

COUNCIL AGENDA: 10/3/2017
ITEM: 6.1 (17-156)

Memorandum

TO: HONORABLE MAYOR AND
CITY COUNCIL

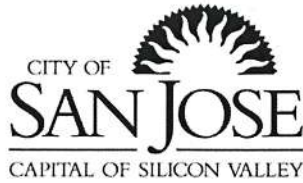
FROM: Toni J. Taber, CMC
City Clerk

SUBJECT: SEE BELOW

DATE: September 21, 2017

**SUBJECT: FORMATION OF THE AD HOC ADVISORY COMMITTEE ON SOUTH
FLOW ARRIVALS**

RECOMMENDATION: As recommended by the Transportation and Environment Committee on September 11, 2017, approve staff's report to allow staff to work with Santa Clara County cities and the County to form the Ad Hoc Advisory Committee on South Flow Arrivals.



Memorandum

TO: TRANSPORTATION AND ENVIRONMENT COMMITTEE

FROM: John Aitken
Interim Director of Aviation

SUBJECT: FORMATION OF THE AD HOC ADVISORY COMMITTEE ON SOUTH FLOW ARRIVALS

DATE: August 21, 2017

Approved D. D. S. L. Date 8/31/17

RECOMMENDATION

Approve staff's report and forward to the full City Council a recommendation to allow staff to work with Santa Clara County cities and the County to form the Ad Hoc Advisory Committee on South Flow Arrivals.

OUTCOME

Approval of the recommendation would authorize Airport staff to work with Santa Clara County cities and the County of Santa Clara to form the Ad Hoc Advisory Committee on South Flow Arrivals. The Ad Hoc Advisory Committee would be an advisory body comprised of elected officials from several local jurisdictions and would review the south flow arrival procedure and present recommendations to the FAA for consideration in reducing south flow noise impacts on surrounding communities. The FAA would also be a participant in the discussions. The Committee would be expected to complete its work within 120 days of its first meeting.

EXECUTIVE SUMMARY

Aircraft normally land at Mineta San José International Airport (SJC) from the south (over downtown San José) and depart heading north. However, for safety reasons, weather conditions sometimes require arriving aircraft to land from the north. The northern landing procedure, known as "south flow," requires aircraft to descend over parts of several surrounding communities, including Cupertino, Sunnyvale and Mountain View as they approach SJC. The south flow arrival approach generates significantly more noise complaints than the northern flow arrival approach.

For much of the past year, weather conditions around the Airport have required a greater use of the south flow procedure. In addition, as the FAA has deployed new air traffic control technology and, as aircraft have incorporated new equipment to taken advantage of the FAA's technology, the arrival path has become increasingly more precise. This has reduced the noise impacts for some residents but dramatically increased it for those residents living directly under the flight path.

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Over most of the past year, staff has seen a significant increase in the number of noise complaints from those residents living under the flight path in the most impacted communities. The number of monthly complaints received by the Airport rose from 716 complaints from 82 residents in July 2016 to more than 44,000 complaints from 376 residents in January 2017. About 96% of the January complaints originated in Sunnyvale and Cupertino. However, in recent months, the number of complaints has declined as weather conditions have not required the use of south flow procedures as frequently.

In November 2016 Sunnyvale residents attended the Airport Commission meeting to ask the Commission to address their noise concerns. The Commission requested staff to write the FAA to ask for solutions to address the south flow noise issue. While the FAA responded to staff's correspondence, the response offered no adjustments in the procedure.

Sunnyvale and Mountain View residents returned to the Commission in February 2017 to request the Commission's support for the formation of a roundtable noise committee to meet periodically with staff and FAA officials to discuss noise issues. In response, the Commission voted unanimously to recommend the formation of a roundtable noise committee that includes FAA participation.

In March, the Airport hosted a meeting organized by Congressman Ro Khanna's office. Elected officials from Sunnyvale, Mountain View, Cupertino, San José, the FAA and the Airport attended to discuss the south flow issue and possible solutions. There was consensus that it would be constructive to have public information and discussion forums to understand why the south flow procedure is used and to review possible solutions to reduce the noise for the most impacted residents. The FAA and the Airport would participate in the forums.

In response to the Commission's recommendation, staff reviewed the formation and structure of the Select Committee on South Bay Arrivals, which was an ad hoc noise committee formed in May 2016 by Congresswoman Anna Eshoo, Congresswoman Jackie Speier and former Congressman Sam Farr. The Select Committee brought together elected officials from the jurisdictions of three counties to look at the noise impacts of the FAA's 2015 implementation of its NextGen technology. The Committee ultimately made a series of consensus-based recommendations before disbanding in November 2016. The three Congressional offices endorsed and transmitted the Committee's recommendations to the FAA for review. The FAA is now studying those recommendations.

In reviewing the Select Committee model, staff concluded the ad hoc model is a good process for conducting a regional discussion on possible solutions to address the noise impacts of the south flow procedure. Staff is therefore requesting that Council approve the formation of the Ad Hoc Advisory Committee on South Flow Arrivals. The Committee would be an advisory body with no legal authority. Its purpose would be to provide potentially feasible and consensus-based recommendations to the FAA to reduce the noise impacts of the south flow procedure.

To encourage the maximum degree of inclusiveness and consensus, all Santa Clara County cities would be invited to participate on the Committee. FAA staff would also participate in the discussions. Airport staff would provide non-technical support.

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It is anticipated that the FAA would conduct detailed analysis, including safety and environmental reviews and seeking industry (e.g., the Airport and airlines) and air traffic controller feedback, for those recommendations the FAA assesses as “preliminarily feasible” before considering whether to initiate a formal amendment process. The Committee’s recommendation(s) would also be transmitted to the offices of Congressman Ro Khanna, Congresswoman Anna Eshoo, Congresswoman Zoe Lofgren and Congressman Jimmy Panetta for their information and review.

It is staff’s belief that an ad hoc committee will be the best approach to secure the appropriate level of FAA support for a solution that has strong regional consensus.

BACKGROUND

Increasing Noise Complaints about South Flow Operations

In the summer of 2016, Airport staff began receiving a growing number of noise complaints about the use of “south flow operations” at the Airport.

What Are South Flow Operations?

Normally, aircraft at SJC land descending from the south (over parts of downtown San José) and take off heading north. However, under certain weather conditions (mostly increased wind speed from the south), for the sake of operational safety, the FAA requires pilots of arriving aircraft to follow an arrival procedure that can take descending aircraft over parts of Cupertino, Sunnyvale, Mountain View and other communities as they prepare to land at SJC. When that arrival procedure is used, air operations are in “south flow.”

Recently, the use of the procedure has increased significantly as wind conditions that cause the need for south flow operations have started earlier in the day and have been lasting longer. In addition, since 2015, new air traffic control technology installed by the FAA and in aircraft have resulted in more precise and compacted arrival patterns, especially over Sunnyvale, Cupertino and Mountain View. While this has reduced noise for some residents, it has increased the noise for those residents living directly under the more precise arrival flight path. Attachments A-1 and A-2 show the flight path and how often it has been used over the last several years.

The greater use of south flow operations has resulted in a significant increase in noise complaints from the impacted residents, primarily in Sunnyvale and, to a lesser extent, Cupertino and Mountain View. For example, in July 2016, the Airport received 716 noise complaints from 82 residents in the region. However, in January 2017 more than 44,000 noise complaints were received from 376 residents. More than 96% of the January complaints originated in Sunnyvale and Cupertino. However, as weather conditions in recent months have required less use of the south flow procedure, there has been a notable decrease in the number of complaints and complainants.

Commission Response to South Flow Noise Concerns

Letter to the FAA

At the November 14, 2016 meeting of the Airport Commission, staff briefed the Commission about the growing number noise complaints related to the Airport's south flow operations. A number of Sunnyvale residents attended the meeting and requested the Commission to take action to address their noise concerns. Although the Airport has no jurisdiction over air traffic control procedures, in response to the residents' concerns, the Commission recommended that staff write to the FAA to request a review of the south flow operations procedures with a goal of identifying possible solutions to reduce the noise impact on residents. Staff prepared such a letter in November 2016. In January 2017, the FAA responded that changed weather conditions was causing the increased use of the south flow approach and that the approach "is the least favorable configuration" and "is not utilized more than necessary." However, the response offered no adjustments in the operation. Staff's November 2016 letter and the FAA's January 2017 response are contained in Attachments B and C.

Recommendation to Form a Noise Roundtable

Impacted residents attended the February 27, 2017 Commission meeting to again express their continued concerns about the south flow noise issue and to request the Commission support the formation of a noise roundtable, similar to the noise roundtable for SFO, to meet periodically to discuss noise issues. The SFO roundtable membership includes FAA participation and thus is a forum where the community, the FAA and the airport can discuss noise issues and possible solutions. The Commission voted unanimously (7-0) to recommend the formation of a noise roundtable that includes FAA participation.

In March 2017, staff participated in a meeting with Congressman Ro Khanna's staff, elected officials from Sunnyvale, Cupertino, Mountain View and San José (represented by Councilmember Chappie Jones), as well as FAA regional staff, to discuss the south flow issue and possible solutions. As part of the discussion, there was general agreement that it would be useful to have public information and discussion forums bringing the impacted communities and the FAA together to disseminate information on the issue and to reach consensus on possible solutions that the FAA would be willing to consider. The impacted communities want to communicate their concerns to the FAA and the FAA wants to discuss the issue with representatives who can speak for the impacted communities. These components are consistent with the basic function of a noise roundtable.

Given the number of complaints received by Airport staff and the specificity of the issue that has generated most of the complaints, staff looked to the 2016 Select Committee on South Bay Arrivals as the model process for conducting a regional discussion with the FAA on the south flow issue.

ANALYSIS

The Select Committee on South Bay Arrivals

In 2015 residents of communities in parts of Santa Cruz, Santa Clara and San Mateo counties voiced concerns about increased aircraft noise as a result of flight path changes related to the FAA's implementation of its NextGen technology. The focus of the NextGen program is to improve air traffic safety and efficiency. The implementation of the program resulted in the altering of flight paths into SFO and SJC that generated new noise impacts on the residents of communities in Santa Cruz, San Mateo and Santa Clara counties. To address the noise issue, Congressional representatives from the three counties (Congresswoman Anna Eshoo, Congresswoman Jackie Speier and former Congressman Sam Farr) worked together to form an ad hoc noise committee known as the Select Committee on South Bay Arrivals (the Select Committee). The Committee's overall charge was to:

1. Review proposals the FAA deemed feasible for addressing aircraft noise impacts related to its implementation of its NextGen program; and
2. Make consensus-based recommendations to the three Congressional offices to address the impacts. The Congressional offices would transmit the recommendations to the FAA for review.

"Feasible" was generally defined as solutions that would allow the FAA to meet its air safety and operational efficiency mandates.

The Select Committee consisted of twelve elected officials – four county supervisors and eight city councilmembers – representing all three counties. Alternates were also appointed. The Committee was chaired by Santa Clara County Supervisor Joe Simitian. Altogether, twenty jurisdictions (including one school district) were represented by the Committee. The FAA provided substantial technical support at each Committee meeting.

The Committee sought strong consensus among its membership on its recommendations as the FAA made it clear that it wanted regional consensus on recommendations. Therefore, early in its deliberation process, the Committee defined consensus as at least eight of twelve members with at least one vote from jurisdictions in each of the three Congressional districts represented on the Committee. In fact, a great majority of the Committee's 45+ recommendations were unanimous.

The Committee held an organizational meeting in early May 2016 to determine how they would operate. From late May to mid-November 2016, the Committee also had five technical briefings with the FAA (done mostly through conference calls). From mid-July through mid-November 2016 the Committee held ten working meetings. During the working meetings, there was robust discussion between Committee members and FAA staff. It was out of those discussions that the Committee made 45+ recommendations to the Congressional offices. The recommendations addressed not only the impacts of NextGen implementation but also other aircraft noise issues impacting the region, including the south flow issue. As part of its recommendations, Recommendation 2.13 of the Committee's final report contained the following comments:

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“Under normal conditions, aircraft arriving at San Jose International Airport (SJC) arrive from the south and depart heading north. During inclement weather, or a significant change in wind direction over the San Jose area, the takeoff and landing approaches are temporarily reversed with aircraft arriving at SJC from the north and departing to the south. This “Reverse Flow” brings arriving aircraft in at lower altitudes to the west of SJC, over the communities of Palo Alto, Mountain View, and Sunnyvale. It has been suggested that the “Reverse Flow” approach could instead arrive from the east of SJC, using a “Normal Flow” departure procedure that is not used during “Reverse Flow” conditions.

The FAA has advised the Committee that this proposed solution, however, has the potential to move existing noise to another community (a community not represented by the congressional districts that established the Select Committee). For that reason, the Select Committee has not endorsed this proposed solution. The FAA may, however, wish to examine whether this proposed solution, or a variation thereof, could be effectively implemented without shifting noise.”

The Committee adopted this recommendation by a unanimous vote of 12-0.

The Committee concluded its work on November 17, 2016 – just over six months after it began meeting. As of this writing, the FAA is reviewing the feasibility of the recommendations it accepted from the Committee. While the airports (SFO and SJC) and airlines were not represented on the Committee and were not asked to comment or to provide information to the Committee during its discussions, as key stakeholders, they will be consulted as part of the FAA’s feasibility review.

Proposal: The Formation of the Ad Hoc Advisory Committee on South Flow Arrivals

Airport staff is recommending the Council authorize staff to work with Santa Clara cities and the County and the FAA to form the Ad Hoc Advisory Committee on South Flow Arrivals. Committee objectives would include:

1. hearing public concerns and comments on the south flow issue;
2. identifying and discussing possible options to address the procedure’s noise impacts; and
3. adopting feasible recommendations for FAA consideration.

The Ad Hoc Advisory Committee would be an advisory body with no legal authority. The Committee’s purpose would be to provide potentially feasible and consensus-based recommendations to the FAA to reduce the noise impacts of the south flow procedure.

Every city in Santa Clara County, as well as the County of Santa Clara, will be notified of the Committee’s formation. Any jurisdiction that believes its residents are impacted or could be impacted by south flow operations will be welcome to participate on the Committee. Alternates should be appointed from each participating agency so that each member will be continuously represented on the Committee.

The Committee’s sole focus would be the south flow issue only. It was the south flow issue, and only the south flow issue, that prompted resident calls for Commission support of some type of

public forum to address the issue. Accordingly, the Committee's focus would be solely on south flow issues.

While not all Santa Clara County cities are affected by south flow operations, and those that are may not be affected to the same degree, staff believes that any community who believes it is impacted or could be impacted in the future by south flow operations, regardless of the degree of impact, can participate on the Committee. *The Committee will be expandable.* Cities that elect not to participate at the beginning of the review process may participate in later meetings if they believe the discussion topics may impact their communities. *However, the Committee should not adopt any recommendation that will impact a community that is not represented on the Committee.*

FAA staff will be available to participate in the Committee's discussions to provide technical expertise on operational issues and air space procedure design, to provide preliminary comment on the feasibility of proposed solutions, etc. However, FAA staff will not be Committee members and will not vote on Committee actions, including any recommendations. Airport staff will provide non-technical support, as needed. While the City of San José may participate as a member of the Committee, Airport staff, in its support role, will not be part of the Committee, will not participate in Committee discussion unless specifically asked to provide information and will not vote on Committee actions or recommendations.

The Committee would be convened for a 120-day period to: 1) hear public comments; 2) discuss and define the nature of the problem; 3) identify and discuss possible solutions to address/improve the problem; 4) reach consensus on possible solutions for FAA consideration; and 5) hear public comments on the recommended solution(s). The 120 days will begin at the first meeting after the initial organizational meeting.

Each participating jurisdiction will have one vote on the Committee. While there would ideally be unanimous consensus on any Committee recommendation, *staff recommends that at least a two-thirds vote of participating member jurisdictions would need to vote in the affirmative to adopt a recommendation.* For the sake of receiving FAA consideration, staff agrees with the FAA that the stronger consensus, the better. A primary objective of the Committee should be to find a high degree of consensus on recommendations that will encourage FAA consideration of those recommendations. In fact, the FAA has reaffirmed that it would like to see strong consensus on any adopted recommendation. Staff believes the FAA is less likely to consider recommendations that are adopted by only a slim majority of the Committee members.

Ideally, through discussions with the FAA, the Committee would develop consensus around one or more "preliminarily feasible" solutions. *The factors that would make a recommendation "preliminarily feasible" would be determined solely by the FAA* and outlined at the Committee's first meeting. Staff's assumption is that the FAA would provide feedback during the Committee's discussions on its assessment of the preliminary feasibility of any specific proposed solutions identified by the Committee so that the Committee does not invest an excess of time and effort on solutions the FAA would not assess as feasible.

It is important to note an FAA initial assessment of preliminary feasibility and adoption by the Committee does not ensure the recommendation will be implemented. If any solutions are

assessed as preliminarily feasible by the FAA and subsequently adopted by the Committee, the FAA would need to conduct detailed analysis to fully assess the feasibility of the recommendation. As part of this effort, the FAA will conduct formal environmental and safety reviews, and coordinate and seek feedback from affected members of the industry (e.g., the Airport and airlines) and the National Air Traffic Controllers Association (NATCA) before considering the initiation of a formal amendment process.

At the end of the Committee's review, its consensus-based recommendation(s) would also be transmitted to the Congressional offices for their information and review.

POLICY ALTERNATIVES

Alternative #1: Do not form an Ad Hoc Advisory Committee on South Flow Arrivals.

Pros: Air traffic control is a federal, not local, responsibility. Neither the Airport Commission – the Airport's current forum for addressing community noise concerns – nor the Airport staff have the personnel, expertise or authority to address the concerns of the public on the noise impacts of south flow operations.

Cons: Airport noise is a local issue for residents in the impacted areas. While the Airport has no authority for determining when the south flow procedure is utilized, the creation of an ad hoc advisory body of stakeholders could provide a mechanism to explore options for reducing noise.

Reason for not recommending: To be responsive to public concerns about the noise impacts of south flow procedure, staff believes an ad hoc advisory committee may be helpful in identifying possible solutions to reduce those impacts. In addition, staff believes an ad hoc advisory committee would be the best mechanism for hearing and addressing the concerns of the impacted communities and for providing recommendations to the FAA. Finally, staff believes that an ad hoc advisory committee has the highest potential for building a needed regional consensus on recommendations for consideration by the FAA.

PUBLIC OUTREACH

A copy of this report has been provided to several community groups interested in the issue, the mayors of each city in Santa Clara County, the Santa Clara County Board of Supervisors, the FAA and the Congressional offices representing Santa Clara County. Copies of the report were also shared with the Airport Commission as well as posted on the Airport's noise website for any interested member of the public to access.

In addition, should staff be authorized to work with the Santa Clara County's city mayors and to the Board of Supervisors to form the Committee, Mayor Liccardo would be asked to prepare a letter to encouraging them to participate and to identify primary and alternate members to serve on the Committee.

COORDINATION

This report was coordinated with the City Attorney's Office.

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COMMISSION RECOMMENDATION

As noted earlier, the Airport Commission took public input on the south flow issue at its November 2016 and February 2017 meetings. At both meetings, some members of the public called for the formation of a roundtable to discuss the south flow issue. The public call for a roundtable was stronger at the February 2017 meeting than the November 2016 meeting. At the February meeting, by a vote of 7-0, the Commission voted to recommend the formation of a roundtable that includes FAA participation.

Although this report was not ready in time for the May 8 Commission meeting, staff provided a high-level outline of the direction of the report to provide the Commission with an idea of what staff would be recommending to the Transportation and Environment Committee and to encourage the Commission to express any comments on staff's proposed approach. The Commission expressed no concerns or objections to the direction outlined by staff.

COSTS

Staff anticipates that most of the cost would be limited to Airport staff's time and some potential costs associated with graphic layout and printing of the final report (estimated to be about \$1,000). Staff's time will be spent working with the staffs of key stakeholders in organizing and supporting the Committee's meetings and supporting the drafting of the Committee's final report and recommendation(s).

CEQA

Not a Project, PP10-069 (a), Staff Reports/Assessments/Annual Reports/Informational Memos that involve no approvals of any City actions.

/s/

JOHN AITKEN

Interim Director of Aviation

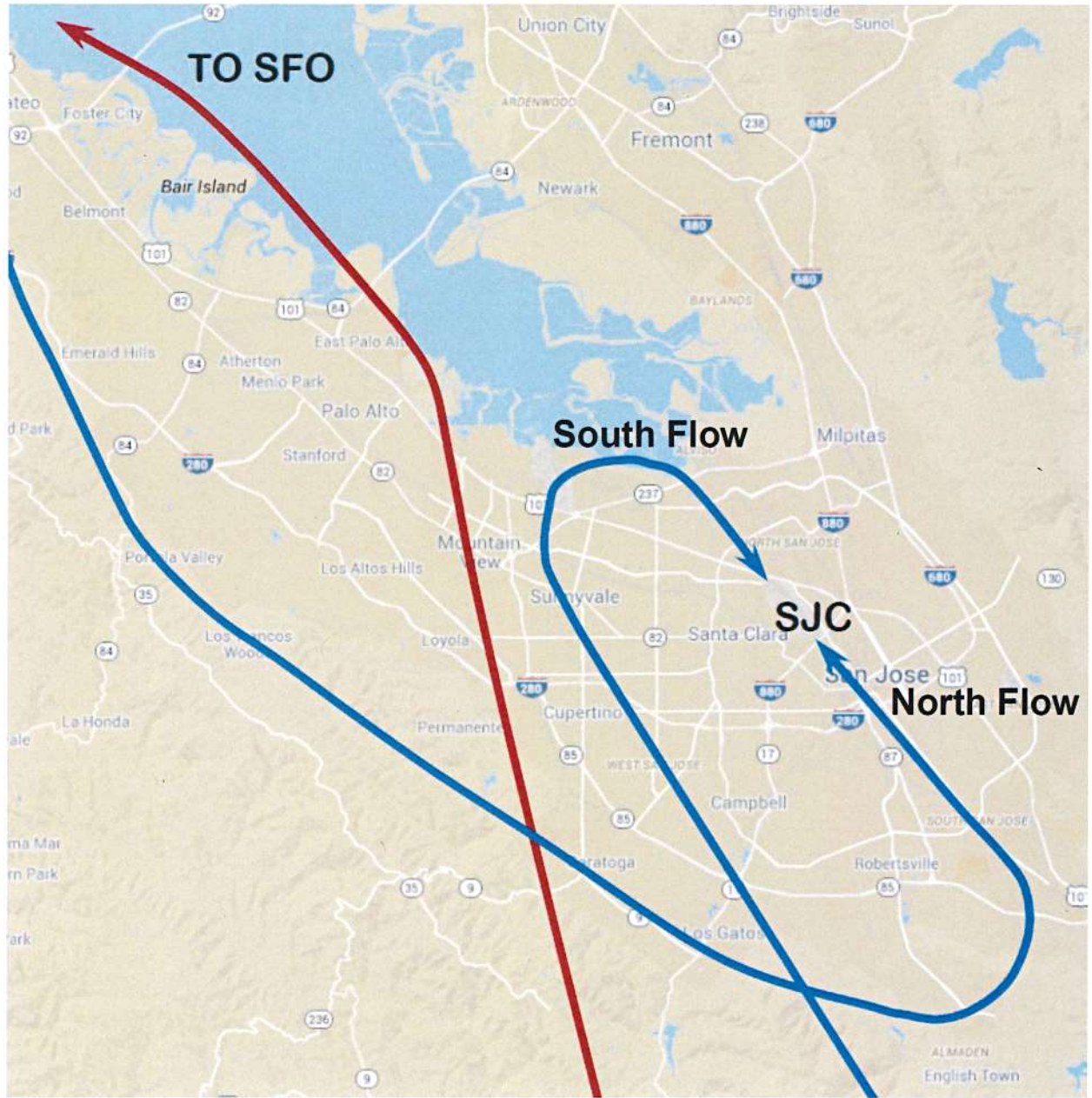
For questions, please contact Jim Webb, Assistant to the Director, at (408) 392-3609.

Attachment A-1: Diagram of South Flow Flight Path

Attachment A-2: Total Number of South Flow Operations Compared to Total Number of SJC Operations 2011-2016

Attachment B: November 2016 SJC letter to the FAA about south flow operational noise issues

Attachment C: January 2017 FAA response to SJC's November 2016 letter



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	153,419	24,033	15.7	139.7
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





ATTACHMENT B

November 30, 2016

Mr. Glen Martin
Regional Administrator
Western-Pacific Region
Federal Aviation Administration
P.O. Box 92007
Los Angeles, CA 90009

Subject: Noise Impacts of South Flow Landing Approach

Dear Mr. Martin:

Over the past several months the Norman Y. Mineta International Airport (SJC) staff has received a significant increase in concerns from Sunnyvale residents over the growing use and noise impacts of the south flow landing approach.

The most common concern expressed by Sunnyvale residents is the density of aircraft passing over their community. Specifically, the ZORSA waypoint on the RNAV Z approach is located directly over a residential neighborhood. Our analysis shows that, historically, when aircraft over the waypoint downwind of SJC runway 12R/L were dispersed over a wide area, there were few complaints from Sunnyvale residents. With the majority of aircraft now consistently passing within a narrow corridor over the waypoint, Sunnyvale residents are experiencing increased noise disturbance from the passing aircraft. Consequently, the number of complaints we are receiving from Sunnyvale is rapidly growing.

We have heard the complaints from multiple channels – directly from Sunnyvale officials, at a well-attended Sunnyvale town hall meeting, at our Airport Commission meeting and from numerous complaints received by the Airport's Noise Office.

Since air traffic procedures are within the sole jurisdiction the FAA, I am writing to ask if your staff could review south flow flight procedures with the goal of identifying possible solutions to reduce the noise impacts on Sunnyvale residents. We realize that safety cannot be compromised and that retaining operational efficiencies is critical. We also understand and support the FAA's policy of not simply shifting noise from one part of the region to another. However, within these parameters we would ask that the FAA identify possible solutions that work for all concerned parties and could bring some degree of noise relief to Sunnyvale residents.

As an airport that operates in a densely urban environment, we believe it is important to minimize the Airport's environmental impacts on surrounding communities to the extent allowed by safety and efficiency considerations. We are therefore encouraging the FAA to work with Sunnyvale officials, and other key stakeholders, to identify possible solutions. Towards that end, SJC stands ready to appropriately participate in any FAA review of this issue.

Mr. Glen A. Martin – Regional Director/FAA
November 30, 2016
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We appreciate your efforts to work with the region's cities on aircraft noise through the Select Committee on South Bay Arrivals. We hope you will be willing to undertake a similar approach on the south flow issue.

Sincerely,



Kimberly J. Becker
Director of Aviation

cc: Mayor and City Council – City of San José
Mayor Glen Hendricks – City of Sunnyvale



U.S. Department
of Transportation
Federal Aviation
Administration

Western-Pacific Region
Office of the Regional Administrator

P.O. Box 92007
Los Angeles, CA 90009-2007

JAN 06 2017

Ms. Kimberly J. Becker
Director of Aviation
Norman Y. Mineta
San Jose International Airport
1701 Airport Boulevard, Suite B-1130
San Jose, CA 95110-1206

Dear Ms. Becker:

Thank you for your letter dated November 30, 2016, regarding your concerns about growing use and noise impacts of the south flow landing approach.

Consistent with its statutory mission, the Federal Aviation Administration (FAA) continues to work to ensure the safe and efficient use of our national airspace system.

While safety remains the FAA's highest priority, the agency does attempt to address noise impacts by designing procedures over water and industrial areas when safety and efficiency permit. The FAA is also mindful that while changes to an approach may solve a noise issue in one area, they may simply shift the noise concern from one location to another.

ZORSA is on the Area Navigation (RNAV) Required Navigation Performance (RNP) Z to runway (RWY) 12 at San Jose International Airport (SJC) and is located over Sunnyvale. ZORSA is on the Radius to a Fix leg of the RNP approach and is used during RWY 12 operations. The location of ZORSA has not changed. The RWY 12 RNP approach was developed in 2011 and was not part of Metroplex. This RNP approach was modified in early 2016 by moving the fix HITIR approximately $\frac{3}{4}$ nautical miles to the southeast (away from Sunnyvale) and raising the altitude from 3,600 to 4,000 at HITIR.

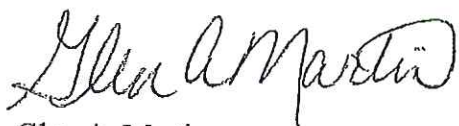
Not all aircraft fly the RNP approach into SJC and the Northern California Terminal Radar Approach Control (TRACON) (NCT) does still vector many aircraft for the SJC RWY 12 RNAV or Instrument Landing System approaches. Usually these aircraft are descending to 3,000 feet on the downwind, which overflies Sunnyvale. This practice also has not changed in over 20 years and NCT is unable to keep these aircraft higher due to the conflict with other traffic, including the San Francisco final.

Weather has dictated the use of SJC South flow more heavily, recently. For September 2015 vs September 2016, 10 percent of SJC traffic landed on a South flow runway (12's). For October 2015, 2 percent of traffic landed on SJC South flow runways, while traffic in October 2016, had 33 percent of SJC traffic landing on the South flow runways. Due to this increase caused by the weather conditions, the FAA understands why the community has noticed a change.

The wind and FAA Order 7110.65 determine the active runway at SJC. In accordance with paragraph 3-5-1 of FAA Order 7110.65, when there is a tailwind of 5 knots or more, SJC Tower must utilize RWY 12. This is the least favorable configuration for both the Tower and the TRACON and it is not utilized more than is necessary. Runway changes are complicated, they increase noise due to delay vectoring and holding and more importantly, introduce risk in the National Airspace System if done too often. SJC Tower will utilize forecasted wind reports to avoid "chasing" the wind, which may result in SJC being on RWY 12 for periods when the tailwind is less than 5 knots if the wind is forecasted to remain out of the east/southeast and increase in velocity.

Thank you for this opportunity to answer your inquiry. If you have any questions, please contact me or Tamara A. Swann, Deputy Regional Administrator, at (310) 725-3550.

Sincerely,



Glen A. Martin
Regional Administrator



Memorandum

TO: HONORABLE MAYOR AND
CITY COUNCIL

FROM: John Aitken

**SUBJECT: FORMATION OF THE AD HOC
ADVISORY COMMITTEE ON
SOUTH FLOW ARRIVALS**

DATE: September 25, 2017

Approved

D. D. S. L.

Date

9/26/17

SUPPLEMENTAL

REASON FOR SUPPLEMENTAL

To provide additional information requested by the Transportation and Environment Committee at its hearing of September 11, 2017, on staff's recommendation to form the Ad Hoc Advisory Committee on South Flow Arrivals and to recommend Council appoint a Councilmember and an alternate to serve on the recommended ad hoc committee.

RECOMMENDATION

If Council approves the formation of the Ad Hoc Advisory Committee on South Flow Arrivals, appoint a Councilmember and an alternate Councilmember to represent the City on the Committee.

BACKGROUND

While the Transportation and Environmental Committee unanimously adopted staff's recommendations for the formation of the Ad Hoc Committee, the Committee requested more information for Council on the following two questions:

1. Given that the Airport has operated in south flow configuration for many years, why has it recently become such a significant problem? What has led to the high number of south flow complaints in the past year?
2. What are some of the possible options to address the south flow noise issue the Ad Hoc Committee could review?

Providing more information on these questions is the primary purpose of this memo.

ANALYSIS

Why the Increase in Complaints Over the Past Year?

There are two interrelated primary reasons the Airport has seen an exponential increase in the number of noise complaints related to south flow operations:

1. ***The use of NextGen technology to guide aircraft.*** Following complaints, staff observed a higher proportion of aircraft utilizing existing GPS approaches developed in 2011. The option to utilize this approach is part of the FAA's nationwide Next Generation (NextGen) project to upgrade U.S. air traffic control from a ground-based radar system to a satellite-based radar system. The purpose of the nationwide upgrade is to increase efficiencies by enabling planes to fly prescribed paths into and out of congested air space. The U.S. air traffic system transported 720 million passengers in 2011 and is predicted to reach one billion passengers by 2024. Congress and the FAA believe that the air traffic control system must become more efficient to handle such an increase in passenger volume. NextGen technology and procedures are meant to address that concern.

As a result, the concentration of flight paths over residential neighborhood during south flow operations has significantly increased as flights that were previously more dispersed are now more concentrated. Those residents not living directly under the flight path may actually be experiencing a drop in aircraft noise. However, those residents living directly under the flight path would be seeing more aircraft and therefore hearing more noise. Attachment A-1 and A-2 provide a graphic illustration of the increased concentration of flights for south flow arrivals with the use of NextGen technology and procedures.

2. ***A historical increase in the number of days and the amount of time requiring the use of south flow operations.*** South flow operations are initiated by the FAA when certain weather conditions exist. The primary weather conditions that causes south flow operations to be implemented are the direction and velocity of the wind.

The prevailing wind over the airfield blows from north (off the bay) to south. As a general rule, aircraft want to land *into* the wind. However, when wind direction changes and the wind over the airfield blow from south to north and when the northern winds reach a certain velocity (five knots or more), for safety reasons, the FAA implements south flow operations so that aircraft are again landing into the wind because it can be harder – and therefore less safe – for an aircraft to takeoff and/or land with the wind at its tail. The airfield remains in south flow configuration until wind conditions change sufficiently to warrant returning to the airfield to north flow operations (landing from the south and departing towards the north). Winds are measured at the airfield and not at other locations in the region. Wind conditions around the Bay Area may differ from the Airport, such that the Airport may be in south flow, yet people in other areas may not perceive a change in wind direction.

In a January 6, 2017 response to then Airport Director Kim Becker (see Attachment C of the attached staff report of August 21, 2017), the FAA stated the use of the south flow configuration *“is the least favorable configuration for both the Tower and the TRACON (Northern California Terminal Radar Approach Control) and is not utilized more than is necessary. Runway changes are complicated. They increase noise due to delay vectoring and holding and more importantly, introduce risk in the National Airspace System if done too often.”*

In the past year, the weather conditions creating the need for south flow operations have occurred more frequently and lasted longer. Anecdotal experience is that the southerly winds used to last from about 6:00 a.m. to 10:00 or 11:00 a.m. However, in the past year, the conditions have occurred with more frequency and are lasting longer into the day. In its January 6, 2017 correspondence to former Director Becker, the FAA states that in October 2015 only 2 percent of the Airport’s traffic landed under south flow configuration. However, in October 2106 about 33 percent of the Airport’s traffic landed under south flow configuration.

Attachment B shows the number of flight operations (takeoffs and landings) in south flow from 2011 to 2016. In 2015 there was an average of 66 south flow flight operations on days when the Airport was operating in south flow. In 2016 the average was 139 south flow take offs and landings per day while in operating in south flow configuration.

The two aforementioned factors (greater concentration of arriving flights and an increase in the number of days and length of time the Airport must operate in south flow configuration) are combining to result in an increase in the aircraft noise now heard in the Sunnyvale, Mountain View and Palo Alto areas (and to a lesser extent in other adjacent cities). Hence, the complaints to the Airport Commission from the impacted residents, the Commission’s call for a noise roundtable and staff’s recommendation to form the Ad Hoc Advisory Committee on South Flow Arrivals.

What are Some of the Options to Address South Flow Noise Impacts?

The Committee also asked what are some of the possible options that may be recommended to the FAA to address the south flow noise impacts on the impacted communities? Airport staff does not have any role in determining flight procedures and has no technical expertise to address this key question. Nor will staff be proposing any solutions to the Committee. Identifying possible options to address the concern will be the primary objective of the Ad Hoc Advisory Committee. However, some of the options staff has heard most commonly raised include:

1. have aircraft come in at higher altitudes;
2. have aircraft approach in south flow from east of San José instead from west of San José; and
3. increase the dispersal of approaching aircraft.

The three aforementioned solutions are not necessarily exhaustive nor feasible. Committee members may introduce other proposed solutions and/or develop other possible solutions

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through the public discussions with the FAA. Members of the public may also propose solutions to the Committee or to individual Committee members through meetings in their communities. Thus, the range of possible solutions are not known at this time. In addition, the determination of feasibility for any proposed solution will rest solely with the FAA.

Ultimately, the Ad Hoc Advisory Committee is an opportunity to have a community discussion with the FAA to explore what feasible solutions may exist that will reduce the noise impacts on the impacted cities without adversely affecting the FAA's primary objective to manage air traffic in a safe and efficient manner.

Appointment of a San José Representative

Should the Council adopt the recommendation to form the Ad Hoc Advisory Committee, staff recommends Council simultaneously appoint a Councilmember to represent the City on the Committee. Council should also appoint an alternate representative in the event the primary representative is unable to attend a meeting. However, the alternate Council representative will be required to attend Committee meetings only when the primary representative is unable to do so. This will ensure the City is continuously represented at all the Committee's meetings.

COORDINATION

This memorandum was coordinated with the City Attorney's Office.

/s/
JOHN AITKEN
Director of Aviation

For questions please contact Jim Webb, Assistant to the Director, at 408-392-3609.

Attachments

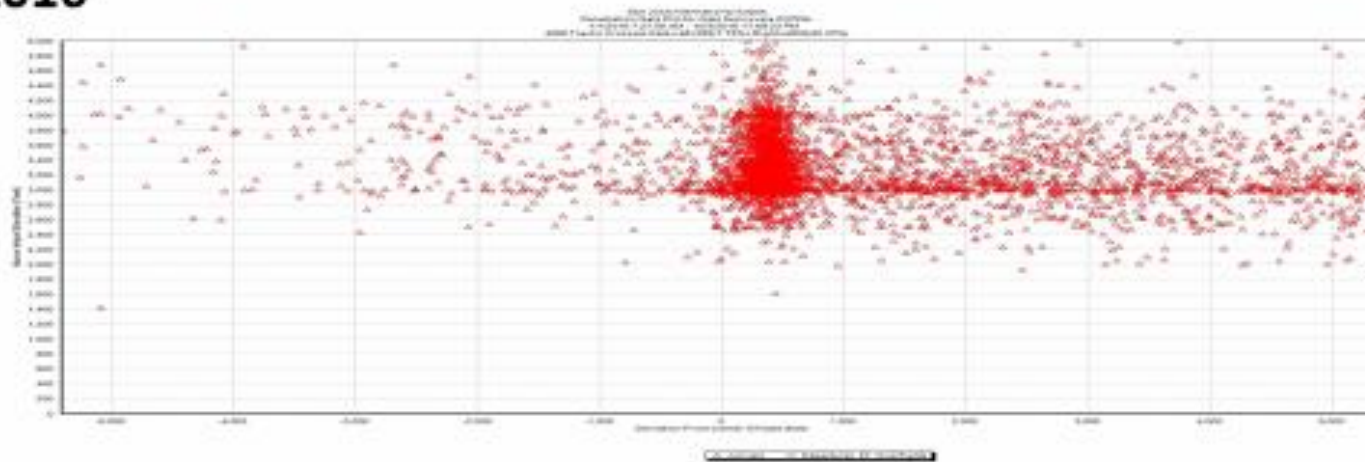
SJC Flight Distribution Over Sunnyvale – 2013 vs 2016



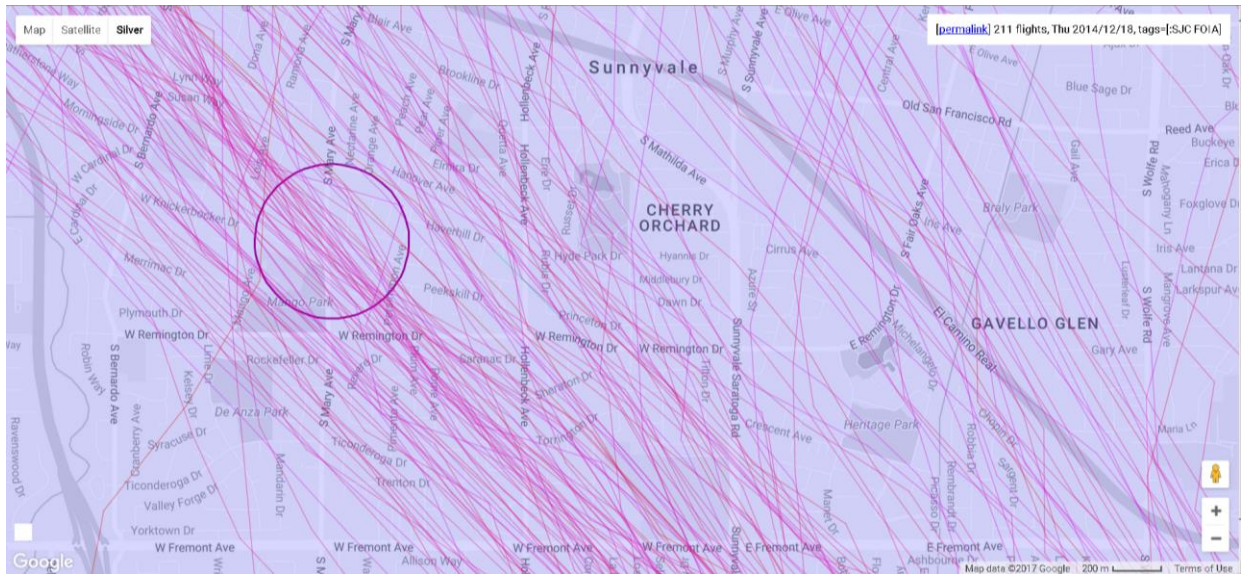
2013



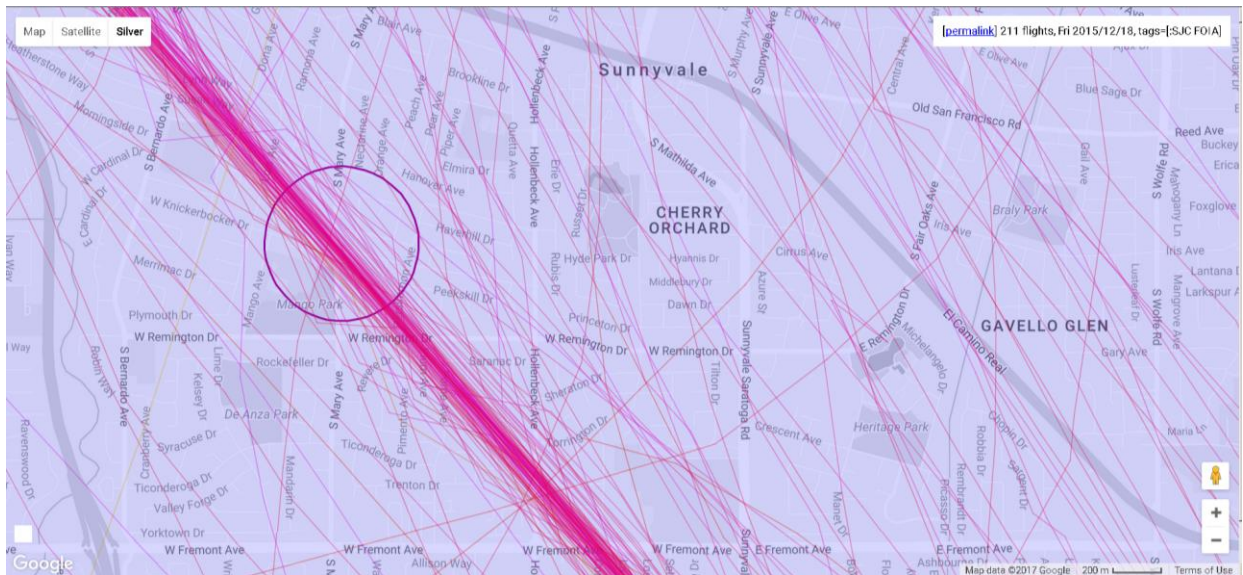
2016



South Flow Flight Paths Before and After NextGen



Flights over Sunnyvale on December 18, 2014, before NextGen (above) and after (below). Circle is Waypoint ZORSA, near Mary Avenue and Knickerbocker Drive.



**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	153,419	24,033	15.7	139.7
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



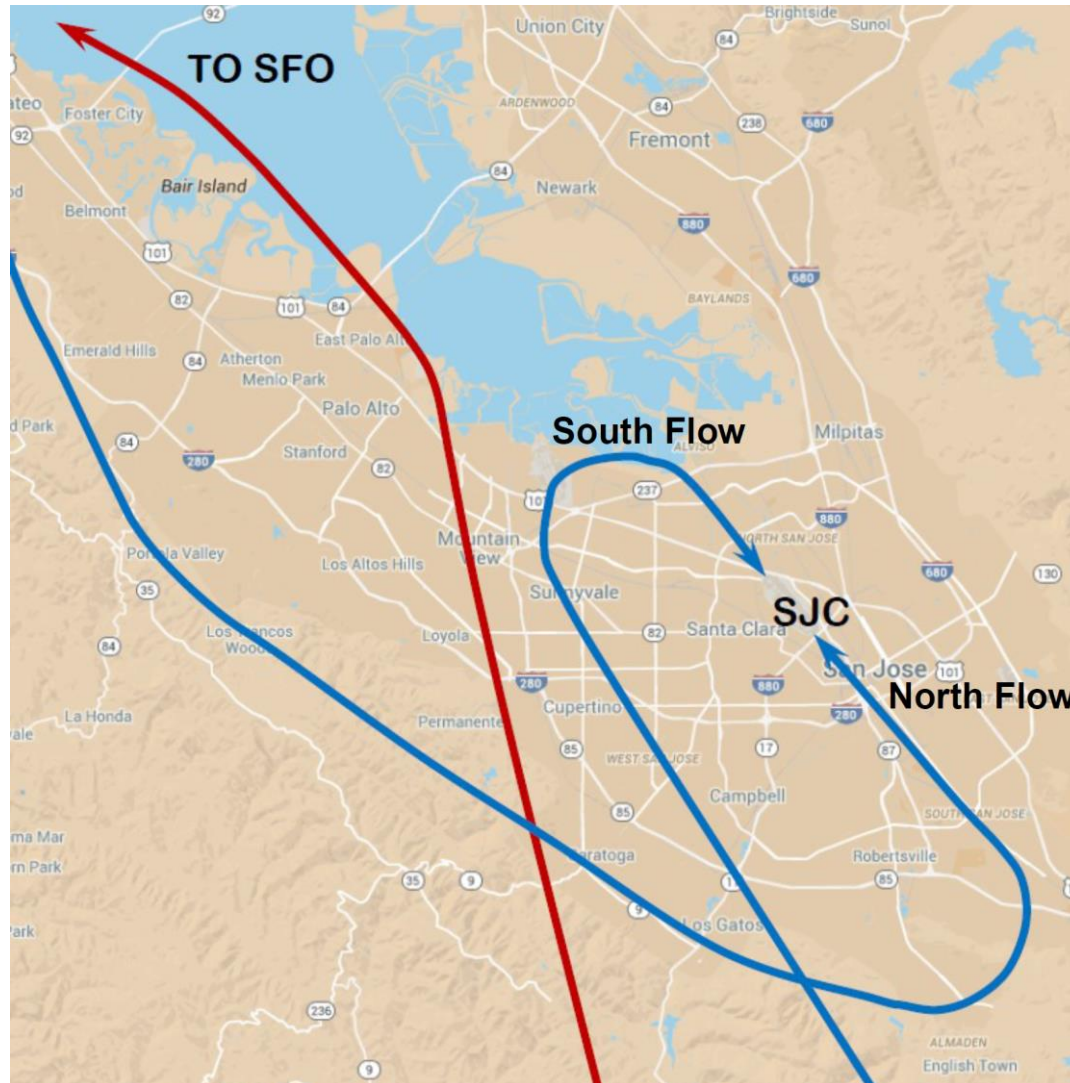
SILICON VALLEY'S AIRPORT



Ad Hoc Advisory Committee on South Flow Arrivals

September 11, 2017

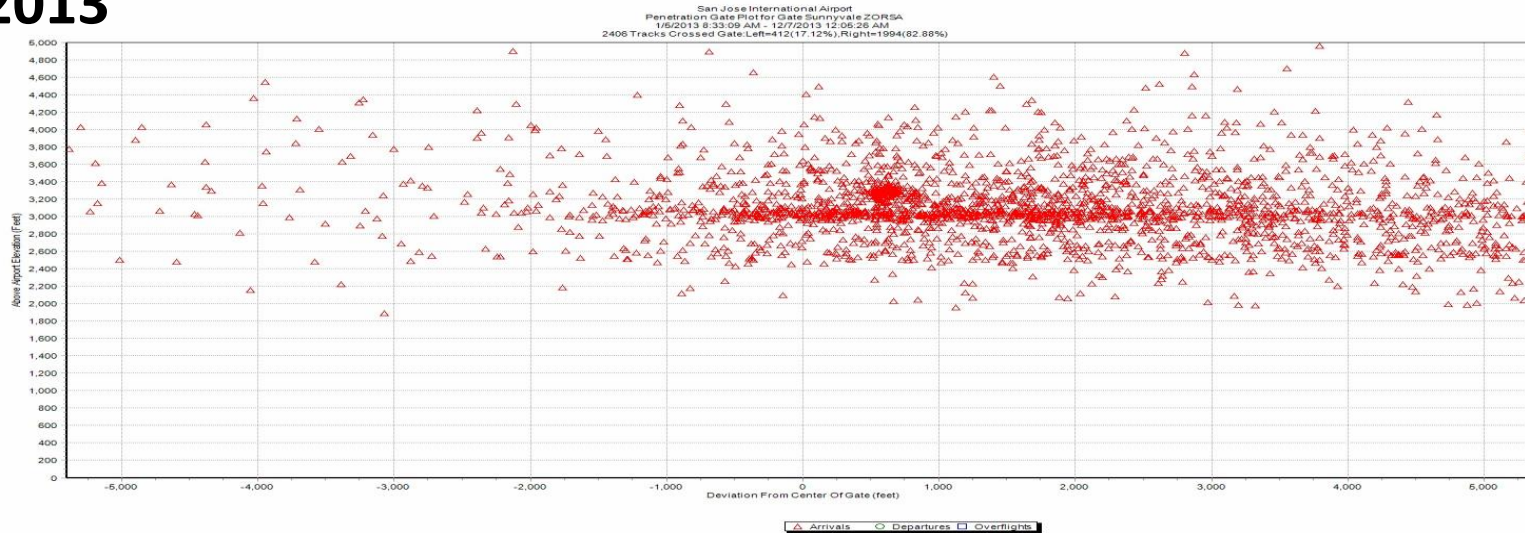
What are South Flow Arrivals?



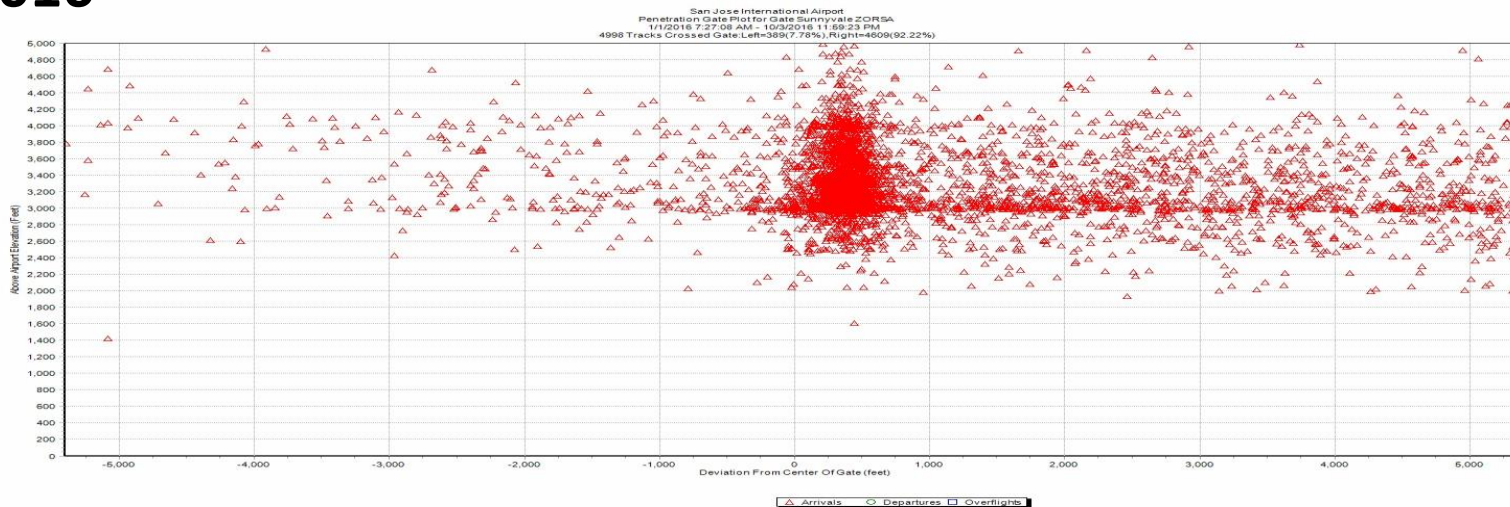
SJC Flight Distribution Over Sunnyvale – 2013 vs 2016



2013



2016



Ad Hoc Advisory Committee on South Flow Charge



1. An advisory group to gather input, concerns, and comments from the general public on the south flow issue.
2. Identify and discuss possible options to address the procedure's noise impacts.
3. Recommend potential “feasible” options for FAA consideration.

Members/Participants



Committee Members

- All Cities in Santa Clara County
- County of Santa Clara

Participating Agency

- FAA

Non-Technical Support

- SJC Staff

Operating Parameters



- ✓ Focus would be the south flow issue only.
- ✓ Would sunset after 120 days.
- ✓ Would not adopt any recommendation that will impact a community not represented on the Committee.
- ✓ Consensus: At least 2/3^{rds} of members need to support a recommendation.
- ✓ “Feasibility” will be determined solely by the FAA.
- ✓ Final report with “preliminary feasible” options to be shared with FAA and Congressional offices for their information and review.



Questions?