/2013 21:50 07/28/2013 22:09 07/28/2013 22:13 07/28/2013 22:17 07/28/2013 22:26	UAL362 SKW5303 SKW5529 UAL834T UAL247 UAL995 SKW5416 SKW6354 SKW6426 AAL1807 AAL881	6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036 6,091 7,642 7,597	B752 E120 A320 B752 A320 CRJ2 CRJ2 CRJ2 CRJ2 B738 B738	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV Seattle, WA Los Angeles, CA Dallas-Fort Worth, TX	SFO SFO SFO SFO SFO SFO SFO SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:43 07/28/2013 21:46 07/28/2013 21:50 07/28/2013 22:09 07/28/2013 22:13 07/28/2013 22:17 07/28/2013 22:26 07/28/2013 22:43	UAL362 SKW5303 SKW5529 UAL834T UAL247 UAL995 SKW5416 SKW6354 SKW6426 AAL1807 AAL881 VRD947	6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036 6,091 7,642 7,597 5,504	B752 E120 A320 B752 A320 CRJ2 CRJ2 CRJ2 CRJ2 B738 B738 B738	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV Seattle, WA Los Angeles, CA Dallas-Fort Worth, TX Los Angeles, CA	SFO SFO SFO SFO SFO SFO SFO SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:43 07/28/2013 21:46 07/28/2013 21:50 07/28/2013 22:09 07/28/2013 22:13 07/28/2013 22:17 07/28/2013 22:26 07/28/2013 22:43 07/28/2013 22:46	UAL362 SKW5303 SKW5529 UAL834T UAL247 UAL995 SKW5416 SKW6354 SKW6426 AAL1807 AAL881 VRD947 SKW6215	6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036 6,091 7,642 7,597 5,504 6,042	B752 E120 A320 B752 A320 CRJ2 CRJ2 CRJ2 CRJ2 B738 B738 A320 CRJ2	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV Seattle, WA Los Angeles, CA Dallas-Fort Worth, TX Los Angeles, CA Las Vegas, NV	SFO SFO SFO SFO SFO SFO SFO SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:43 07/28/2013 21:46 07/28/2013 21:50 07/28/2013 22:09 07/28/2013 22:13 07/28/2013 22:17 07/28/2013 22:26 07/28/2013 22:43 07/28/2013 22:45	UAL362 SKW5303 SKW5529 UAL834T UAL247 UAL995 SKW5416 SKW6354 SKW6426 AAL1807 AAL881 VRD947 SKW6215 UAL824T	6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036 6,091 7,642 7,597 5,504 6,042 5,977	B752 E120 A320 B752 A320 CRJ2 CRJ2 CRJ2 B738 B738 B738 A320 CRJ2 CRJ2	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV Seattle, WA Los Angeles, CA Dallas-Fort Worth, TX Los Angeles, CA Las Vegas, NV San Diego, CA	SFO SFO SFO SFO SFO SFO SFO SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:43 07/28/2013 21:46 07/28/2013 21:50 07/28/2013 22:09 07/28/2013 22:13 07/28/2013 22:17 07/28/2013 22:26 07/28/2013 22:46 07/28/2013 22:52 07/28/2013 22:55	UAL362 SKW5303 SKW5529 UAL834T UAL247 UAL995 SKW5416 SKW6354 SKW6426 AAL1807 AAL881 VRD947 SKW6215 UAL824T UAL434	6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036 6,091 7,642 7,597 5,504 6,042 5,977 5,502	B752 E120 A320 B752 A320 CRJ2 CRJ2 CRJ2 B738 B738 B738 A320 CRJ2 CRJ2 A320 CRJ2	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV Seattle, WA Los Angeles, CA Dallas-Fort Worth, TX Los Angeles, CA Las Vegas, NV San Diego, CA Los Angeles, CA	SFO SFO SFO SFO SFO SFO SFO SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:43 07/28/2013 21:46 07/28/2013 21:50 07/28/2013 22:09 07/28/2013 22:13 07/28/2013 22:17 07/28/2013 22:26 07/28/2013 22:46 07/28/2013 22:52 07/28/2013 22:55 07/28/2013 23:03	UAL362 SKW5303 SKW5529 UAL834T UAL247 UAL995 SKW5416 SKW6354 SKW6426 AAL1807 AAL881 VRD947 SKW6215 UAL824T UAL434 CPA872	6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036 6,042 7,597 5,504 6,042 5,977 5,502 6,210	B752 E120 A320 B752 A320 CRJ2 CRJ2 CRJ2 CRJ2 B738 B738 B738 A320 CRJ2 CRJ2 A320 A320 A320 B77W	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV Seattle, WA Los Angeles, CA Dallas-Fort Worth, TX Los Angeles, CA Las Vegas, NV San Diego, CA Los Angeles, CA Hong Kong, China	SFO SFO SFO SFO SFO SFO SFO SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:43 07/28/2013 21:46 07/28/2013 21:50 07/28/2013 22:09 07/28/2013 22:13 07/28/2013 22:17 07/28/2013 22:26 07/28/2013 22:46 07/28/2013 22:52 07/28/2013 22:55 07/28/2013 23:03 07/28/2013 23:05	UAL362 SKW5303 SKW5529 UAL834T UAL247 UAL995 SKW5416 SKW6354 SKW6426 AAL1807 AAL881 VRD947 SKW6215 UAL824T UAL824T UAL434 CPA872 JBU1513	6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036 6,042 7,597 5,504 6,042 5,977 5,502 6,210 6,051	B752 E120 A320 B752 A320 CRJ2 CRJ2 CRJ2 CRJ2 B738 B738 B738 A320 CRJ2 CRJ2 A320 A320 B77W A320	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV Seattle, WA Los Angeles, CA Dallas-Fort Worth, TX Los Angeles, CA Las Vegas, NV San Diego, CA Los Angeles, CA Hong Kong, China Austin, TX	SFO SFO SFO SFO SFO SFO SFO SFO SFO SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:43 07/28/2013 21:46 07/28/2013 21:50 07/28/2013 22:09 07/28/2013 22:09 07/28/2013 22:17 07/28/2013 22:26 07/28/2013 22:46 07/28/2013 22:52 07/28/2013 22:55 07/28/2013 23:03 07/28/2013 23:05 07/28/2013 23:11	UAL362 SKW5303 SKW5529 UAL834T UAL247 UAL995 SKW5416 SKW6354 SKW6426 AAL1807 AAL881 VRD947 SKW6215 UAL824T UAL824T UAL434 CPA872 JBU1513 UAL517T	6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036 6,042 7,597 5,504 6,042 5,977 5,504 6,042 5,977 5,502 6,210 6,051 7,033	B752 E120 A320 B752 A320 CRJ2 CRJ2 CRJ2 CRJ2 B738 B738 B738 A320 CRJ2 A320 CRJ2 A320 B77W A320 A320	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV Seattle, WA Los Angeles, CA Dallas-Fort Worth, TX Los Angeles, CA Las Vegas, NV San Diego, CA Los Angeles, CA Hong Kong, China Austin, TX Houston, TX	SFO SFO SFO SFO SFO SFO SFO SFO SFO SFO
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07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:46 07/28/2013 21:46 07/28/2013 22:09 07/28/2013 22:09 07/28/2013 22:13 07/28/2013 22:17 07/28/2013 22:26 07/28/2013 22:43 07/28/2013 22:43 07/28/2013 22:55 07/28/2013 22:55 07/28/2013 23:03 07/28/2013 23:03 07/28/2013 23:41 07/28/2013 23:41 07/29/2013 00:33 07/29/2013 04:37	UAL498 UAL362 SKW5303 SKW5529 UAL834T UAL995 SKW5416 SKW6354 SKW6426 AAL1807 AAL881 VRD947 SKW6215 UAL824T UAL824T UAL434 CPA872 JBU1513 UAL517T TAI560 SWA102 UAL1726	7,043 6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036 6,091 7,642 7,597 5,504 6,042 5,977 5,502 6,210 6,051 7,033 6,047 5,991 7,665	B752 E120 A320 B752 A320 CRJ2 CRJ2 CRJ2 CRJ2 B738 B738 B738 A320 CRJ2 A320 CRJ2 A320 A320 A320 A320 A320 A320 A320 A32	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV Seattle, WA Los Angeles, CA Dallas-Fort Worth, TX Los Angeles, CA Las Vegas, NV San Diego, CA Los Angeles, CA Hong Kong, China Austin, TX Houston, TX San Salvador, El Salvado Los Angeles, CA	SFO
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:46 07/28/2013 21:46 07/28/2013 21:50 07/28/2013 22:09 07/28/2013 22:09 07/28/2013 22:13 07/28/2013 22:13 07/28/2013 22:26 07/28/2013 22:43 07/28/2013 22:43 07/28/2013 22:55 07/28/2013 22:55 07/28/2013 22:55 07/28/2013 23:03 07/28/2013 23:05 07/28/2013 23:41 07/29/2013 00:33 07/29/2013 05:01	UAL498 UAL362 SKW5303 SKW5529 UAL834T UAL995 SKW5416 SKW6354 SKW6426 AAL1807 AAL881 VRD947 SKW6215 UAL824T UAL434 CPA872 JBU1513 UAL517T TAI560 SWA102 UAL1726 UAL326	7,643 6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036 6,091 7,642 7,597 5,504 6,042 5,977 5,502 6,210 6,051 7,033 6,047 5,991 7,665 7,923	B752 E120 A320 B752 A320 CRJ2 CRJ2 CRJ2 B738 B738 B738 A320 CRJ2 A320 CRJ2 A320 A320 A320 A320 A320 A320 A320 A32	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV Seattle, WA Los Angeles, CA Dallas-Fort Worth, TX Los Angeles, CA Las Vegas, NV San Diego, CA Los Angeles, CA Hong Kong, China Austin, TX Houston, TX San Salvador, El Salvado Los Angeles, CA Kahului, Maui, HI	SFO SFO SFO S
07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:46 07/28/2013 21:46 07/28/2013 21:50 07/28/2013 22:09 07/28/2013 22:09 07/28/2013 22:13 07/28/2013 22:13 07/28/2013 22:26 07/28/2013 22:43 07/28/2013 22:46 07/28/2013 22:55 07/28/2013 22:55 07/28/2013 22:55 07/28/2013 23:03 07/28/2013 23:05 07/28/2013 23:41 07/29/2013 00:33 07/29/2013 05:01	UAL498 UAL362 SKW5303 SKW5529 UAL834T UAL995 SKW5416 SKW6354 SKW6426 AAL1807 AAL881 VRD947 SKW6215 UAL824T UAL434 CPA872 JBU1513 UAL517T TAI560 SWA102 UAL396 UAL396	7,043 6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036 6,091 7,642 7,597 5,504 6,042 5,977 5,502 6,051 7,033 6,047 5,991 7,665 7,923 6,600	B752 E120 A320 B752 A320 CRJ2 CRJ2 CRJ2 CRJ2 B738 B738 B738 A320 CRJ2 A320 CRJ2 A320 A320 A320 A320 A320 A320 A320 A32	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV Seattle, WA Los Angeles, CA Dallas-Fort Worth, TX Los Angeles, CA Las Vegas, NV San Diego, CA Los Angeles, CA Hong Kong, China Austin, TX Houston, TX San Salvador, El Salvado Los Angeles, CA Kahului, Maui, HI Honolulu, Oahu, HI	SFO SFO SFO
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07/28/2013 21:23 07/28/2013 21:29 07/28/2013 21:36 07/28/2013 21:38 07/28/2013 21:38 07/28/2013 21:46 07/28/2013 21:46 07/28/2013 21:50 07/28/2013 22:09 07/28/2013 22:13 07/28/2013 22:13 07/28/2013 22:14 07/28/2013 22:26 07/28/2013 22:26 07/28/2013 22:55 07/28/2013 22:55 07/28/2013 22:55 07/28/2013 22:55 07/28/2013 23:03 07/28/2013 23:03 07/28/2013 23:11 07/28/2013 23:11 07/28/2013 23:41 07/29/2013 00:33 07/29/2013 05:57 07/29/2013 05:57	UAL498 UAL362 SKW5303 SKW5529 UAL834T UAL995 SKW5416 SKW6354 SKW6426 AAL1807 AAL881 VRD947 SKW6215 UAL824T UAL434 CPA872 JBU1513 UAL517T TAI560 SWA102 UAL1726 UAL396 UAL396 UAL396	7,043 6,038 5,487 4,034 6,036 5,897 6,025 6,042 7,036 6,091 7,642 7,597 5,504 6,042 5,977 5,502 6,051 7,033 6,047 5,991 7,665 7,923 6,699 5,358	B752 E120 A320 B752 A320 CRJ2 CRJ2 CRJ2 B738 B738 B738 A320 CRJ2 A320 A320 A320 A320 A320 A320 A320 A32	Lihue, Kauai, HI Kern County, CA Rogue, OR Las Vegas, NV San Diego, CA Portland, OR Ontario, CA Reno, NV Seattle, WA Los Angeles, CA Dallas-Fort Worth, TX Los Angeles, CA Las Vegas, NV San Diego, CA Los Angeles, CA Hong Kong, China Austin, TX Houston, TX San Salvador, El Salvado Los Angeles, CA Kahului, Maui, HI Honolulu, Oahu, HI Kona, Big Island, HI	SFO SFO SFO SFO

6,188

07/29/2013 06:22	SKW5612	6,190	CRJ7	Salt Lake City, UT	SFO
07/29/2013 07:07	UAL235	7,456	B752	Honolulu, Oahu, HI	SFO
07/29/2013 07:08	SWA557	5,979	B737	Los Angeles, CA	SFO
07/29/2013 07:13	UAL392	7,735	A320	Portland, OR	SFO
07/29/2013 07:15	SKW6403	3,998	E120	Rogue, OR	SFO

121 SFO Arriving Flights over Portola Valley (PV)

There were 4 distinct periods during the day in which \geq 10 flights flew over PV within 1 hr (i.e. 7-8 am, 11 am-noon, 6-7 pm, and 8-9 pm). Between 11 am and noon, there were 18 flights over PV!

Average altitude of SFO Arriving Flights over PV from 7 AM to 1 PM is 6188 ft above sea level (range 3940 ft-8781 ft)

Flights @ <4000 feet above sea level = 3 Flights between 4000-5000 ft above sea level = 4 Flights @ < 6000 ft above sea level = 55 (or 45.5% of SFO arriving flights)

Flights @ <6000 ft above Portola Valley homes = 85 (or 70% of SFO arriving flights)* * Homes in central PV and Westridge are on hills w/ elevations of >500 feet above sea level

Sunday 8/4/13 SFO Arriving Commercial Aircrafts over Portola Valley

Flight Time over PV	Flight No	Altitude (ft) ASI	Aircraft Type	Origination	Destinatior	# Flights/Hour
08/04/2013 06:53	UAL1722	6,670	B738	Honolulu, Oahu, HI	SFO	
08/04/2013 06:55	SKW5612	4,077	CRJ7	Salt Lake City, UT	SFO	
08/04/2013 07:14	SKW5632	5,337	E120	Santa Barbara, CA	SFO	
08/04/2013 07:15	SKW6403	5,663	E120	Rouge, OR	SFO	
08/04/2013 07:20	UAL414	5,970	B752	Los Angeles, CA	SFO	
08/04/2013 07:25	SKW5435	5,710	CRJ2	Franklin County, WA	SFO	
08/04/2013 07:27	SKW5308	5,053	E120	Bakersfield, CA	SFO	
08/04/2013 07:29	UAL1553	6,006	B738	Portland, OR	SFO	
08/04/2013 09:04	UAL404	5,752	A320	Houston, TX	SFO	
08/04/2013 09:11	SKW6270	5,646	CRJ7	Austin, TX	SFO	
08/04/2013 09:18	JBU1413	5,922	A320	Austin, TX	SFO	
08/04/2013 09:20	UAL294	6,281	B752	Seattle, WA	SFO	
08/04/2013 09:23	DAL208	7,906	B763	Tokyo, Japan	SFO	
08/04/2013 09:29	CES589	7,378	A332	Shanghai, China	SFO	
08/04/2013 09:35	SKW6369	6,341	CRJ7	Tucson, AZ	SFO	
08/04/2013 09:39	SKW6421	6,026	CRJ7	Edmonton, Canada	SFO	
08/04/2013 09:47	UAL1531	6,552	B738	Los Angeles, CA	SFO	
08/04/2013 09:59	SKW6480	6,983	CRJ7	Jackson, WY	SFO	10
08/04/2013 10:25	UAL886	7,384	B772	Kansai, Japan	SFO	
08/04/2013 10:32	ANA8	5,894	B77W	Tokyo, Japan	SFO	
08/04/2013 10:37	UAL870	7,525	B744	Sydney, Australia	SFO	
08/04/2013 10:42	SKW5503	5,984	E120	Monterey, CA	SFO	
08/04/2013 11:02	UAL892	6,011	B744	Seoul, South Korea	SFO	
08/04/2013 11:48	CPA870	5,974	B744	Hong Kong, China	SFO	
08/04/2013 11:52	KLM281	6,084	B744	Amsterdam, Netherlan	SFO	
08/04/2013 12:02	SKW5655	6,999	CRJ2	Burbank, CA	SFO	
08/04/2013 12:06	CCA985	6,833	B744	Peking, China	SFO	
08/04/2013 12:09	DAL2375	5,225	B738	Salt Lake City, UT	SFO	
08/04/2013 12:15	UAL318	5.978	A320	Los Angeles, CA	SFO	
08/04/2013 12:16	KAL023	6,889	B77W	Seoul, South Korea	SFO	
08/04/2013 12:21	VRD953	5,989	A320	San Diego, CA	SFO	
08/04/2013 12:25	UAL991	8.188	B763	Paris. France	SFO	
08/04/2013 12:26	SWA1887	5,270	B737	San Diego, CA	SFO	
08/04/2013 12:32	SIA16	8,105	B77W	Seoul, South Korea	SFO	
08/04/2013 12:37	SKW6484	6,039	CRJ7	Reno, NV	SFO	
08/04/2013 12:39	SWA8616	5,973	B737	Phoenix, AZ	SFO	
08/04/2013 12:54	SKW5654	3,972	E120	Eureka, CA	SFO	
08/04/2013 12:56	UAL758	4,508	A320	Los Angeles, CA	SFO	
08/04/2013 13:00	AFR084	5,830	B77W	Paris, France	SFO	14
08/04/2013 13:05	SKW5603	5,043	CRJ2	Phoenix, AZ	SFO	
08/04/2013 13:06	SKW6197	5,759	CRJ7	Burbank, CA	SFO	
08/04/2013 13:21	SKW5640	5,422	E120	Santa Barbara, CA	SFO	
08/04/2013 13:27	UAL1127	5,914	B738	Los Angeles, CA	SFO	
08/04/2013 13:29		5,259	LJ35	Van Nuys, CA	SFO	
08/04/2013 13:44	SKW5487	5,961	E120	Monterey, CA	SFO	
08/04/2013 14:34	SKW5309	7,202	CRJ2	North Bend, OR	SFO	
08/04/2013 15:04	UAL1219	5,393	B737	Los Angeles, CA	SFO	
08/04/2013 15:23	SKW6287	4,975	E120	Santa Barbara, CA	SFO	
08/04/2013 15:25	UAL454	5,931	A319	Los Angeles, CA	SFO	
08/04/2013 15:50	SKW6359	5,559	E120	Monterey, CA	SFO	
08/04/2013 16:03	SWA1723	7,381	B737	Orange County, CA	SFO	
08/04/2013 16:05	SKW5646	5,896	E120	Santa Barbara, CA	SFO	
08/04/2013 16:07	SKW4599	7,005	CRJ9	Salt Lake City, UT	SFO	
08/04/2013 16:11	SWA804	6,243	B737	Orange County, CA	SFO	
08/04/2013 16:13	UAL1548	6,044	B738	San Diego, CA	SFO	
08/04/2013 16:40	AAL1967	7,147	B738	Los Angeles, CA	SFO	

08/04/2013 16:43	UAL931	5,933	B772	London, UK	SFO	
08/04/2013 16:47	UAL806	7,881	A319	Puerto Vallarta, Mexico	SFO	
08/04/2013 16:50	UAL902	5,478	B744	Frankfurt, Germany	SFO	9
08/04/2013 17:15	SKW4608	6.522	CRJ9	Los Angeles, CA	SFO	
08/04/2013 17:31	JAL2	5,994	B772	Tokyo, Japan	SEO	
08/04/2013 18:15	VRD279	5.941	A320	Los Cabos, Mexico	SEO	
08/04/2013 18:30	SKW6232	5.317	F120	Monterey, CA	SEO	
08/04/2013 18:32	UAI 746	4 959	A320	Los Angeles, CA	SEO	
08/04/2013 19:27	SKW5645	5.950	F120	Santa Barbara, CA	SEO	
08/04/2013 19:59	FVA28	7.342	B77W	Taipei. Taiwan	SEO	
08/04/2013 20:03	SKW6269	7 104	CR17	Calgary Canada	SEO	
08/04/2013 20:17	CAL004	5 948	B744	Tainei Taiwan	SEO	
08/04/2013 20:44	VRD939	6 367	A320	Los Angeles, CA	SEO	
08/04/2013 20:47	UAI 724	6 810	B772	Honolulu Oahu HI	SEO	
08/04/2013 20:54	UAI 1702	6.052	B753	Kona Big Island HI	SEO	
08/04/2013 20:58	SKW6267	6 047	CRI7	Seattle WA	SEO	
08/04/2013 21:05	UAI 508	5,969	A319	Seattle, WA	SEO	
08/04/2013 21:00	SKW6390	6,979	F120	Rouge, OR	SEO	
08/04/2013 21:20	UAI 362	7,167	B752	Lihue, Kauai, HI	SEO	
08/04/2013 21:30	SKW6220	5 5 2 9	CRI7	Dallas TX	SEO	
08/04/2013 21:42		7 710	B752	Anchorage Al	SEO	
08/04/2013 21:45		5,000	B737	St Louis MO	SEO	
08/04/2013 22:00		6.263	B752	Orlando, El	SEO	
08/04/2013 22:30		6 736	A333	Honolulu Ophu HI	SEO	
08/04/2013 22.30		6 21 9	P753	Kabului Maui HI	510	
08/04/2013 22.38		6,010	A220		SEO	
08/04/2013 22:51	CKW2201	5 004	CD12	Orange County CA	SEO	
08/04/2013 22.34	SW/A151	6,002	D727	Orange County, CA	SEO	
08/04/2013 23:04	AAL1711	5 989	B738	Chicago II	SEO	
08/04/2013 23:00		5,565	D750	San Diogo CA	SEO	
08/04/2013 23.24		5,009	A220	San Diego, CA	SEO	
08/04/2013 23.23	UAL024	J,240	A320	Clearwater El	SEO	
08/04/2013 23:30		5,424	FZ10	Clear Water, FL	SFU	
08/04/2013 23:41		5,954	A319	San Salvauor, El Salvau	SFU	
08/04/2013 23:44	SKW6252	5,965	CRJZ	Eugene, OR	SFU	0
08/04/2013 23:58	ACA564	5,690	E190	vancouver, Canada	SFU	ð
08/05/2013 00:02	UAL841	5,858	A319	Los Angeles, CA	SFU	
08/05/2013 00:05		0,014	A320	vancouver, Canada	SFU	
	UAL469	7,U08	A32U	Sedille, WA	SFU	
08/05/2013 00:16	SKW6293	0,022	E12U	Eureka, CA	SFU	
08/05/2013 00:19	SKW4504	5,979	CKJ/	Los Angeles, CA	SFU	
08/05/2013 00:25	DAL21//	5,957	B/38	Los Angeles, CA	SFO	
08/05/2013 00:30	AALI8U/	4,992	B/38	Los Angeles, CA	SFU	
08/05/2013 00:33	SKW5451	5,437	E120	San Luis, CA	SFO	
08/05/2013 00:35	UAL1102	5,353	B/38	Los Angeles, CA	SFO	10
08/05/2013 00:42	UAL434	6,011	A320	Los Angeles, CA	SFU	10
08/05/2013 04:43	UAL396	7,973	B/72	Honolulu, Oahu, Hl	SFO	
08/05/2013 04:56	UAL1726	/,/19	B753	Kahului, Maui, Hl	SFO	
08/05/2013 05:30	UAL1724	/,/34	B739	Kona, Big Island, HI	SFO	
08/05/2013 06:43	SKW6397	/,725	CRJ7	Eugene, OR	SFO	
08/05/2013 06:51	UAL235	5,541	B752	Honolulu, Oahu, HI	SFO	
08/05/2013 06:51	SKW5457	6,989	E120	Chico, CA	SFO	
08/05/2013 07:05	SKW5632	5,101	E120	Santa Barbara, CA	SFO	
08/05/2013 07:16	UAL392	7,257	A320	Portland, OR	SFO	

6,098

109 SFO Arriving Flights over Portola Valley (PV)

There were 3 distinct periods during the day in which >10 flights flew over PV within 1 hr (i.e. 9-10 am, noon-1 pm, and midnight-1 am). Between noon and 1 AM, there were 14 flights over PV! 30 of these SFO Arriving Flights flew over PV during the hours of sleep from 10 PM to 7 AM

Average altitude of SFO Arriving Flights over PV from 7 AM to 1 PM is 6098 ft above sea level (range 3927 ft-8188 ft) Flights @ <4000 feet above sea level = 1 Flights between 4000-5000 ft above sea level = 5 Flights @ < 6000 ft above sea level = 58 (or 53% of SFO arriving flights)

Flights @ <6000 ft above Portola Valley homes = 78 (or 72% of SFO arriving flights)*

* Homes in central PV and Westridge are on hills w/ elevations of >500 feet above sea level

Sunday 8/11/13 SFO Arriving Commercial Aircrafts over Portola Valley

Time over PV	Flight No	Altitude (ft) AL	Aircraft Typ	Destination/Origination	Airport ID	# Flights/Hr
08/11/2013 06:53	UAL226	4,674	B752	Anchorage, AL	SFO	
08/11/2013 06:59	SKW5458	5,160	E120	San Luis, CA	SFO	
08/11/2013 07:01	SKW6397	6,000	CRJ2	Eugene, OR	SFO	
08/11/2013 07:03	UAL414	6,010	B752	Los Angeles, CA	SFO	
08/11/2013 07:25	SKW5629	5,611	CRJ2	Palm Springs, CA	SFO	
08/11/2013 07:29	SKW5308	5,500	E120	Bakersfield, CA	SFO	
08/11/2013 07:31	UAL278	5,014	B752	Phoenix, AZ	SFO	
08/11/2013 07:35	NCA109	5,803	B748	Los Angeles, CA	SFO	
08/11/2013 07:40	UAL1731	5,768	B738	San Diego, CA	SFO	7
08/11/2013 08:43	SKW6315	6,575	CRJ2	Victoria, Canada	SFO	
08/11/2013 08:51	N378DB	5,871	FA20	Monterey, CA	SFO	
08/11/2013 08:57	VRD923	5,239	A320	Los Angeles, CA	SFO	
08/11/2013 09:06	SWA4522	4,941	B737	Orange County, CA	SFO	
08/11/2013 09:09	UAL838	6,454	B744	Tokyo, Japan	SFO	
08/11/2013 09:17	ASA244	6,012	B734	Portland, OR	SFO	
08/11/2013 09:26	UAL294	6,020	B752	Seattle, WA	SFO	
08/11/2013 09:30	SKW6421	5,461	CRJ7	Edmonton, Canada	SFO	
08/11/2013 09:33	UAL820	6,636	A319	Mexico City, Mexico	SFO	
08/11/2013 09:34	SKW6480	8,069	CRJ7	Jackson, WY	SFO	
08/11/2013 09:36	UAL1531	6,120	B738	Los Angeles, CA	SFO	
08/11/2013 09:40	CES589	6,010	A332	Shanghai, China	SFO	
08/11/2013 09:42	SWA2591	6,436	B737	San Diego, CA	SFO	
08/11/2013 09:55	UAL662	5,160	A319	San Diego, CA	SFO	11
08/11/2013 10:03	SKW311F	6,047	CRJ2	Boise, ID	SFO	
08/11/2013 10:18	ASA220	6,001	B739	Seattle, WA	SFO	
08/11/2013 10:23	BJS441	4,929	LJ45	Jackson, WY	SFO	
08/11/2013 10:27	SKW4656	5,403	CRJ9	Salt Lake City, UT	SFO	
08/11/2013 10:30	ELJ33	5,194	H25B	Missoula County, MT	SFO	
08/11/2013 10:33	UAL870	6,004	B744	Sydney, Ausralia	SFO	
08/11/2013 10:46	UAL892	5,800	B744	Seoul, South Korea	SFO	7
08/11/2013 11:54	DLH454	5,887	A388	Frankfurt, Germany	SFO	
08/11/2013 11:58	AAR214	5,974	B772	Seoul, South Korea	SFO	
08/11/2013 12:02	SKW5366	5,976	E120	San Luis, CA	SFO	
08/11/2013 12:09	KAL023	5,323	B77W	Seoul, South Korea	SFO	
08/11/2013 12:11	AAL2419	5,100	B738	Los Angeles, CA	SFO	
08/11/2013 12:17	SIA16	6,350	B77W	Seoul, South Korea	SFO	
08/11/2013 12:20	SKW6487	5,975	E120	Santa Barbara, CA	SFO	
08/11/2013 12:32	AFR084	7,000	B77W	Paris, France	SFO	
08/11/2013 12:37	SWA1270	5,775	B737	Los Angeles, CA	SFO	
08/11/2013 12:38	SKW6286	6,810	E120	Santa Barbara, CA	SFO	
08/11/2013 12:42	UAE225	5,300	B77W	Dubai, Unitedes Arab Em	SFO	
08/11/2013 12:43	EJA388	7,067	C680	Santa Monica, CA	SFO	
08/11/2013 12:49	SKW6404	5,698	CRJ2	Eugene, OR	SFO	
08/11/2013 12:50	SKW5603	6,643	CRJ2	Phoenix, AZ	SFO	
08/11/2013 13:00	UAL242	6,777	A320	San Diego, CA	SFO	13
08/11/2013 13:06	SKW4604	5,797	CRJ9	Los Angeles, CA	SFO	
08/11/2013 13:08	SKW5556	5,857	CRJ7	Seattle, WA	SFO	
08/11/2013 13:14	SKW5539	6,236	CRJ2	Salt Lake City, UT	SFO	
08/11/2013 13:20	VRD927	5,551	A320	Los Angeles, CA	SFO	
08/11/2013 13:21	SKW6197	5,923	CRJ7	Burbank, CA	SFO	
08/11/2013 13:29	WJA1508	6,711	B737	Calgary, CA	SFO	
08/11/2013 13:46	SKW5640	5,796	E120	Santa Barbara, CA	SFO	
08/11/2013 13:50	UAL/2	5,851	B/64	Honolulu, Oahu, HI	SEO	
08/11/2013 13:51	SKW6290	6,975	CRJ2	iviissoula County, MT	SFO	
08/11/2013 13:53	XAGIT	5,772	C650		SFO	4.4
08/11/2013 13:56	SKW5459	5,422	E120	San Luis, CA	SEO	11
08/11/2013 14:12	DAL2023	6,466	B/53	iviinneapolis, Minnesota	SFO	

08/11/2013 14:15	VRD753	6,246	A320	Seattle, WA	SFO	
08/11/2013 14:23	SWA250	7,525	B737	Phoenix, AZ	SFO	
08/11/2013 14:26	SKW6406	8,823	CRJ2	Eugene, OR	SFO	
08/11/2013 14:29	VRD961	5,977	A320	San Diego, CA	SFO	
08/11/2013 14:43	CCA985	7,123	B744	Peking, China	SFO	
08/11/2013 14:50	ASA310	6,589	B737	Seattle, WA	SFO	
08/11/2013 14:48		5,960	CL30	Glacier, MT	SFO	8
08/11/2013 15:02	SWA4452	5,432	B733	Phoenix, AZ	SFO	
08/11/2013 15:07	SKW5591	5,605	CRJ2	Phoenix, AZ	SFO	
08/11/2013 15:15	UAL816	5,955	A320	Seattle, WA	SFO	
08/11/2013 15:20	SKW6476	6,918	CRJ7	Austin, TX	SFO	
08/11/2013 15:35	UAL6869	6,910	B752	SFO	SFO	
08/11/2013 16:08	EVA18	5,122	B77W	Taipei, Taiwan	SFO	
08/11/2013 17:58	SKW5646	6,012	E120	Santa Barbara, CA	SFO	
08/11/2013 18:14	AFR080	6,583	B772	Paris, France	SFO	
08/11/2013 18:18	SWA2164	5,579	B737	Phoenix, AZ	SFO	
08/11/2013 18:20	VRD279	6,045	A320	Los Cabos, Mexico	SFO	
08/11/2013 18:39	SKW6232	5,793	E120	Monterey, CA	SFO	
08/11/2013 18:54	SKW5551	7,896	CRJ2	Vancouver, Canada	SFO	
08/11/2013 19:08	SKW5638	5,948	E120	Santa Barbara, CA	SFO	
08/11/2013 19:20	UAL927	6,002	B744	Frankfurt, Germany	SFO	
08/11/2013 19:24	SKW6410	4,808	CRJ7	Burbank, CA	SFO	
08/11/2013 19:44	EVA28	4,940	B77W	Taipei, Taiwan	SFO	
08/11/2013 19:47	UAL746	7,283	A320	Los Angeles, CA	SFO	
08/11/2013 19:49	CFSDL	8,045	LJ45	Victoria, CA	SFO	
08/11/2013 20:06	UAL1728	5,643	B753	Kahului, Maui, HI	SFO	
08/11/2013 20:07	CAL004	5,663	B744	Taipei, Taiwan	SFO	
08/11/2013 20:10	UAL841	6,811	A319	Los Angeles, CA	SFO	
08/11/2013 20:33	UAL724	7,105	B772	Honolulu, Oahu, HI	SFO	
08/11/2013 20:36	UAL362	5,844	B752	Lihui, Kauai, HI	SFO	
08/11/2013 21:03	UAL1720	7,086	B753	Honolulu, Oahu, HI	SFO	
08/11/2013 21:15	UAL824	6,036	A320	San Diego, CA	SFO	
08/11/2013 21:17	UAL496	6,956	B752	Portland, OR	SFO	
08/11/2013 21:19	UAL995	6,919	A320	Portland, OR	SFO	
08/11/2013 21:21	UAL508	6,411	A319	Seattle, WA	SFO	
08/11/2013 21:46	CPA872	8,842	B77W	Hong Kong, China	SFO	
08/11/2013 22:05	UAL422	6,737	B752	Kahului, Maui, HI	SFO	
08/11/2013 22:37	SKW5615	6,257	E120	Santa Barbara, CA	SFO	
08/11/2013 22:48	SKW5451	5,458	E120	San Luis, CA	SFO	
08/11/2013 23:00	UAL469	4,806	A320	Seattle, WA	SFO	
08/11/2013 23:06	SWA461	4,884	B738	Los Angeles, CA	SFO	
08/12/2013 00:06	JBU1513	5,641	A320	Austin, TX	SFO	
08/12/2013 00:12	ACA564	6,188	E190	Vancouver, Canada	SFO	
08/12/2013 00:16	SWA805	5,972	B737	San Diego, CA	SFO	
08/12/2013 00:20	VRD947	5,922	A320	Los Angeles, CA	SFO	
08/12/2013 00:27	UAL1458	4,353	B738	Los Angeles, CA	SFO	6,083
08/12/2013 04:32	UAL396	7,580	B772	Honolulu, Oahu, HI	SFO	
08/12/2013 04:47	UAL1726	7,718	B753	Kahului, Maui, HI	SFO	
08/12/2013 05:18	UAL1724	7,366	B739	Kona, Big Island, HI	SFO	
08/12/2013 06:27	VRD061	7,711	A320	Anchorage, AL	SFO	

107 SFO Arriving Flights over Portola Valley (PV).

There were 3 distinct periods during the day in which >10 flights flew over PV within 1 hr (i.e. 9-10 am, noon-1 pm, and 1 pm-2 pm). Between noon and 2 pm, there were PV was bombarded by 26 low-flying airplanes! Average altitude of SFO Arriving Flights over PV from 7 AM-12:30 AM is 6,083 feet above sea level (range 4,353 ft-8,842 ft)

Flights between 4000-5000 ft above sea level = 8

Flights @ < 6000 ft above sea level = 54 (or 51% of SFO arriving flights)

Flights @ <6000 ft above Portola Valley homes = 76 (or 71% of SFO arriving flights)* * Homes in central PV and Westridge are on hills w/ elevations of >500 feet above sea level

Wednesday 7/31/13	7 PM - 11 PM SFO Fligh	ts over Portola Valley		
Time Flight #	Altitude (ft) ASI Aircraft Type	Departing City	ArrivingAirpor# Flights over P	V/hr
19:05 ACA562	6,700 E190	Vancouver, Canada	SFO	
19:08 VRD941	6300 A320	Los Angeles	SFO	
19:11 TAI564	7000 A319	San Salvador, El Salvador	SFO	
19:50 PAL104	5400 B744	Manila, Philippines	SFO	
19:54 EVA28	5700 B77W	Taipei, Taiwan	SFO	
19:55 DAL2177	5600 B738	Los Angeles	SFO	
19:57 UAL927	6000 B744	Frankfurt, Germany	SFO 7	
20:01 SWA151	5500 B737	Orange County, C	SFO	
20:04 VRD717	5500 A320	Dallas-Fort Worth, TX	SFO	
20:13 SKW6398	6000 CRJ7	Austin, TX	SFO	
20:14 SKW6267	6000 CRJ7	Seattle, WA	SFO	
20:23 UAL724	6000 B772	Honolulu, Oahu, HI	SFO 5	
21:04 SKW5451	5400 E120	San Luis, CA	SFO	
21:13 SWA556	5000 B733	Los Angeles	SFO	
21:15 UAL1720	5900 B753	Honolulu, Oahu, HI	SFO	
21:28 SKW5609	6000 E120	Monterey, CA	SFO	
21:40 AAL881*	6800 B738	Dallas-Fort Worth, TX	SFO	
21:44 WJA1776	6000 B737	Vancouver, Canada	SFO	
21:51 SKW5416	6000 CRJ2	Ontario, CA	SFO 7	
22:00 SKW5600	5000 CRJ2	Burbank, CA	SFO	
22:02 SWA3042	2 5600 B733	San Diego, CA	SFO	
22:06 HAL12**	4900 A332	Honolulu, Oahu, HI	SFO	
22:13 VRD947	5900 A320	Los Angeles	SFO	
22:16 AAL1807	5800 B738	Los Angeles	SFO	
22:19 UAL731	5800 A320	Los Angeles	SFO	
22:30 SKW4504	5900 CRJ7	Los Angeles	SFO	
22:36 UAL422	5800 B752	Kahului Maui, HI	SFO	
22:39 ACA564	7700 E190	Vancouver, Canada	SFO	
22:41 CPA872	7300 B77W	Hong Kong, China	SFO	
22:43 UAL1763	6000 B772	Maui, HI	SFO	
22:46 SKW6293	5900 E120	Eureka, CA	SFO	
22:51 UAL1652	5800 B753	Kona, Big Island, HI	SFO	
22:53 AMX664	5900 B737	Mexico City	SFO	
22:56 AWE463	5700 A321	Charlotte, NC	SFO	
22:59 SWA3856	6000 B737	Phoenix, AZ	SFO 17	
	5,937			

35 SFO Arriving Flights over Portola Valley (PV) in a 4 hour period from 7 PM to 11 PM. Average of 9 flights per hour over PV communities and 17 flights between 10 -11 PM! Average altitude for night flights over PV is 5,937 ft above sea level.

Monday 8/5/13	SFO Flights over Portola Valley
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Time	Flight #	Altitude (ft) ASI Aircraft T	Typ Departing City	ArrivingAir _l # Fligh	nts over PV/hr
18:11	VRD221	5700 A320	Austin, TX	SFO	
21:01	SKW6345	5900 CRJ2	Belgrade, MO	SFO	
21:12	UAL1517	5900 B739	San Diego, CA	SFO	
21:04	DAL2177	5900 B738	Los Angeles, CA	SFO	
21:20	UAL724	5900 B772	Honolulu, Oahu, HI	SFO	
21:25	VRD945	5900 A320	Los Angeles, CA	SFO	
21:29	UAL841	5700 A319	Los Angeles, CA	SFO	
21:37	N802UA	5400 A319		SFO	
21:44	SKW5600	5800 CRJ2	Burbank, CA	SFO	
21:52	AAL1807	5100 B738	Los Angeles, CA	SFO	
21:58	SWA538	4800 B737	Orange County, CA	SFO	10
22:08	VRD969	5300 A319	San Diego, CA	SFO	
22:11	UAL422	5600 B752	Kahului, Maui, HI	SFO	
22:24	UAL497	5900 A319	Orange County, CASFO		
22:28	SWA102	6900 B737	Los Angeles, CA	SFO	
22:32	SWA235	5100 B737	San Diego, CA	SFO	
22:51	VRD947	6000 A320	Los Angeles, CA	SFO	
22:53	AAL1399	6900 B738	Chicago, IL	SFO	
22:57	SWA4997	6000 B737	San Diego, CA	SFO	8
23:02	N75410	6000 B739		SFO	
23:03	UAL1275	6000 B739	Los Angeles, CA	SFO	
23:12	UAL498	6100 A320	Vancouver, Canada	SFO	
23:15	SKW5615	5100 E120	Santa Barbara, CA	SFO	
23:18	AAL2004	5200 B752	Miami, FL	SFO	
23:22	SWA3042	6000 B737	San Diego, CA	SFO	
23:43	JBU1513	5900 A320	Austin, TX	SFO	
23:49	SKW5416	5900 CRJ2	Ontario, CA	SFO	
23:52	SKW6252	6400 CRJ2	Eugene, OR	SFO	9
00:03	UAL263	4800 A320	Los Angeles, CA	SFO	
00:27	SWA3856	4900 B737	Phoenix, AZ	SFO	
		5733.333			

30 SFO Arriving Flights over Portola Valley (PV) in a 3.5 hour period from 9 PM to 12:30 PM which averages to 9 flights per hour.

Average altitude for night flights over PV is 5,733 ft above sea level.

Friday 8/9/13 SFO Flights over Portola Valley

Time	Flight #	Altitude (ft) A Aircraft Type	Departing City	ArrivingAirpor# Flights over PV/hr
20:00	SKW6409	6800 CRJ2	Portland, OR	SFO
20:15	EVA28	6400 B77W	Taipei, Taiwan	SFO
20:18	UAL1728	5300 B753	Kahului, Maui, HI	SFO
20:20	VRD755	6000 A320	Seattle, WA	SFO
20:27	SKW5645	6000 E120	Santa Barbara, CA	SFO
20:29	SIA2	5400 B77W	Hong Kong, China	SFO
20:32	SWA151	5800 B737	Orange County, CA	SFO
20:45	SKW6410	7200 CRJ2	Burbank, CA	SFO
20:49	UAL1720	6899 B753	Honolulu, Oahu, HI	SFO
20:57	UAL362	5866 B752	Lihue, Kauai, HI	SFO 10
21:22	SKW5638	5900 E120	Santa Barbara, CA	SFO
21:46	HAL12	7115 A332	Honolulu, Oahu, HI	SFO
21:52	WJA1176	6407 B737	Vancouver, Canada	SFO 2
22:04	CPA872*	5000 B77W	Hong Kong, China	SFO
22:07	UAL422*	5800 B752	Kahului, Maui, HI	SFO
22:10	DAL841	5800 B752	New York	SFO
22:13	SWA538	5700 B737	Orange County, CA	SFO
22:17	SWA644	6400 B737	Los Angeles, CA	SFO
22:26	UAL497	5200 A320	Orange County, CA	SFO
22:32	SKW6508	5500 CRJ2	Austin, TX	SFO
22:38	SKW6252	7000 CRJ2	Eugene, OR	SFO
22:40	SKW5615	6000 E120	Santa Barbara, CA	SFO
22:45	SKW6252	6103 CRJ2	Eugene, OR	SFO
22:49	UAL12	5331 B739	Los Angeles, CA	SFO
22:52	UAL1185	5800 B737	Seattle, WA	SFO 15
23:01	SWA235	5500 B737	San Diego, CA	SFO
23:04	JBU1513	5400 A320	Austin, TX	SFO
23:08	UAL1141	5600 B739	Newark, NJ	SFO
23:11	UAL731	6100 A319	Los Angeles, CA	SFO
23:21	VRD969	5400 A319	San Diego, CA	SFO
23:26	SKW5600	5600 CRJ2	Burbank, CA	SFO
23:28	SKW6293	6000 E120	Eureka, CA	SFO
23:40	TAI560	5200 A319	San Salvador, El Salvador	SFO
23:43	VRD947	5600 A320	Los Angeles, CA	SFO
23:46	UAL578	7000 A320	Vancouver, Canada	SFO 10
00:01	SKW5418	6200 CRJ2	Ontario, CA	SFO
00:07*	UAL305	5500 A319	New Orleans, LA	SFO
00:09	LN191VE	5800 C560	Van Nuys, CA	SFO
00:13	SKW6215	4700 CRJ7	Las Vegas, NV	SFO
00:17	SWA4997	5000 B737	San Diego, CA	SFO
00:26	SWA3856	4400 B737	Phoenix, AZ	SFO
00:30	AAL2004	4200 B752	Miami, FL	SFO
00:46	ASA316	6000 B738	Seattle, WA	SFO
01:01	CBJ806	5800 B737		SFO 9
01:12	KAL213	5900 B748	Los Angeles, CA	SFO

5813.8

45 SFO Arriving Flights over Portola Valley (PV) in a 5 hour period from 8 PM to 1 AM which averages to 9 flights per hour.

15 flights over PV between 10 -11 PM!

Average altitude for night flights over PV is 5,813 ft above sea level.

Wednesday 8/21/13 SFO Flights over Portola Valley

Time	Flight #	Altitude (ft) ASI Aircraft Type	Departing City	Arriving Airpo # Flights/Hr
18:12	JAL2	3900 B772	Tokyo, CA	SFO
18:17	UAL1529	5100 B739	San Diego, CA	SFO
18:21	VRD919	4600 A320	Las Vegas, NV	SFO
18:23	ASA231	5800 B734	Los Cabos, Mexico	SFO
18:29	UAL373	5600 A320	Orange County, CA	SFO
18:35	SKW6410	4600 CRJ2	Burbank, CA	SFO
18:39	UAL460	4600 A319	Los Angeles, CA	SFO
18:40	N430QS	4300 GLF4	Los Angeles, CA	SFO
18:41	ASA309	6100 B734	Palm Springs, CA	SFO
18:42	JBU1436	4700 A320	Long Beach, CA	SFO
18:44	SWA513	5800 B733	Las Vegas, NV	SFO 11
19:03	SKW5418	5800 E120	San Luis, CA	SFO
19:04	UAL633	5000 A319	Houston, TX	SFO
19:06	VRD939	5400 A320	Los Angeles, CA	SFO
19:08	SWA1040	5200 B737	San Diego, CA	SFO
19:08	XOJ53	7000 C750	Santa Barbara, CA	SFO
19:11	SKW6432	4900 CRJ7	Orange County, CASF	0
19:13	SKW6206	4700 CRJ2	Phoenix, AZ	SFO
19:27	SKW6347	6300 CRJ7	Austin, TX	SFO
19:29	SKW4602	5600 CRJ9	Los Angeles, CA	SFO
19:30	BAW287	5900 B744	London, UK	SFO
19:36	ASA229	5200 B739	Puerto Vallarta, Mexi	SFO
19:38	UAL1728	6400 B753	Maui, HI	SFO
19:48	HAL24	5500 B763	Maui, HI	ОАК
19:49	UAL364	6400 A319	Las Vegas, NV	SFO 14
20:06	UAL302	6098 A320	Portland, OR	SFO
20:17	RSP812	5900 E50P	Santa Monica, CA	SFO
20:20	B6776	5800 GLEX	Van Nuys, CA	SFO
20:49	VRD759	6900 A320	Seattle, WA	SFO
20:54	UAL1652	6700 B752	Big Island, HI	SFO
20:56	UAL351	5700 A320	San Diego, CA	SFO
20:57	UAL362	7400 B752	Lihue, HI	SFO 7
21:00	UAL305	5700 A319	New Orleans, LA	SFO
21:02	SWA1366	5300 B737	Orange County, CA	SFO
21:05	DAL8891	5100 B738	San Diego, CA	SFO
21:08	SKW6252	5600 CRJ2	Eugene, OR	SFO
21:10	UAL496	6300 B752	Phoenix, AZ	SFO
21:14	SIA2	7612 B77W	Hong Kong, China	SFO
21:21	UAL450	4979 A320	Vancouver, Canada	SFO
21:26	SKW5609	5469 E120	Monterey, CA	SFO
21:30	SKW5615	6610 E120	Santa Barbara, CA	SFO
21:32	SWA461	7214 B738	Los Angeles, CA	SFO
21:55	UAL746	5364 B752	Honolulu, HI	SFO 11
22:01	UAL422	5515 B752	Cuba	SFO
22:03	UAL462	6127 A320	Houston, TX	SFO

22:07 B6737	5800		SFO	
22:09 WJA1776	5463 B737	Vancouver, Canada	SFO	
22:26 SKW5303	5997 E120	Bakersfield, CA	SFO	
22:33 SKW4802	4374 CRJ7	Los Angeles, CA	SFO	
22:35 EJA820	5175 C560	Burbank, CA	SFO	
22:59 AMX664	5879 B737	Mexico City, Mexico	SFO	8
	5656.392			

51 SFO Arriving Flights over Portola Valley (PV) in a 5 hour period from

6 PM to 11 PM which averages to 10 flights per hour.

14 flights over PV between 7-8 PM!

Average altitude for night flights over PV is 5,648 ft above sea level.
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DISTRICT OFFICE 698 EMERSON STREET PALO ALTO, CA 94301 (650) 323-2884 (409) 245-2339 FAX (650) 323-3493

May 12, 2000

Dear UPROAR Member,

Because of your interest and concerns about airplane noise on the mid-Peninsula and the reduction of it, I'm pleased to report to you some important news on the subject.

After hearing from you and many constituents from communities in our area, I launched a collaborative effort with city officials to curb aircraft noise. Elected officials from Palo Alto, East Palo Alto, Menlo Park, Atherton, Los Altos, Woodside, Redwood City and Portola Valley wrote letters to San Francisco Airport Director John Martin requesting the opportunity to meet and to discuss the issue in person. I followed up with San Francisco Airport officials and was able to arrange a meeting between San Francisco Airport Director John Martin and the local officials where a variety of proposals to combat aircraft noise were discussed. Three objectives were established:

- 1. Need for residents to communicate directly with Airport Noise Abatement Officials
- 2. Increase in maximum altitude at which planes fly over mid-Peninsula cities
- 3. Establish a permanent device in the field to monitor aircraft noise

In short, we were successful in achieving all these goals and I think this is a terrific step in the right direction until better technologies are created to make this an obsolete issue. First, Airport officials agreed to set up a complaint line, which identifies the locations of complaint calls.

Second, I contacted the Federal Aviation Administration to request the lifting of altitude requirements over the mid-Peninsula in order to curb the noise of the 70 daily flights that are routed across the 14th Congressional District and into SFO. The FAA responded to our request and agreed with our recommendations. The new flight procedure that has been approved by the FAA will raise the altitudes at which airplanes fly over mid-Peninsula cities. These changes did not require the use of new technology but did need FAA approval due to the alterations of arrival and departure paths.

The new flight patterns have already been implemented and airplanes flying into SFO from Southern California, Mexico, Phoenix, Las Vegas, Hawaii and north from Point Reyes are now crossing a navigation fix located at the Menlo Park-Palo Alto border at 5,000 feet rather than the previous 4,000 feet. It's important to note that since the glide

Anna G. Eshon 14th District, California Congress of the United States Nouse of Representatives

Mashington, DC 20515-0514

COMMITTEE ON COMMERCE SUECOMMITTEES: TELECOMMUNICATIONS, TRADE, AND CONSUMER PROTECTION HEALTH AND ENVIRONMENT

WHIP AT LARGE

CO-CHAIR MEDICAL TECHNOLOGY CAUCUS VICE-CHAIR

DEMOCRATIC BUDGET GROUP

CO-CHAIR DEMOCRATIC ADVISORY GROUP ON HIGH TECHNOLOGY

THES STATIONERY PREVIED ON PAPER MADE OF RECYCLED FIBERS

THIS MAILING WAS PREGERAT MEETING NO. 28 AT TAXPAYER EXPENSE Packet Page 109 slope angle is increased by the altitude change, a normal descent to the runway requires a maximum reduction of engine thrust in order to reduce speed and configure the aircraft for landing.

It is anticipated that this change will bring about a reduction of between 1-2 decibels at ground level, which equates to a 41% reduction in noise when factoring in both the altitude and glide slope change.

Lastly, San Francisco Airport will install a permanent noise monitor near the navigational marker at the border of Palo Alto and Menlo Park that will aid in the enforcement of the new flight procedures.

I'm very pleased and excited about the positive changes we've been able to make. I appreciate your patience and your advocacy and I hope, of course, that the changes will bring about peaceful nights of sound sleep and more quality of life during the day!

包

Sincerely,

3

9

Anna-G. Eshoo Member of Congress

Subject: FW: Memorandum re Aircraft Noise, Data Set, PV Resident Responses, and Eshoo Letter
From: Council-Jeff Gee <jgee@redwoodcity.org>
Date: Mon, 26 Aug 2013 16:05:14 -0700
To: James A. Castañeda <jcastaneda@sforoundtable.org>, Cynthia Gibbs <cindyg@airportnetwork.com>

FYI. More correspondence.

Jeff Gee Vice Mayor City of Redwood City (c) 650-483-7412 1017 Middlefield Road Redwood City, CA 94063

From: cleverkris@yahoo.com [cleverkris@yahoo.com]
Sent: Monday, August 26, 2013 3:07 PM
To: Tina Nguyen; Bert Ganoung; SFO Noise
Cc: Council-Jeff Gee; awengert@portolavalley.net; Jim Lyons; Victor Schachter
Subject: Re: Memorandum re Aircraft Noise, Data Set, PV Resident Responses, and Eshoo Letter

FYI, here is a copy of the email I sent to Bert late last night:

Dear Bert,

I wish I could report that I, or my neighbors, had noticed a difference in the overflights, but despite the beautiful weather, things are just as loud as they have been for the last few months.

Tonight, it is relentless. Every couple of minutes there is another direct overflight by a plane headed into SFO. There is no visible traffic on the Webtrak site of SJC indicating any reason at all why they should be flying directly over PV, and, in most cases, less than a mile from my house. I really don't understand why this is happening.

I was also awakened early this morning by a lovely plane at about 8:15 a.m. It even woke up my adolescent son, and he sleeps like the dead.

Because I am unable to report these planes to you, I am reporting the ones that are particularly awful to the SJC via their Webtrak site. I'm sure they are tired of it. Hopefully, they will forward them to you, so that you can see the pattern.

I have noticed today that there were a number of what appear to be private jets, flying out of or into San Carlos Airport, and they were very, very loud. Is there any control over where these planes fly?

Thank you very much,

Kris Moriarty

This email was in response to Bert's response to me (Tina has the whole thread), which was this:

Dear Ms. Moriarity,

I am very sorry to hear of the difficulties with the on-line complaint form though we have just in the last day switched over to in-house hosting of the web page and are experiencing difficulty with this and the flight tracking. I would like

to ask that we stand by for now and allow our webmaster to get their kinks out and then we can address the problems from before the changeover.

I am available most days starting at 8:45 a.m. and would be happy to assist. I do have a meeting and tour tomorrow from 10:00 - 11:40 a.m. other than that I am free. I would be happy to try and get you brought on board with our very useful tool that I feel is exciting and beautiful too.

To say that after tomorrow morning at 1:00 a.m. when our instrument landing systems are brought back on-line that Portola Valley will not have any more over flights would not be correct. To say that when we have poor weather there will be overflights and when we have good weather the likelihood of overflights will be much lower would be appropriate.

Sincerely, Bert

Bert Ganoung SFO Manager | Aircraft Noise Abatement San Francisco International Airport | P.O. Box 8097 | San Francisco 94128 Tel +1.650-821-5100 | <u>www.flysfo.com</u> | <u>www.flyquietsfo.com</u>

and this:

Dear Bert,

Thank you very much for your response, and I will be sure to share it.

I and several others have had difficulty with the online complaint form; it is unwieldy to use, and after pressing "submit," we have found that it sometimes says that there is an error. Trying again later unfortunately does not work. I wonder if you could please check on this?

I would love to have you walk me through the Volans tracking system; for some reason, my computer (a MacBook Pro) had trouble either installing the Java necessary, or something else. I would like to give you a call next week, after school starts, so that I've got a few uninterrupted moments to talk with you. Is there a particular time to best get ahold of you? What number should I call?

We have lived here through the Boom and Bust cycle of the last decade, and at no time have we heard either the numbers of overflights, or the low-altitude of these flights over Portola Valley. I believe 2006/2007 was pretty much the high point of the bubble down here, and we never noticed flights at all then, so I'm puzzled by your indication that the upswing in the economy affects traffic over Portola Valley. I do remember very clearly back in 2001, in viewing the flight maps, there was virtually no air traffic over PV; it all went either further south before turning over Palo Alto Hills/Los Altos Hills, or went over Woodside to Redwood City and then to the Bay. Portola Valley wasn't the go-to turning point at that time.

Would you say that, after this Thursday, and until next April, we should return to the quiet and normal atmosphere that we are used to in Portola Valley?

It's helpful to know about next Summer at this point; I will pass along all of this information, and we can discuss it from there.

FW: Memorandum re Aircraft Noise, Data Set, PV Resident Responses...

Again, thank you very much,

Kris Moriarty

From: Tina Nguyen <tnps2008@gmail.com>
To: Bert Ganoung <bert.ganoung@flysfo.com>; SFO Noise <SFONoise@flysfo.com>
Cc: jgee@redwoodcity.org; awengert@portolavalley.net; Jim Lyons <jel1293@yahoo.com>; Victor Schachter <VSchachter@fenwick.com>
Sent: Monday, August 26, 2013 11:12 AM
Subject: Memorandum re Aircraft Noise, Data Set, PV Resident Responses, and Eshoo Letter

Dear Bert and David,

As part of our ongoing efforts toward noise abatement for our communities, Vic, Jim and I sent Congresswoman Eshoo's Chief of Staff Karen Chapman an email with the attached documents.

We were overwhelmed with constant streams of commercial airplane noise this entire summer irrespective of the weather. I posted a survey on the Portola Valley forum in late July asking whether residents were bothered by the airplane noise. To date, over 60 residents either emailed or called me on my cell phone to tell me that are very bothered by the increasing noise pollution. I cut and pasted all of the email responses into a word document and removed residents' identifying information until we receive everyone's formal consent.

I very much appreciate David's time, expertise, and cooperation with fulfilling my requests for 3 days worth of flight information. It saved me a tremendous amount of time from manually entering the data.

Sincerely, Tina Nguyen Subject: FW: Memorandum re Aircraft Noise, Data Set, PV Resident Responses, and Eshoo Letter
From: Council-Jeff Gee <jgee@redwoodcity.org>
Date: Mon, 26 Aug 2013 16:07:28 -0700
To: James A. Castañeda <jcastaneda@sforoundtable.org>, Cynthia Gibbs <cindyg@airportnetwork.com>

one more

Jeff Gee Vice Mayor City of Redwood City (c) 650-483-7412 1017 Middlefield Road Redwood City, CA 94063

From: cleverkris@yahoo.com [cleverkris@yahoo.com]
Sent: Monday, August 26, 2013 3:21 PM
To: Tina Nguyen; Bert Ganoung; SFO Noise
Cc: Council-Jeff Gee; awengert@portolavalley.net; Jim Lyons; Victor Schachter
Subject: Re: Memorandum re Aircraft Noise, Data Set, PV Resident Responses, and Eshoo Letter

By the way, this is excellent information, and and excellent presentation. I'm very impressed, and the analysis of the data is so compelling. I have additional information for particularly bothersome flights (in my observation) fro 8/12 and 8/15. All of the flights I recorded were at or beneath 6,000 feet; two of them were at 5,000 feet upon passing over my house. All of them were going into SFO. At the time of recording, there was no traffic at all going over the open space south of us, over Mountain View, or over Sunnyvale. on 8/15, the times were around 8 am and thereafter, to about 9:15 am. On 8/12 they were from about 11:30 p.m. to 1:30 am.

I am happy to pass it along, should you need it.

Thanks!

Kris Moriarty

From: Tina Nguyen <tnps2008@gmail.com>

To: Bert Ganoung <bert.ganoung@flysfo.com>; SFO Noise <SFONoise@flysfo.com>

Cc: jgee@redwoodcity.org; awengert@portolavalley.net; Jim Lyons <jel1293@yahoo.com>; Victor Schachter

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FW: Memorandum re Aircraft Noise, Data Set, PV Resident Responses...

Sincerely, Tina Nguyen

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AIRPORT NOISE NEWS

Regular Meeting # 287 September 4, 2013

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BBCNEWS LONDON

14 August 2013 Last updated at 04:42 ET

Heathrow noise trial 'helped 100,000 residents'

A trial involving early morning flights at Heathrow Airport has found about 100,000 people living under the flight path experienced less noise.

During the five month trial, planes were directed to more defined flight paths to protect people in dedicated areas between 04:30 and 06:00.

But the findings showed some areas such as Brockley in south-east London experienced more night flights.

A report on the trial said it should not continue in its present form.

On average about 17 planes arrive at Heathrow each morning between 04:30 and 06:00.

'Unintended negative outcomes'

Air traffic controllers normally direct these aircraft to achieve the safest and most efficient arrival routes, spreading out their flight paths.

During the trial, which began in December, pilots were directed to avoid flying through certain areas taking part in the experiment.

The findings from the trial, detailed in The Helios Report, said it benefited residents in the south-east and east London as well as many residents of Berkshire.

But it said the trial should not continue and that "pre-trial assessments should be undertaken to predict likely outcomes to better understand the balance of the likely benefits against the unintended negative outcomes".

'Considerable achievement'

The scheme was a partnership between Heathrow, British Airways, the National Air Traffic Service and HACAN, which campaigns against aircraft noise.

John Stewart, the chair of HACAN, said: "This is the first time we have worked with the aviation industry in this way.

"Although the trial had some problems which would need to be addressed in any future experiments, to bring relief to 100,000 people is a considerable achievement."

Matt Gorman, from Heathrow: said: "The results of this trial are very encouraging, showing that by working with local communities and our partners across the airport we can find new ways to bring noise respite to thousands of residents."

These areas covered in the trial included Vauxhall, Wandsworth, Battersea, Clapham Common, Westminster, Bermondsey and Streatham to the east of the airport, and Binfield, Reading, Purley-on-Thames and Winnersh to the west of the airport.

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FAA Puts More Restrictions on Foreign Jets at SFO

SAN FRANCISCO July 31, 2013 (AP)

U.S. aviation officials are no longer allowing foreign airlines to land alongside another plane when touching down at San Francisco International Airport in the wake of the deadly Asiana Airlines crash.

The Federal Aviation Administration said in a statement Tuesday it implemented the change "to minimize distractions during a critical phase of flight."

In the past, two planes could approach SFO's main parallel runways at the same time in clear weather. Domestic carriers can still do that, but air traffic controllers are now staggering the arrivals of foreign carriers.

The shift away from side-by-side landing came Sunday, on the same day the FAA started advising foreign airlines to use a GPS system instead of visual reckonings when landing at SFO. The agency said it had noticed an increase in aborted landings by some foreign carriers flying visual approaches.

Pilots on Asiana Airlines Flight 214 had been cleared to make a visual approach when the plane crash-landed July 6. Three Chinese teenagers died, and 180 people were injured among the 307 aboard.

The plane from China and South Korea came in too low and too slow, slamming its landing gear into a seawall well before the actual runway.

Seconds before the accident, the pilots called for a go-around, meaning they wanted to abort the landing and circle for another approach. The FAA said such maneuvers are "routine, standardized procedures that can occur once a day or more at busy airports for various reasons."

Two weeks after the crash, another Asiana flight aborted its landing, San Francisco airport officials said. In addition, they said a Taiwanese EVA Air flight approached too low last week, then aborted and began another approach.

The FAA said it hasn't seen any significant delays as a result of the move away from side-by-side approaches.

chicagotribune.com

Park Ridge wants air traffic patterns changed at O'Hare

Runway 10 Center/28 Center is scheduled to open on Oct. 17

By Jon Davis, Special to the Tribune

12:17 PM CDT, August 20, 2013

Park Ridge is joining a number of neighborhood groups in asking the Federal AviationadvertisementAdministration for an 11th-hour change in planned new air traffic patterns at O'Hare InternationalAirport.

Aldermen on Monday night approved a resolution giving Mayor David Schmidt clearance to sign a letter to U.S. Rep. Michael Quigley (D-5th Dist.), seeking his support for the changes, which include an updated Environmental Impact Statement regarding the O'Hare Modernization Program. Ald. Joseph Sweeney, 1st, was the lone "no" vote.

Runway 10 Center/28 Center is scheduled to open on Oct. 17 as an arrival runway capable of handling the latest and largest jumbo jets, including the Airbus A-380 and Boeing 747-8, according to the Chicago Department of Transportation. The takeoff and landing plan means air traffic will increase "two-fold during daytime hours and an astronomical 500 percent during the evening and nighttime hours," according to the letter from Fair Allocation in Runways — a coalition of groups from the Edgebrook, Forest Glen, Hollywood-North Park, Sauganash and Sauganash Woods neighborhoods.

Schmidt's signature lends weight to the letter, which asks support for:

•Replacing the takeoff and landing plan with a "neighborhood-based plan, working with community groups, businesses, the [O'Hare Noise Compatibility Commission] and the [Federal Aviation Administration], for fair allocation of air traffic between existing and new runways for day and night air traffic."

•Park Ridge's ongoing request to the FAA for a Supplemental Environmental Impact Statement "to verify what the real environmental impacts will be" from the new runway plan and to update the original statement from 2005.

•Continued use of all existing and new runways; expansion of noise monitoring and mitigation projects; and mandating the "Fly Quiet" program "as the official policy for O'Hare."

The 1997 "Fly Quiet" program is voluntary and "encourages" pilots and air traffic controllers to use preferred approach and departure corridors over interstates and forest preserves, or commercial/industrial areas; to use particular runways between 10 p.m. and 7 a.m. (weather permitting); and to perform "ground run-up" engine

maintenance tests only in designated locations.

Historically, most efforts to curtail O'Hare traffic and noise came from suburbs adjacent to or near the airport. This effort is coming from Northwest side neighborhoods that are now staring down the approaches. FAiR asked Park Ridge's O'Hare Airport Commission for support, and Commission Chairman Jim Argionis brought the idea to the Aug. 5 City Council meeting where it was decided a resolution was the proper authorization.

While the FAA's original estimates counted on airplanes using interstate highways and forest preserves for "Fly Quiet" noise mitigation routes, the new traffic patterns mean "modifications may be needed in the Fly Quiet routes given that few forest preserves run east/west," the letter states.

The O'Hare Modernization Program, approved by the FAA in 2005, calls for six parallel east-west runways and two "cross-wind" runways. Runway 10 Center/28 Center is the second of three new east-west runways — the first, 9 Left/27 Right, opened in 2008 along the airport's northern perimeter paralleling Touhy Avenue. The third, 10 Right/28 Left, is slated to open in 2015 on O'Hare's southern perimeter. (Runway designation numbers generally indicate compass orientation while letters are used when there are parallel runways, to avoid confusion.)

Copies of Schmidt's letter are also being sent to Rep. Jan Schakowsky (D-9th Dist.), Chicago Mayor Rahm Emanuel and Aviation Commissioner Rosemarie Andolino, Chicago Ald. Michael Zalewski, 23rd, who chairs the Chicago City Council's aviation committee, and FAA officials.

State Sen. Ira Silverstein (D-8th Dist.) sent a nearly identical letter to those officials on July 18.

<u>triblocaltips@tribune.com</u>

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theguardian

63

America's scariest airport could add more thrills with 'S-curve' takeoff

FAA considering takeoff route for California's John Wayne airport to further muffle noise over wealthy neighbourhoods

Follow Rory Carroll by email

Rory Carroll in Los Angeles theguardian.com, Wednesday 7 August 2013 11.01 EDT



The Federal Aviation Administration said it did not know if such a takeoff was technically possible. Photograph: Spencer Platt/Getty Images

It is already known for one of America's most stomach-churning takeoffs, an abrupt, steep ascent which can make passengers feel like they are blasting into space.

Now John Wayne airport at Newport Beach, <u>California</u>, is threatening to ratchet up the white-knuckle factor another notch by forcing planes to slalom as they climb into the

sky.

City authorities are lobbying for a new "S-curve" takeoff route to further muffle the noise of departing aircraft and protect the tranquility of well-heeled residents. The "required navigation performance departure" would oblige aircraft, which already takeoff at an unusually steep angle, to make an additional swerve to level out over the bay rather than neighbourhoods.

The Federal Aviation Administration said it did not know if such a takeoff was technically possible but would consider the request.

Newport Beach's mayor, Keith Curry<u>, told the Los Angeles Times</u> the city was determined to reduce noise pollution. "We'll do anything we can to reduce the impact."

Which means <u>John Wayne airport</u>, just 14 miles from Disneyland, could offer visitors an additional and possibly unwanted thrill. It is the third busiest commercial airfield in southern California, served by 14 carriers including Delta, American Airlines and United Airlines.

Even before the route-change proposal it was named <u>one of the world's scariest airports</u> for the fact planes roar to takeoff at near full power and climb at 25 degrees -10 degrees steeper than normal – before swiftly reducing engine power, a protocol designed to minimise noise pollution over some of Orange County's wealthiest neighbourhoods, including Dover Shores.

"John Wayne's an interesting airport – one because you have a very short runway – so landings are more critical," Jon Russell, an Air Line Pilots Association regional safety director, told the LA Times. "And, of course, the takeoff profile. Those are two important catalysts for making an airport unique and more difficult."

The proposed S-curve route provoked dismay. Jean-Claude Demirdjian, a retired airline pilot, <u>said the new route</u> could affect safety if an engine failed during takeoff. Others accused city authorities of inconveniencing and endangering passengers.

Lobbying by residents and politicians has made John Wayne airport, named after the actor in 1979, one of the US's most noise-controlled airports. Most days commercial aircraft cannot takeoff before 7am or after 10pm.

The FAA said it would consider the city's request next year after testing of a similar proposal <u>at Atlanta's Hartsfield-Jackson airport</u>.

Airport Noise Report

A weekly update on litigation, regulations, and technological developments

Volume 25, Number 27

August 23, 2013

ACRP

TRB ISSUES UPDATED, EXPANDED GUIDELINES FOR AIRPORT SOUND INSULATION PROGRAMS

A 313-page Airport Cooperative Research Program (ACRP) report, which updates and expands previous guidance on airport sound insulation programs, was released by the Transportation Research Board on Aug. 20.

ACRP Report 89: Guidelines for Airport Sound Insulation Programs was prepared to help airport and non-airport sponsors develop and effectively manage their aircraft noise insulation projects.

As the guidelines were being finalized last year, the Federal Aviation Administration issued Program Guidance Letter (PGL) 12-09, "AIP Eligibility and Justification Requirements for Noise Insulation Projects," on Aug. 17, 2012.

The PGL replaced existing guidance on the implementation of AIP-funded noise insulation projects as had previously been provided per Section 812 of the AIP Handbook, FAA Order 5100-38C.

"At the time that the ACRP Report 89 guidelines were finalized, there were outstanding questions regarding the PGL. These outstanding questions and related is-

(Continued on p. 107)

Naval Air Station Key West

COUNTY ADVOCATES FOR MITIGATION NAVY REJECTED IN FEIS ON EXPANDED BASE OPS

Monroe County, FL, Commissioners are seeking the ear of as many influential people as they can to express concerns about the Navy's plans to increase fighter jet training operations at Naval Air Station Key West without implementing the noise mitigation measures the County seeks, including sound insulation of civilian homes in the high noise zone near the air station.

On Aug. 21, the Commissioners authorized the County Administrator, staff, and consultants to meet with senior Navy policy officials, White House Council on Environmental Quality and Office of Intergovernmental Affairs staffs, members of the Florida congressional delegation, and the County lobbyist to discuss the County's continuing concern with the Final Environmental Impact Statement on the project.

The County's concerns focus on the Navy's rejection of all the major substantive recommendations it made on a Draft Environmental Impact Statement the Navy released in August 2012 on its plan to increase operations at the naval air station.

Monroe County disagreed with the Navy's conclusion that expanding operations at Naval Air Station Key West would not cause significant noise impact in the *(Continued on p. 108)*

> Airport Noise Report Regular Meeting No. 287 Packet Page 126

In This Issue...

ACRP ... New and expanded guidelines for sound insulation programs will help airport and non-airport sponsors develop and effectively manage them - p. 106

Key West ... Monroe County Commissioners advocating for noise mitigation Navy rejected in FEIS on expansion of operations at Naval Air Station Key West - p. 106

MSP Int'l ... Forum scheduled to solicit questions community wants answered prior to RNAV implementation at airport - p. 107

NASA ... Agency releases new vision for aeronautics research; includes innovation in commercial supersonic aircraft that will provide data for a low-level sonic boom standard that could lead to permission for supersonic flights over land - p. 107

Awards Reno-Tahoe Airport Authority is recipient of the 2013 Randy Jones Award for Excellence in Airport Noise Mitigation - p. 108

ACRP, from p. 106

sues are discussed throughout the text with advice to users to contact their ADO project manager regarding any further guidance or information that has been provided since the publication of these guidelines," TRB Staff Officer Theresia H. Schatz explained in a *Forward* to the report.

"This research will be very helpful to improve current practices and ensure compliant airport sound insulation programs. The research significantly expands information available on best practices and current standards and requirements for sound insulation of homes as well as for other eligible noise-sensitive buildings. The guidelines are a very useful tool for airport staff, consultants, and FAA offices to use with the AIP guidance provided in the AIP Handbook as updated by PGLs from time to time," the *Forward* notes.

The updated guidelines were prepared under ACRP Project 02-24. The effort was led by the Jones Payne Group in association with URS Group, Freytag & Associates, Larson Manufacturing, CSDA Architects, S&L Specialty Contracting, Robert R. Smith, R.W. Sullivan Engineering, and Hill International, Inc. Each of the team members was expert in a specific area or aspect of sound insulation addressed in the guidelines.

A separate contractor's final report, which provides background to the research conducted in support of the guidebook, has been posted on the ACRP Project 02-24 web page at

http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=2795.

Unlike earlier sound insulation program guidance, the ACRP report also addresses energy performance and sustainability, community outreach, improvements in products, current code and other regulatory requirements, and bidding methodologies and project costs.

The report is available online at http://www.trb.org/ACRP/Blurbs/169358.aspx

MSP Int'l

FORUM TO SOLICIT QUESTIONS ON MSP RNAV IMPLEMENTATION

Congressman Keith Ellison (D-MN) will hold a public forum on Aug. 27 to discuss the questions Minneapolis residents would like to have answered before RNAV procedures are implemented at Minneapolis-St. Paul International Airport.

Expected to attend the forum are Administrator of Federal Aviation Administration Great Lakes Region Barry Cooper, Minneapolis Mayor R.T. Rybak (D), State Sen. Scott Dibble (DFL), state Rep. Frank Hornstein (DFL), and representatives of the Metropolitan Airports Commission (MAC).

The forum will be held from 5:30 to 7 p.m. at Washburn High School, 201 W. 49th St., in Minneapolis.

"Last fall, the FAA attempted to implement RNAV at the airport with minimal notification and no input from the residents directly affected by the changes. Minneapolis and partners were able to prevail upon the Metropolitan Airports Commission to request more time and to develop a better plan," the City of Minneapolis said in an Aug. 12 press release announcing the forum.

Officials of Minneapolis and the community of Edina, west of the airport, were so fearful that FAA was trying to push through airport commission approval of the RNAV departure procedures it wanted to impose at MSP that they mounted a scorching campaign against them (25 ANR 184).

Portions of both Minneapolis and Edina would have had concentrated overflights from the RNAV procedure package FAA proposed.

The political pressure on the Metropolitan Airports Commission was so intense from Minneapolis and Edina that the MAC backed off endorsing the RNAV procedures that would have taken aircraft over those cities and only approved those that took aircraft to the south and east of the airport.

Consequently, FAA is now determining whether it can safely implement only a portion of the RNAV departure procedure package it proposed at MSP International.

NASA

NASA RELEASES NEW VISION FOR AERONAUTICS RESEARCH

NASA Administrator Charles Bolden has unveiled a new strategic vision that will better align the work of the agency's Aeronautics Research Mission Directorate to address looming challenges in global air transportation.

Continuing a tradition of nearly a century of aviation research, NASA's aeronautical innovators will bring to life new technology and ideas in flight to ensure the United States will maintain its leadership in the sky and sustain aviation as a key economic driver for the nation, the agency said.

Bolden shared the strategic vision as a keynote speaker during a gathering of the nation's leading aviation engineers and managers at the American Institute for Aeronautics and Astronautics' Aviation conference in Los Angeles on Aug. 14.

The new strategic vision greatly expands the relevancy of NASA's research and is based on three themes: understanding emerging global trends, using those trends to drive research directions and then organizing NASA's aeronautical research work in response to those drivers.

The new vision addresses key drivers that are expected to change the face of aviation during the next 20 to 40 years. Those drivers include significant growth in planet-wide demand for air mobility, mounting concerns related to climate and energy, and the convergence of technologies ranging from new materials to embedded sensors to ubiquitous networking.

Airport Noise Report Regular Meeting No. 287 Packet Page 127

Six Research Areas Defined

Reflecting inputs contributed by the aviation community and national policymakers, six areas of research were identified in the vision that will allow NASA to best deploy its resources and prioritize its goals:

• Safe, efficient growth in global operations that will enable the Next Generation Air Transportation System in the United States by 2035 and safely expand capacity of the global airspace system to accommodate growth in air traffic.

• Innovation in commercial supersonic aircraft that will provide data for a low level sonic boom standard that could lead to permission for supersonic flight over land.

• Ultra-efficient commercial transports that will pioneer technologies for future generations of commercial transports that simultaneously reduce noise, fuel use and emissions.

• Transition to low-carbon propulsion that will enable industry to move toward and adopt use of low-carbon fuels and alternative propulsion systems.

• Real-time, system-wide safety assurance in which tools are developed for use in creating a prototype of an integrated safety monitoring and assurance system that can detect, predict and prevent safety problems in real time.

• Assured autonomy for aviation transformation that will enable the utilization of higher levels of automation and autonomy across the aviation system, particularly as it relates to unmanned aerial systems and remotely piloted vehicles.

A NASA White Paper on the agency's Aeronautics Research Strategic Visions is available at http://www.aeronautics.nasa.gov/pdf/armd_strategic_vision_2013.pdf

Awards

RENO-TAHOE AIRPORT AUTH. WINS 2013 RANDY JONES AWARD

The Reno-Tahoe Airport Authority is the recipient of the 2013 Randy Jones Award for Excellence in Airport Noise Mitigation, the Planning Committee for the American Association of Airport Executives (AAAE) Airport Noise Mitigation Symposium announced.

This award is given every year to an individual or organization that has made a significant contribution to the airport noise mitigation industry.

The RTAA has undertaken noise mitigation efforts at Reno International Airport since 1995. To date it has insulated over 4,600 dwellings and expects to insulate the 5,000th home in the summer of 2013. During the 2010 seven-monthlong construction season, the RNO program was treating over 110 dwellings per week.

"Since the program began in 1995, the RTAA has shown a dedication to improve the quality of life for individuals in the community that live near RNO airport and are impacted by high levels of aircraft noise," the Planning Committee said in announcing the award. The Randy Jones Award will be presented at the 13th Annual AAAE Airport Noise Mitigation Symposium during the awards luncheon on Oct. 7 at the Eldorado Hotel in Reno.

A draft symposium agenda is available at: http://noisemitigation-symposium.com/

The symposium sessions will focus on an update of FAA regulations, an airport survey on the status of sound insulation programs, "practical realities" of the Airport Handbook revisions, acoustical testing protocols, winding down a sound insulation program, and public relations strategies for airports implementing sound insulation programs.

In addition, a contractor/supplier roundtable discussion will be held as well as an overview of the Reno-Tahoe Airport sound insulation program and a tour of homes in the program.

Key West, from p. 106_

nearby community, asserting that there were substantial flaws in the Navy's noise analysis, including an inadequate assessment of the baseline noise condition at the air station and surrounding community.

In the Final EIS on the project, released on Aug. 2, the Navy selected a project alternative that will add up to 4,500 additional annual operations at the Key West Naval Air Station, increasing the total number of annual operations to approximately 52,000. It also approved transitioning to next-generation F-35 aircraft at the air station and conducting carrier air wing Field Carrier Landing Practice (FCLP) operations there.

The Navy is expected to issue a Record of Decision on the project in September.

Monroe County Commissioners authorized staff and its consultant on the EIS (the Fort Lauderdale, FL-based engineering firm Keith and Schnars) to advocate for the following noise mitigation measures recommended by the County:

• An absolute limit on all types of flight operations at the naval air base, including FCLP and night flights.

• The "proper evaluation" of the baseline condition for existing operations at Naval Air Station Key West. Although the FA-18E/F Super Hornet aircraft is already operating at the air station, Monroe County wants the Navy to exclude its noise from the baseline conditions analysis on the basis that the noise impact of the aircraft on the surrounding community was never properly evaluated in earlier NEPA documents that the Navy relied on in this FEIS. The County asked the Navy to evaluate the FA-18E/F as a new, Next Generation aircraft in the noise analysis of the current project.

• The Navy should contract with an independent consultant "to conduct a noise study to establish an actual noise baseline with actual noise sampling based on industry accepted protocols, and should the Navy choose not to conduct a noise study, it should request authorization for the County to contract an independent consultant to conduct a noise study to establish an actual noise baseline with actual noise

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Patton Boggs LLP Washington, D.C. sampling to document the full impacts to surrounding community and the necessary mitigation by the Navy to alleviate the impacts";

• Full mitigation by the Navy for the impacts associated with the proposed increases in flight operations to ensure the impacts on existing surrounding community are minimized. This includes, but is not limited to:

(1) Navy request for statutory authority, where necessary, to provide mitigation to the surrounding community impacted by the proposed increases in flight operations included in the preferred alternative. Also, as a result of the FA-18E/F Super Hornet, mitigation should include but not be limited to soundproofing;

(2) The use of alternative runways to alleviate impacts to the surrounding community; and

(3) Modification of operational procedures and full enforcement of course rules (e.g., altitudes, flight paths) to minimize impacts to the surrounding community.

Navy's Response to Comments

In the FEIS the Navy responded to Monroe County's criticisms and recommendations.

It said "the analytical methodology and results presented in the EIS for noise are consistent with current Navy policy regarding the modeling of aircraft noise. The Navy has determined the noise analyses presented in this EIS is an accurate representation of the current and future noise environment."

The Navy said the noise environment at the NAS Key West airfield was modeled using NOISEMAP software suite, which "represents the best noise modeling science available today for military airfields."

Regarding mitigation of noise impacts, the Navy said it "will continue to make every attempt to minimize its noise impacts to nearby communities through the continued use of designated flight paths, procedures, and noise abatement measures for military aircraft," which include restricting the manner in which aircraft climb, limiting late night flying to only mission essential activities, minimizing flights over heavily-populated areas, and accepting input from the public to ensure these measures remain as effective as practicable."

The Navy explained in its FEIS that Congress has not given the military services the authority to install soundproofing in homes and buildings that are not owned by the federal government.

Under existing conditions, an estimated 1,273 housing units off the air station are within the 65 dB DNL or greater noise zone, according to the FEIS. Expanding operations at the air station under the alternative selected is estimated to add another 184 homes to that zone.

The FEIS is available at http://www.keywesteis.com/

AIRPORT NOISE REPORT

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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.

В

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.

С

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



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4.77 and 10 decibel penalty for operations occurring in the evening and nighttime periods, respectively.

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

Commuter Airline – Operator of small aircraft (maximum size of 30 seats) performing scheduled 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 Aweighting, 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.

Е

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

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 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.

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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 terrain.

Н

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.

L

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

К

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.

Μ

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

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not established at authorized minimums or instructions from air traffic control, or for other reasons.

Ν

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.

0

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.

Ρ

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

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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 3dimensionally defined points in space. RNAV and RNP systems are fundamentally similar. The key difference between them is the requirement for onboard 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.

Significant Exceedance – As defined by the Airport Community Roundtable, is a noise event more than 100 dB SENEL outside of the 65 CNEL contour.

SOIA – Simultaneous Offset Instrument Approach 羊 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.

Т

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.

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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.