

Sent to Council: _____

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL **FROM:** John Aitken

SUBJECT: 2019 Annual Noise Report **DATE:** 01/31/2020

Approved

Date

INFORMATION

Attached for distribution is the Norman Y. Mineta San Jose International Airport 2019 Annual Noise Report outlining air carrier activities related to the noise-based curfew in place at the Airport between January 1, 2019 and December 31, 2019.

In addition to the information provided in the attached report, the Airport publishes Quarterly Noise reports including noise exposure maps and Monthly Noise Summary data on the Airport's website for further explanation of air carrier activities and noise impacts to the community.



JOHN AITKEN

Director of Aviation

Attachments:

2019 Annual Noise Report

Norman Y. Mineta
San José International Airport
2019 Annual Noise Report



NORMAN Y. MINETA
SAN JOSE
INTERNATIONAL
AIRPORT
SILICON VALLEY'S AIRPORT

Annual Noise Report for Norman Y. Mineta San José International Airport

Introduction and Purpose

The purpose of this annual report is to communicate the efforts undertaken by the City of San José (“the City”) and Norman Y. Mineta San José International Airport (“SJC” or “Airport”) to minimize the airport’s noise impact on the surrounding communities. This report contains an explanation of the curfew and violation process, as well as a summary of records for the calendar year detailing the number and type of curfew violations.

Operational Restrictions and the Curfew

Chapter 25 of the San José Municipal Code (“SJMC”) details the city ordinances regarding Airport-related noise as well as the Airport curfew. The SJMC defines the curfew as, “. . .a time use restriction that limits the hours in which the city will allow certain aircraft operations to be conducted and that prohibits the scheduling and operation of certain aircraft operations at the airport during curfew hours.”

The weight-based curfew for the Airport was original formulated in 1984 with subsequent revisions to a noise-based curfew in 2003. The revisions also allowed for monetary fines for curfew violations and included newer business jet type aircraft.

The noise-based curfew restricts flight activity into and out of the Airport between the local hours of 11:30 PM and 06:30 AM for aircraft operations by jet aircraft with Federal Aviation Administration (“FAA”) certified and published Effective Perceived Noise level in decibels (“EPNdb”) above 89.0. Aircraft types grandfathered in to be exempt from this noise level as well as those that are compliant with the curfew are listed for easy reference on the Schedule of Authorized Aircraft. This document is regularly maintained and posted to the “Curfew” page on the Airport’s website.

Responsibility for monitoring and managing the airport noise and curfew programs at SJC belongs to the City’s Airport Operations Division.

Types of Curfew Violations

Any aircraft operation in an aircraft type whose EPNdb is above 89.0, not on the Schedule of Authorized Aircraft, that depart from or arrive to the Airport between the local hours of 11:30 PM and 06:30 AM is defined as a non-compliant operation. A non-compliant operation is then further defined as being either an intrusion or a violation. An intrusion is defined as a non-compliant operation that was documented to occur during curfew hours due to circumstances outside of the aircraft operators’ control (e.g. Air Traffic Control delays, Weather delays, etc.) which are referred to in the SJMC as “Force Majeure” events. A violation is defined as a non-compliant operation that did not have acceptable documentation justifying the operation to occur during curfew hours.

For a non-compliant operation to be categorized as an intrusion rather than a violation, the operator must communicate the extenuating circumstances to the Airport. If those circumstances are accepted by the Airport, the operation will be categorized as an intrusion and no fine will be levied. Fines for violations are \$2,500 per occurrence.

Actions Taken by Airport Operations Department

Throughout the year, Airport Operations staff publishes the Monthly Noise Summary Charts on the Airport's website which detail the total number of curfew-compliant and non-compliant operations as well as the number of noise complaints submitted. Additionally, Airport Operations staff use data from the FAA along with data from an airport noise monitoring system to compile a Quarterly Noise Report for concerned residents, as well as other City, County, and State officials. These documents are regularly maintained and posted to the "Noise Reports" page on the Airport's website.

The noise monitoring system mentioned above was originally installed in November of 1992, with updated hardware and software installed more recently. The system records and measures aircraft noise levels at strategic locations in noise-sensitive locations under the aircraft arrival and departure paths. The noise system also compiles flight track and flight identification information, noise complaints and complainants' addresses, and noise events. The quarterly noise monitoring and reporting is conducted in compliance with State regulations.

Airport Operations staff continually investigate and respond to noise complaints, track flight activity, review curfew operations for compliance with the SJMC and assess fines as necessary. Airport Operations staff also participate in Airport Commission meetings to communicate the findings contained in the Monthly Noise Summary Charts and to respond to questions from residents of neighboring communities.

In May 2019, the Airport met with airlines based at San Jose to remind staff of the efforts to operate aircraft, regardless of their noise impacts to the community, outside of curfew hours.

Airport staff review airline-provided justification for curfew violations, and work with aircraft operators to minimize the number of non-compliant operations during curfew hours, thereby reducing the disturbance to the public. The Airport Operations staff strives to take a proactive approach to managing the noise associated with SJC and the need to be polite neighbors to the surrounding residential communities.

2019 Operations During Curfew

In calendar year 2019, there were 3,112 operations during the curfew hours out of the 198,372 total operations for the Airport (approximately 1.57%). For comparison, calendar year 2018 had 3,383 curfew operations out of the total 183,892 operations for the airport (approximately 1.84%).

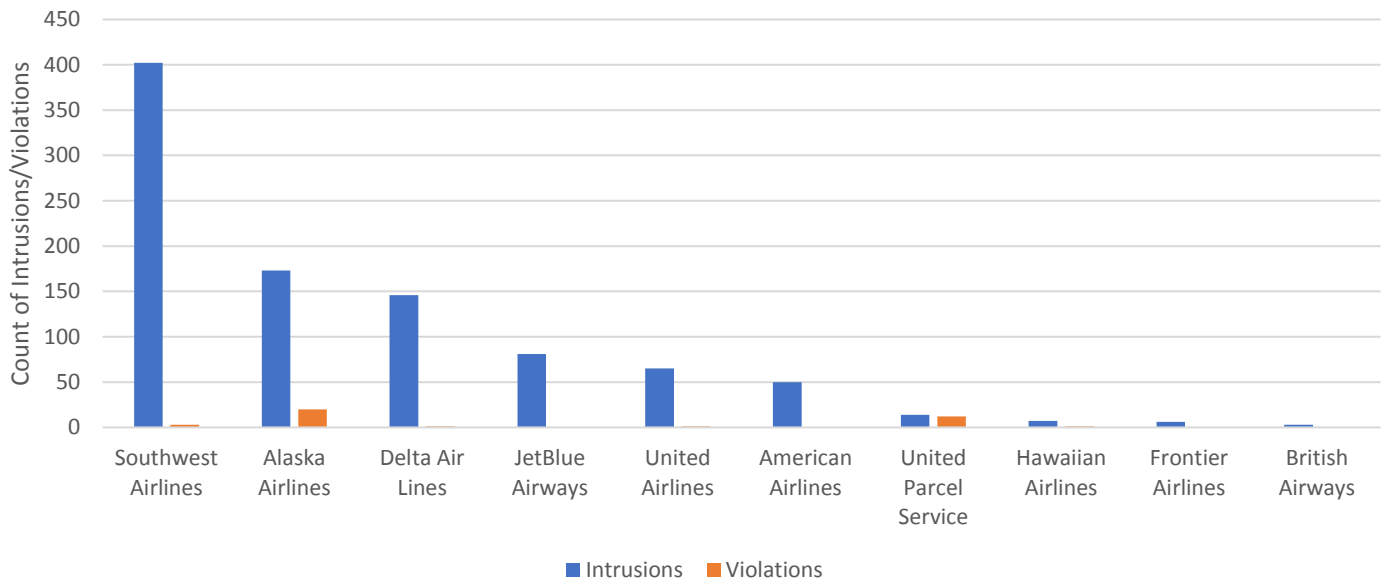
Of the 3,112 curfew operations, 964 were found to be intrusions, which represent approximately 0.5% of all operations at SJC. Of those 964 intrusions, 55 were found to be violations and were cited; these violations represent approximately 0.03% of all operations at SJC which results in a curfew compliance rate of over 99.9%

In 2019, the airport hosted 14 Commercial Air Carrier tenants and 2 Air Cargo tenants. Of those 16 total operators, Aeromexico, Air Canada, All Nippon Airways, FedEx Express, Hainan Airlines, and Volaris each committed zero curfew intrusions.

In 2019, Southwest Airlines, Jetblue Airways, Alaska Airlines, United Airlines, and Delta Air Lines were responsible for the majority (90%) of curfew intrusions.

The chart and table on the following page depict the commercial and air cargo carriers' annual intrusions and related violations for calendar year 2019.

Summary of Air Carrier/Air Cargo Operator Curfew Intrusions and Violations (CY 2019)



Bar Chart of CY 2019 Air Carrier/Air Cargo Intrusions

SJC Air Carrier/Cargo Operator Curfew Data 2019		
Operator	Intrusions	Violations
Southwest Airlines	402	3
Alaska Airlines	173	20
Delta Air Lines	146	1
JetBlue Airways	81	0
United Airlines	65	1
American Airlines	50	0
United Parcel Service	14	12
Hawaiian Airlines	7	1
Frontier Airlines	6	0
British Airways	3	0

Table of CY 2019 Air Carrier/Air Cargo Intrusions

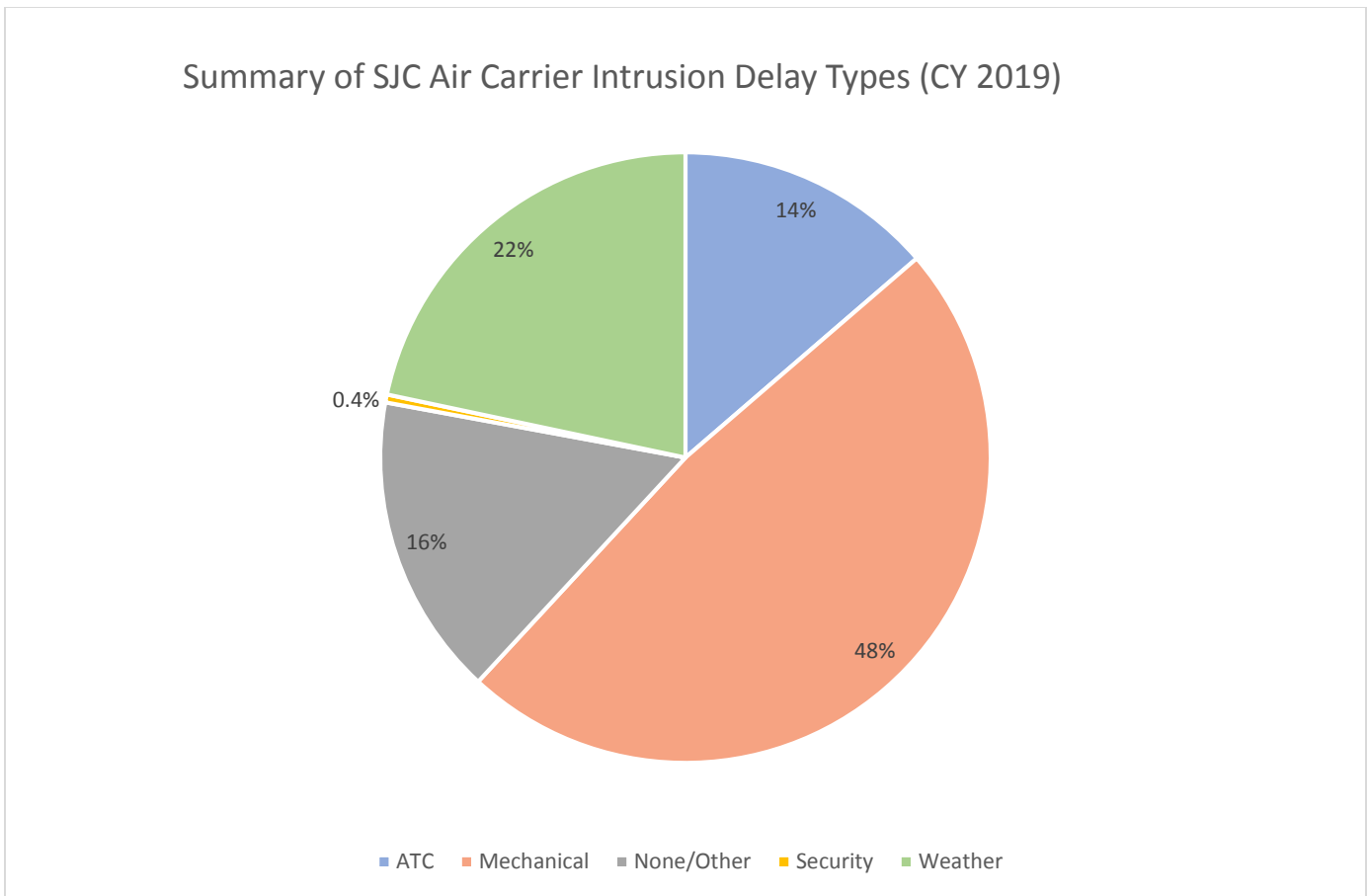
Curfew violations and intrusions for **JetBlue Airways**, **Frontier Airlines**, and **United Airlines** dropped significantly in 2019. Compared to 2018, the airlines combined committed about 35% fewer intrusions, and reduced their violations (except for United, which was unchanged) by 100%. Fewer scheduled operations, making use of curfew-compliant aircraft, as well as fewer airspace and weather delays were contributing factors to the change.

Most of **Alaska Airlines'** violations are due to a previously-operated morning flight from Reno that has since been discontinued. The flight was not scheduled to arrive during curfew, but its early departure from Reno and

short flight time resulted in the flight arriving into San Jose during the curfew period on several occasions. Following these intrusions and prior to its discontinuation, the airline adjusted the flight's departure time from Reno to ensure it was late enough to avoid potential intrusions.

United Parcel Service (UPS) informed Airport Operations staff that due to a forecasted increase in holiday-related packages through the Bay Area, as in 2017 and 2018, that they would be adding additional arrivals during the curfew hours between 4:00 AM and 5:00 AM. Airport Operations staff reminded UPS of the airport's curfew and commitment to minimizing its noise impact on the surrounding communities. This year, UPS again chose to hold departures until the curfew timing expired but did have 12 violating arrival flights that they were cited for.

For the SJC-based air carriers in general, the plurality of the delays come from mechanical issues that are experienced on the specific aircraft carrying the flight throughout the day on its flight network. Oftentimes the original aircraft scheduled to operate a flight will be taken out of service for maintenance reasons and another will be substituted. Most of the remaining delays are due to ATC or Weather. Occasionally there are also delays for more specific incidents such as required security sweeps, power or computer system outage, or when a crew member calls in sick. The following chart illustrates the breakdown of the proportion of flights affected by weather, mechanical, air traffic control, security, or other delays. Some intrusions were not caused by a delay, and they are noted as "None" and included in the Other category. Not every intrusion notice sent by the Airport was responded to. In these instances, citations were automatically generated.



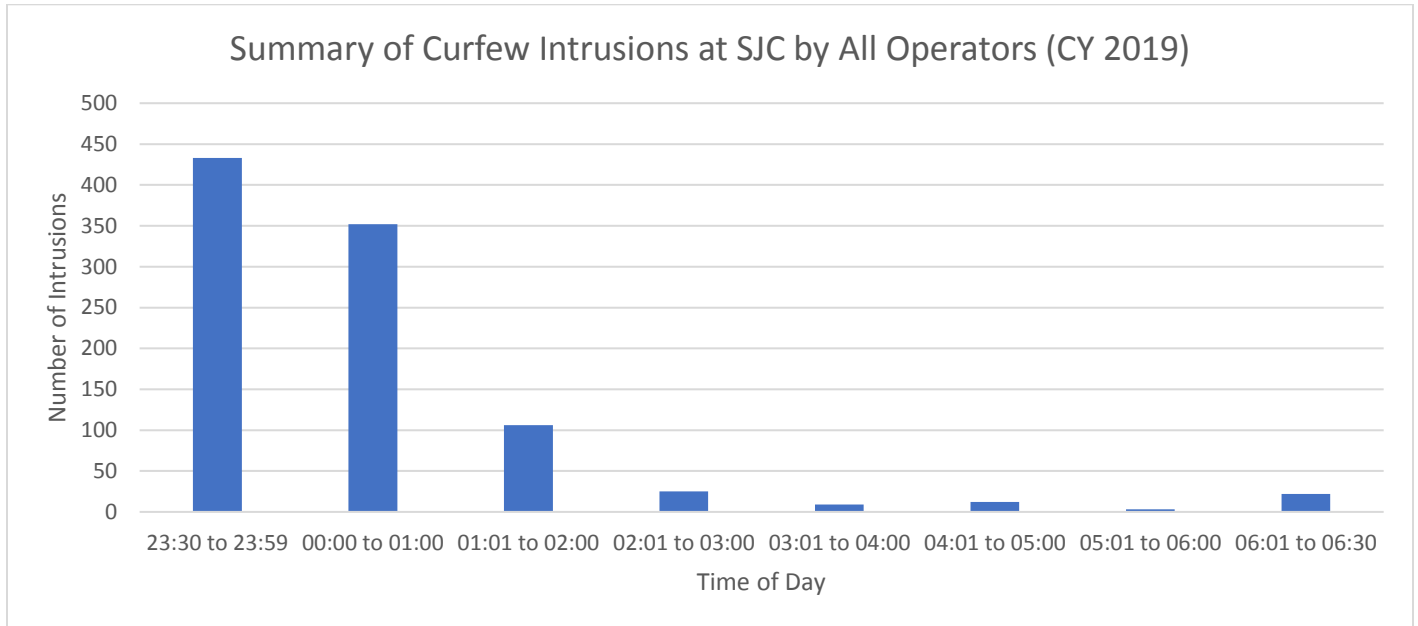
Pie Chart of CY 2019 Air Carrier Intrusion Delay Types

The table on the following page shows the various charter operators who committed curfew intrusions. All depicted charter-operated intrusions were determined to be non-compliant curfew operations and were cited by the Airport.

Operator	Intrusions	Violations
Pentastar Aviation	2	2
Swift Air LLC	11	11
Kaiser Air	1	1
Paradigm Air	1	1

Table of Charter Operators and Curfew Intrusions/Violations

Most curfew intrusions occur during the first 90 minutes of its onset, with a dramatic fall after the midnight to 1:00 AM time period. This indicates that the aircraft operators are attempting to serve their passengers while also creating as minimal of a noise impact as possible by adhering to the curfew restriction period.



Bar Chart of 2019 Curfew Intrusions at SJC

Engine Runs

In addition to takeoff and landing restrictions at the Airport, the Airport Operations staff also limit maintenance and engine run-ups during the curfew hours to help limit the noise generated during curfew hours. If an aircraft operator must perform engine maintenance run-ups to prepare for a 06:30 AM flight, Airport Operations will direct the aircraft to the north end of the airfield to avoid generating noise towards the surrounding residential uses at the Southeast end of the airfield. Those engine maintenance run-ups can be performed as early as 2 hours before the scheduled departure, as published in the SJMC.

Airport Operations staff record the number of engine maintenance checks performed during curfew hours which require a full engine run-up. In 2019, twenty-one high or full-power engine maintenance run-ups were performed during curfew hours.

Airport Noise Complaints

Like many other airports in noise sensitive communities, the Airport collects noise complaints from residents of the City of San José as well as the surrounding municipalities through the “WebTrak” system. This system allows concerned residents to monitor a slightly delayed live feed of aircraft operations in the South Bay Area. Community members regularly use this tool to investigate deeper into their noise disturbances and to report their noise disturbances to the Airport’s Noise Management Office. Some complaints also arrive through direct e-mail.

Airport staff respond to curfew-related complaints whenever possible by including the reason the flight in question operated during curfew hours, an explanation of the approach or departure procedures to the Airport, and acknowledgement of whether a late-night operation was a curfew violation. Additionally, responses from Airport staff may include whether a flight was operating at another airport in the area, or its status as an emergency response or military aircraft.

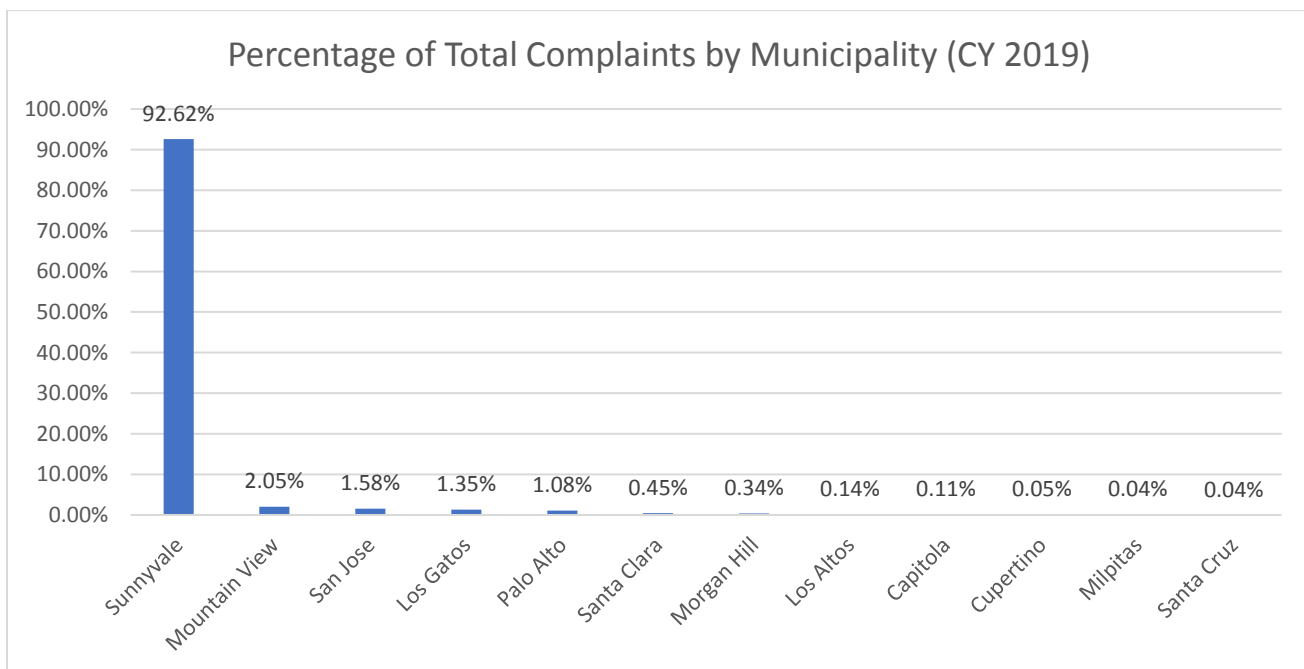
There was a total of 114,727 complaints submitted by 611 individual residents throughout the area. This compares to a total of 114,003 complaints made by 744 individual residents in 2018. This group of complaint submitters represents approximately 0.058% of the total San José population (1.04 Million). Of those complaints, just over 85% (98,606) were submitted by a group of 30 individuals which means the vast majority of the Airport’s complaints were received from approximately 4.91% of the total complaint reporters.

The population of total complaint reporters continues to decrease, but the number of complaints received remains roughly the same. Still, the select group of individuals identified above submits hundreds, or thousands, more complaints than an average person typically would; the top reporter submitted 15,600 complaints in 2019. The Airport is aware of an automated reporting system that some residents use to automatically submit a complaint for any flight in South Flow Operations which makes up the bulk of the complaints received. Some of the other complaints concern other SJC traffic, but sometimes also reference other airports in the area such as San Francisco, Reid-Hillview, and Moffett Federal Airfield.

Submitters	Proportion of Complaints Submitted
Top 10	68%
Top 20	79%
Top 30	85%

Table of 2019 Complaints by Group

The chart below shows a breakdown by city of noise complaints:



Bar Chart of 2019 Complaints by Municipality

Sunnyvale residents continue to submit a significantly higher amount of noise complaints than their neighboring cities. In 2019 there were 106,208 complaints submitted by Sunnyvale residents which represents a 6.16% increase over 2018 in which they submitted 100,046 complaints. This increase in Sunnyvale complaints correlates to an increase in the amount of South Flow operations (18% of all operations in 2019 compared to 11% in 2018).

The number of complaints submitted by San José residents decreased significantly to 1,808 (from 3,778), a reduction of 47.9%. Complaints from San Jose continue to represent a negligible number (1.58%) of the overall total.

South Flow Operations

Occasionally, due to weather changes, SJC arrivals will land from the north on Runways 12R or 12L instead of approaching the airfield from the south and landing on Runways 30L or 30R. In 2019, the FAA (Air Traffic Control) utilized South Flow Operations approximately 17.84% of the year compared to 2018 when the traffic operated in South Flow 10.62% of the year.

When the airport operates in South Flow conditions, the communities in Sunnyvale, Santa Clara, Cupertino, Mountain View, and Palo Alto become more impacted by the SJC arrivals than they are under normal operating conditions. Similarly, residents of San Jose living south of the airport are secondarily impacted due to the change in departures direction and resulting increase in noise levels from those aircraft (compared to quieter noise levels from arriving aircraft).

In May 2018, the Ad Hoc Advisory Committee on South Flow Arrivals concluded. The Committee was established to explore possible solutions to address the noise impacts on residents when weather conditions over the airfield require the Airport to operate in a South Flow configuration. It was formed of community members who each represented their municipality of residence.

Throughout the existence of the Ad Hoc Committee, the Airport provided any services it could offer to the community members including but not limited to compiling aircraft operations data sets and producing maps of flight tracks. The FAA was also present at these meetings and responded to questions and concerns regarding noise. In May 2019, the FAA sent their Final Response to the Ad Hoc Committee's report (<https://www.flysanjose.com/sites/default/files/commission/FAA%20Response%20May%202019%20SJC%20Ad%20Hoc.pdf>).