

September 21, 2016

The Honorable Michael M. Honda
United States House of Representatives
1713 Longworth House Office Building
Washington, D.C. 20515

Dear Congressman Honda:

I am writing in response to your recent letter (Attachment A) requesting data and information regarding Mineta San José International Airport (SJC)-bound flights over the City of Sunnyvale. We welcome the opportunity to respond to your request.

In response to your request, I enclose the following data:

1. A picture of the north and south flow approach paths (Attachment B);
2. A table of the number of days south flow air traffic (requiring aircraft landings from north to south) have occurred in each month of this year and comparing this year to the five previous years (Attachment C);
3. A graph showing the use of the south flow approach on a month-by-month basis from 2011-2016 (Attachment D); and
4. A table showing the total number of aircraft operations (commercial and general aviation) for the past five and a half years, the number of south flow operations during that same time period, the percentage of south flow operations compared to total operations for each year, and the average number of south flow operations per south flow day (Attachment E).

However, before I comment on the enclosed data, I wish to share an explanation recently provided by SJC staff to a number of Sunnyvale residents who have contacted the Airport to express their concern about SJC-bound flights over Sunnyvale. The explanation illustrates the reason flights are sometimes required to fly over Sunnyvale before landing in San José. Because it provides the basic reason for the overflights, I therefore believe it is a good place to start our response to your request for information.

Why are SJC-Bound Aircraft Flying over Sunnyvale?

For safety reasons, aircraft land and depart into the wind. At SJC, that normally means aircraft land and depart from south to north into the prevailing northerly winds. However, for the same safety reasons, when the winds change and come predominantly from the south, the FAA directs aircraft to take off and land into these southerly winds, requiring the Airport to operate in "south flow" mode. South flow refers to an alternate arrival path into and departure path out of SJC in which aircraft land from the north and take off towards the south. This allows aircraft to land

and take off into the wind when it is blowing from the south. South flow days occur an average of about 15 percent of the time during the year.

Starting this summer, the SJC has experienced a high number of morning winds coming from the south that has required the increased use of south flow arrival and departures. The winds are not only coming earlier, they are lasting longer. During these mornings aircraft must follow a basic traffic pattern over the area west of SJC over Santa Clara and Sunnyvale, before turning east in the area over Moffett Airfield to prepare to land at SJC. As these weather systems pass, Air Traffic Control re-directs aircraft to arrive from the south over downtown San José and SJC returns to its normal "north flow" configuration. Attachment B contains a picture of the north and south flow arrival paths.

We do not know what has caused the change in wind patterns this summer. However, the net result of the south winds starting earlier in the day has been longer south flow operations during the morning hours. It has been most prevalent starting from 6am until 11am, when the prevailing wind generally shifts back to its more common southern direction.

Please be assured that the arrival paths into and out of SJC have not changed over the years. While all of the flights operating in south flow are under the control of the FAA Air Traffic Control Tower, they are simply being re-routed to allow aircraft to take off and land into the wind, while maintaining safe separation from other SJC aircraft and aircraft operating in and out of the other Bay Area airports. One factor in the amount of aircraft noise residents are hearing: depending on the amount of cloud cover on a given south flow day, aircraft may or may not fly along a specifically designated flight path that has been published through the FAA for a number of years.

Wind directions in the mornings can be determined by any interested member of the public by referring to WebTrak (<http://www.flysanjose.com/fl/environmental.php?page=monitor>), a tool provided by the SJC's Noise Office to allow residents to track aircraft over their neighborhoods. The weather in WebTrak is in real time and is measured from instruments at ground level just off the runways at SJC.

How often are "South Flow" Flights Occurring over Sunnyvale?

Per your request, Airport staff reviewed the number of days the south flow approach has been used for each month of this year and compared the numbers for this year to the five previous years. Attachment C contains the numbers we found.

For the first eight months of 2016, SJC-bound aircraft have flown been in south flow 108 days. January had the highest number of days with 22, while May had the fewest days with three. The average number of south flow days per month was 13.5 (The average rises to 15 days per month if the three days in May are not counted.) A review of the data showed the number of south flow days per month increased from 2011 to 2012, but both 2013 and 2014 had fewer south flow days than 2012, although the number of south flow days increased each successive year between 2013 and 2015. Based on the first eight months of this year, it appears that 2016 will see fewer south

flow days (an estimated 162 days for the year) than 2015. In addition, you can see from the table in Attachment C and graph in Attachment D, the number of south flow days varied from month to month within each year, creating no clear pattern, as would be expected when the decisions to reverse the landing approach is based on daily wind conditions.

However, counting the number of south flow days does not provide useful information about how many flights took place on a given south flow day. The table only reflects the number of days at least one south flow operation occurred. Although the Airport does not have the resources to analyze the number of flights over Sunnyvale and how long they lasted for every day they occurred over the last five-plus years, to provide you with some additional context, Attachment E shows the number of air operations (one operation is one takeoff or one landing for both commercial and general aviation) that have occurred each year from 2011 through August 2016. The table also provides data on: 1) the total number of south flow operations (takeoffs or landings from north to south) during the same period; 2) the percentage of south flow operations as part of the total number of Airport operations for each year; and 3) the average number of south flow operations (takeoffs or landings) that occurred on each south flow day of a given year.

The table shows that while the total of operations generally increased from 131,000 in 2011 to just over 140,000 operations in 2015 (SJC has added more flight service over the years), there were about 4,000 fewer south flow operations in 2015 than in 2011. In terms of the average number of flight operations on the south flow days, not surprisingly, the years with the lowest percentage of south flow operations (2013 and 2015) also saw the lowest average number of south flow operations per day (53 and 66 respectively). 2014 had highest number of south flow operations by number (21,473) and the highest average number of south flow flights per day (117) during the five-plus years reviewed.

While 2015 had an average of 66 south flow operations on south flow days – among the fewest south flow operations per day since 2011, the first eight months of 2016 have seen an average of 109 south flow operations per south flow day – a significant increase compared to 2015. At 16 percent of all SJC operations, the percentage of south flow operations thus far in 2016 is also the highest of the six years reviewed by staff. With the combination of southern winds that are starting earlier in the day and lasting longer, we assume the increase in south flow operations from 2015 to 2016 is the noticeable difference in aircraft noise Sunnyvale residents are hearing.

We can provide no explanation for why the winds are starting earlier and lasting longer this year than in years past. We can only say that when the wind conditions warrant it, FAA air traffic control requires aircraft to land from the north.

Overall, our review of the data shows that while the number of flight operations at SJC have generally been increasing over the last four to five years, there is no clear correlation between the number of flight operations, the number of south flow days and the number of south flow flight operations on those days. Again, the lack of correlation is consistent with occurrences that are based on a variable such as daily wind conditions. The current year's increase in south flow

operations notwithstanding, we do not believe it necessarily presages an even higher level of south flow operations in future years.

Has the Implementation of the FAA's Next Generation Air Transportation System Resulted in any Changes in the Approach to SJC?

We are not aware of any connection between the implementation of the Next Generation Air Transportation System and the level of use of south flow operations. As noted earlier in this correspondence, the south flow approach has been in place for many years and, in fact, the three highest years of south flow operations in recent years (2011, 2012 and 2014) occurred before the implementation of the Next Generation Air Transportation System. We have no reason to believe that the level of use of south flow operations is attributable to anything more than the wind conditions over the airfield on any given day.

I hope the information contained in this correspondence has been responsive to your information request and has provided a greater understanding of the SJC-bound flight activity over Sunnyvale and why it is occurring. If you believe we can be of further assistance, please do not hesitate to let me know.

Sincerely,



James Webb, Jr.
Assistant to the Director
Government and Legislative Affairs

cc: Mayor and City Council, City of Sunnyvale
Glenn Martin, Western-Pacific Regional Administrator/FAA
Kimberly J. Becker, Director of Aviation

Attachments:

- A: Letter from Congressman Michael Honda
- B: Map of North and South Flow Approaches
- C: Month-by-Month Number of Days of South Flow Air Traffic – 2011-2016
- D: Graph of Month-by-Month Use the South Flow Approach – 2011-2016
- E: Total Number of Aircraft and South Flow Operations – 2011-2016



Congress of the United States
House of Representatives

MICHAEL M. HONDA

17TH DISTRICT, CALIFORNIA

WASHINGTON OFFICE:

1713 LONGWORTH HOUSE OFFICE BUILDING

WASHINGTON, DC 20515

PHONE: (202) 225-2631

FAX: (202) 225-2699

<http://www.honda.house.gov>

DISTRICT OFFICE:

900 LAFAYETTE STREET, SUITE 206

SANTA CLARA, CA 95050

PHONE: (408) 436-2720

(855) 680-3759

FAX: (408) 436-2721

Jim Webb

Director, Government and Legislative Affairs

Mineta San Jose International Airport

1701 Airport Boulevard Suite B-1130

San Jose, CA 95110

Director Webb,

Thank you for joining me, the Federal Aviation Administration, and local leaders from my Congressional district on August 10, 2016, at Sunnyvale City Hall to discuss air traffic concerns.

As you may remember, the meeting was called to address the City of Sunnyvale's frustrations with being subject to an increase in air traffic, and therefore noise. One of the sources of increased noise identified during the meeting was air traffic landing at San Jose International Airport from the north, which has occurred more frequently in recent weeks. At the August 10 meeting, you noted that there indeed has been an increase in the number of days on which this approach has been used, but that you did not have a statistical analysis available.

In order for Sunnyvale residents and leaders to better understand the true scope of air traffic over their community and to ensure they are not subject to an undue air traffic and noise burden, they need information about the flights in their skies. To assist them in this effort, I request the following information about flights landing at SJC from the north, over Sunnyvale: the number of days this approach has been used each month of this year, a comparison of this to the past 5 years, and the reason(s) this approach was used more frequently. I would also like to know whether the implementation of the FAA's Next Generation Air Transportation System has resulted in any changes to this approach to SJC and if the increase in noise Sunnyvale residents have experienced can be attributed to NextGen. In order to be responsive to the inquiries of my constituents, I ask that you provide this information by September 20, 2016.

Again, I appreciate your participation in the August 10 meeting and I look forward to working with you to ensure that the quality of life of Sunnyvale residents is restored as much as possible.

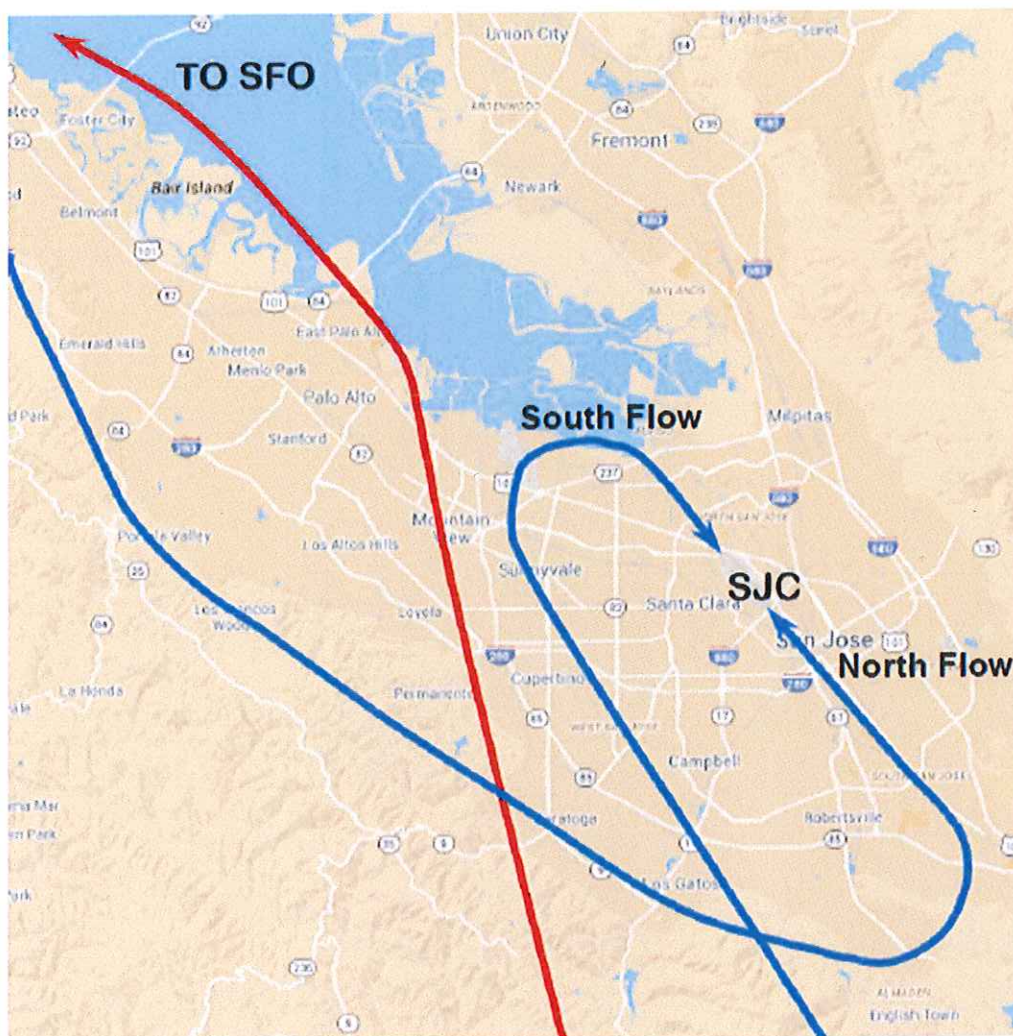
Sincerely,

Michael M. Honda
Member of Congress

CC: Mayor and City Councilmembers of the City of Sunnyvale

Map of North and South Flow Flight Paths

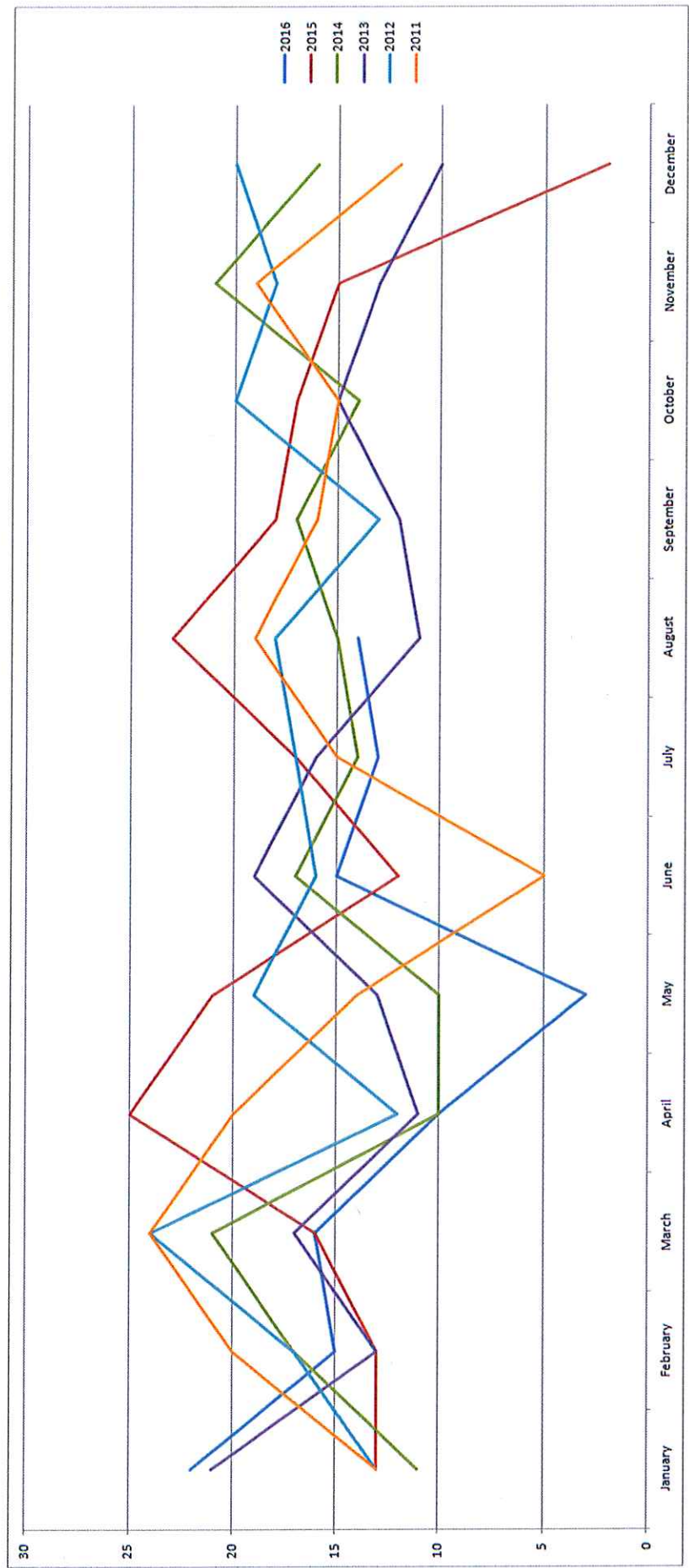
In the image below, the blue lines indicate north and south flow into SJC. The red line indicates arrivals into SFO over the Santa Cruz Mountains. Aircraft must proceed along the south flow corridor - any further west would impact SFO arrivals, and any further east and the aircraft wouldn't have sufficient space to complete the turn into the SJC. While northerly winds may prevail west of SJC, wind direction can differ drastically over the bay. As a result, the wind in communities west of the SJC may not correspond to the wind direction on the ground at SJC.



**Month-by-Month Number of days of South Flow Air Traffic
2011-2016**

	2016	2015	2014	2013	2012	2011
January	22	13	11	21	13	13
February	15	13	17	13	17	20
March	16	16	21	17	24	24
April	10	25	10	11	12	20
May	3	21	10	13	19	14
June	15	12	17	19	16	5
July	13	17	14	16	17	15
August	14	23	15	11	18	19
September		18	17	12	13	16
October		17	14	15	20	15
November		15	21	13	18	19
December		2	16	10	20	12
Total Days	108	192	183	171	207	192
Monthly Average	13.5	16.0	15.3	14.3	17.3	16.0

Number of Days of South Flow Approach Month-by-Month 2011-2016

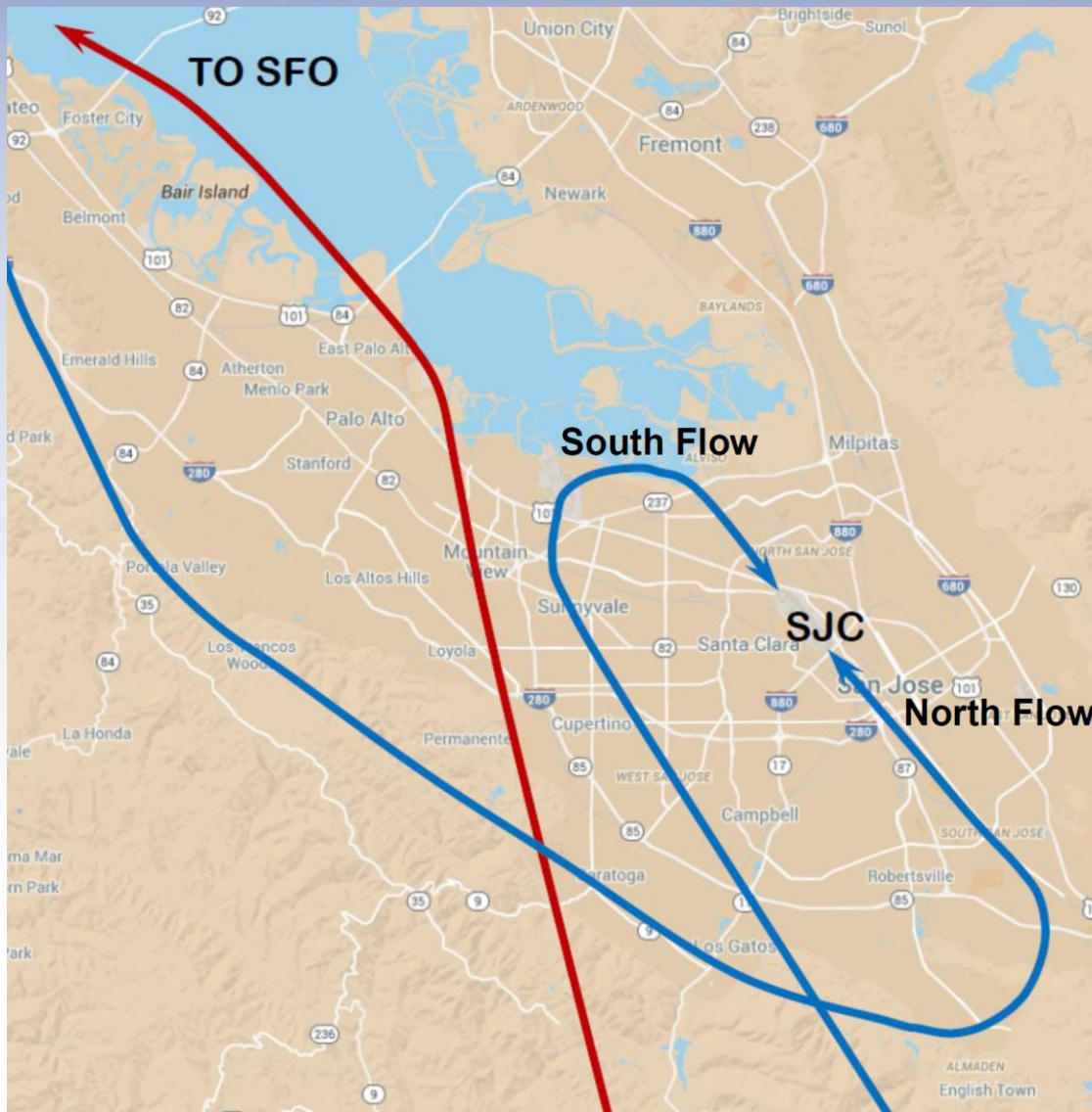


**Total Number South Flow Operation Compared to Total Number
of Operations – 2011-2016**

Year	Total Ops	South Flow Ops	% of Total Ops	Average Ops per South Flow Day
2016 (Jan-Aug)	73,078	11,791	16.1	109.2
2015	140,129	12,713	9.1	66.2
2014	135,872	21,473	15.8	117.3
2013	132,789	9,034	6.8	52.8
2012	127,181	18,639	14.7	90.0
2011	131,003	16,786	12.8	87.4

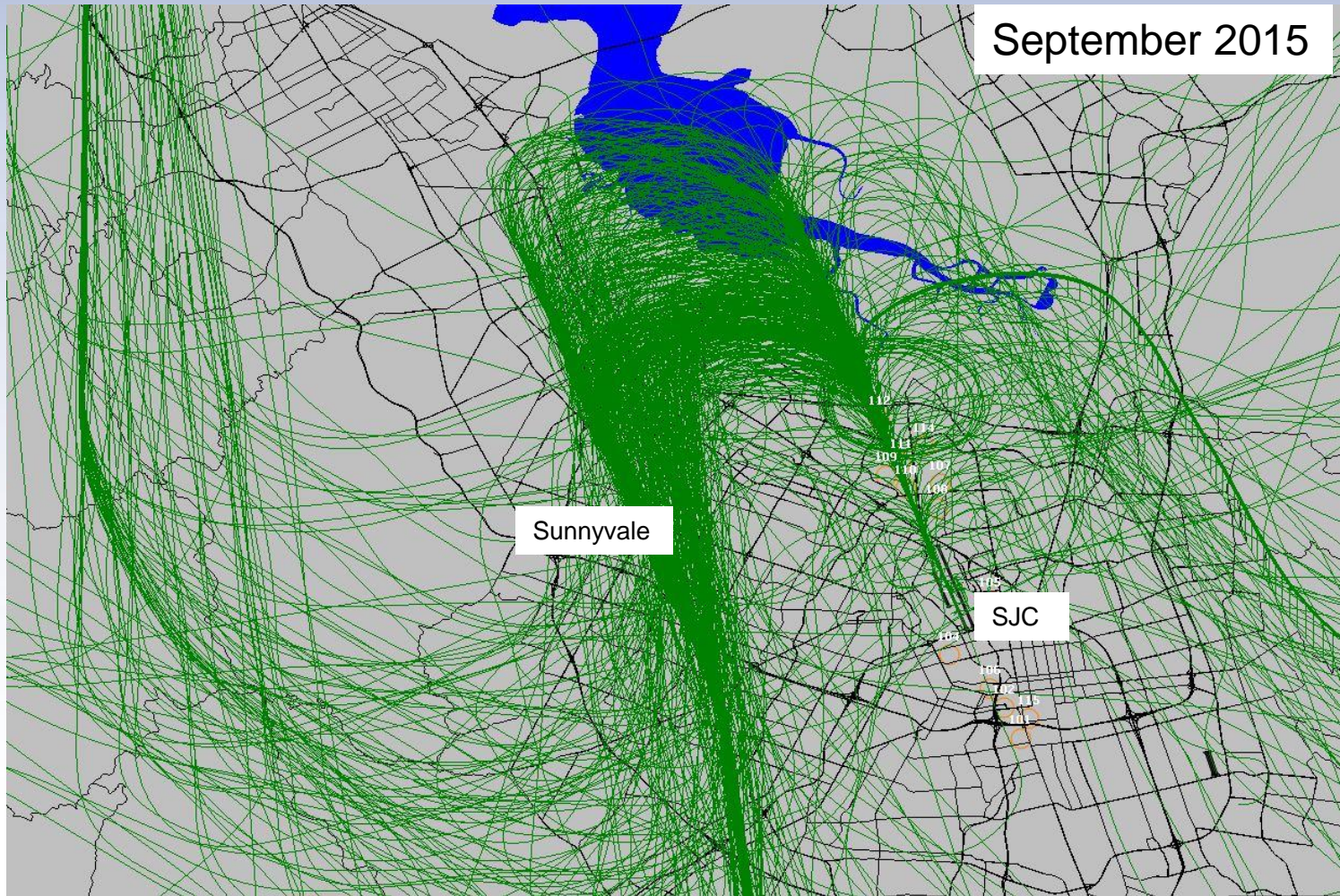
Mineta San José International Airport

South Flow Operations

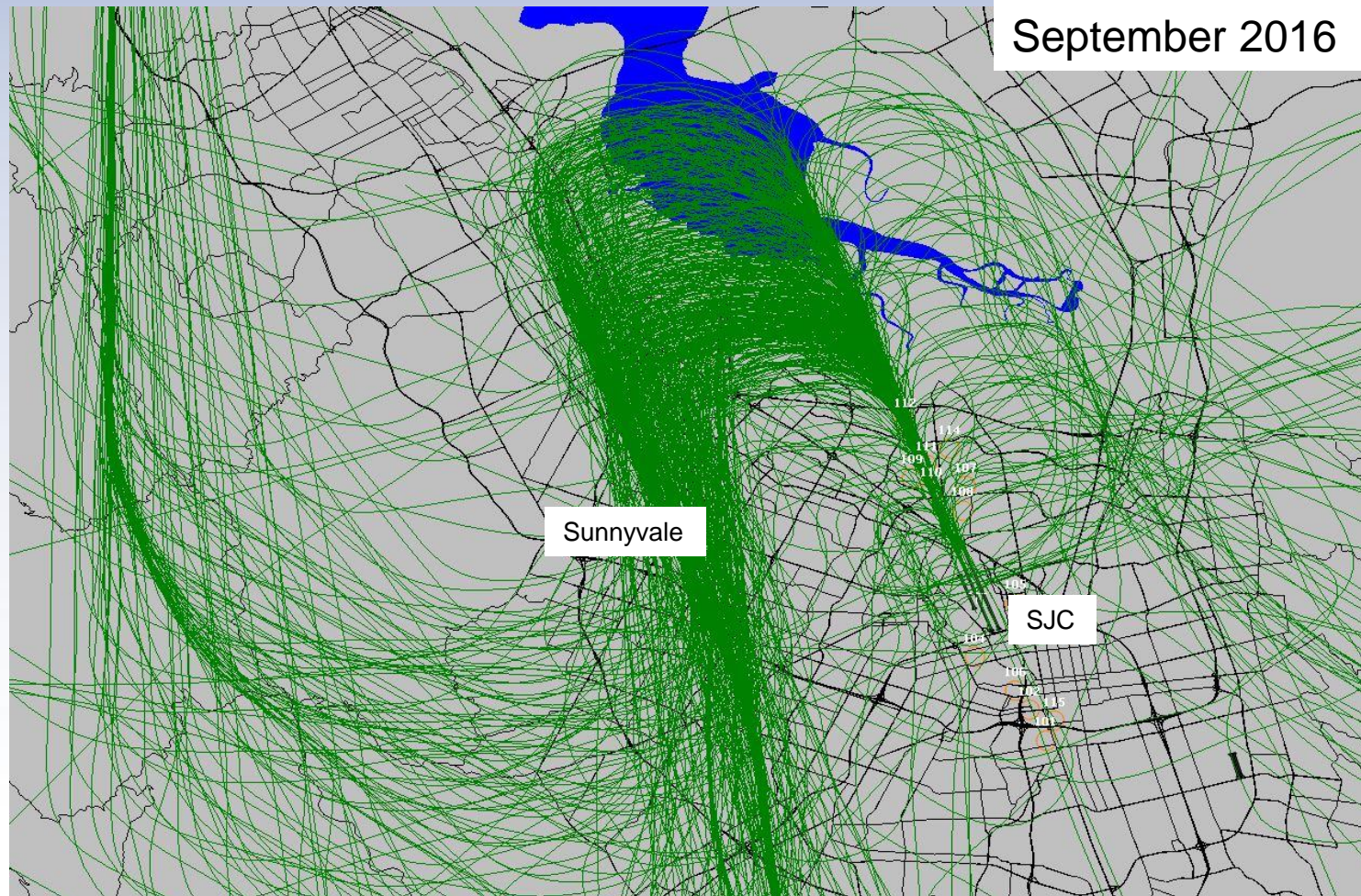


South Flow Flight Tracks Over Sunnyvale - 2015

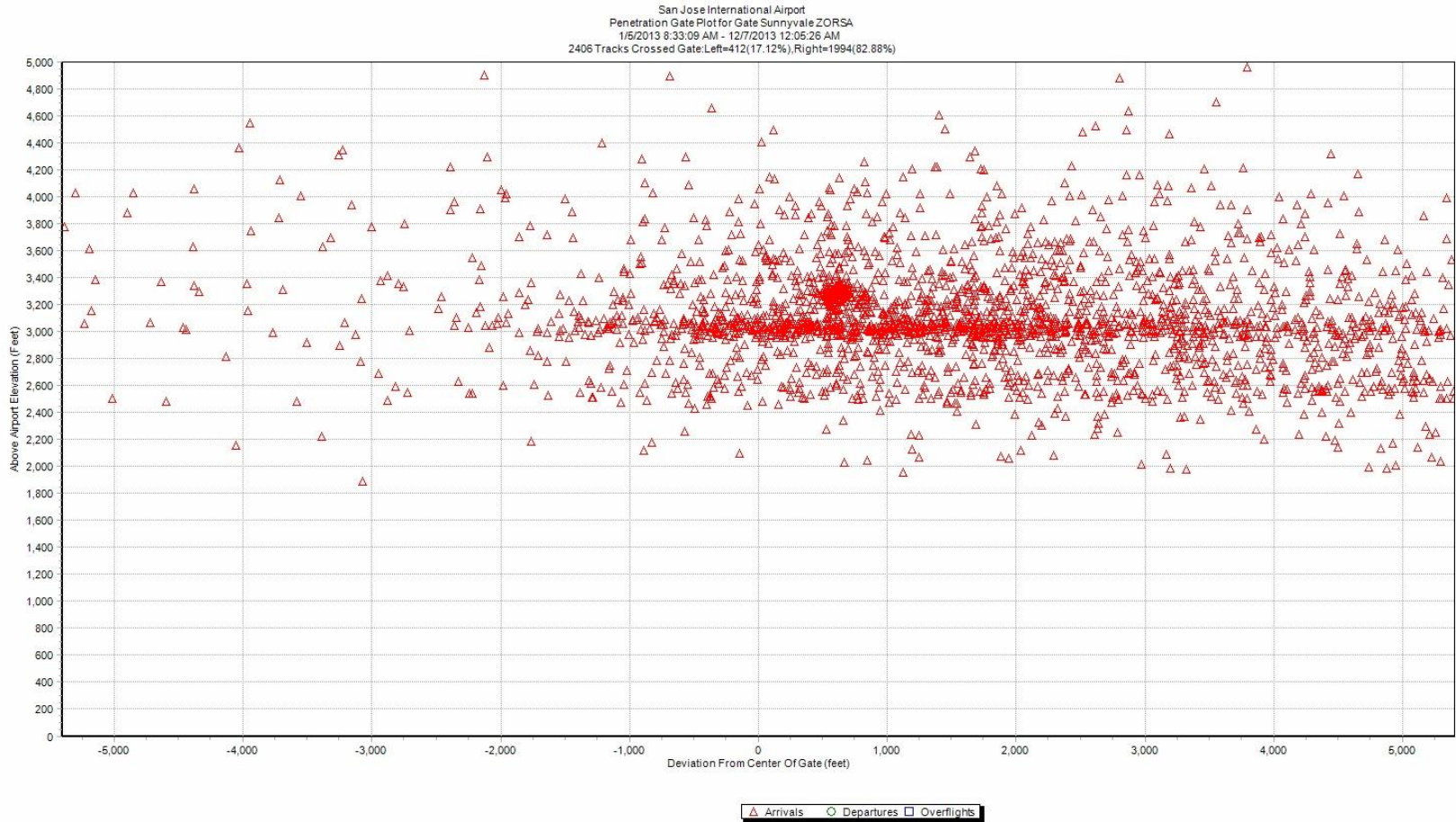
September 2015



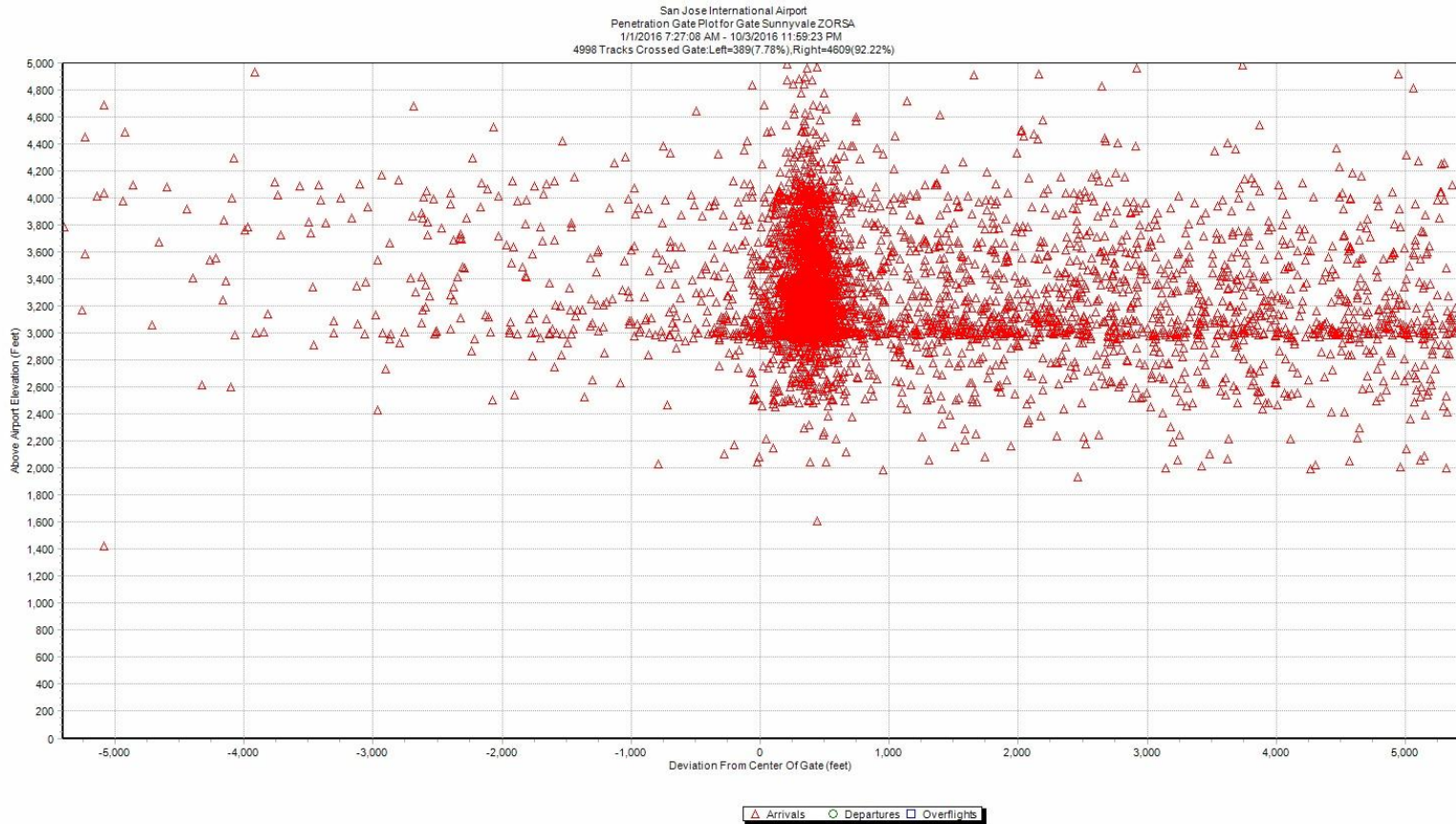
South Flow Flight Tracks Over Sunnyvale - 2016



SJC Flight Distribution Over Sunnyvale – 2013



SJC Flight Distribution Over Sunnyvale – 2016 (increased concentration)



Month-by-Month Number of Days of South Flow Air Traffic 2011-2016

	2016	2015	2014	2013	2012	2011
January	22	13	11	21	13	13
February	15	13	17	13	17	20
March	16	16	21	17	24	24
April	10	25	10	11	12	20
May	3	21	10	13	19	14
June	15	12	17	19	16	5
July	13	17	14	16	17	15
August	14	23	15	11	18	19
September	19	18	17	12	13	16
October	22	17	14	15	20	15
November		15	21	13	18	19
December		2	16	10	20	12
Total Days	149	192	183	171	207	192
Monthly Average	14.9	16.0	15.3	14.3	17.3	16.0

Total Number South Flow Operations Compared to Total Number of SJC Operations – 2011-2016

Year	Total Ops	South Flow Ops	% of Total Ops	Average Ops per South Flow Day
2016 (Jan-Oct)	127,379	20,107	15.8	134.9
2015	140,129	12,713	9.1	66.2
2014	135,872	21,473	15.8	117.3
2013	132,789	9,034	6.8	52.8
2012	127,181	18,639	14.7	90.0
2011	131,003	16,786	12.8	87.4

SJC Staff Response

Objective: To be as responsive as possible by providing information and data to the extent allowed by our expertise and resources.

SJC Staff Response

- ✓ *August 10* – Attended a discussion called by Congressman Honda on Sunnyvale noise issues.
- ✓ *September 21* – Responded to letter of inquiry from Congressman Honda on south flow operations.
- ✓ *October 3* – Briefed Sunnyvale Mayor and staff at SJC on south flow issue.

SJC Staff Response

- ✓ *October 18* – Participated in Sunnyvale town hall meeting on aircraft noise.
- ✓ *October 26* – Provided information to Sunnyvale officials on timing and deliberation process of the Select Committee on South Bay Arrivals

Recommendations

- ✓ Continue to be as responsive as our expertise and resources allow.
- ✓ Continue to be supportive of relief from the impact of aircraft noise on Sunnyvale residents *provided* the proposed solutions work for all concerned parties.