



# (●) CASPER

## CITY OF SUNNYVALE 2024 ANNUAL FLIGHT OPERATIONS AND NOISE REPORT SUMMARY

CASPER AIRPORT SOLUTIONS, INC. | 1055 Westlakes Drive, Suite  
300, Berwyn, PA 19312 | <https://casper.aero>

## DISCLAIMER

Casper Airport Solutions, Inc. provides the data in this report on behalf of the City of Sunnyvale for informational purposes only. It has no legal standing and is not recognized as an official source by either the State of California or the Federal Aviation Administration (FAA).

The City of Sunnyvale is not an airport authority. It has no statutory reporting obligation under Title 21 of the California Department of Transportation.

The sound level meters installed by Casper are certified by the manufacturer Larson Davis to meet all ANSI performance requirements for a Type 1 sound level meter.

The FAA System Wide Information Management (SWIM) flight track position data has a stated minimum accuracy of  $\pm 150$  feet and temporal accuracy of approximately 1 second.

# INTRODUCTION

The City of Sunnyvale's primary goal in procuring a Noise and Operations Monitoring System (NOMS) is to monitor flight activity and the aircraft noise associated with overflights that affect residents living within the city limits. Secondly, to provide this data to interested parties in a transparent and unfiltered way.

The data contained in this report is a summary of the most relevant noise and operations data over the course of the previous calendar year. Each metric will be given a short explanation.

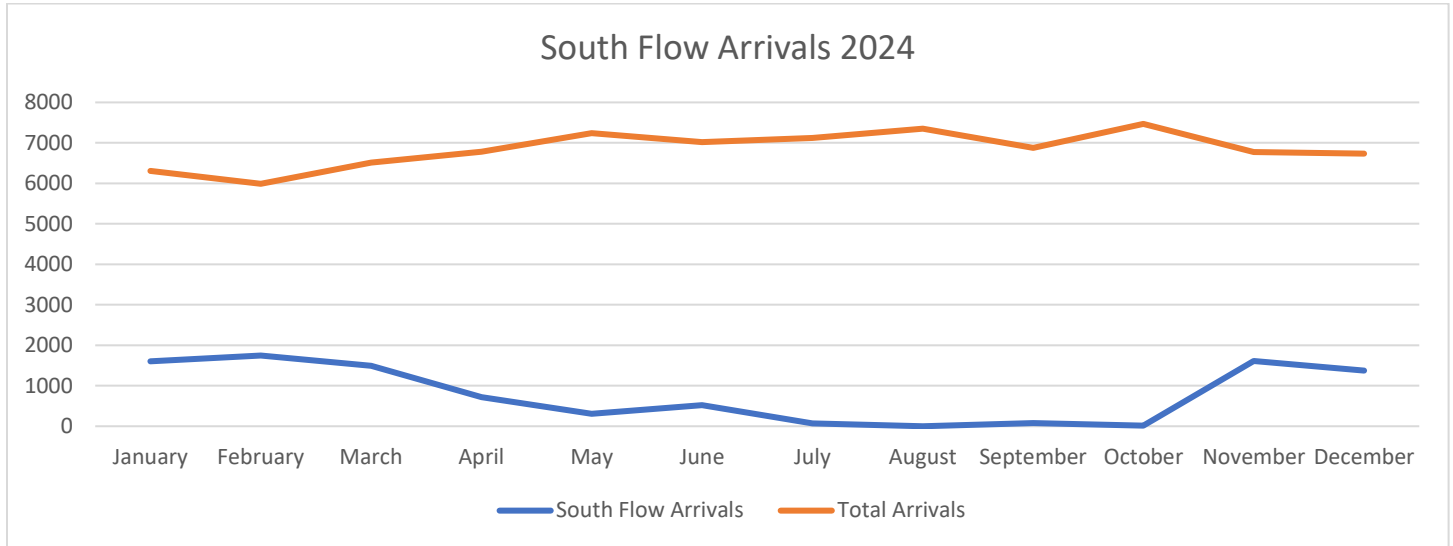
For a more detailed explanation of the various noise metrics, general aircraft operations, or ATC procedures discussed in this report, please refer to the Education section of the City of Sunnyvale's NoiseLab website (<https://syv.noiselab.casper.aero>). The website also contains interactive data browsers that allow interested parties to view detailed noise and flight operations statistics concerning areas around the City of Sunnyvale.

## GLOSSARY

<b>SJC</b>	Norman Y Mineta San Jose International Airport
<b>HWD</b>	Hayward Executive Airport
<b>PAO</b>	Palo Alto Airport
<b>SQL</b>	San Carlos Airport
<b>SFO</b>	San Francisco International Airport
<b>OAK</b>	San Francisco Bay Oakland International Airport
<b>RHV</b>	Reid-Hillview Airport of Santa Clara County
<b>NUQ</b>	Moffett Federal Airfield
<b>ILS</b>	Instrument Landing System
<b>RNP</b>	Required Navigation Performance
<b>CNEL</b>	Community Noise Equivalent Level
<b>LAm<sub>ax</sub></b>	Maximum sound level measured during a period
<b>NE</b>	Noise Event
<b>ACNE</b>	Aircraft Noise Event
<b>NOMS</b>	Noise and Operations Monitoring System
<b>ATC</b>	Air Traffic Control

# SJC AIRPORT SOUTH FLOW DATA FOR 2024

One of the City of Sunnyvale's primary objectives in installing a Noise and Operations Monitoring System (NOMS) was to monitor and report on South Flow arrivals that overfly the City on their approach to land to Norman Y. Mineta San Jose International Airport (SJC). To glean any seasonal trends in South Flow usage, or long term increases or decreases, an annual summary has been included below.

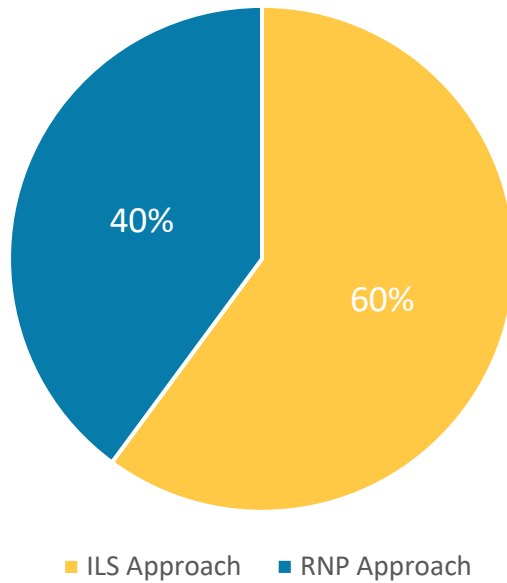


There are two types of approaches flown by airplanes landing in South Flow at SJC Airport. The ILS approach, which is more dispersed, and the more concentrated RNP approach.

The ILS approach has a wide lateral footprint because the pilots are flying vectors (headings) under ATC's direction. The controller determines their turn onto the final approach. By contrast, the RNP approach is a precision instrument procedure that utilizes fixed GPS waypoints that must be precisely overflown and have very small lateral error tolerances.

Because of the wide dispersion caused by the ILS approach, there is a measurable decrease in the intensity of noise events. However, the concentrated nature of the RNP approach means noise events are typically higher.

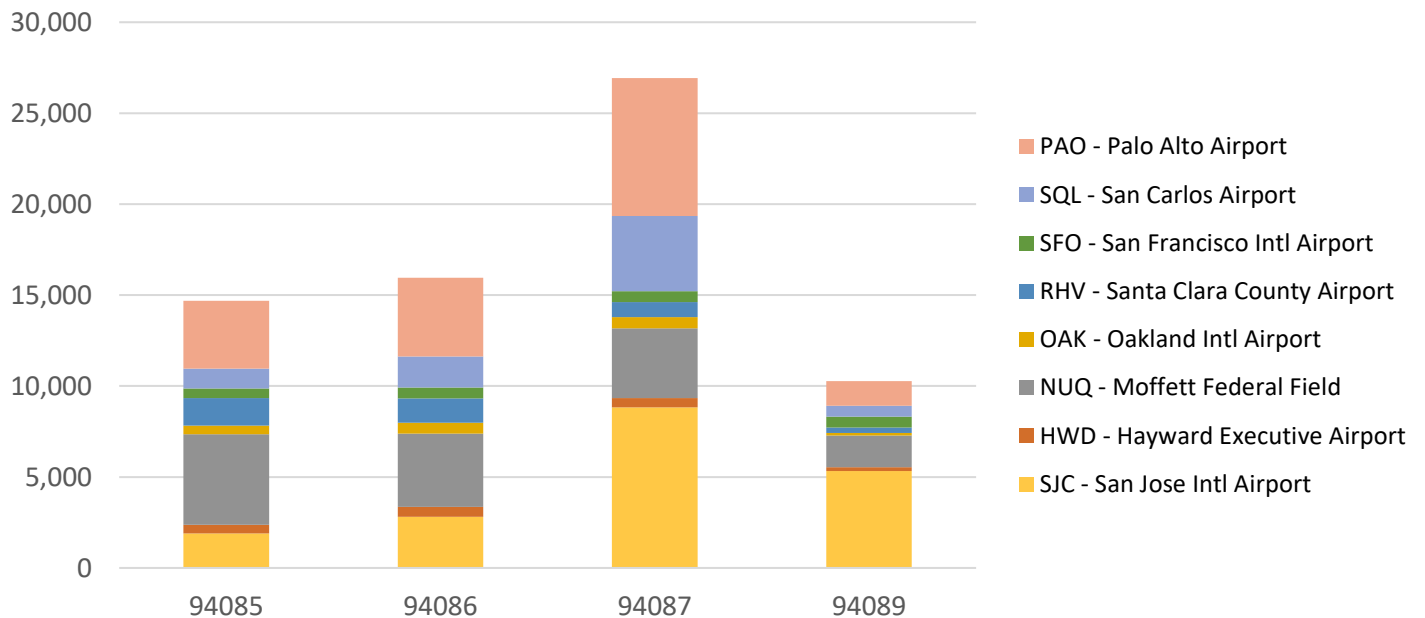
## SOUTH FLOW APPROACHES BY TYPE IN 2024



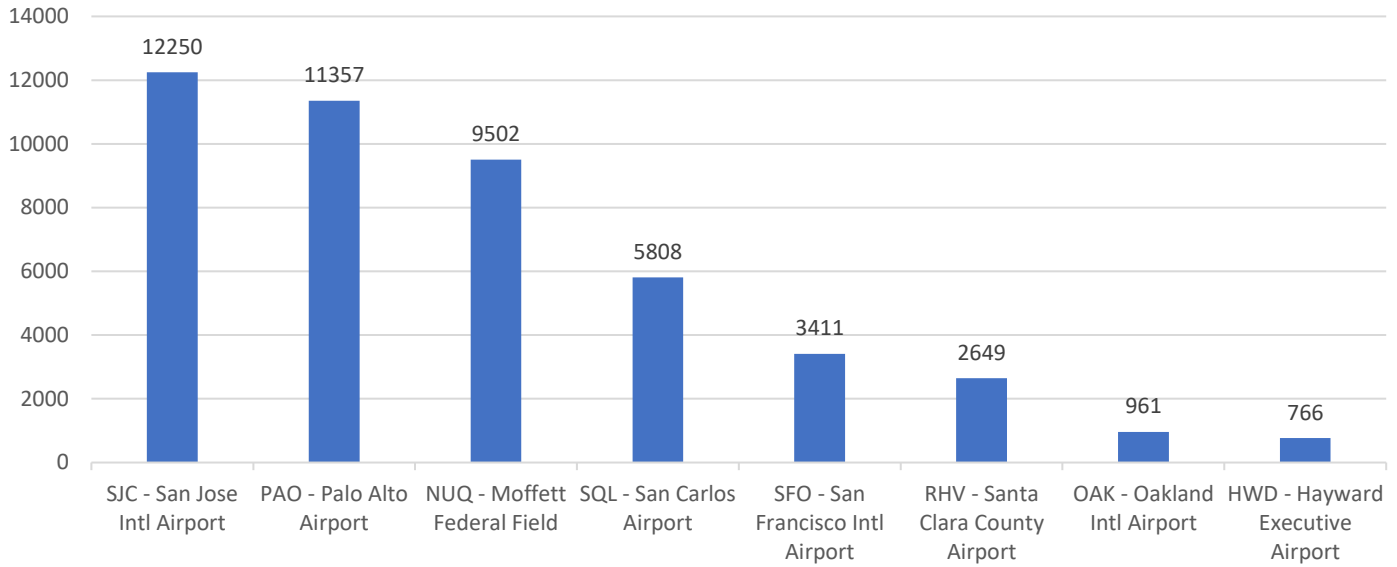
## SUNNYVALE OVERFLIGHT DATA FOR 2024

The data in this section quantifies overflights associated with each of the four zip codes that fall within the City limits, as well as the breakdown of airport of origin/destination. This is to discern trends over time.

### AIRPORT OVERFLIGHTS BY ZIPCODE



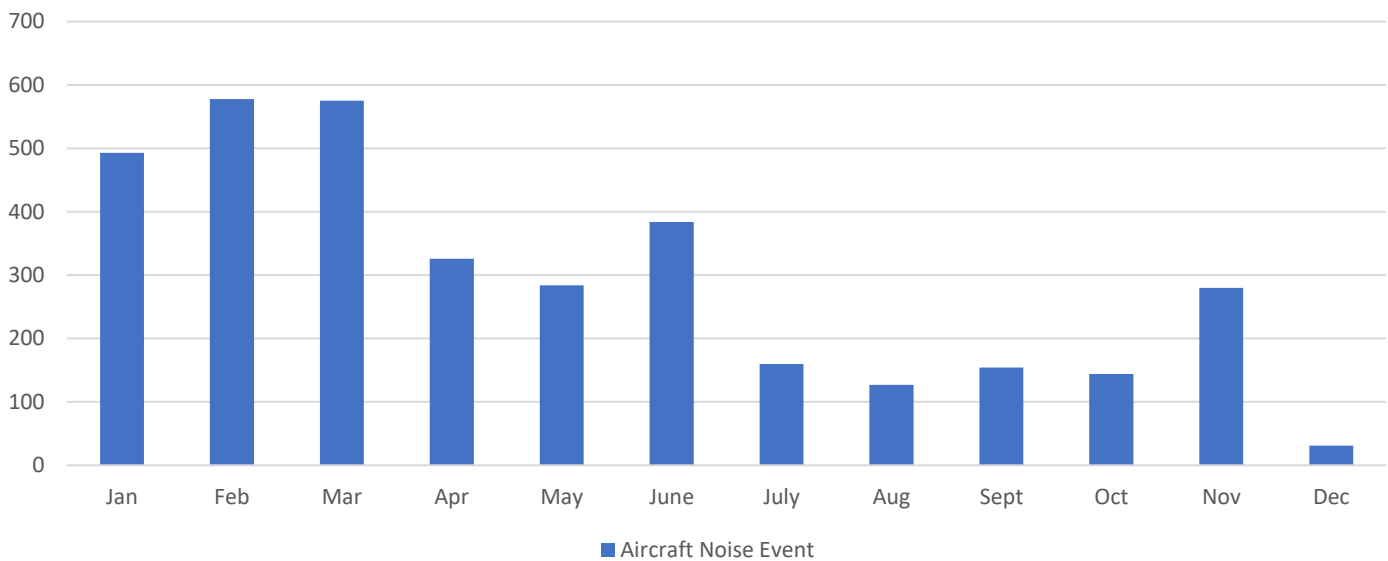
## SUNNYVALE OVERFLIGHTS (ENTIRE CITY) BY AIRPORT



## NOISE DATA PER MONITOR FOR 2024

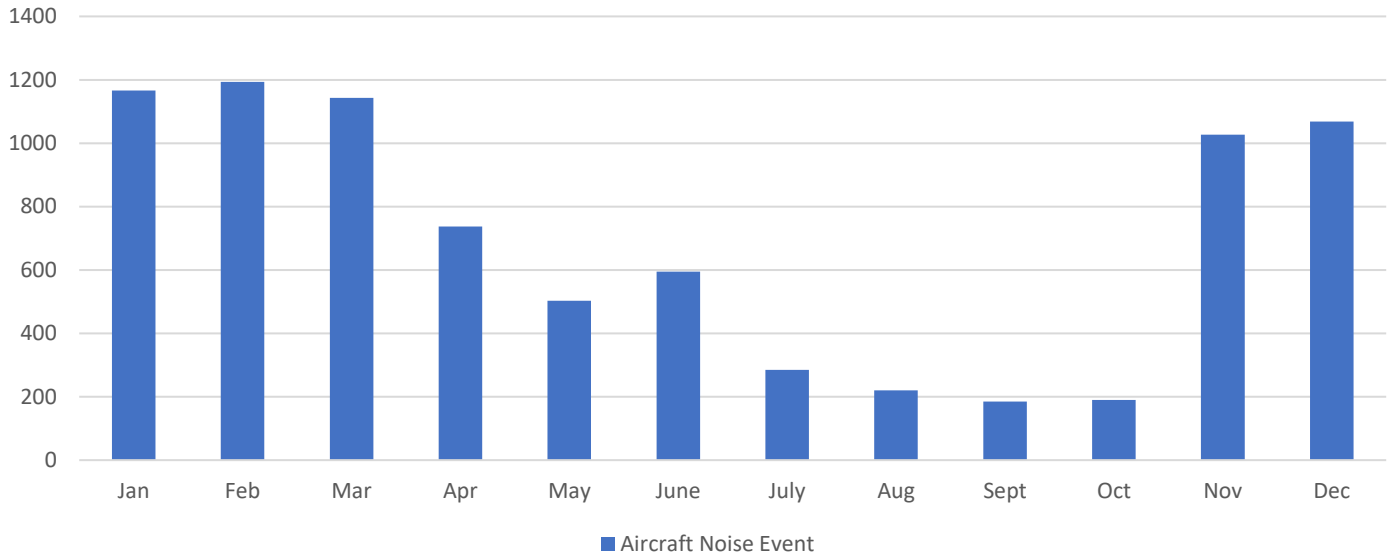
Noise monitors differentiate between noise events created by aircraft and non-aircraft (or community) sources. The first charts in this section shows the breakdown of these two types of noise events by month for each monitor. The second shows the total number of noise events for each monitor for each year since their construction.

### SYV-1: ORTEGA PARK AIRCRAFT NOISE EVENTS



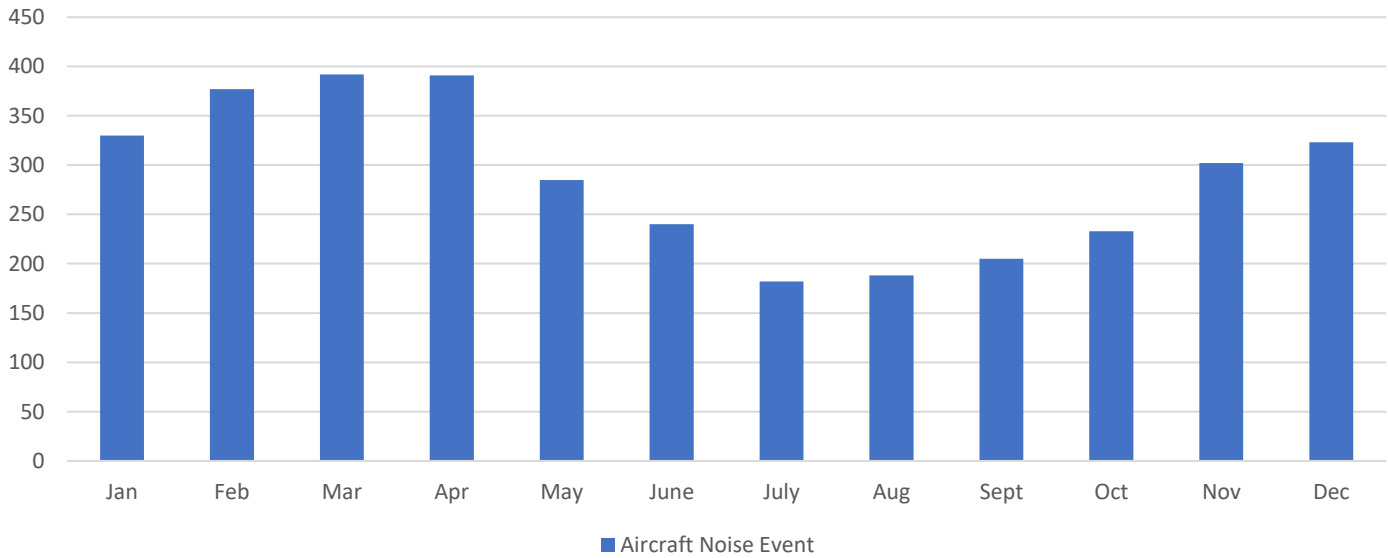
**Note:** The Ortega Park noise monitor was offline from November 29 to December 23, then again from December 24 to December 31. Noise events were not collected during this time.

## SYV-2: DONA AVE AIRCRAFT NOISE EVENTS

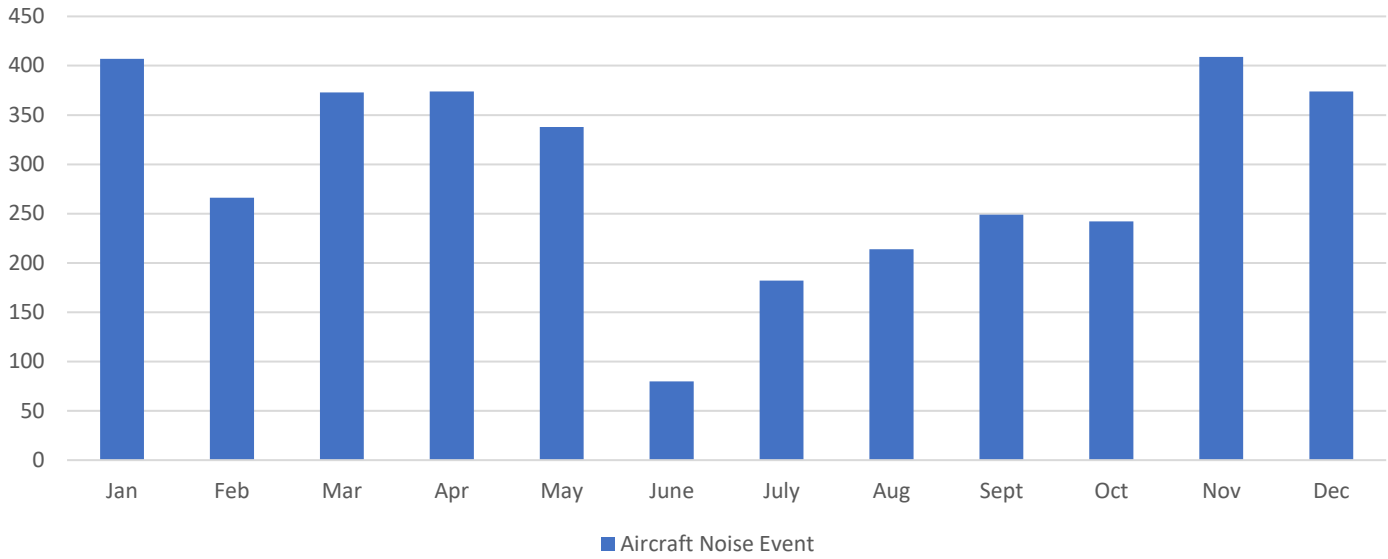


**Note:** The Dona Ave noise monitor was experiencing occasional nighttime outages from August 26 to October 17. Noise data from this period is incomplete.

## SYV-3: COMMUNITY CENTER PARK AIRCRAFT NOISE EVENTS

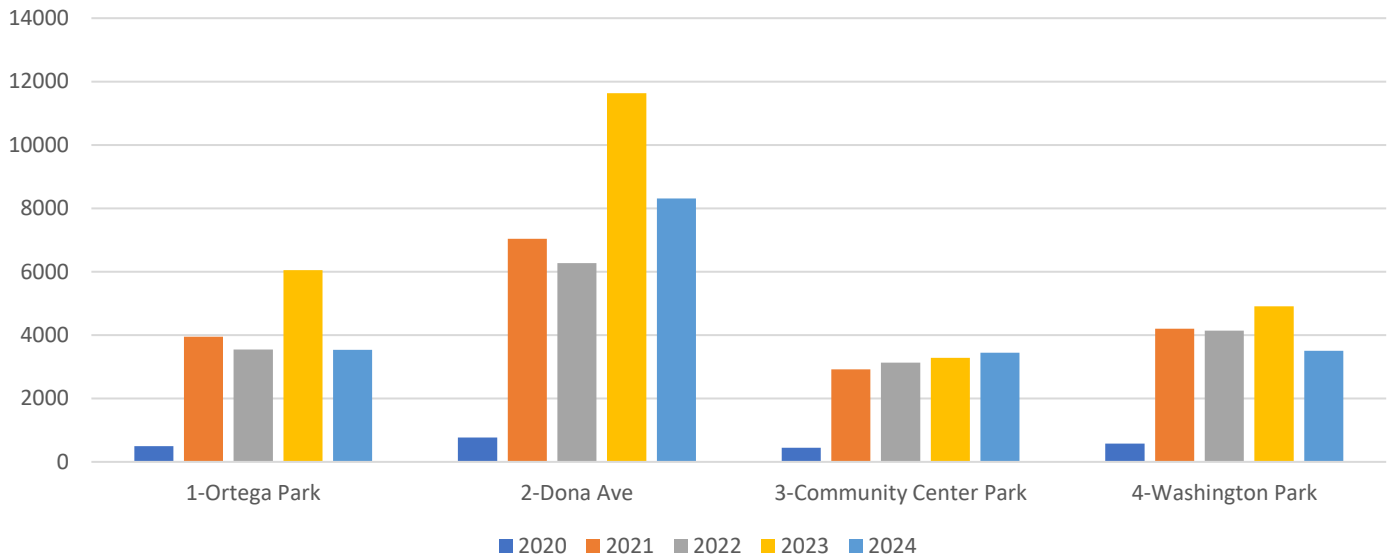


## SYV-4: WASHINGTON PARK AIRCRAFT NOISE EVENTS



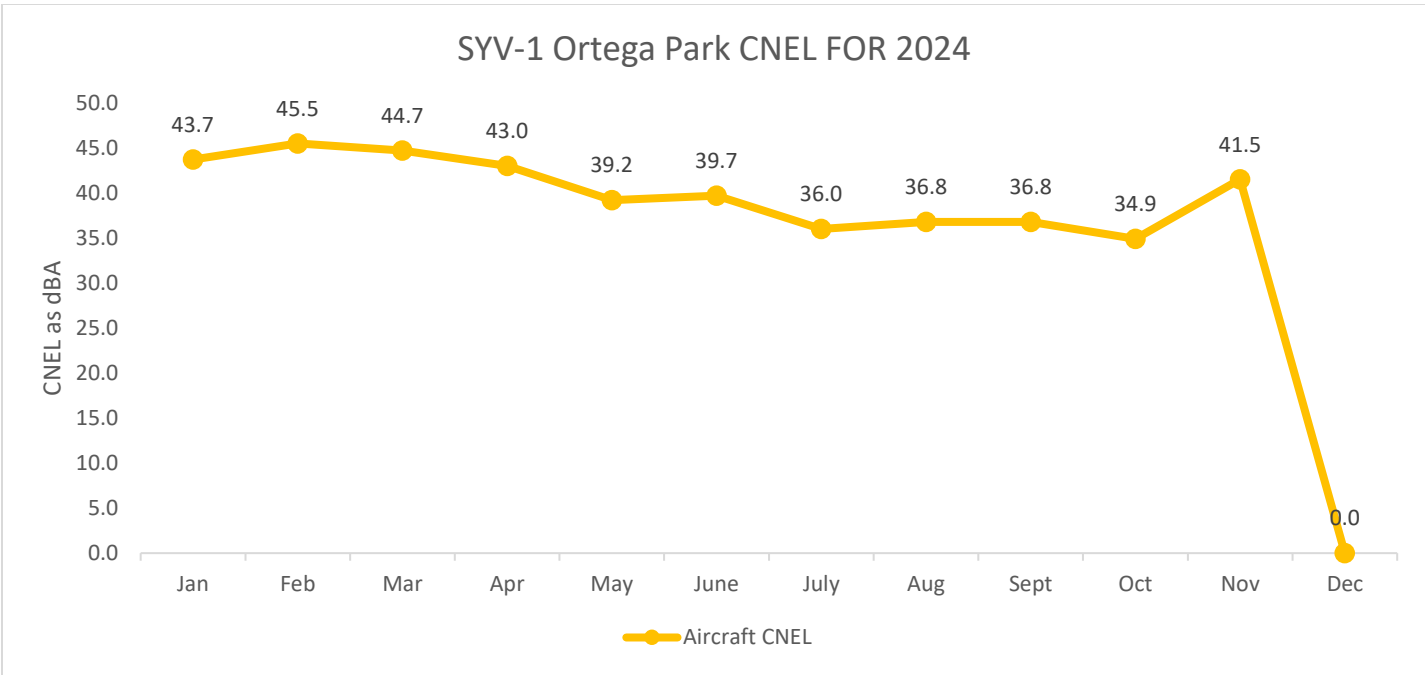
**Note:** The Washington Park noise monitor underwent maintenance from February 18 to March 4, then again from June 12 to June 30. Noise events were not collected during this time.

## AIRCRAFT NOISE EVENTS BY MONITOR

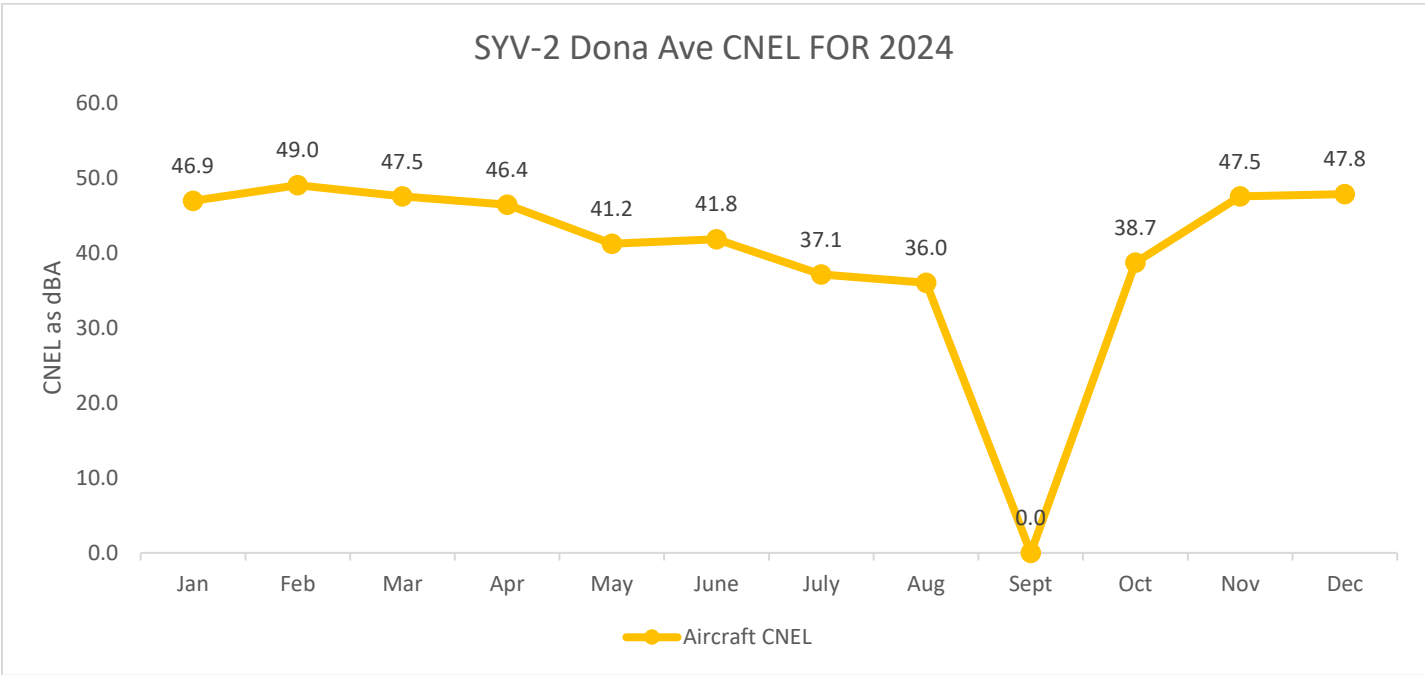


Community Noise Equivalent Level (CNEL) is the California state standard for airport noise land use compatibility. In addition to the penalty for the 10pm to 7am timeframe that DNL uses, CNEL adds a five (5) decibel penalty for the evening hours of 7pm to 10pm. For most airports, the contour of significance is the 65 CNEL contour. The below chart shows the CNEL per month for each monitor in 2024.



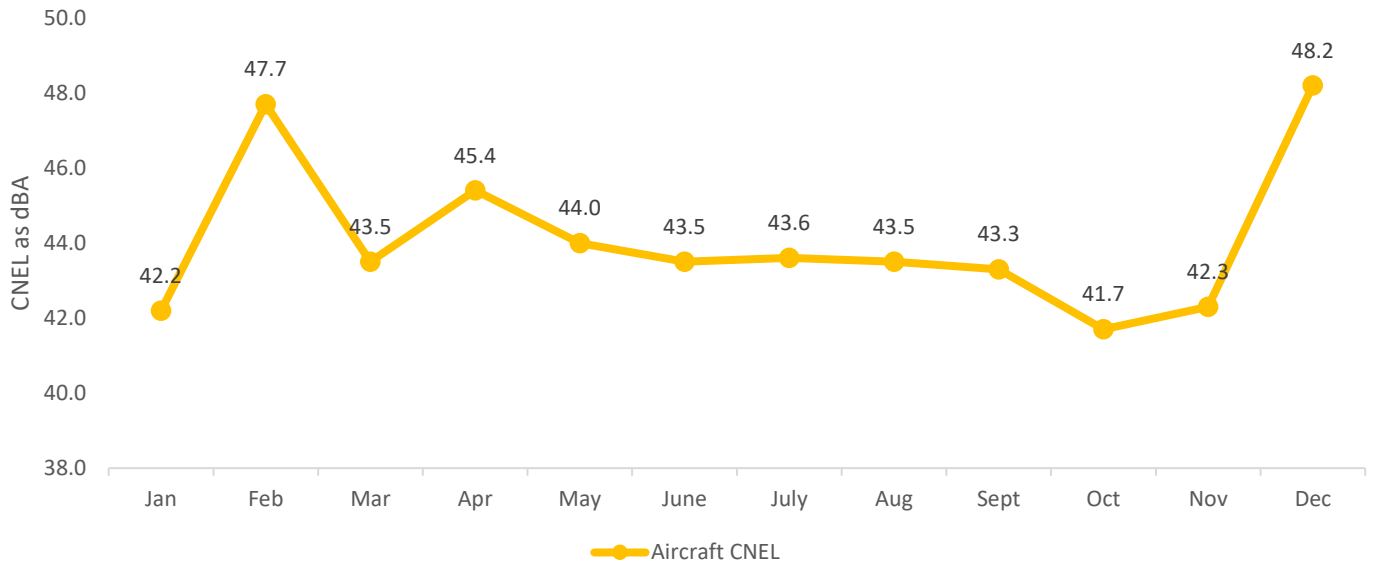


**Note:** The Ortega Park noise monitor was offline from November 29 to December 23, then again from December 24 to December 31. Noise events were not collected during this time.

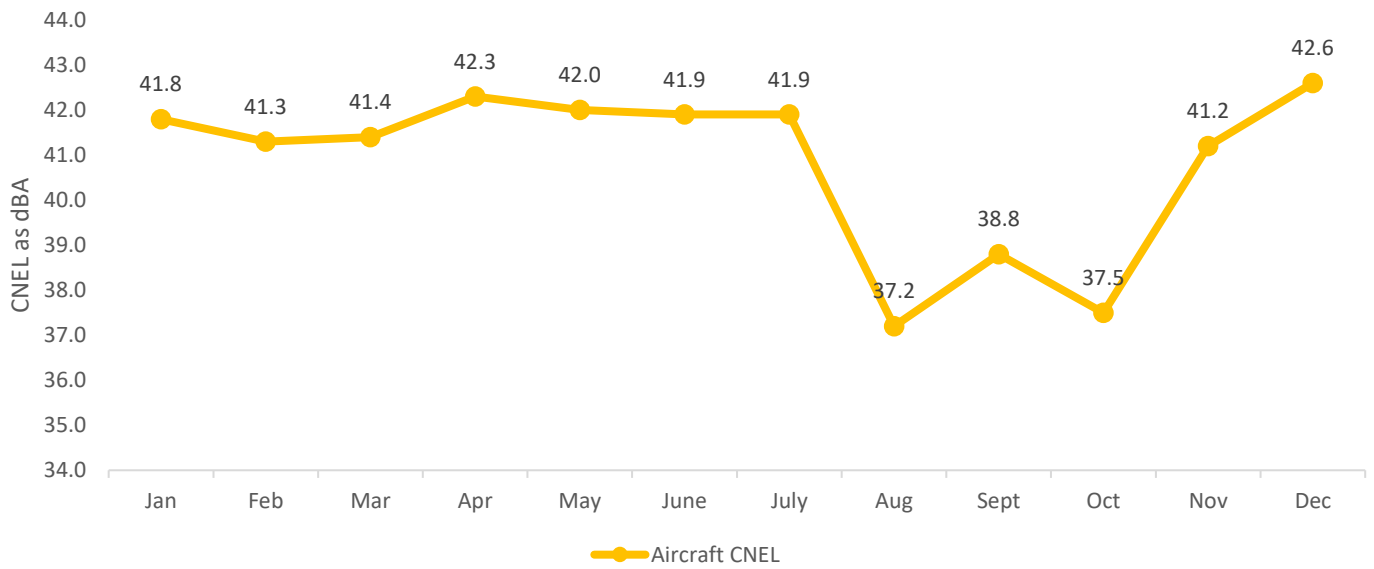


**Note:** The Dona Ave noise monitor was experiencing occasional nighttime outages from August 26 to October 17. Noise data from this period is incomplete.

SYV-3 Community Center Park CNEL FOR 2024



SYV-4 Washington Park CNEL FOR 2024



**Note:** The Washington Park noise monitor underwent maintenance from February 18 to March 4, then again from June 12 to June 30. Noise events were not collected during this time.

