



**COUNTY OF SAN MATEO**  
Inter-Departmental Correspondence  
Department of Public Works



**Date:** February 25, 2016  
**Board Meeting Date:** March 8, 2016  
**Special Notice / Hearing:** None  
**Vote Required:** Majority

**To:** Honorable Board of Supervisors

**From:** James C. Porter, Director of Public Works

**Subject:** Study Session: Review of Airport Operations and Options for Noise Reduction Procedures

**RECOMMENDATION:**

Review and provide input on options to enhance noise reduction procedures at San Carlos Airport.

**BACKGROUND:**

The San Carlos Airport is owned and operated by the County of San Mateo and is home to approximately 500 aircraft and over 25 aviation-related businesses generating over 130,000 flights per year. Over the past several years, the County has received a significant number of complaints and comments from residents about aircraft noise issues at the San Carlos Airport. In response to community concerns, your Board requested staff to meet with the community and Airport businesses to develop noise reduction procedures.

An "Airport Noise Working Group" was established in October 2013 by Supervisors Slocum and Horsley, Airport staff, Surf Air, the Pilots Association, and Atherton/North Fair Oaks residents. The working group met nine times over a period of two years and developed a series of noise reduction procedures including: a voluntary curfew on some flights during certain night and early morning hours, higher altitude approaches, and the implementation of an automated noise complaint reporting system. A complete list of noise reduction procedures currently in place is included as Attachment A. County leadership and Airport staff have also met with community residents, Airport businesses and Associations, State and Federally-elected Representatives, and the Federal Aviation Administration (FAA) to discuss options to reduce the impacts of aircraft overflights on the community.

While there has only been a thirteen percent (13%) increase in the total number of flights since 2012 (117,322 in 2012 compared to 132,497 in 2015), there has been a

significant increase in the number of noise complaints. One reason may be that a significant percentage of aircraft operations are charter flights, which generally fly the GPS instrument approach to the Airport. This instrument approach is a narrow route which does not disperse flights over a larger geographical area. Those residents who live under the GPS approach experience frequent aircraft overflights by aircraft arriving at the Airport. This primarily impacts the residents of East Palo Alto, Atherton, North Fair Oaks, and Redwood City.

Efforts to date have not resolved the considerable community concern over these aircraft disturbances. Therefore, your Board has requested staff to look at additional options to provide meaningful relief for affected communities.

### **DISCUSSION:**

In a review of complaints received, the majority of the complaints can be categorized in the following four areas:

- The frequency of overflights, especially during peak periods
- Time of day for overflights
- Perceived noise level
- Altitude of flights

What is important is that community concern is apparently not just about the absolute noise level of aircraft overflights (generally reported in decibels (dB) using various industry-established metrics). The concern is about the annoyance and disturbance, which is far more difficult to measure using traditional metrics and which may be a function of the sheer number of overflights; the type or quality (rather than the magnitude) of noise; and the time of day when there are occurrences, in comparison to normal household activities. For example, one overflight might not generate community concern, but 10 overflights at the same noise level could do so. Similarly, an overflight that occurs at noon is likely to have a different level of community concern than one that occurs on a pleasant summer evening at 7:00 p.m., or in the middle of the night, during open-window season.

All this means is that it is important to conduct a nuanced analysis of the impacts in these communities from operations at this airport – and that data from other airports or other communities may not be especially helpful in understanding the nature of the community concern for neighborhoods near San Carlos Airport.

Flight data received over the past three years indicates that there are approximately 363 takeoffs and landings on average that arrive each day to the San Carlos Airport between the hours of 6:45 a.m. to 10:00 p.m. The majority of those flights are Monday – Friday, in the peak morning and nighttime hours. Attachments B and C provide more detailed information on the number of flights by arrival time and the average number of flights per day by day of week. (The data provided is for informational purposes only and is not a comprehensive sampling.)

While the County can continue to pursue voluntary or cooperative actions to address community annoyance, these measures are only as effective as the level of cooperation. There are both good and not-so-good reasons for why voluntary programs may not be effective, despite the best efforts of the County. But it is inherent in any voluntary measure that the County cannot require compliance and can do little or nothing to force operations to comply with such measures. When, or if, voluntary measures prove unsuccessful, it is appropriate to look at other mandatory measures that might be more effective.

It is also important to distinguish between measures that actually reduce the impact (called “noise abatement options”) and those measures that mitigate the effect on the community (called “noise mitigation options”). Together, these are called “noise reduction options”. It is legally much simpler, but far costlier to implement noise mitigation options because such measures require an examination of the impacts on each affected property. Noise mitigation measures are particularly effective in communities where sound insulation can be effective. Noise abatement options actually reduce the noise, while noise mitigation measures reduce the effect of the noise without reducing the noise.

Staff has worked with a consultant to develop a list of options used at other airports to address disturbances from aircraft overflights (Attachment D). Options provided are classified within the following categories: Rules, Regulations and Policy; Mandatory Operational Rules; Voluntary Measures; Noise Mitigation; and Flight Tracks and Procedures. Staff has provided an estimate on the time needed to implement each option and its relative costs. Staff has also provided a guide on whether the option addresses each of the four main complaint areas listed above. Staff requests that your Board review and provide direction on which options to research further.

Staff proposes the following schedule and will report back to your Board in June 2016.

<b>Timeline</b>	<b>Action</b>
March 2016	Study Session on noise reduction options.
March 2016	Research noise reduction procedures in effect at analogous airports.
April 2016	Hire consultant to analyze data, refine noise reduction options, and to develop a map of complaints.
April 2016	Report back to your Board with a more refined list of noise reduction options and next steps.
May 2016	Community outreach: to include Town Hall and community meetings, survey of affected residents, and development of an airport noise reduction webpage.
June 2016	Report findings to your Board, including recommendations for further action.

County Counsel has reviewed and approved this item as to form.

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The proposed options to reduce aircraft noise disturbances contributes to the Shared Vision 2025 outcome of a Livable Community by allowing residents, business owners, and Airport customers to help shape airport noise reduction measures in a way that best fits their collective needs.

**FISCAL IMPACT:**

Staff estimates the cost of hiring a consultant to analyze data, refine noise reduction options, develop a map of complaints, and conduct a survey of impacted residents is approximately \$150,000. The Airport Enterprise Fund currently does not have sufficient funds to support this request, due to revenue requirements for upcoming capital projects. Funding would be needed from an alternative funding source, such as the General Fund.

**Attachments:**

- A: Summary of San Carlos Airport Noise Reduction Procedures
- B: San Carlos Airport Number of Flights by Arrival Time
- C: San Carlos Airport Average Number of Flights by Day of Week
- D: Possible Components of Comprehensive Plan to Address Aircraft Disturbances at San Carlos Airport