



# Memorandum

**TO:** HONORABLE MAYOR  
AND CITY COUNCIL

**FROM:** John Aitken

**SUBJECT:** 2022 ANNUAL NOISE REPORT

**DATE:** May 10, 2023

Approved

Date

5-11-23

## INFORMATION

Attached for distribution is the San José Mineta International Airport 2022 Annual Noise Report outlining air carrier activities related to the noise-based curfew in place at the Airport between January 1, 2022 and December 31, 2022.

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.

/s/

JOHN AITKEN, A.A.E.  
Director of Aviation

For questions, please contact Rosalyn Bond, Deputy Director Operations, at [rbond@sjc.org](mailto:rbond@sjc.org) or 408-392-3511.

Attachment:

San José Mineta International Airport 2022 Annual Noise Report

# San José Mineta International Airport 2022 Annual Noise Report



**SAN JOSE  
MINETA  
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 San José Mineta 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, and community noise complaints received.

The Coronavirus (“COVID-19”) Pandemic, which began to impact aviation in early 2020, greatly curtailed the amount of air carrier activity at SJC. With current health measures and guidelines, the travel industry begun to see travel trends returning close to pre-pandemic levels. SJC continued experiencing an increase of flight activities in 2022. Total flight operations, curfew, intrusion violations and administrative citation were 80% comparable to 2019 annual reported activities. As the airline industry recovers from COVID-19, the effect on noise complaints and total aircraft operations have been noticeable.

## **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 originally formulated in 1984, with subsequent revision to a noise-based curfew in 2003.

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 requirement, 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. Boeing’s MAX 8 and MAX 9 variants were added to the Schedule in 2022.

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

## **Types of Curfew Violation**

Any jet aircraft operation whose EPNdb is above 89.0, is not on the Schedule of Authorized Aircraft, and that departs from or arrives at the Airport between the local hours of 11:30 PM and 06:30 AM is defined as an intrusion. An intrusion is then further defined as being either exempt (from citation) or a violation. An exempt intrusion is one with documentation provided by the operator explaining why it occurred during curfew hours due to circumstances outside of the operator’s 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 an intrusion that did not have acceptable documentation provided justifying its occurrence during curfew hours. Fines for violations are \$2,500 each.

## **Actions Taken by Airport Operations Department**

Throughout the year, Airport Operations staff publishes 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 and Noise Exposure Map for the public. These documents are 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. In 2020, the Noise Office upgraded the modems used by these monitors to ensure their continued operation and improve reliable connectivity into the future.

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.

Additionally, as of early 2021, server components of the noise monitoring system have transitioned to being vendor-hosted vs on-site at the Airport. This should improve overall system reliability and allow for quicker implementation of new features to more efficiently manage and respond to complaints, and better analyze aircraft operations.

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 surrounding communities.

In 2020, a new noise abatement page geared towards General Aviation pilots was added to the airport website with the goal of educating that community on best practices and procedures to minimize their noise impact to the surrounding residents.

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 respectful neighbors to the surrounding residential communities.

### **2022 Operations During Curfew**

In calendar year 2022, there were 1661 commercial or cargo jet operations during the curfew hours out of the 158,974 total operations for the Airport (approximately .73%). For comparison, calendar year 2021 had 1156 curfew operations out of the 126,552 total operations for the airport (approximately .91%). Of the 1661 curfew operations, 613 were found to be intrusions, which represent approximately .39% of all operations at SJC. Of those 613 intrusions, 39 were found to be violations and were cited; these violations represent approximately .02% of all operations at SJC which results in a curfew compliance rate of over 99.97%.

### Curfew Operations Breakdown

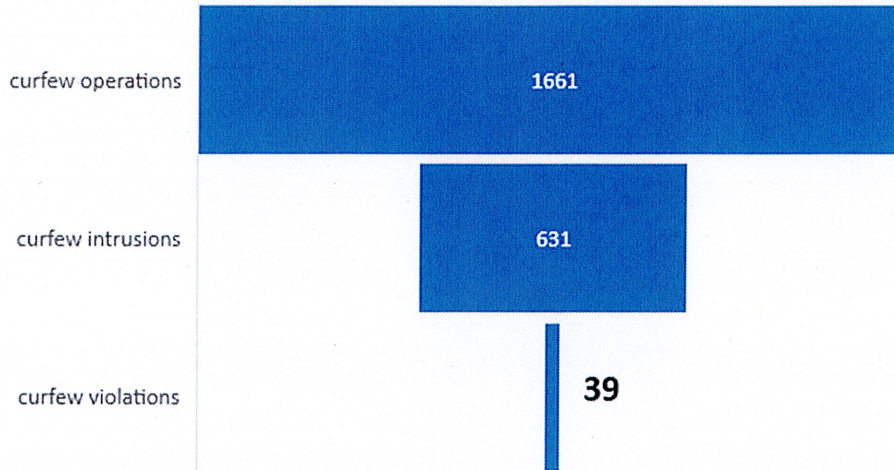


Chart of 2022 Curfew Operations Breakdown

In 2022, the airport hosted 10 Commercial Air Carrier tenants and 2 Air Cargo tenants. Of those 12 total operators, FedEx, Volaris and ZIPAIR committed zero curfew intrusions.

In 2022, Southwest Airlines, Alaska Airlines, jetBlue Airways, United Airlines and Delta Air Lines (or their contracted regional airline partners) were responsible for the majority (94% combined) of curfew intrusions. The following chart and table depict the commercial and air cargo carriers' annual intrusions and related violations for calendar year 2022.

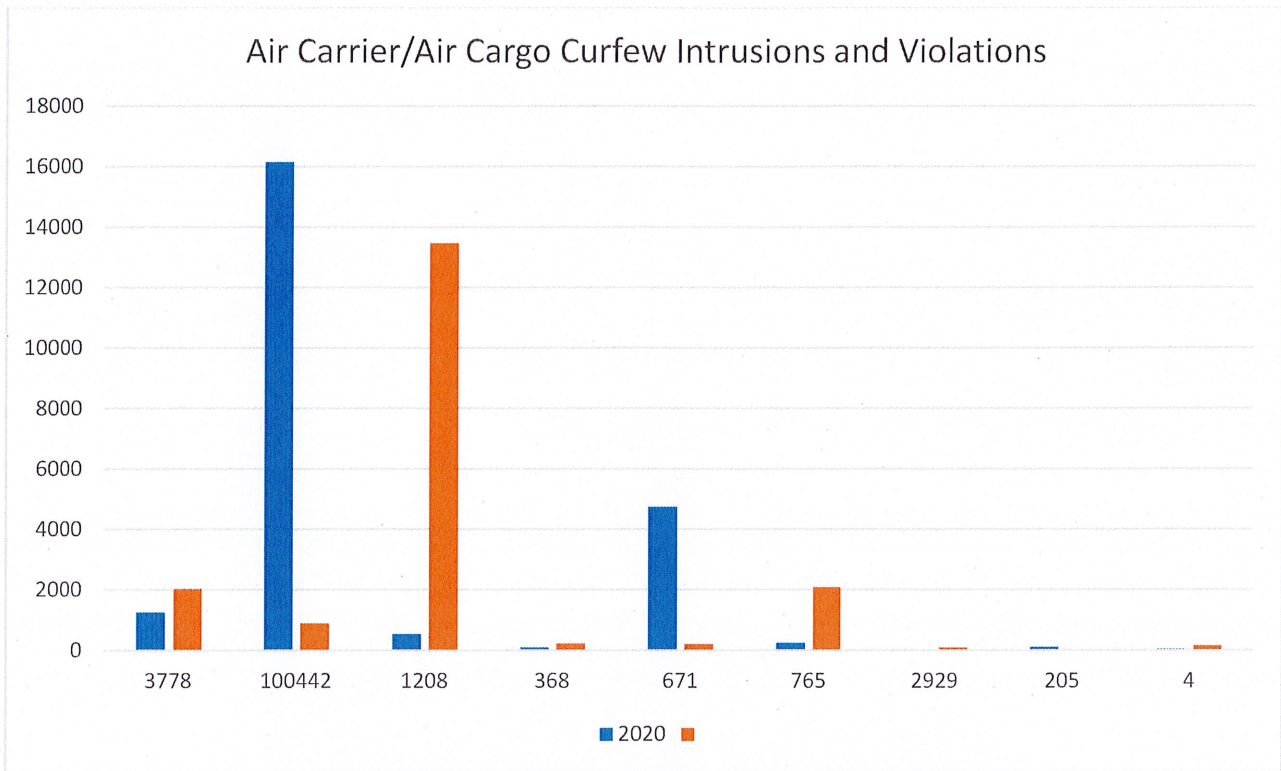


Chart of 2022 Air Carrier/Air Cargo Intrusions

SJC Air Carrier/Cargo Curfew Data		
Operator	Intrusions	Violations
Southwest Airlines	347	6
Alaska Airlines	97	3
Delta Air Lines	28	3
British Airways	1	0
JetBlue Airways	59	1
United Airlines	39	3
American Airlines	6	0
United Parcel Service	8	7
Hawaiian Airlines	8	7
<b>TOTAL</b>	<b>590</b>	<b>23</b>

Table of 2022 Air Carrier/Air Cargo Intrusions/Violations

**Delta Air Lines, United Airlines and Alaska Airlines** incurred violations for early departures. The flights were scheduled to depart around the end of the nightly curfew (6:30 AM) but took off prior to that time. Delta Air Lines', United Airlines and Alaska Airlines' intrusions were operated by regional partners SkyWest Airlines and Horizon Airlines. Changes in scheduled departure time, operating airline, and equipment type (from curfew-compliant to non-curfew-compliant aircraft) may have played a role in the occurrences. Management of all airlines is aware of and have made efforts to educate their employees on the curfew program to prevent future

occurrences. While not formally obligated to enforce the restrictions of the curfew program, Air Traffic Control (ATC) has historically reminded pilots about the curfew and has been asked to continue doing so when feasible.

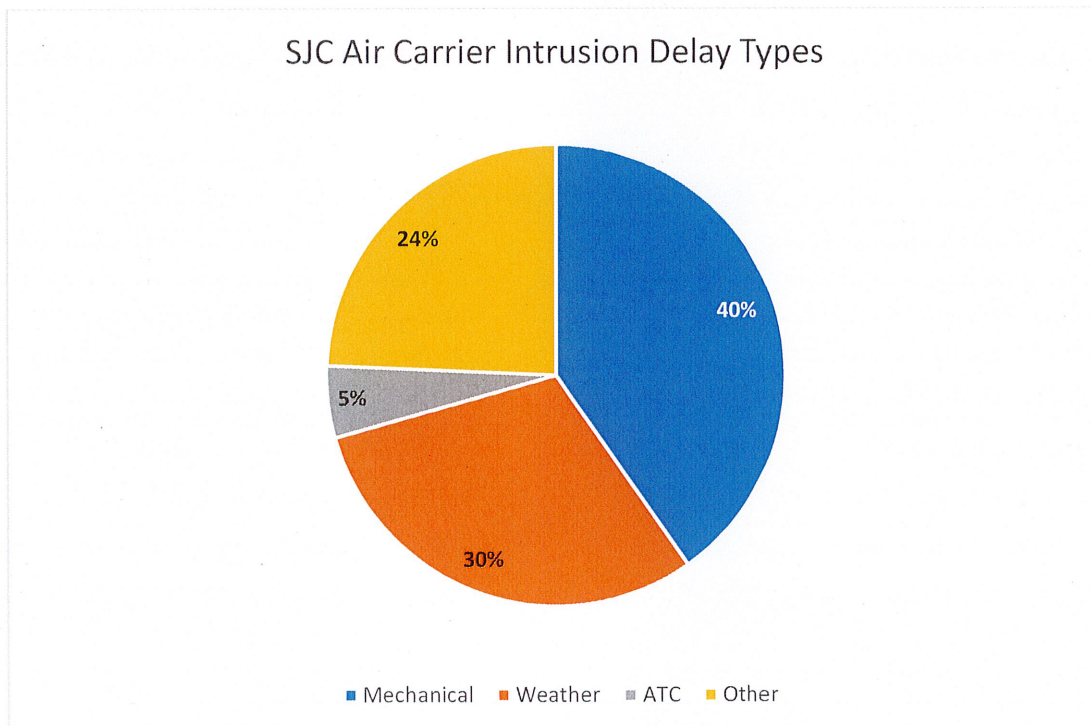
**United Parcel Service (UPS)** informed Airport Operations staff that due to the annual increase in holiday-related packages through the Bay Area, as in 2020 and 2021, they would be adding additional arrivals during the curfew hours between 4:00 AM and 5:00 AM. Airport Operations staff reminded UPS of the airport’s curfew and commitment to minimizing its noise impact on the surrounding communities. This year, UPS again chose to hold most departures until the curfew timing expired, but still committed seven violations, for which they were cited.

The table below shows the various charter operators who committed curfew intrusions.

Charter Operator	Intrusions	Violations
Allegiant Air	2	2
Hillwood Air	5	0
Swift Air/ iAero Airways	9	9
Kaiser Air	2	2
Global Crossing Airlines	1	1
Sun Country	2	2

Table of 2022 Charter Operators’ Curfew Intrusions/Violations

In general, the plurality of the delays are due to poor weather, ATC congestion or mechanical issues that are experienced by the specific aircraft flying throughout the day on its given routing. Oftentimes, the original aircraft scheduled to operate a flight will be taken out of service for maintenance and another will be substituted. Occasionally there are also delays for specific incidents, such as required security sweeps, power or computer systems outages, or when a crew member calls in sick. The next chart illustrates the breakdown of the proportion of flights affected by weather, mechanical, air traffic control, 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.



### Chart of 2022 Air Carrier Intrusion Delay Types

Most curfew intrusions occur during the first 90 minutes of its onset, with a dramatic fall-off after 1:00 AM. This indicates that 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. Intrusions occurring between 6:00 and 6:30 AM tend to be early departures.

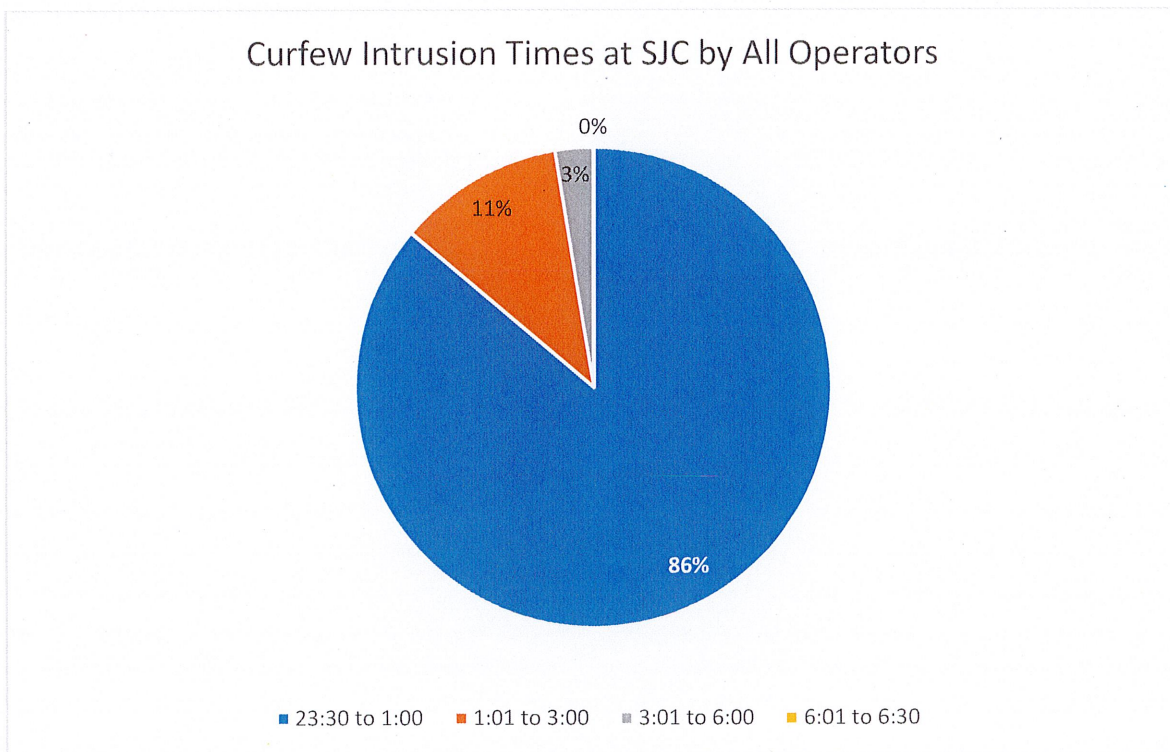


Chart of 2022 Curfew Intrusion Times at SJC

### **Engine Runs**

In addition to takeoff and landing restrictions at the Airport, Airport Operations staff also limit maintenance and engine run-ups during the curfew hours to help minimize the noise generated during curfew hours. If an aircraft operator must perform an engine maintenance run-up 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



areas at the Southeast end of the airfield. Those engine maintenance run-ups can be performed as early as 2 hours before the scheduled departure time, as published in the SJMC.

Airport Operations staff record the number of high (>90%) or full-power engine run-up maintenance checks performed during curfew hours. In 2022, two (2) 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” webpage, phone messages, e-mails, and a dedicated complaint form hosted on the airport’s website. Webtrak allows 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 report them to the Airport’s Noise Management Office.

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 (and therefore cited). 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, police, or military aircraft.

In 2022 there were a total of 11,357 complaints submitted by 260 individual residents throughout the area. This group of 260 submitters represents approximately .0144% of the total San José population (1.08 Million).

This compares to a total of 17,420 complaints made by 337 individual residents in 2021. Of the 2022 complaints, just over 65% (7,353) were submitted by 5 individuals, which means most complaints were from only 1.9% of the total submitters. The top reporter (a Mountain View resident) submitted 2,371 complaints in 2022. Year over year, the population of total complaint submitters has decreased, along with the number of complaints received.

<b>Submitters</b>	<b>Proportion of Complaints Submitted</b>
<b>Top 5</b>	65%
<b>Top 10</b>	74%
<b>Top 20</b>	83%
<b>Top 30</b>	88%

Table of 2022 Complaints Received by Top Submitters

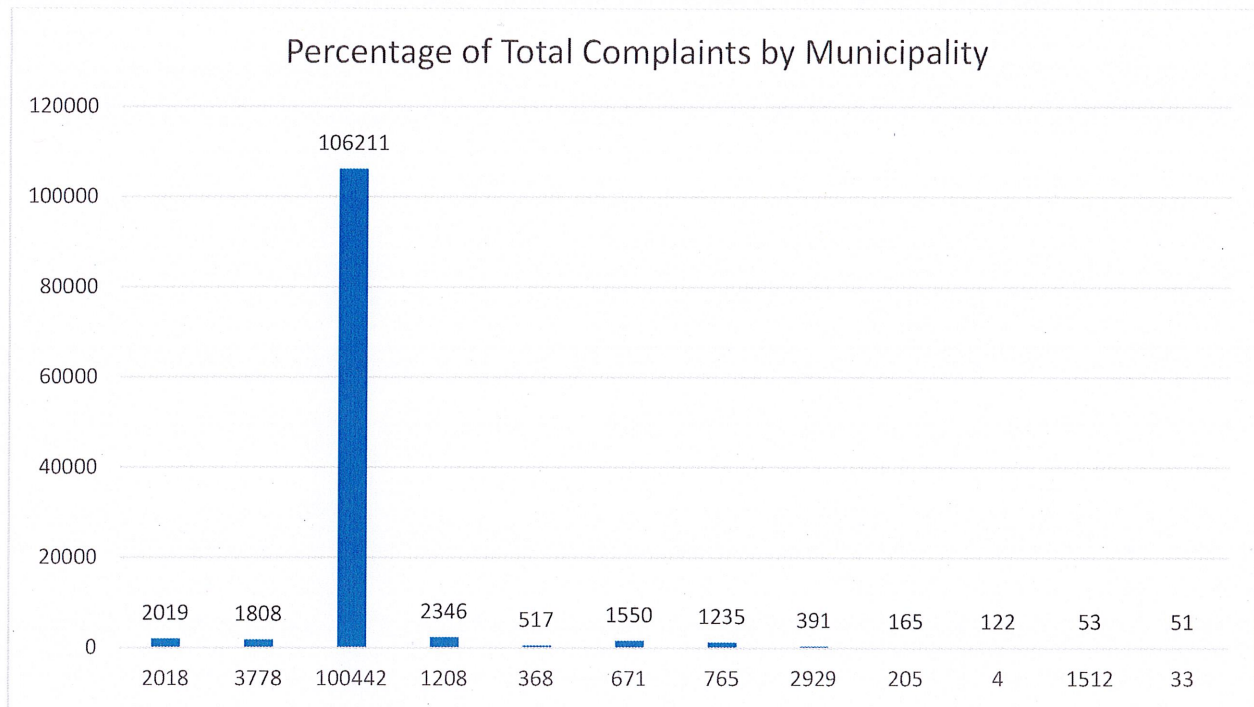


Chart of 2022 Complaints by Municipality

Sunnyvale residents continued to submit a significantly higher amount of noise complaints than other neighboring cities. In 2022, there were 7,403 complaints submitted by Sunnyvale residents, which represents an 45% decrease over 2021, in which they submitted 13,481 complaints. Complaints from San Jose residents continue to represent a small proportion (4.8%) of the overall total.

2018 - 2022 Complaints by Municipality					
	2018	2019	2020	2021	2022
<b>San Jose</b>	3778	1808	1252	896	546
<b>Sunnyvale</b>	100442	106211	16149	13481	7403
<b>Mountain View</b>	1208	2346	533	227	2442
<b>Santa Clara</b>	368	517	87	208	139
<b>Los Gatos</b>	671	1550	4740	2085	565
<b>Palo Alto</b>	765	1235	243	90	10
<b>Morgan Hill</b>	2929	391	0	3	0
<b>Los Altos</b>	205	165	98	151	51
<b>Capitola</b>	4	122	40	68	22
<b>Cupertino</b>	1512	53	5	20	36
<b>Milpitas</b>	33	51	6	16	14
<b>Santa Cruz</b>	72	43	18	17	10
<b>Other/Blank</b>	2016	749	336	140	155

<b>TOTAL</b>	114003	115241	23507	17402	11393
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Table of 2018-2022 Complaints by Municipality

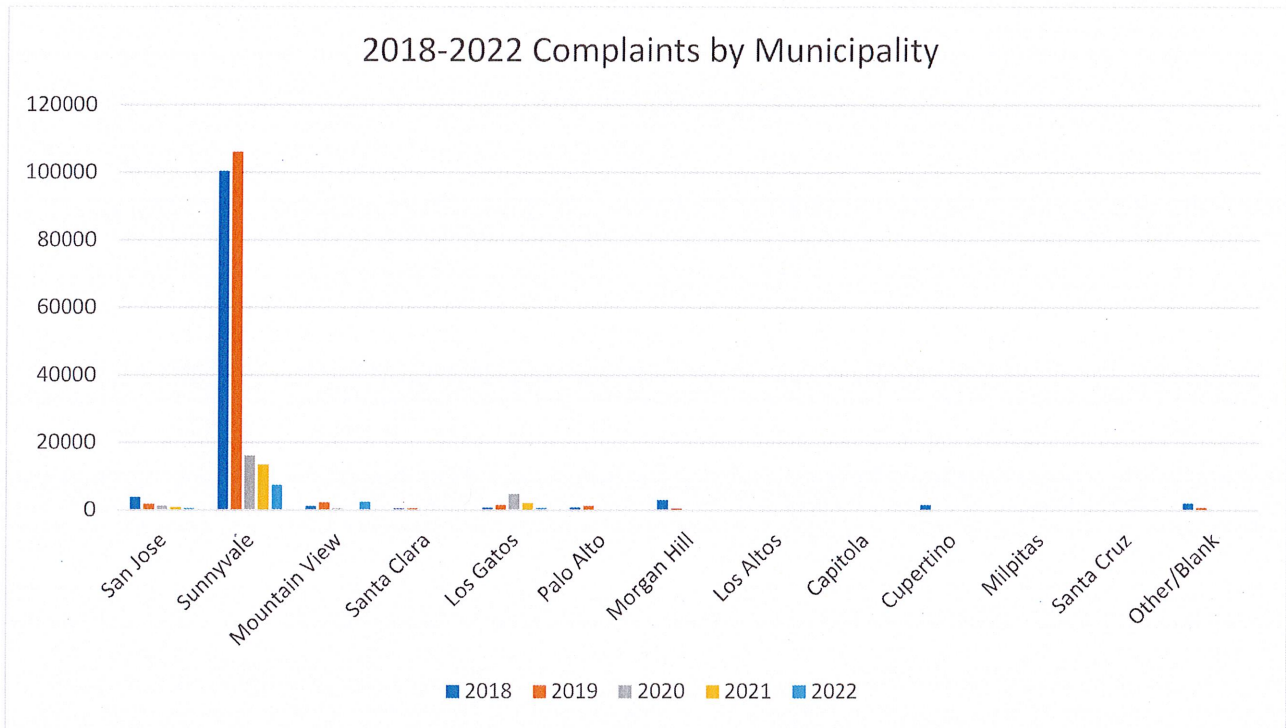


Chart of 2018-2022 Complaints by Municipality

### South Flow Operations

Commonly during times of poor weather, arriving flights at SJC 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. When the airport operates in “South Flow” conditions, the communities in Sunnyvale, Santa Clara, Cupertino, Mountain View, and Palo Alto become more impacted by SJC arrivals than they are under normal “prevailing weather” operating conditions. Similarly, residents of San Jose living south of the airport are 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 2022, the FAA (Air Traffic Control) utilized South Flow Operations for approximately 7% of all operations throughout the year, compared to 2021, when 12% of traffic operated in South Flow.

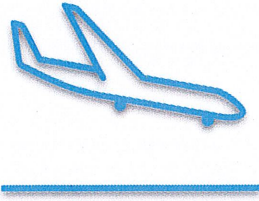
2018 - 2022 South Flow Summary					
	Operations	Days*	South Flow Days*	South Flow Operations	Avg SF Days/Month*
<b>2018</b>	11%	21%	78	19471	6.5
<b>2019</b>	18%	32%	115	34515	9.58
<b>2020</b>	9%	21%	78	10101	6.5

<b>2021</b>	12%	25%	91	14715	7.6
<b>2022</b>	7%	29%	105	10504	8.75

Table of 2018-2022 South Flow Summary Data

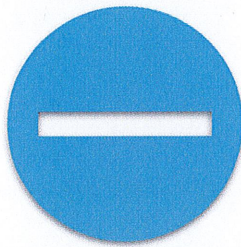
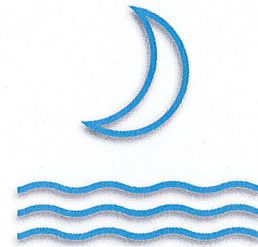
\*At least 10+ Runway 12L/12R operations on that day

## San José Mineta International Airport 2022 Annual Noise Report Summary



Total Operations  
158,974 (+26%\*)

Curfew Intrusions  
613 (+53%\*)



Curfew Violations  
39 (+3%\*)

Complaints  
11,357 (-35%\*)



\*Year over Year