

2013-2014 FLY QUIET AWARDS & ROUNDTABLE REGULAR MEETING PACKET

Meeting No. 295
Wednesday, April 1, 2015 - 7:00 p.m.

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

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

AGENDA

- 1. Call to Order / Roll Call / Declaration of a Quorum Present** ACTION
Cliff Lentz, Roundtable Chairperson / James A. Castaneda, AICP, Roundtable Coordinator
- 2. 2013-2014 Jon C. Long Fly Quiet Awards** INFORMATION
Cliff Lentz, Roundtable Chairperson
Bert Ganoung, Manager - Aircraft Noise Abatement Office
pg. 39
- 3. Public Comments on Items NOT on the Agenda** INFORMATION
Speakers are limited to two minutes. Roundtable members cannot discuss or take action on any matter raised under this item.

CONSENT AGENDA 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.

- 4. Review of Airport Director's Reports for:** ACTION
January 2015 pg. 11
February 2015 pg. 19
- 5. Review of Roundtable Regular Meeting Overview for December 3, 2014** ACTION
pg. 27



REGULAR AGENDA

- | | |
|--|-------------|
| 6. Airport Director's Comments
John Martin, Director – San Francisco International Airport | INFORMATION |
|--|-------------|

REGULAR AGENDA – WORK PROGRAM ITEMS

- | | |
|--|-----------------------|
| 7. Update, Departure and Arrivals Technical Working Groups
Roundtable Chairperson | INFORMATION
pg. 35 |
| 8. Update, FAA's PORTE Departure Analysis
Bert Ganoung, Manager - Aircraft Noise Abatement Office | INFORMATION |
| 9. Update, Oceanic Arrivals Over the Woodside VOR
Bert Ganoung, Manager - Aircraft Noise Abatement Office
Cliff Lentz, Roundtable Chairperson | INFORMATION |
| 10. Update, Metroplex
Roundtable Aviation Technical Consultant | INFORMATION |

OTHER MATTERS

- | | |
|---|-------------|
| 11. Discussion, Noise Symposium Wrap-up
Cliff Lentz, Roundtable Chairperson
Elizabeth Lewis, Roundtable Vice-Chairperson | INFORMATION |
| 12. Airport Noise Briefing
Roundtable Aviation Technical Consultant | INFORMATION |
| 13. Member Communications / Announcements
Roundtable Members and Staff | INFORMATION |
| 14. Adjourn
Cliff Lentz, Roundtable Chairperson | ACTION |

- | | |
|--|--------|
| Correspondences | pg. 37 |
| Airport Noise Industry News | pg. 43 |
| Glossary of Common Acoustic & Air Traffic Control Terms | pg. 49 |

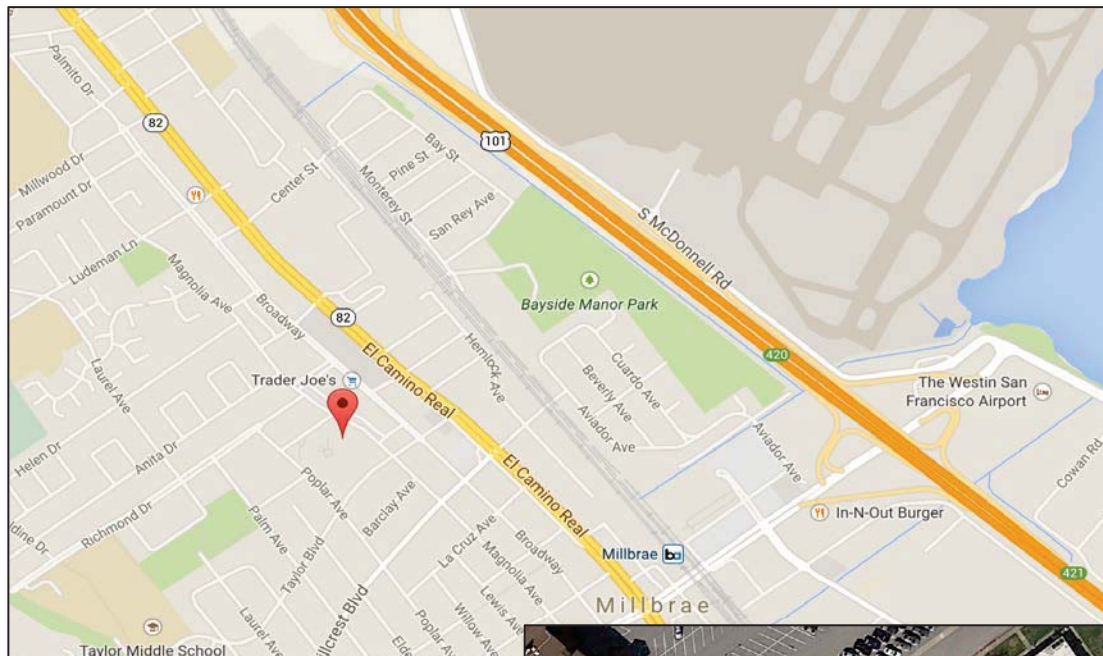
Next Regular Roundtable Meeting Date: Wednesday, June 3, 2015

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

REGULAR MEETING LOCATION

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

Access through Millbrae Library parking lot on Poplar Avenue





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)).



WELCOME

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

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

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

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

AIRPORT/COMMUNITY ROUNDTABLE OFFICERS & STAFF

Chairperson:

CLIFF LENTZ

Representative, City of Brisbane
cliff Lentz@ci.brisbane.ca.us

Vice-Chairperson:

ELIZABETH LEWIS

Representative, Town of Atherton
el Lewis@ci.atherton.ca.us

Roundtable Coordinator:

JAMES A. CASTAÑEDA, AICP

County of San Mateo
Planning & Building Department
jcastaneda@sforoundtable.org



MEMBERSHIP ROSTER APRIL 2015 REGULAR MEMBERS

CITY AND COUNTY OF SAN FRANCISCO

BOARD OF SUPERVISORS

Representative: Vacant

Alternate: Vacant

CITY AND COUNTY OF SAN FRANCISCO

MAYOR'S OFFICE

Julian C. L. Chang, (Appointed)

Alternate: Edwin Lee, Mayor

CITY AND COUNTY OF SAN FRANCISCO

AIRPORT COMMISSION REPRESENTATIVE

John L. Martin, Airport Director (Appointed)

Alternate: Doug Yakel, Acting Airport Spokesperson

COUNTY OF SAN MATEO BOARD OF SUPERVISORS

Dave Pine, Supervisor

Alternate: Don Horsley, Supervisor

CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY (C/CAG)

AIRPORT LAND USE COMMITTEE (ALUC)

Richard Newman, ALUC Chairperson (Appointed)

Alternate: Carol Ford, Aviation Representative (Appointed)

TOWN OF ATHERTON

Elizabeth Lewis, Council Member/Roundtable Vice-Chairperson

Alternate: Bill Widmer, Council Member

CITY OF BELMONT

Representative: Cathy Wright

Alternate: Vacant

CITY OF BRISBANE

Cliff Lentz, Council Member/Roundtable Chairperson

Alternate: Lori Liu, Council Member

CITY OF BURLINGAME

Ricardo Ortiz, Council Member

Alternate: Vacant

MEMBERSHIP ROSTER APRIL 2015

Page 2 of 3

CITY OF DALY CITY

Raymond Buenaventura, Mayor

Alternate: Vacant

CITY OF FOSTER CITY

Steve Okamoto, Council Member

Alternate: Vacant

CITY OF HALF MOON BAY

Vacant

Alternate: Allan Alifano, Council Member

TOWN OF HILLSBOROUGH

Alvin Royse, Council Member

Alternate: Shawn Christianson, Council Member

CITY OF MENLO PARK

Peter Ohtaki, Council Member

Alternate: Vacant

CITY OF MILLBRAE

Robert Gottschalk, Council Member

Alternate: Marge Colapietro, Council Member

CITY OF PACIFICA

Sue Digre, Council Member

Alternate: Vacant

TOWN OF PORTOLA VALLEY

Ann Wengert, Council Member

Alternate: Maryann Derwin, Council Member

CITY OF REDWOOD CITY

Rosanne Foust, Council Member

Alternate: Vacant

CITY OF SAN BRUNO

Ken Ibarra, Council Member

Alternate: Rico Medina, Council Member

CITY OF SAN CARLOS

Bob Grassilli, Council Member

Alternate: Ron Collins, Council Member

MEMBERSHIP ROSTER APRIL 2015

Page 3 of 3

CITY OF SAN MATEO

David Lim, Council Member

Alternate: Vacant

CITY OF SOUTH SAN FRANCISCO

Mark Addiego, Council Member

Alternate: Pradeep Gupta, Council Member

TOWN OF WOODSIDE

David Burow, Council Member

Alternate: Thomas Shanahan, Council Member

ROUNDTABLE ADVISORY MEMBERS

AIRLINES/FLIGHT OPERATIONS

Captain Andy Allen, United Airlines

Glen Morse, United Airlines

Michael Jones, United Airlines

FEDERAL AVIATION ADMINISTRATION

Elisha Novak, Airports District Office, Burlingame

Greg Kingery, SFO Air Traffic Control Tower

Don Kirby, Northern California Terminal Radar Approach Control (NORCAL TRACON)

ROUNDTABLE STAFF/CONSULTANTS

James A. Castañeda, AICP, Roundtable Coordinator

Cynthia Gibbs, Roundtable Aviation Technical Consultant (BridgeNet International)

Harvey Hartman, Roundtable Aviation Technical Consultant (Hartman & Associates)

SAN FRANCISCO INTERNATIONAL AIRPORT NOISE ABATEMENT STAFF

Bert Ganoung, Noise Abatement Manager

David Ong, Noise Abatement Systems Manager

Ara Balian, Noise Abatement Specialist

Barbara Lawson, Noise Abatement Specialist

John Hampel, Noise Abatement Specialist

Joyce Satow, Noise Abatement Office Administration Secretary

CONSENT AGENDA

Regular Meeting # 295
April 1, 2015

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Airport Director's Report

**Presented at the April 1, 2015
Airport Community Roundtable Meeting
SFO Aircraft Noise Abatement Office
January 2015**



Monthly Noise Exceedance Report

San Francisco International Airport -- Director's Report

Period: **January 2015**



Airline	Noise Exceedances				Noise Exceedance Quality Rating
	Total Noise Exceedances	Total Operations per Month	Exceedances per 1,000 Operations	Score	
SKW	13	7,262	2	9.99	
ASA	4	1,008	4	9.98	
DAL	6	1,244	5	9.98	
ASH	1	152	7	9.97	
VRD	23	2,686	9	9.96	
CPZ	11	1,152	10	9.95	
SWA	31	2,337	13	9.93	
AAL	23	1,702	14	9.93	
ACA	2	147	14	9.93	
UAE	1	62	16	9.92	
JBU	13	751	17	9.91	
KLM	1	54	19	9.91	
AWE	18	845	21	9.89	
FFT	6	280	21	9.89	
ANZ	2	87	23	9.88	
UAL	256	8,530	30	9.85	
HAL	7	125	56	9.72	
AMX	13	191	68	9.65	
ABX	9	84	107	9.46	
ETD	7	62	113	9.43	
TAI	15	98	153	9.22	
FDX	11	69	159	9.19	
JAL	24	62	387	8.04	
PAL	32	74	432	7.81	
CPA	57	124	460	7.67	
EVA	76	137	555	7.19	
KAL	68	118	576	7.08	
SIA	73	124	589	7.01	
NCA	30	44	682	6.54	
AAR	154	116	1,328	3.27	
CKS	8	6	1,333	3.24	
CAL	209	106	1,972	0.00	
TOTAL	1,204	29,839	9,193		

Source: SFO Noise Abatement Office

Historical Significant Exceedances Report
San Francisco International Airport -- Director's Report
Period: **January 2015**

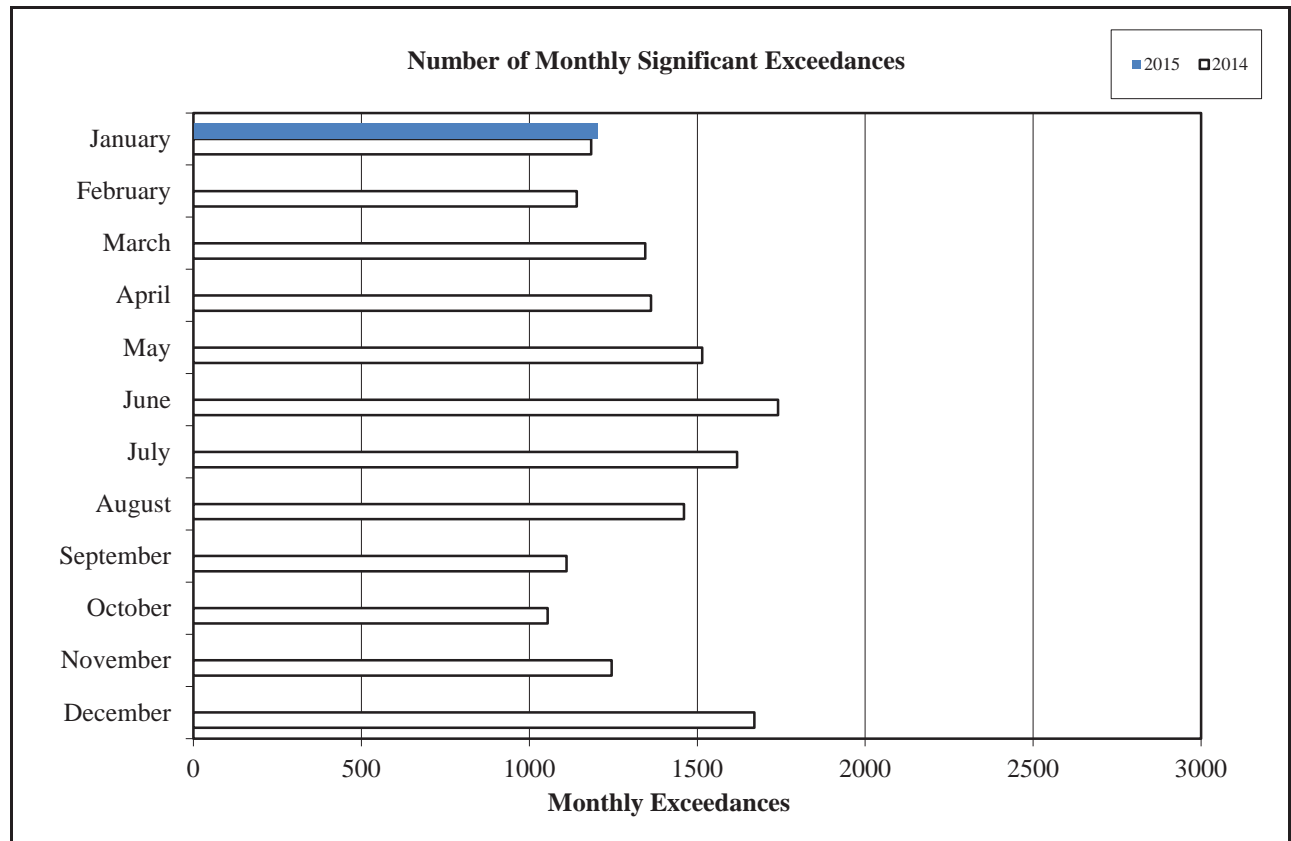


San Francisco International Airport

Month	Number of Monthly Significant Exceedances					Change from Last Year
	2011	2012	2013	2014	2015	
January	1,580	1,378	1,428	1,184	1,204	20
February	1,429	1,581	1,176	1,141		0
March	1,681	1,703	1,671	1,345		0
April	1,900	1,870	1,910*	1,362		0
May	2,024	1,912	1,859*	1,515		0
June	1,947	2,355	1,915	1,740		0
July	2,017	2,621	1,647	1,619		0
August	1,847	1,823	1,638**	1,460		0
September	1,609	1,464	1,352	1,111		0
October	1,572	1,689	1,277	1,055		0
November	1,575	1,421	1,262	1,245		0
December	1,447	1,439	1,160	1,670		0
Annual Total	20,628	21,256	18,295	16,447	1,204	
Year to Date Trend	20,628	21,256	18,295	16,447	1,204	20

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

** No data available from Site 7, August 1-26



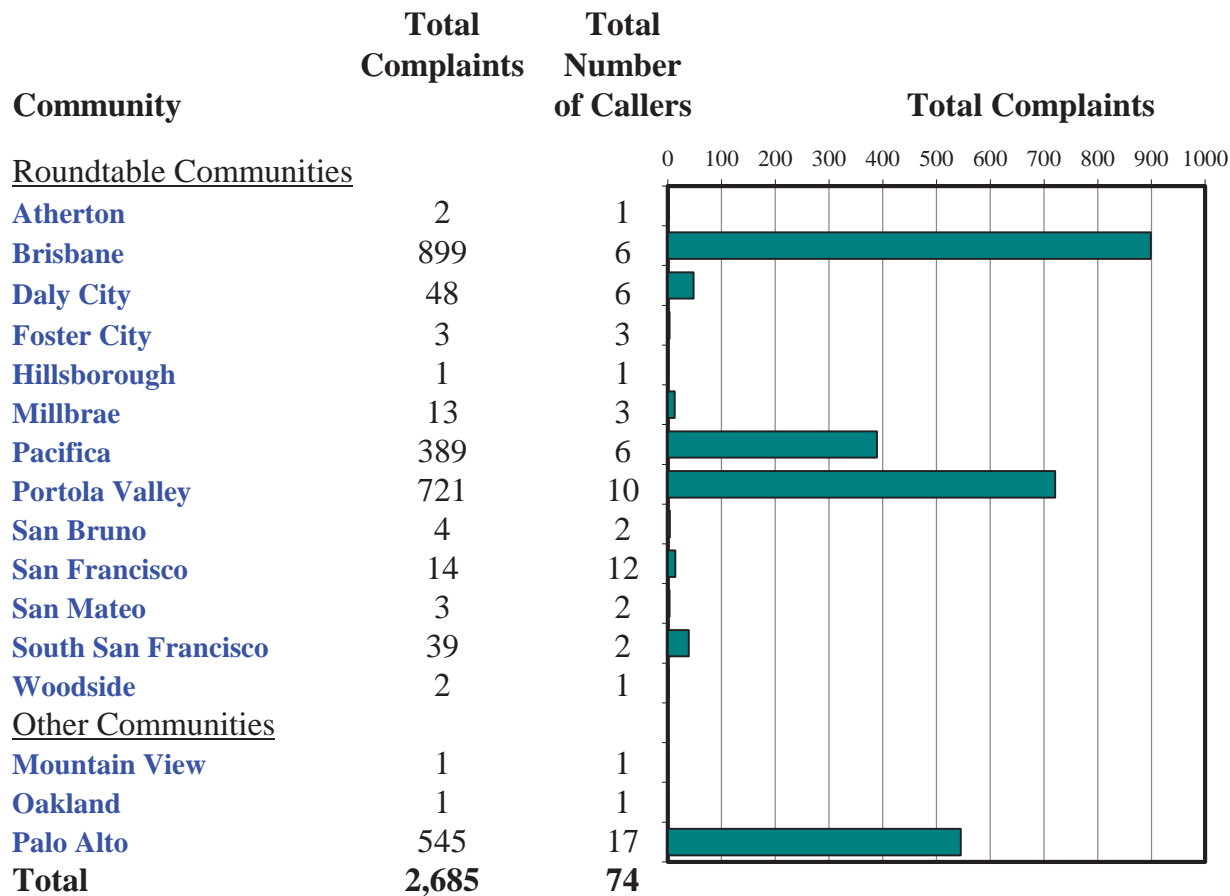
Monthly Noise Complaint Summary
San Francisco International Airport -- Director's Report
Period: **January 2015**



San Francisco International Airport

Monthly Calls by Community

Source: Airport Noise Monitoring System



Monthly Noise Complaint Summary Map January 2015



● Caller Location and Amount of Complaints





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

San Francisco International Airport -- Director's Report

Period : **January 2015**

Time of Day : From 10 pm through 7 am



Airline Code		Number of Runups	Runups Per 1,000 Departures	Percentage of Runups	
 UNITED	UAL	5	1.2	24%	
 American Airlines	AAL	16	18.5	76%	
Total		21			

A power runup is a procedure used to test an aircraft engine after maintenance is completed.

This is done to ensure safe operating standards prior to returning the aircraft to service.

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



San Francisco International Airport

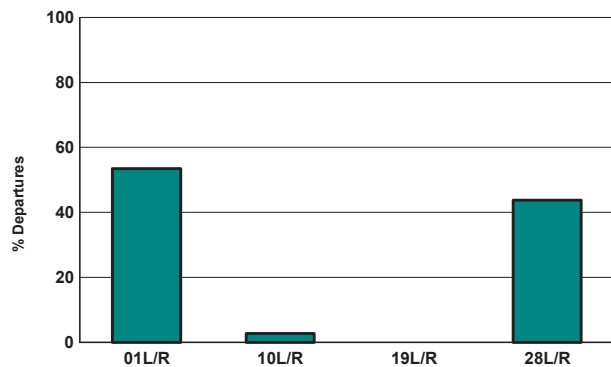
Runway Utilization (1 am to 6 am)

Monthly Jet Departures

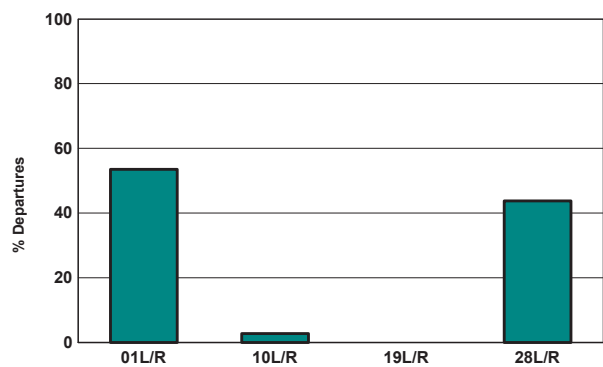
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
01L/R	99	-	-	-	-	-	-	-	-	-	-	-	99
10L/R	5	-	-	-	-	-	-	-	-	-	-	-	5
19L/R	-	-	-	-	-	-	-	-	-	-	-	-	0
28L/R	81	-	-	-	-	-	-	-	-	-	-	-	81
Total	185	-	-	-	-	-	-	-	-	-	-	-	185

01L/R	54%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	54%
10L/R	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%
19L/R	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
28L/R	44%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	44%

Current Month (1 am to 6 am)



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



Current Month (1 am to 6 am)



Numbers rounded to nearest whole percentages

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



Numbers rounded to nearest whole percentages

Air Carrier Runway Use Summary Report

San Francisco International Airport -- Director's Report

Period: January 2015

Time of Day : All Hours



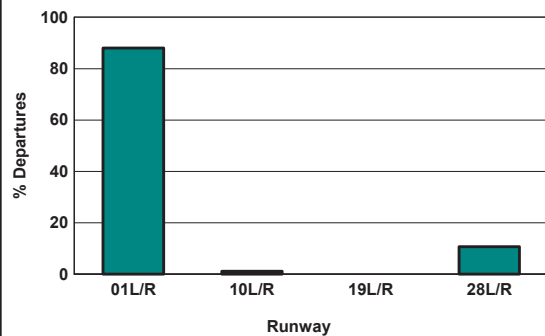
San Francisco International Airport

Runway Utilization (All Hours)

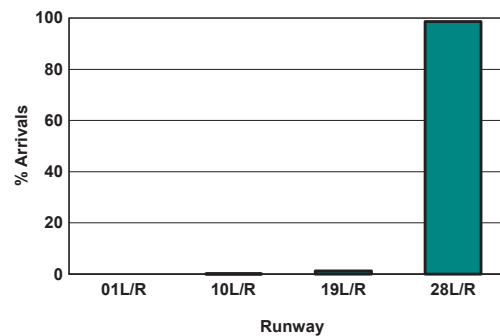
Source: Airport Noise Monitoring System

	Runway Utilization				Total
	01L/R	10L/R	19L/R	28L/R	
Total Monthly Operations					
Departures	13,937	192	0	1,701	15,830
Arrivals	0	9	193	15,100	15,302
Percentage Utilization					
Departures	88.0%	1.2%	0.0%	10.7%	100%
Arrivals	0.0%	0.1%	1.3%	98.7%	100%

Departures (All Hours)



Arrivals (All Hours)



Percentage Departure Utilization



Numbers rounded to nearest whole percentages

Percentage Arrival Utilization



Numbers rounded to nearest whole percentages

Airport Director's Report

**Presented at the April 1, 2015
Airport Community Roundtable Meeting
SFO Aircraft Noise Abatement Office
February 2015**



Monthly Noise Exceedance Report

San Francisco International Airport -- Director's Report

Period: February 2015



Airline	Noise Exceedances				Noise Exceedance Quality Rating
	Total Noise Exceedances	Total Operations per Month	Exceedances per 1,000 Operations	Score	
SKW	9	6,266	1	9.99	
ACA	2	348	6	9.97	
DLH	1	96	10	9.94	
VRD	26	2,361	11	9.94	
DAL	16	1,106	14	9.92	
ASA	15	916	16	9.91	
CPZ	18	1,064	17	9.91	
CES	1	58	17	9.91	
SWR	1	56	18	9.90	
SWA	46	2,042	23	9.88	
SAS	1	44	23	9.88	
AWE	18	716	25	9.86	
JBU	21	751	28	9.85	
AAL	46	1,480	31	9.83	
FFT	8	256	31	9.83	
UAL	264	7,834	34	9.81	
ASH	5	147	34	9.81	
HAL	7	112	63	9.66	
VIR	3	48	63	9.66	
ABX	7	80	88	9.52	
AMX	15	160	94	9.48	
FDX	9	62	145	9.20	
ETD	10	56	179	9.02	
BAW	21	112	188	8.97	
TAI	15	80	188	8.97	
NCA	12	38	316	8.26	
SIA	41	112	366	7.99	
PAL	22	58	379	7.91	
CPA	48	113	425	7.66	
JAL	27	56	482	7.35	
EVA	65	124	524	7.12	
KAL	67	108	620	6.59	
AAR	113	102	1,108	3.91	
CAL	171	94	1,819	0.00	
TOTAL	1,151	27,056	7,385		

Source: SFO Noise Abatement Office

Historical Significant Exceedances Report
San Francisco International Airport -- Director's Report
Period: **February 2015**

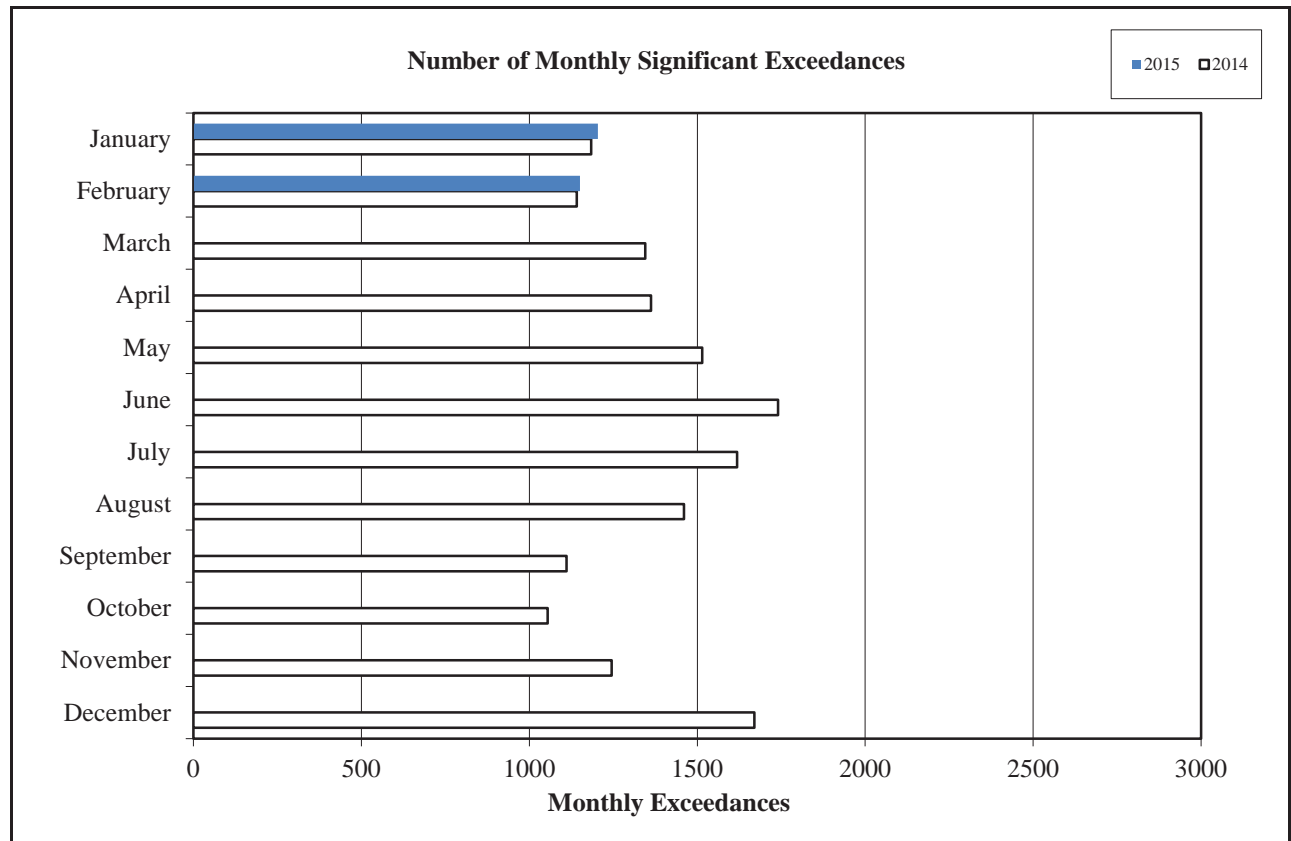


San Francisco International Airport

Month	Number of Monthly Significant Exceedances					Change from Last Year
	2011	2012	2013	2014	2015	
January	1,580	1,378	1,428	1,184	1,204	20
February	1,429	1,581	1,176	1,141	1,151	10
March	1,681	1,703	1,671	1,345		0
April	1,900	1,870	1,910*	1,362		0
May	2,024	1,912	1,859*	1,515		0
June	1,947	2,355	1,915	1,740		0
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September	1,609	1,464	1,352	1,111		0
October	1,572	1,689	1,277	1,055		0
November	1,575	1,421	1,262	1,245		0
December	1,447	1,439	1,160	1,670		0
Annual Total	20,628	21,256	18,295	16,447	2,355	
Year to Date Trend	20,628	21,256	18,295	16,447	2,355	30

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

** No data available from Site 7, August 1-26



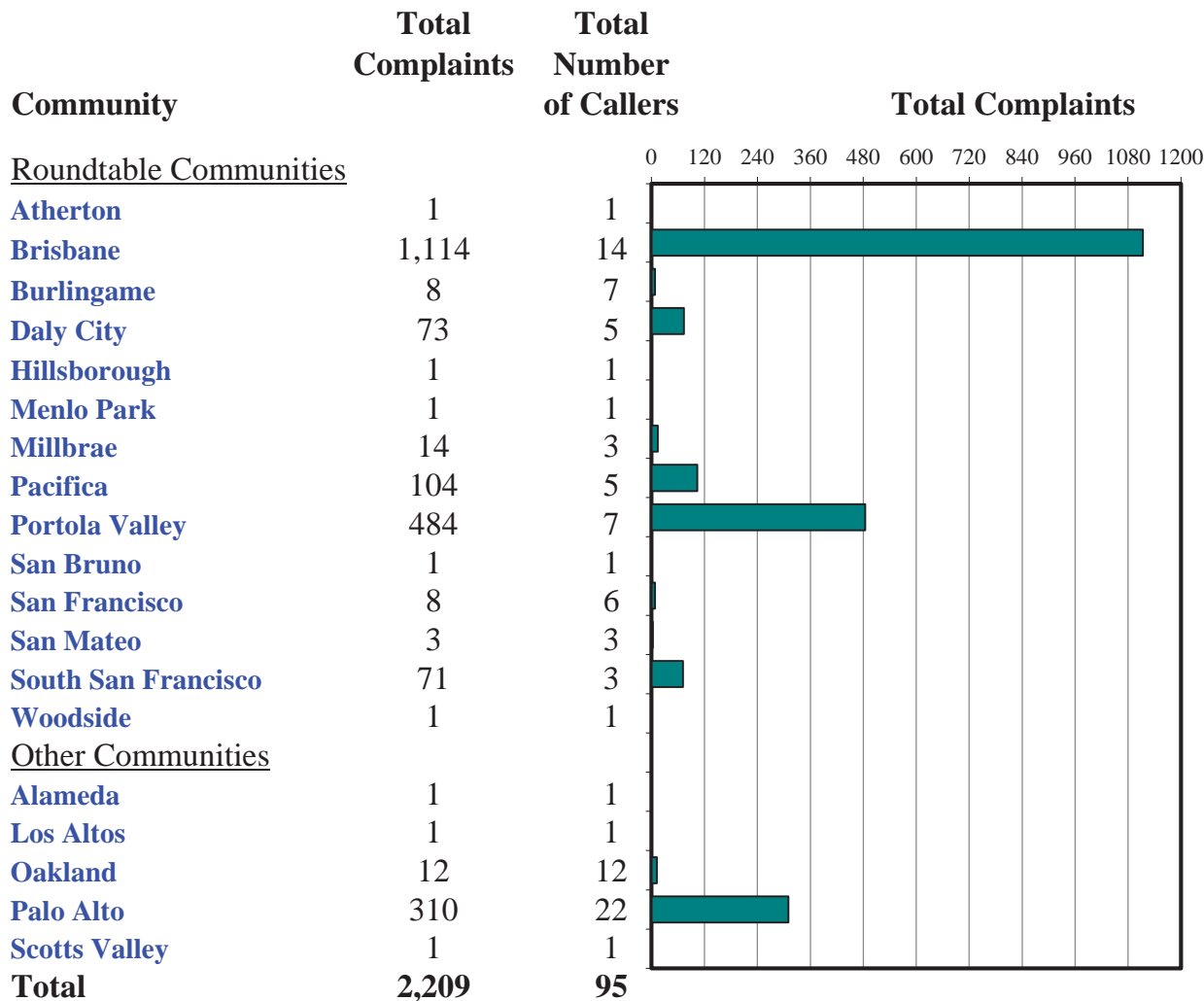
Monthly Noise Complaint Summary
San Francisco International Airport -- Director's Report
Period: **February 2015**



San Francisco International Airport

Monthly Calls by Community

Source: Airport Noise Monitoring System



This map illustrates the distribution of bird sightings across the San Francisco Bay Area. The data is represented by yellow circles, each containing a number indicating the count of sightings at that specific location. The map covers a large area, including San Francisco, Alameda, Contra Costa, San Mateo, and Santa Cruz counties. Major cities such as San Francisco, Oakland, Berkeley, and San Jose are labeled. The map also shows major highways (980, 880, 280, 84, 35, 17) and state parks (Butano, Big Basin, Castle Rock). The highest concentrations of bird sightings are found in the San Francisco Peninsula and the San Jose area, with some locations having counts exceeding 100. The distribution is more sparse in the surrounding areas, particularly in the north and east.

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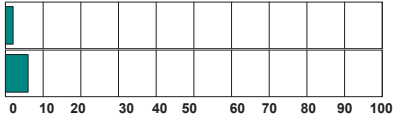

Monthly Nighttime Power Runups Report (85-06-AOB)

San Francisco International Airport -- Director's Report

Period : **February 2015**

Time of Day : From 10 pm through 7 am



Airline Code		Number of Runups	Runups Per 1,000 Departures	Percentage of Runups	
	UAL	3	0.8	30%	
	AAL	7	9.3	70%	
Total		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.

Late Night Preferential Runway Use Report
San Francisco International Airport -- Director's Report
Period: February 2015
Time of Day: Late Night (1 am to 6 am)



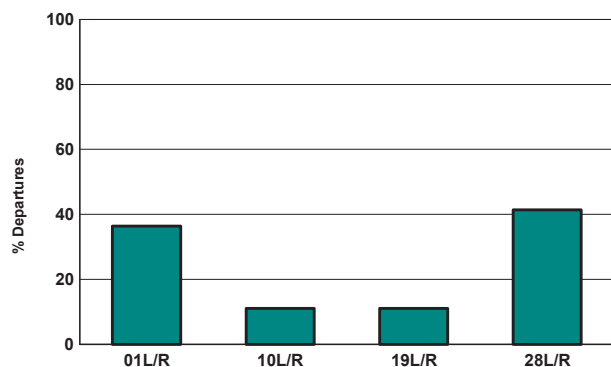
San Francisco International Airport

Runway Utilization (1 am to 6 am)

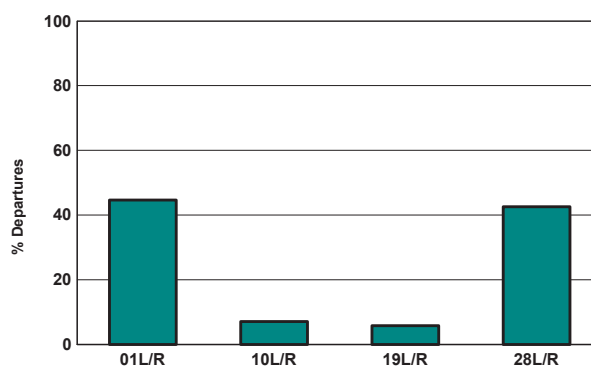
Monthly Jet Departures

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
01L/R	99	72	-	-	-	-	-	-	-	-	-	-	171
10L/R	5	22	-	-	-	-	-	-	-	-	-	-	27
19L/R	-	22	-	-	-	-	-	-	-	-	-	-	22
28L/R	81	82	-	-	-	-	-	-	-	-	-	-	163
Total	185	198	-	-	-	-	-	-	-	-	-	-	383
01L/R	54%	36%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	45%
10L/R	3%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%
19L/R	0%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6%
28L/R	44%	41%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	43%

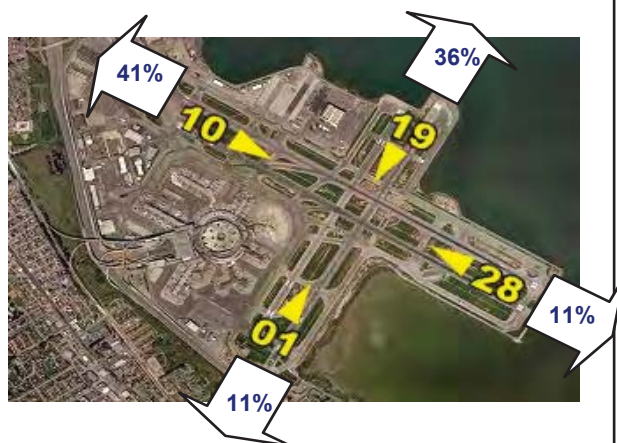
Current Month (1 am to 6 am)



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



Current Month (1 am to 6 am)



Numbers rounded to nearest whole percentages

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



Numbers rounded to nearest whole percentages

Air Carrier Runway Use Summary Report

San Francisco International Airport -- Director's Report

Period: February 2015

Time of Day : All Hours



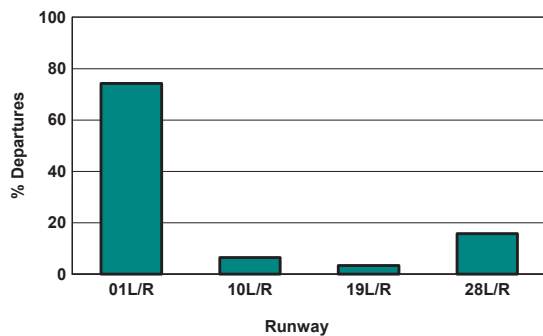
San Francisco International Airport

Runway Utilization (All Hours)

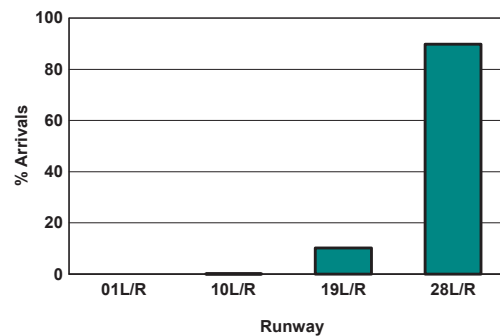
Source: Airport Noise Monitoring System

	Runway Utilization				Total
	01L/R	10L/R	19L/R	28L/R	
Total Monthly Operations					
Departures	10,513	926	481	2,236	14,156
Arrivals	0	3	1,396	12,243	13,642
Percentage Utilization					
Departures	74.3%	6.5%	3.4%	15.8%	100%
Arrivals	0.0%	0.0%	10.2%	89.7%	100%

Departures (All Hours)



Arrivals (All Hours)



Percentage Departure Utilization



Numbers rounded to nearest whole percentages

Percentage Arrival Utilization



Numbers rounded to nearest whole percentages

SFO Airport/Community Roundtable

Meeting No. 293 Overview
Wednesday, December 3, 2014

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

Roundtable Chairperson, Cliff Lentz, called the Regular Meeting of the SFO Airport / Community Roundtable to order, at approximately 7:10 p.m., 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

Julian Chang – City and County of San Francisco Mayor's Office
Doug Yakel – City and 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
Raymond Buenaventura – City of Daly City
Steve Okamoto – City of Foster City
Robert Gottschalk – City of Millbrae
Sue Digre – City of Pacifica
Ann Wengert – Town of Portola Valley
Ken Ibarra – City of San Bruno
David Burrow – Town of Woodside

REGULAR MEMBERS ABSENT

City and County of San Francisco Board of Supervisors (Vacant)
City and County of San Francisco Mayor's Office
City of Belmont (Vacant)
City of Burlingame
City of Half Moon Bay
Town of Hillsborough
City of Menlo Park
City of Redwood City
City of San Carlos
City of San Mateo
City of South San Francisco

ADVISORY MEMBERS PRESENT

Don Kirby – Northern California TRACON
Glen Morris – United Airlines

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

Bert Ganoung, Noise Abatement Manager
Ara Balian, Noise Abatement Specialist
David Ong, Noise Abatement Specialist

2. Public Comments on Items Not on the Agenda

Brian Perkins of Congresswoman Speier's Office provided an update regarding the congressional letter to the Federal Aviation Administration dated September 12, 2014.

3. Adoption of Resolution in recognition of Naomi Patridge

Roundtable Chairperson, Cliff Lentz, read for the record the resolution prepared to honor Naomi Patridge's years of dedicated service to the Roundtable. Ms. Patridge expressed her appreciation for the Roundtable's recognition, and encouraged the group to continue Roundtable's legacy of achievements.

ACTION: Richard Newman **MOVED** to adopt a resolution recognizing Naomi Patridge. The motion was seconded by Ken Ibarra and **CARRIED**, unanimously

CONSENT AGENDA

4. Review of Airport Director's Reports for September and October 2014

5. Review of Roundtable Regular Meeting Overview for June 6, 2014 and October 1, 2104

DISCUSSION: None.

ACTION: Richard Newman **MOVED** the approval of the Consent Agenda. The motion was seconded by David Burrow and **CARRIED**, unanimously.

REGULAR AGENDA

6. Review of SFO FlyQuiet Report for Q3 2014

Bert Ganoung, Noise Abatement Manager, provided an overview of the SFO FlyQuiet report for the third quarter of 2014 included in the meeting packet.

DISCUSSION: The Town of Atherton Representative, Elizabeth Lewis, asked for clarification of the Foster City arrival slide that had been presented and commented on the increased amount of flights above Atherton and numerous complaints she has received. Bert Ganoung, Noise Abatement Manager, explained the general details of the final approach and the expected altitude of aircrafts. The Town of Woodside Representative, David Burrow, commented that short of having planes fly higher at waypoints leading to the final approach, gliding in via an Optimized Profile Descent (OPD) seems to be the solution. Mr. Burrow asked how many OPD are in use. Mr. Ganoung responded that only one to two flights a day at the moment. Don Kirby from Norcal TRACON provided some additional details.

7. Airport Director's Comments

Airport Public John Martin reported that the airport would end the year with approximately 47 million passengers, up 4 ½ percent from last year. It was indicated that United Airlines would be doing away with 32 prop aircraft as part of their regional operations at SFO.

8. Follow-up, SFO PART 150

Noise Abatement Manager, Bert Ganoung, provided an update regarding the forthcoming PART 150 study workshop to be held on December 11, 2014. Several members of the Roundtable expressed concern over the timing of the event and the short notice, and suggested better outreach in the future. San Bruno Representative, Ken Ibarra, advocated for "easier to understand" announcements so the public can better understand what the study is about.

9. Follow-up, Request from City of Palo Alto for Roundtable Membership

Chairperson Lentz had provided an explanation of the memo included in the packet that summarized the comments and concerns from the October 1, 2014, regular meeting where the Roundtable discussed the topic. Roundtable Coordinator, James Castañeda, pointed out the draft memorandum to the Association of Bay Area Government Regional Airport Planning Committee (RAPC) is the before them for consideration.

ACTION: Richard Newman **MOVED** sending of the letter to RAPC. The motion was seconded by Dave Pine and **CARRIED**, unanimously.

The Town of Portola Valley Representative, Ann Wengert, indicated that the wording could be stronger and that two meetings a year is not enough. ALUC Representative, Rich Newman, suggested a motion to authorize the Roundtable Chairperson to edit and finalize the letter.

ACTION: Richard Newman **MOVED** authorizing the Roundtable Chairperson to make the final edits to the Roundtable's letter to the Regional Airport Planning Committee (RAPC). The motion was seconded by Ann Wengert and **CARRIED** with one abstention.

REGULAR AGENDA – WORK PROGRAM ITEMS

10. Update, FAA's PORTE Departure Analysis

Bert Ganoung, Noise Abatement Manager, explained that the Noise Abatement Office continues to monitor and analyze data regarding the PORTE departure. There is nothing significant to report at this time.

11. Update, Oceanic Arrivals over the Woodside VOR

DISCUSSION: The Town of Woodside Representative, David Burrow, asked when the data from the latest analysis will be available? Noise Abatement Manager, Bert Ganoung, indicated that it should be available in three weeks, and will be distributed directly via email and posted online.

12. Update, Metroplex

Roundtable Technical Consultant, Cindy Gibbs, provided a brief update regarding the latest procedures to come online as part of Metroplex. It was indicated that the next set of procedures should come online in January 2015.

DISCUSSION: Chairperson Lentz asked staff to give the Roundtable an overview of the recent NIITE departure procedure that recently came online. Both Ms. Gibbs and Noise Abatement Manager, Bert Ganoung, went into detail of procedure.

13. Letter to FAA Director, Congressional Support for Lower DNL Standard

Roundtable Technical Consultant, Cindy Gibbs, provided an overview of the correspondence that lead to the congressional letter to the FAA Director, as well as the draft letter of support from the Roundtable that is included in the packet for consideration and action.

ACTION: Rich Newman **MOVED** to authorize the Roundtable Chairperson to finalize the letter to send to the FAA Director. The motion was seconded by Dave Pine and **CARRIED**, unanimously.

14. Discussion of Possible North and South County Subcommittees

Chairperson Lentz proposed the idea of having two new subcommittees to serve as a technical subcommittee to deal with specific issues, in greater detail, that focus on impacts within the northern and southern San Mateo County communities.

DISCUSSION: The City of Pacifica Representative, Sue Digre, and the Town of Portola Valley Representative, Ann Wengert, both expressed support for the idea. Roundtable Coordinator, James Castañeda, indicated that the item will be on the agenda with more detail for the next Roundtable regular meeting.

15. Upcoming 2015 Noise 101

Roundtable Aviation Technical Consultant, Cindy Gibbs, discussed the options available for an upcoming Noise 101 to be held in the spring. The Roundtable will be emailed possible dates to see what will work best.

16. Airport Noise Briefing

Roundtable Aviation Technical Consultant, Cindy Gibbs, gave a brief industry update.

17. Member Communications / Announcements

None.

16. Adjourn

The meeting was adjourned at approximately 9:03 p.m.

JC:pac - JACZ233_wpb.docx

* NOTE: Roundtable meeting overviews are considered draft until approved by the Roundtable at a regular meeting.

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REGULAR AGENDA

Regular Meeting # 295
April 1, 2015

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April 1, 2015

TO: Roundtable Representatives, Alternatives, and Interested Persons

FROM: James A. Castañeda, AICP, Roundtable Coordinator 

SUBJECT: Departures and Arrivals Technical Working Groups

Background

At the Roundtable's regular meeting on February 4, 2015, the Roundtable approved to amend the Roundtable Bylaws to form two subcommittees to discuss issues in the north and south of San Mateo County, respectively. At that time the names used for these subcommittees were the "North County Roundtable Subcommittee" and "South County Roundtable Subcommittee".

Call for Volunteers

In response to initial comments received during the February 4, 2015 regular meeting, staff determined that the subcommittees be titled to more accurately reflect and reinforce their intent and purpose. They will now be referred to as the "Departures Technical Working Group", who will focus on topics specific to those in the northern San Mateo County area related to departing flights, and the "Arrivals Technical Working Group", which will focus on topics specific to impacts of arriving flights predominately over the communities of southern San Mateo County.

At this time, we will need volunteers from the Roundtable membership to commit to participating in the Working Groups (no more than 12 each). The first meeting will occur on the following tentative dates pending volunteering member's availability:

- Thursday, April 16, 2015
- Wednesday, April 22, 2015
- Thursday, April 23, 2015
- Wednesday, April 29, 2015
- Thursday, April 30, 2015

This first meeting will be held in Redwood City, with the Departures Technical Working Group meeting in the morning before noon, and the Arrivals Technical Working Group meeting in the afternoon. At the discretion of each Working Group at this first meeting, the subsequent meetings may be held closer to the geographic location of the respective Working Group's focus area (i.e. Departure Technical Working Group be held in a location north of Burlingame and Arrivals Technical Working Group be held in a location south of Burlingame).

Meeting Organization

The Working Group meetings is expected to be organized in the following manner:

- The Departure and Arrival Technical Working Groups will be held at least 3 times per year.
- Meetings shall be held on a day that allows Roundtable staff to present the meeting summary at the next regular meeting of the Roundtable.
- Meetings are open to the public, subject to the Brown Act
- Teleconferencing will be available for participants unable to be at the meeting in person.
- Attendance of technical representatives by stakeholders will be encouraged.

Goals

The goals of the Working Groups are as follows:

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

Purpose

The purpose of the subcommittees is to serve as a technical subcommittee that is a forum for stakeholders to deal with specific issues in greater detail. Members will learn about specific issues of concern in the counties of San Mateo and San Francisco.

Discussion Topics – North Peninsula

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

Discussion Topics – South Peninsula

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

CORRESPONDENCES

Regular Meeting # 295
April 1, 2015

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March 16, 2015

Mr. Ed Barnes, Station Manager
Air New Zealand
San Francisco International Airport
P.O. Box 25747
San Francisco, CA 94125-0747

Dear Mr. Barnes:

I am pleased to inform you that Air New Zealand has been selected to receive the Annual San Francisco International Airport/Community Roundtable's Jon C. Long Fly Quiet Program "Chairperson's Award" for 2013-2014. This annual award is presented in recognition of exceptional commitment to all aspects of the Fly Quiet Program. The Chairperson's Award recognizes efforts that go above and beyond mere participation in the program, and is intended to commend the extraordinary efforts demonstrated towards reducing aircraft noise impacts in the communities surrounding San Francisco International Airport (SFO). This is the second award for Air New Zealand from the San Francisco International Airport/Community Roundtable (Roundtable).

Air New Zealand was chosen for their continued commitment to work with the Noise Abatement Office to improve their GAP departure procedure performance and overall Fly Quiet Scores. Air New Zealand was the recipient of the "Most Improved Airline" award for the 2012-2013 Fly Quiet awards, and we commend Air New Zealand for their continued efforts to work to reduce noise over the communities of San Mateo County and the San Francisco Airport environs.

The Roundtable will present the Jon C. Long Fly Quiet Awards at its next Regular Meeting on April 1, 2015 at 7:00pm. The meeting will be held at the David Chetcuti Community Room at Millbrae City Hall, 450 Poplar Avenue, Millbrae, California. I invite you to attend this event to accept the "Chairperson Award" on behalf of Air New Zealand. Please contact me at (650) 363-1853 by March 23, 2015 to confirm your attendance.

The San Francisco International Airport and the Roundtable appreciate the efforts of Air New Zealand to be a good neighbor and fly as quietly as possible at SFO. On behalf of the Roundtable and its Chairperson, we congratulate you and your airline on receiving this award.

Best regards,

James A. Castañeda, AICP
Roundtable Program Coordinator

cc: Roundtable Representatives and Alternates
Doug Yakel, SFO Director, Bureau of Community Affairs



March 16, 2015

Ms. Tracy Zhao, Station Manager
Air China
San Francisco International Airport
P.O. Box 250178
San Francisco, CA 94125-0178

Dear Ms. Zhao:

I am pleased to announce that Air China has been selected to receive the Annual San Francisco International Airport/Community Roundtable's Jon C. Long Fly Quiet Program "Most Improved Airline Award" for 2013-2014. This award is presented to the airline that exhibited the most improvement when the summary scores were computed for the year. Over the course of the 2013-2014 rating period, Air China has made an overall improvement of 2.40 points. Air China scores saw an increase from their fourth quarter 2013 score of 5.98 to impressive scores of 7.73 and 8.47 in the first and second quarters, respectively, for 2014. This is the first award for Air China from the San Francisco International Airport/Community Roundtable (Roundtable).

San Francisco International Airport's (SFO) Fly Quiet Program is a Roundtable initiative implemented by the Aircraft Noise Abatement Office. The purpose of the program is to encourage individual airlines to operate as quietly as possible at SFO. The Fly Quiet Program rates an airline's operation at SFO Airport in six categories: (1) the overall noise quality of each airline's fleet operating at SFO, (2) an evaluation of single overflight noise level exceedances, (3) a measure of how well each airline complies with the nighttime preferred noise abatement runways, an assessment of how well each airline adheres to the (4) Gap Departure as well as the (5) Shoreline Departure and (6) a measure of how well each airline flies the Foster City arrival procedures.

The Roundtable will present the Jon C. Long Fly Quiet Awards at its next Regular Meeting on April 1, 2015 at 7:00pm. The meeting will be held at the David Chetcuti Community Room at Millbrae City Hall, 450 Poplar Avenue, Millbrae, California. I invite you or an airline representative to attend this event to accept the "Most Improved Airline" award on behalf of Air China. Please contact me at (650) 363-1853 by March 23, 2015 to confirm your attendance.

The San Francisco International Airport and the Roundtable appreciate the efforts of Air China to be a good neighbor and fly as quietly as possible at SFO. On behalf of the Roundtable and its Chairperson, we congratulate you and your airline on receiving this award.

Best regards,

James A. Castaneda, AICP
Roundtable Program Coordinator

cc: Roundtable Representatives and Alternates
Doug Yakel, SFO Director, Bureau of Community Affairs



March 16, 2015

Mr. Aki Hamada Station Manager
Compass Airlines
c/o Delta Airlines
San Francisco International Airport
P.O. Box 280487
San Francisco, CA 94125-0487

Dear Mr. Hamada:

I am pleased to announce that Compass Airlines has been selected to receive the Annual San Francisco International Airport/Community Roundtable's Jon C. Long Fly Quiet Program Award for the "Quietest Overall Airline". This award is presented to an airline that holds the highest average summary score for the previous four quarters. For 2013– 2014, Compass Airlines had an overall Fly Quiet score of 8.48. This is the first award for Compass Airlines from the San Francisco Airport/Community Roundtable (Roundtable).

San Francisco International Airport's (SFO) Fly Quiet Program is a Roundtable initiative implemented by the Aircraft Noise Abatement Office. The purpose of the program is to encourage individual airlines to operate as quietly as possible at SFO. The Fly Quiet Program rates an airline's operation at SFO in six categories: (1) the overall noise quality of each airline's fleet operating at SFO, (2) an evaluation of single overflight noise level exceedances, (3) a measure of how well each airline complies with the nighttime preferred noise abatement runways, an assessment of how well each airline adheres to the (4) Gap Departure as well as the (5) Shoreline Departure and (6) a measure of how well each airline flies the Foster City arrival procedures.

The Roundtable will present the Jon C. Long Fly Quiet Awards at its next Regular Meeting on April 1, 2015 at 7:00pm. The meeting will be held at the David Chetcuti Community Room at Millbrae City Hall, 450 Poplar Avenue, Millbrae, California. I invite you to attend this event to accept the "Quietest Overall Airline" award on behalf of Compass Airlines. Please contact me at (650) 363-1853 by March 23, 2015 to confirm your attendance

The San Francisco International Airport and the Airport/Community Roundtable appreciate the efforts of Compass Airlines to be a good neighbor and fly as quietly as possible at SFO. On behalf of the Roundtable and its Chairperson, congratulations on receiving this award.

Best regards,

James A. Castañeda, AICP
Roundtable Program Coordinator

cc: Roundtable Representatives and Alternates
Doug Yakel, SFO Director- Bureau of Community Affairs



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AIRPORT NOISE NEWS

Regular Meeting # 295
April 1, 2015

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

Volume 27, Number 10

March 20, 2015

Germany

COMPRESSED AIR SUBSTANTIALLY REDUCES ENGINE FAN NOISE, GERMANY'S DLR FINDS

Researchers at the German Aerospace Center (DLR) said they have succeeded in demonstrating – for the first time anywhere in the world – that aircraft engine fan noise, one of the largest sources of inflight noise, can be reduced substantially by introducing compressed air.

To do this, they developed a method that blows air through several perforated rings fitted behind the fan to create noise cancellation that reduces the sound produced by the fan.

“This compressed air method has allowed us to reduce the particularly annoying rotor-stator noise that emerges from the engine at critical emission angles by up to 10 decibels. In terms of human perception, this is approximately equivalent to halving the volume,” said Lars Enghardt from the DLR Institute of Propulsion Technology.

“By far the most irritating noise produced at the engine intake is created where the main fan spins at high speed in front of an additional row of fixed-position blades, referred to as the stator,” he added.

(Continued on p. 39)

NextGen

MA CONGRESSMAN'S SUPPORT FOR NEXTGEN NOW WAIVERING DUE TO NOISE COMPLAINTS

At a March 3 House Aviation Subcommittee hearing, Rep. Michael Capuano (D-MA) told FAA Administrator Michael Huerta that his support for NextGen is waivering because he has not seen “enough bang for the buck in terms of reducing noise and increasing safety.”

“You can’t fan planes anymore at Boston [Logan International Airport]; Next Gen should allow that but it doesn’t,” the congressman, who represents residents of Boston and some surrounding suburban communities impacted by airport noise, told the FAA Administrator.

Huerta began responding to Capuano by noting that Performance-based Navigation procedures are making operations in the Boston area more efficient but Capuano cut him off snapping, “Complaints in Boston are going through the roof and it began with RNAV.”

The focus on the Aviation Subcommittee hearing was the new FAA reauthorization legislation.

House Transportation and Infrastructure Committee Chairman Bill Shuster (R-PA) and Aviation Subcommittee Chairman Frank LoBiondo (R-NJ) said in their

(Continued on p. 36)

In This Issue...

Technology ... German researchers demonstrate, for the first time anywhere, that compressed air can be used to cut engine fan noise by up to 10 dB - p. 38

... NASA LEAPTech project demonstrating benefits of quieter electric propulsion for aircraft - p. 39

... NASA shape-changing flap project achieves major milestone with modified G III flight - p. 40

NextGen... MA congressman tells Huerta his support for NextGen is waivering because he has not seen “enough bang for the buck” in noise reduction - p. 38

Helicopters ... Vice Chair of House Aviation Subcommittee urges FAA to reduce helicopter noise on North Fork of Long Island - p. 40

Awards ... DFW International's Sandy Lancaster and James Crites are the recipients of the 2015 UC Davis Gillfillan Award - p. 41

*Germany, from p. 38***Quieter All Around**

The fan noise suppression experiments were performed in the experimental Ultra High Bypass Ratio (UHBR) compressor test system in Cologne, Germany, operated by the DLR Institute of Propulsion Technology.

"We analysed the compressed air method using a realistic partial engine model installed in the test system and operated at a low rotational speed under normal approach conditions," explained Eberhard Nicke, describing the experiment.

To measure the volume, the researchers installed a frame fitted with microphones in front of the engine model. Then they moved the microphone frame in increments until they had covered every possible position in front of the intake.

"It was particularly important that the manner in which we controlled noise cancellation ensured a reduction in volume in every possible direction of emission, and not just one; and we succeeded," says Enghardt, who heads up the Engine Acoustics Department in Berlin.

Active Noise Reduction

German researchers have been exploring means of making engines quieter for some time, pursuing active noise reduction as an innovative technology.

"Active noise reduction involves the use of noise cancellation sources to suppress the output of the primary noise emitters. Initially, the methods used loudspeakers to produce a noise cancellation field. However, a system consisting of a large number of loudspeakers would have to be extremely robust, durable and reliable to be fitted to an engine, for instance at the intake. Furthermore, the use of high-performance magnets and amplifiers substantially increases the engine weight, which has negative repercussions on its efficiency," said Enghardt, explaining the disadvantages.

This prompted the acoustic specialists at the DLR Institute of Propulsion Technology to design an innovative procedure to use compressed air as a means of actively reducing engine noise.

The air this introduces exerts alternating forces on the guide vanes behind the main fan, creating active noise cancellation, provided that the air supply is controlled precisely.

Project partner Airbus Group Innovations used the underlying principle to build a computerised control system that precisely and automatically adjusts the ideal circumferential position that the two perforated rings that provide the fan noise cancellation adopt, and also how much air they introduce.

In addition to being lightweight, the new system comes with the advantage that, compared with the loudspeaker solution, is easier to integrate into modern engine designs. Modern aircraft engines already have a compressed air system designed for a variety of purposes, which can be upgraded and adapted for acoustic applications.

Initial DLR tests conducted on the new compressed air

technique in 2012 had already shown, in principle at least, that this method would be suitable for noise cancellation.

At the time, the experiment was conducted in cooperation with the two industrial partners, Rolls-Royce Germany and Airbus Group Innovations, as part of the Aerospace Research Programme IV funded by the German Federal Ministry for Economic Affairs and Energy.

NASA**LEAPTECH TO DEMONSTRATE ELECTRIC PROPULSION BENEFITS**

The arrival of a unique experimental demonstrator at NASA's Armstrong Flight Research Center on Feb. 26 may herald a future in which many aircraft are powered by electric motors, NASA said.

The Leading Edge Asynchronous Propeller Technology (LEAPTech) project will test the premise that tighter propulsion-airframe integration, made possible with electric power, will deliver improved efficiency and safety, as well as environmental and economic benefits.

Key potential benefits of LEAPTech include decreased reliance on fossil fuels, improved aircraft performance and ride quality, and aircraft noise reduction.

LEAPTech is a key element of NASA's plan to help a significant portion of the aircraft industry transition to electrical propulsion within the next decade.

According to Mark Moore, an aerodynamicist at NASA Langley Research Center, "LEAPTech has the potential to achieve transformational capabilities in the near-term for general aviation aircraft, as well as for transport aircraft in the longer-term."

Over the next several months, NASA researchers will perform ground testing of a 31-foot-span, carbon composite wing section with 18 electric motors powered by lithium iron phosphate batteries.

The experimental wing, called the Hybrid-Electric Integrated Systems Testbed (HEIST), is mounted on a specially modified truck. Testing on the mobile ground rig assembly will provide valuable data and risk reduction applicable to future flight research.

Instead of being installed in a wind tunnel, the HEIST wing section will remain attached to load cells on a supporting truss while the vehicle is driven at speeds up to 70 miles per hour across a dry lakebed at Edwards Air Force Base. Preliminary testing, up to 40 mph, took place in January at Oceano County Airport on California's Central Coast.

The LEAPTech project began in 2014 when researchers from NASA Langley Research Center and Armstrong partnered with two California companies, Empirical Systems Aerospace (ESAero) in Pismo Beach and Joby Aviation in Santa Cruz. ESAero is the prime contractor for HEIST responsible for system integration and instrumentation, while Joby is responsible for design and manufacture of the electric

motors, propellers, and carbon fiber wing section.

The truck experiment is a precursor to a development of a small X-plane demonstrator proposed under NASA's Transformative Aeronautics Concepts program. Researchers hope to fly a piloted X-plane within the next couple years after removing the wings and engines from an Italian-built Tecnam P2006T and replacing them with an improved version of the LEAPTech wing and motors. Using an existing airframe will allow engineers to easily compare the performance of the X-plane with the original P2006T.

Each motor can be operated independently at different speeds for optimized performance.

NASA

SHAPE-CHANGING FLAP PROJECT REACHES MAJOR MILESTONE

NASA's Adaptive Compliant Trailing Edge (ACTE) project achieved a major milestone at NASA's Armstrong Flight Research Center on Feb. 18 when a modified Gulfstream G-III completed a flight with 15 degrees flap deflection, thus successfully meeting all of the project's primary requirements.

Flight tests have been performed with deflections ranging from zero to 15 degrees, with plans for flights up to 30 degrees of deflection. Although the flexible ACTE flaps are designed to morph throughout the entire range of motion, each test is being conducted at a single fixed setting in order to collect incremental data with a minimum of risk.

The ACTE project is a joint effort between NASA and the U.S. Air Force Research Laboratory (AFRL) at Wright-Patterson Air Force Base, Ohio, to advance compliant structure technology for use in aircraft to significantly reduce drag, structural weight, and aircraft noise.

It is part of NASA's Environmentally Responsible Aviation (ERA) project to explore and document the feasibility, benefits and technical risk of vehicle concepts and enabling technologies for reducing aviation's impact on the environment.

ACTE technology has the potential to be retrofitted to existing airplane wings or integrated into entirely new airframes. ACTE enables engineers to reduce wing structural weight and to aerodynamically tailor the wings throughout the flight envelope to promote improved fuel economy and more efficient operations, while reducing environmental and noise impacts.

Flight testing at Armstrong is key to proving the concept's airworthiness.

Last year, researchers replaced the G-III's conventional aluminum flaps with advanced, shape-changing assemblies that form seamless bendable and twistable surfaces. The revolutionary flaps were designed and built by FlexSys, Inc., of Ann Arbor, Michigan, with AFRL funding based on FlexSys patented technology.

"Reaching our minimum success criteria for the ACTE Integrated Technology Demonstration is a testament to the exceptional cooperation and collaboration toward the success of this flight campaign between NASA, AFRL and FlexSys, the inventor of the technology," said Ed Waggoner, Integrated Aviation Systems Program Director in NASA's Aeronautics Research Mission Directorate.

"Every milestone we achieve helps us to better understand how these enabling technologies reduce aviation's impact on the environment."

NextGen, from p. 38

opening statement that a key area of focus in the new FAA reauthorization will be privatizing the air traffic control system.

Noting that other countries have successfully privatized their air traffic control systems, Shuster asked the FAA administrator if this was the right time to do so in the United States.

Huerta said that he and Transportation Secretary Anthony Foxx are open to the idea of restructuring the U.S. air traffic control system but stressed we must make sure there are no unforeseen consequences in doing so.

Shuster countered that other countries have privatized their ATC systems with no problems but Huerta said the U.S. system is unique and will require "uniquely American solutions" to privatizing ATC.

"Our system is unique in size and composition," he told the Aviation Subcommittee. "We need an operational model that works for the U.S."

The question of how environmental impacts of revised air traffic procedures would be handled under a privatized ATC system was not addressed but will need to be if the idea moves forward.

Helicopters

AVIATION SUBCOM. VICE CHAIR URGES ACTION ON COPTER NOISE

Vice Chairman of the House Aviation Subcommittee Rep. Lee Zeldin (R-NY) recently joined with local elected officials and community groups on Long Island to stress the importance of finding an immediate solution to the helicopter noise issue on the East End of Long Island.

"The persistent issue of helicopter noise on the East End, summer after summer, has become an increasing impediment on the quality of life of many of my constituents," Zeldin said at a March 8 rally.

"That's why I am calling on the FAA to find an immediate solution for this problem, especially since it continues to get worse ... My constituents cannot afford to have another season ruined by disruptive noise. This is an important quality of

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life concern that must be resolved.”

On March 2, Zeldin sent a letter to FAA Administrator Michael Huerta urging him to use “rotating points of entry over land” and enforce the 2,500 foot minimum altitude set in FAA’s 2012 North Shore over-water helicopter route.

That rule was successful in mitigating disruptive helicopter noise on other parts of Long Island but exacerbated the problem on Long Island’s North Fork, Zelin told Huerta.

He also urged the FAA Administrator to stand by assurances it made to East Hampton and to his predecessor in 2012 that the Town would not be subject to the Airport Noise and Capacity Act after Dec. 31, 2014, and could impose airport use restrictions without FAA approval.

The Town of East Hampton is expected in early April to approve four airport noise restrictions, including a weekend ban on helicopter operations during the summer season (27 ANR 18).

Awards

DFW’S LANCASTER, CRITES HONORED WITH 2015 UC DAVIS GILLFILLAN AWARD

Sandy Lancaster and James Crites, who have long championed noise mitigation efforts at Dallas-Ft. Worth International Airport, are the recipients of the 2015 Walt Gillfillan Award.

The award is presented annually at the UC Davis Aviation Noise & Air Quality Symposium to an individual or organization whose exemplary achievements in and contributions to the field of environmental aviation deserve special recognition.

Sandy Lancaster currently serves as Interim Assistant Vice President for DFW’s Environmental Affairs Department. She oversees DFW’s Noise Compatibility Office, evaluates local development to assure maximum land use compatibility by local jurisdictions, operates and maintains the airport’s permanent noise monitoring system, monitors aircraft and community noise levels, and interacts with the public on noise issues.

She also assisted the FAA in the development and successful implementation of new RNAV departures procedures at DFW, including NEPA documentation and community educational forums.

James Crites currently serves as Executive Vice President for the Operations Division of DFW International where he oversees the activities of Operations, Energy and Transportation Management, Asset Management, Department of Public Safety, Planning and Environmental Affairs.

Prior to that, he worked in several key management positions at American Airlines.

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Aircraft Noise Abatement Office

Glossary of common Acoustic and Air Traffic Control terms

A

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

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

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

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

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

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

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

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

Arrival – The act of landing at an airport.

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

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

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

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

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

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

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

B

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

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

C

Center – See ARTCC.

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

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

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

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

D

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

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

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

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

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

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

Displaced Threshold - A threshold that is located at a point on the runway other than the physical beginning. Aircraft can begin departure roll before the threshold, but cannot land before it.

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

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

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

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

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

E

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

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

F

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

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

G

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

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

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

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

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

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

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

H

High Speed Exit Taxiway – A taxiway designed and provided with lighting or marking to define the path of aircraft traveling at high speed from the runway center to a point on the center of the taxiway.

I

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

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

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

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

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

J

K

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

L

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

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

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

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

M

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

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

N

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

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

Navaid – Navigational Aid.

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

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

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

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

NMS – See RMS

Noise Contour – See CNEL and DNL Contour.

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

O

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

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

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

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

P

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

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

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

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

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

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

Q

R

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

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

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

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

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

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

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

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

S

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

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

SENEL – Single Event Noise Exposure Level - The noise exposure level of a single aircraft event measured over the time between the initial and final points when the noise level exceeds a predetermined threshold. It is important to distinguish single event noise levels from cumulative noise levels such as CNEL. Single event noise level numbers are generally higher than CNEL numbers, because CNEL represents an average noise level over a period of time, usually a year.

Single Event – Noise generated by a single aircraft over-flight.

SOIA – Simultaneous Offset Instrument Approach

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

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

T

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

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

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

Threshold – Specified boundary.

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

U

V

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

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

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

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

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

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

W

X

Y

how to reach us

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