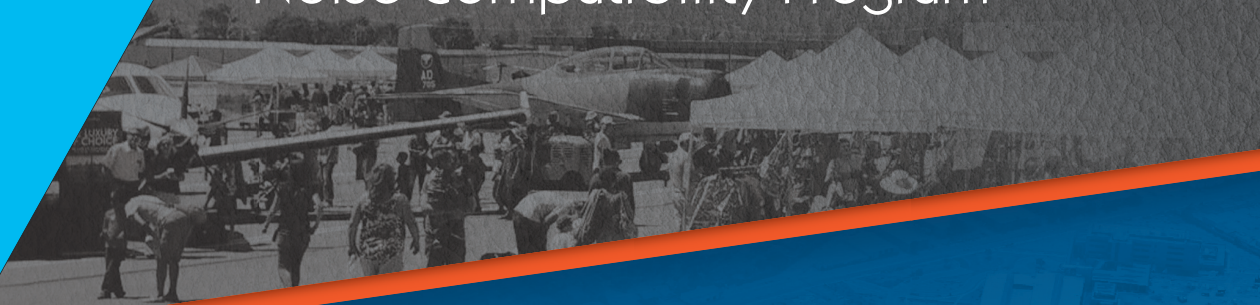




San Carlos

Airport

14 CFR Part 150 Noise Compatibility Planning Study
Noise Compatibility Program



SAN CARLOS AIRPORT

14 CFR Part 150

NOISE COMPATIBILITY PLANNING STUDY

Noise Compatibility Program

Prepared For

San Mateo County, California

By

Coffman Associates, Inc.

November 2019

The preparation of this document was financed in part through a planning grant from the Federal Aviation Administration (FAA) as approved under the Airport and Airway Improvement Act of 1982, as amended. The contents of this report do not necessarily reflect the official views or policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein, nor does it indicate that the proposed development is environmentally acceptable in accordance with applicable public laws.

TABLE OF CONTENTS

INTRODUCTION

NOISE COMPATIBILITY PROGRAM

Chapter Four – NOISE ABATEMENT ALTERNATIVES

POTENTIAL NOISE ABATEMENT MEASURES.....	4-6
Runway Use and Flight Routing.....	4-6
Airport Facilities	4-12
Aircraft Operational Procedures	4-16
Airport Regulations	4-24
Regulatory Alternatives.....	4-26
Additional Considerations	4-32
SUMMARY.....	4-33

Chapter Five – LAND USE ALTERNATIVES

POLICY TECHNIQUES	5-1
General Plan Policies	5-1
General Plan Map.....	5-3
Project Review Guidelines.....	5-6
REGULATORY TECHNIQUES.....	5-7
Compatible Land Use Zoning.....	5-7
Change in Residential Density	5-8
Subdivision Regulations	5-9
Building Codes.....	5-9
Transfer of Development Rights.....	5-11
Environmental Zoning	5-12
Fair Disclosure Regulations	5-13
Capital Improvement Programming.....	5-14
Airport Compatibility Overlay Zoning.....	5-14
EXPENDITURE TECHNIQUES	5-18
Property Acquisition.....	5-19
Sound Insulation	5-20
Noise and Avigation Easement Purchase	5-21
Sales Assurance.....	5-22
Development Rights Acquisition	5-22
PRELIMINARY LAND USE ALTERNATIVES REVIEW	5-23

Chapter Six – NOISE COMPATIBILITY PROGRAM

NOISE ABATEMENT ELEMENT 6-2
NOISE CONTOURS 6-2
LAND USE MANAGEMENT ELEMENT 6-2
PROGRAM MANAGEMENT ELEMENT 6-7
 Program Management Element 6-8
RESIDUAL NOISE IMPACTS 6-9
SUMMARY OF NOISE COMPATIBILITY MEASURES FOR REVIEW UNDER 14 CFR PART 150 6-10
LOCAL NOISE COMPATIBILITY MEASURES NOT SUBMITTED FOR 14 CFR PART 150 REVIEW 6-11
SUMMARY OF LOCAL NOISE COMPATIBILITY MEASURES NOT SUBMITTED FOR 14 CFR PART 150
REVIEW 6-14

EXHIBITS

4A San Carlos Airport Noise Abatement Procedures 4-3
4B Noise Abatement Alternatives – Runway Use and Flight Routes 4-7
4C Noise Abatement Alternatives – Facilities Development 4-13
4D Example Sound Wall 4-17
4E Noise Abatement Alternatives – Aircraft Operating Procedures 4-19
4F Noise Abatement Alternatives – Airport Restrictions and Regulations 4-25
4G Potential Bay Meadows Departure Revision 4-35

5A Future Noise Contours with General Plan Land Use Map 5-5
5B Airport Influence Area 5-15

6A 2017 Existing Noise Contours with Land Use 6-3
6B 2022 Noise Contours with Land Use 6-5
6C Future Noise Contours with General Plan Land Use Map 6-12

APPENDICES

Appendix A
PLANNING ADVISORY COMMITTEE

Appendix B
COORDINATION, CONSULTATION, AND PUBLIC INVOLVEMENT

Appendix C
RESOURCE LIBRARY



Appendix D
NOISE COMPATIBILITY PROGRAM CHECKLIST

Appendix E
FAA CONSULTATION

Appendix F
SUPPLEMENTAL NOISE CONTOURS

Appendix G
NOISE COMPATIBILITY PROGRAM IMPLEMENTATION SUMMARY



Preface



Preface

This document is the Noise Compatibility Program (NCP) prepared for San Carlos Airport, which is owned and operated by San Mateo County. The NCP is the second of two parts required for a Code of Federal Regulation (CFR) Title 14, Part 150 Noise Compatibility Study. It includes Chapters Four, Five, and Six of the study and supporting appendices. The first volume, Noise Exposure Maps (NEM), was accepted by the Federal Aviation Administration (FAA) on April 23, 2019. FAA's NEM acceptance letter can be found in **Appendix E**, and the Noise Exposure Maps are shown on **Exhibits 6A** and **6B**. The following chapters are included in this NCP document:

- Chapter Four, Noise Abatement Alternatives, discusses and analyzes potential methods of reducing or shifting aircraft noise to be less disturbing to noise-sensitive areas.
- Chapter Five, Land Use Alternatives, analyzes potential land use planning and zoning techniques to prevent the development of new noise-sensitive land uses in areas exposed to aircraft noise.
- Chapter Six presents the Noise Compatibility Program. The program is organized into two elements: land use management and program management. The land use management element includes measures to prevent noise impacts on existing noise-impacted land uses and future land use development in the Airport environs. The program management element includes measures to administer, refine, and update the overall program as needed in the future.

Appendices provide additional background information, document public outreach, educational materials, and implementation materials.

Coordination, Consultation, and Public Involvement

As part of the planning process, the public, Airport users, and local, state, and federal agencies were given the opportunity to review and comment on the Noise Compatibility Program and supporting documentation. Project materials were made available for local review and discussion throughout the process via physical hand-outs and a dedicated project website.

Consultation per the requirements of 14 CFR Part 150, Sections 150.21(b) and A150.105(a), were primarily conducted through a study committee, the Planning Advisory Committee (PAC), formed to provide input and feedback on the NEM. The PAC included local residents, Airport users, community officials and planning staff with jurisdiction within or in the vicinity of the 65 Community Noise Equivalent Level (CNEL) noise exposure contours, local business representatives, the California Department of Transportation – Division of Aeronautics (Caltrans), and the FAA. PAC members are listed in **Table 1** below. The PAC reviewed and commented on the working papers throughout the study process.

The PAC met on November 8, 2017 and March 21, 2018 during preparation of the NCP. Following each PAC meeting, the public was invited to participate in a Public Information Workshop. These workshops were structured informally, in an open house format, using display boards to present information throughout the meeting room.

A presentation was also given to the San Carlos City Council on September 24, 2018. The purpose of this presentation was to brief the City Council on the status and recommendations of the Noise Compatibility Study.

In addition to the PAC meetings, two technical conferences were convened by the consultant on August 3, 2017. The purpose of the conferences was to assist in the initial development of noise abatement and land use alternatives. Airport traffic control tower (ATCT) staff, FAA, and local aircraft operators were invited to the Aviation Technical Conference. Representatives from local planning agencies were invited to the Land Use Technical Conference.

Study materials were also made available on a project-specific website for the duration of the study process at <http://sancarlosnoise.airportstudy.com/>.

A Public Hearing regarding the Noise Compatibility Program was held on September 26, 2018 during which oral and written comments on the materials were received. For those not attending the Public Hearing, written comments were also accepted by mail or e-mail.

Written comments were received as part of the public consultation processes described above. These comments are on file with the FAA Western-Pacific Region Airports Division Manager. Additional information regarding coordination, consultation, and public involvement may be found in **Appendix B**, which includes copies of meeting notices, meeting notes, sign-in sheets, and written comments received.

TABLE 1
Planning Advisory Committee
San Carlos Airport

Name	Representing
Ms. Rochelle Kiner	County of San Mateo , Deputy Director of Public Works Administration and Airports
Ms. Camille Garibaldi	Federal Aviation Administration , Environmental Protection Specialist, SFO-613, FAA San Francisco ADO
Ms. Gretchen Kelly	San Mateo County Airports , Airport Manager
Mr. Christopher St. Peter	San Mateo County Airports , Assistant Airport Manager
Ms. Stacey Maye	San Carlos Airport Traffic Control Tower , San Carlos Air Traffic Manager
Ms. Thann McLeon	Federal Aviation Administration , Manager of Airspace, Procedures, Planning & Requirements, FAA Northern California TRACON
Mr. Philip Crimmins	California Department of Transportation Division of Aeronautics
Ms. Sandy Wong	City/County Association of Governments of San Mateo County (C/CAG) , Executive Director
Ms. Tara Peterson	City of San Carlos , Assistant City Manager
Ms. Melissa Diaz Stevenson	City of Redwood City , City Manager
Mr. Kevin M. Miller	City of Foster City , City Manager
Mr. Carlos de Melo	City of Belmont , Community Development Director
Ms. Stacy Howard	National Business Aviation Assoc., Inc. , Regional Representative
Mr. Alex Gertsen	National Business Aviation Assoc., Inc. , Director of Airports and Infrastructure
Ms. Melissa McCaffrey	Airport Owners and Pilots Association , Regional Manager
Ms. April Gafford	San Carlos Airport Tenant , JATO Aviation
UJ Emetron	San Carlos Airport Tenant , Diamond Aviation
Mr. Rich Newman	San Carlos Airport Association , Board Member
Mr. Hans Plesman	Business Association of San Carlos Airport , President
Mr. James Cvengros	Redwood Shores Community Association
Mr. Dimitri Vandellos	Greater East San Carlos Neighborhood Association , President
Mr. Steve Monowitz	County of San Mateo , Community Development Director
Mr. Chris Hunter	Office of Supervisor Don Horsley, San Mateo County Board of Supervisors, District 3 , Chief of Staff
Ms. Carol Ford	San Carlos Airport Pilots Association , President
Mr. Irving Torres	Office of Supervisor Warren Slocum San Mateo County Board of Supervisors, District 4 , Legislative Aide
Mr. Dan Dyer, Owner	San Carlos Airport Tenant , San Carlos Flight Center
Ms. Linda R. Wolin	Office of Supervisor Dave Pine, San Mateo County Board of Supervisors, District 1 , Legislative Aide
Mr. Joe Straton	Calm the Skies , Representative
Mr. George Rodericks	Town of Atherton , City Manager
Mr. Alex D. McIntyre	City of Menlo Park , City Manager



Chapter Four

Noise Abatement Alternatives



CHAPTER FOUR

Noise Abatement Alternatives

The purpose of this chapter under Title 14 of the Code of Federal Regulations, Part 150 (14 CFR Part 150) guidelines is to identify noise abatement alternatives that reduce the number of people and noise-sensitive land uses within the 65 Community Noise Equivalent Level (CNEL) noise contour at San Carlos Airport (Airport, SQL). This chapter will also review current noise abatement methods that reduce overflight impacts outside of the 65 CNEL noise contour.

Before the analysis of noise abatement alternatives can be done, it is important to understand the scope of the aircraft noise impacts on noise-sensitive land uses. The Federal Aviation Administration's (FAA) criterion for approval of a noise abatement measure is the reduction of noise-sensitive land uses within the 65 CNEL noise exposure contours. As discussed in Chapter Three, there are no noise-sensitive land uses located within the existing condition (2017) or five-year forecast condition (2022) 65 CNEL noise exposure contours. Therefore, the focus of this analysis will be keeping noise-sensitive land uses outside of the 65 CNEL contours and ensuring the current noise abatement methods in place are still effective for reducing San Carlos Airport aircraft overflight noise near the Airport.

For many years, the noise abatement procedures have been in effect at San Carlos Airport. Airport staff, in conjunction with local pilots, have adopted a good-neighbor policy that encourages all pilots operating at the Airport to comply with the published voluntary noise abatement procedures. It is important to note that many of the measures discussed in this chapter have already been implemented as part of the San Carlos Airport Noise Abatement Procedures, depicted on **Exhibit 4A**. Last updated in 2007, the San Carlos Airport Noise Abatement Procedures are distributed to pilots in digital and printed form. In addition to the recommended flight paths, the recommended noise abatement procedures include:

- Reduce power/revolutions per minute (RPM) as soon as safe and practical
- Avoid flying over homes in extremely noise sensitive areas
- Departing traffic use Runway 12, wind permitting
- Please consider the noise impact of your pattern flying activities. If able, fly after 10:00 am on weekend and holiday mornings
- No touch and go operations when the Tower is not in operation
- Instrument flight rule (IFR) arrivals and departures: Give consideration to your noise impact and follow noise abatement procedures to the greatest extent possible
- Helicopter traffic pattern is located southwest of runway and east of Industrial Road. Contact airport operations for additional information and procedures.
- Be a good neighbor: Fly safely and quietly!

In addition, the following hours of operations are requested in the San Carlos Airport Noise Abatement Procedures:

- On Weekdays: No touch and go, low-approach or full stop—taxi back operations on weekdays during the period from two (2) hours after sunset of one day and 8:00 AM of the following day Monday through Friday; and until 9:30 AM on Saturday.
- On Weekends and Holiday: No touch-and-go, low approach or full stop-taxi back operations before 9:30 AM nor after 6:00 PM on any Saturday, Sunday or Holiday.



San Mateo County also has a noise complaint submittal system for residents to submit complaints about aircraft noise online or by telephone. In addition to the voluntary noise abatement procedures, airfield signage depicting the noise abatement procedures has been installed, as shown in the photo. When complaints about pilots not adhering to the noise abatement procedures are submitted, Airport staff investigates the complaint. Staff uses the Airport’s radar system to verify that an early turn occurred, then checks the ATCT audio records to determine if the pilot was instructed to turn early. If the pilot was instructed to turn early by the ATCT, no further action is taken. If the pilot was not instructed to make an early turn, Airport staff prepares a letter documenting the findings. The letter includes

a description of the event, map of the radar flight track showing the early turn, and a copy of the Airport’s noise abatement procedures. Copies of the letter are sent to the pilot, ATCT, San Mateo County Deputy Director of Public Works and the San Carlos Airport Pilot’s Association.

In addition to the noise abatement procedures, the Airport staff works with the surrounding communities to address noise concerns. Most recently, Airport staff have been engaged in issues related to scheduled charter service operations at the Airport, which began in June 2013.

SAN CARLOS AIRPORT NOISE ABATEMENT PROCEDURES

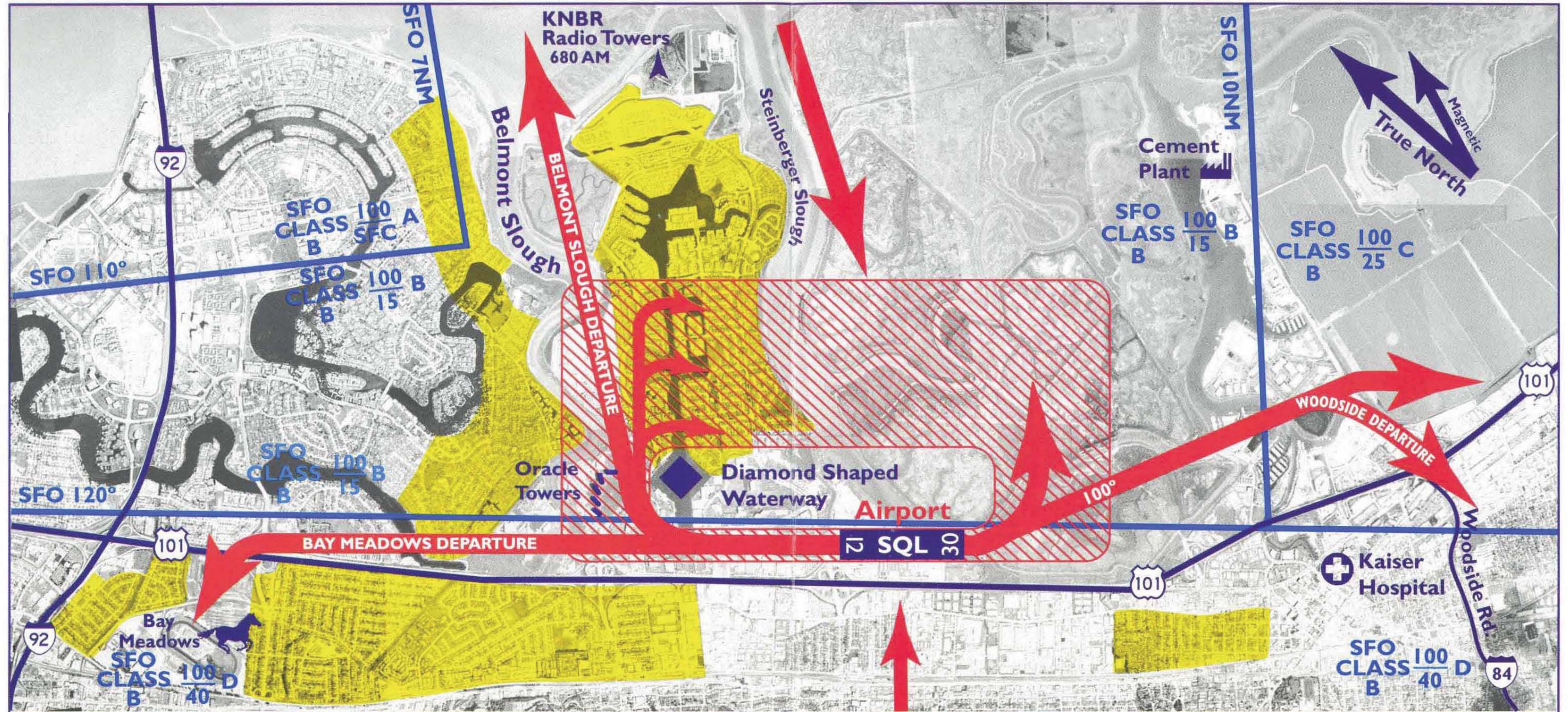


Photo by Aire Image

- Arrival & Departure Routes
- Approximate SFO Class B Airspace
- Typical Traffic Pattern Area
- Extremely Noise Sensitive Areas

For Pilot Information Purposes – Not To Be Used For Navigation
SAFETY ALWAYS SUPERSEDES NOISE ABATEMENT PROCEDURES

Source: San Carlos Airport Noise Abatement Procedures; December 2007

December 2007

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Shortly thereafter, Airport staff began fielding noise complaints from residents located under the global positioning system (GPS) approach path to the Airport from the southeast. To address these concerns, the following actions have been taken:

- The San Carlos Airport Noise Working Group was established in November 2013. Meeting quarterly, the Working Group includes representatives from the San Mateo County Board of Supervisors, staff from local U.S. Representatives, San Carlos Airport Association, Airport staff, the charter service, Atherton Town Council, and residents from Menlo Park, North Fair Oaks, Redwood City, and Atherton. The Working Group has coordinated with FAA to minimize overflight noise for those residing under the approach path to the Airport.
- The initial recommendations involved adjustments to the GPS approach used by pilots approaching the Airport. The suggested changes included increasing the altitude of the aircraft on approach and varying the path used by aircraft. FAA later concluded that varying the approach path was not feasible due to potential conflicts with aircraft operating at San Francisco International Airport.
- A noise monitor was placed at a residence in the Town of Atherton to measure the noise levels of charter service aircraft overflights. Flight tests using different aircraft gear and flap configurations were conducted to provide information to the public. During the tests, residents and charter service representatives listened from the ground to determine which option was the quietest. The charter service trained its pilots to use the landing gear and flaps up option when weather and operational procedures allow.
- In March 2016, the San Mateo County Board of Supervisors initiated an Aircraft Disturbance Study to evaluate the feasibility of implementing limits, restrictions, and curfews to reduce aircraft noise near the Airport. The result of the study was a draft aircraft noise ordinance prohibiting the operation of certain aircraft exceeding 74.5 dBA at San Carlos Airport from 9:00 p.m. until 6:00 a.m.
- In 2016, the Working Group coordinated with FAA and the charter service to test the Bayside Visual Approach, which, when weather conditions permit, routes aircraft over portions of San Francisco Bay on approach to San Carlos Airport. During the initial portion of the six-month test period, approximately 65 percent of scheduled charter operations arrived using the Bayside Visual Approach. Following the six-month test period, which concluded in January 2017, FAA began its analysis of the approach and considered community, environmental, and operational impacts on the findings of the Bayside Visual Approach. Those findings were presented to the public in September 2017 in a process separate from this Part 150 study.

Effective noise abatement and mitigation of noise impacts requires a coordinated approach among airport users; aircraft manufacturers; airport proprietors; federal, state, and local governments; and residents of communities near the Airport. The full range of potential noise abatement measures required in 14 CFR Part 150 are screened in this chapter. Each of the techniques was first screened at a noise abatement workshop convened by the consultant on August 3, 2017. Invitees to the workshop included

FAA representatives, the ATCT Manager, Airport staff, and local Airport users. Following the conference, further investigation regarding the effectiveness of each measure was conducted by the consultant.

The screening criteria for the noise abatement measures include the:

- Probable noise reduction over noise-sensitive areas;
- Potential for compromising safety margins;
- Ability of the airport to perform its intended function; and
- Legal, political, and financial implications of implementation

If a noise abatement measure is found to have benefits based on the above criteria and analysis, an assessment of the feasibility of each measure and the strategies required for its implementation are presented. At the end of each section, a recommendation as to whether the measure deserves additional consideration is presented.

POTENTIAL NOISE ABATEMENT MEASURES

14 CFR Part 150 provides a comprehensive list of potential noise abatement measures which must be analyzed as part of this study. These techniques either (1) reduce the size of the noise contours or (2) move the noise to other areas where it is less disruptive. To reduce the size of the noise contours, the total sound energy emitted by the aircraft must be reduced. This may be done by modifying aircraft operating procedures or restricting the number or type of aircraft allowed to operate at the Airport. Measures which can be used to shift the location of noise include runway use programs, special flight routes, and airport facility development.

Potential noise abatement measures can be assigned to the following four categories:

1. Runway Use & Flight Routing
 2. Airport Facilities
 3. Aircraft Operational Procedures
 4. Airport Regulations
-

RUNWAY USE AND FLIGHT ROUTING

As illustrated on **Exhibit 4B**, runway use and flight route alternatives can be used to shift noise from existing noise-sensitive areas, such as residential development, to noise compatible areas, such as commercial development. Each technique depicted on the exhibit is discussed below.

Preferential and Rotational Runway Use

Preferential runway use programs are intended to direct as much noise as possible over the least noise-sensitive areas. This is accomplished by favoring the runway or runways which lead traffic over compatibly developed areas.

NOISE ABATEMENT ALTERNATIVES

Runway Use and Flight Routes



Preferential Runway Use



Departure Turns/Route



Visual Approach Procedures



Instrument Approach Procedures



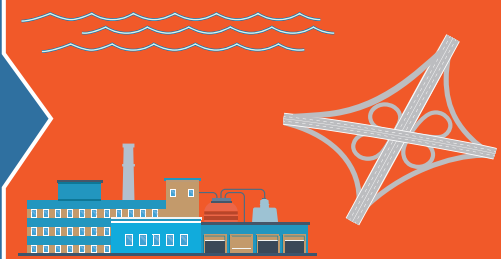
Traffic Pattern Changes

How Do They Help?

Shift noise from noise-sensitive area...



to noise-compatible area



Will These Options Work for San Carlos Airport?



- ✓ Currently encourage Runway 12 departures, wind permitting
- ? Other Runway use options



- ✓ GPS approach to Runway 30
- ? New instrument procedures



- ✓ Bay Meadows
- ✓ Belmont Slough
- ✓ Woodside
- ? New departure turns/routes



- ✓ Left traffic - Runway 12
- ✓ Right traffic - Runway 30
- ? Traffic pattern changes



- ✓ Steinberger Slough
- ✓ Overhead approach
- ✓ Straight-in Runway 30 and remain at 1,000' until Kaiser Hospital
- ? Bayside approach

Rotational runway use is intended to distribute aircraft noise equally off all runway ends. At best, a rotational runway use program can only provide temporary relief for one group at the expense of another.

FAA Order 8400.9 - *National Safety and Operational Criteria for Runway Use Programs* provides criteria for establishing runway use programs. It defines two classes of programs: *formal* and *informal*.

A formal program must be defined and acknowledged in a Letter of Understanding between FAA's Flight Standards Division and Air Traffic Organization, the airport proprietor, and the airport users. Once established, participation by aircraft operators is mandatory. Formal programs can be extremely difficult to establish, especially at airports with many different users.

An informal program is an approved runway use program that does not require the Letter of Understanding. Informal programs are typically implemented through a Tower Order and publication of the procedure in FAA's Digital-Chart Supplement (d-CS).

Preferential and Rotational Runway Use Evaluation

The prevailing wind direction at an airport dictates the direction in which aircraft depart and arrive. Consistent with the principles of flight, pilots takeoff and land into the wind. As discussed in Chapter Two – Aviation Noise, Runway 30 is used for departures as follows:

- Air Taxi Turboprop: 95 percent;
- Jet and non-Air Taxi Turboprop: 92 percent;
- Itinerant General Aviation: 95 percent;

This results in aircraft arriving to the Airport from the southeast and departing to the northwest before making any turns. These runway use percentages are based on interviews with airport and ATCT staff as well as a review of radar flight track data obtained from the San Carlos Airport.

Based on a wind analysis, calm winds, which are classified as between zero and three knots, occur approximately 46 percent of the time at San Carlos Airport. Further analysis, based on data from the automated weather observing system (AWOS) at the Airport, indicates 83 percent of the calm winds occur between 9:00 pm and 7:00 am. This time period corresponds to the hours when the ATCT is closed. Based on an evaluation of radar flight track data for the Airport, approximately two percent of operations occur during this time.

Preferential and Rotational Runway Use Conclusion

As outlined in the previously discussed San Carlos Airport Noise Abatement Procedures, Runway 12 is the designated calm wind runway. San Carlos Airport has adopted this as an informal preferential runway use program which is published in the FAA's d-CS. Using Runway 12, in conjunction with the noise abatement arrival and departure paths described below, routes aircraft over areas that are considered compatible with aircraft noise.

A rotational runway use program is not applicable at the Airport as most of the time winds above calm levels (three knots) dictate runway use during the period when the tower is open. Therefore, implementing a rotational runway use program could conflict with safe operating practices at the airport by encouraging pilots to fly opposite of the prevailing winds.

Adjustments to the established informal preferential runway use program would not remove noise-sensitive land uses from the 65 CNEL. Under 14 CFR Part 150 guidelines, FAA disapproval of a preferential runway use is likely.

However, this established program shifts aircraft overflights away from concentrated residential areas north and northwest of the Airport located outside of the 65 CNEL noise exposure contours. Therefore, this program should remain as a local measure outside of the 14 CFR Part 150 process. There are no noise-sensitive land use impacts with the informal preferential runway use program in place.

Preferential and Rotational Runway Use Recommendation

Preferential and rotational runway use programs should not be included for review and approval under 14 CFR Part 150. The current preferential runway use program should remain as a local measure outside of the 14 CFR Part 150 process.

Departure Turns

A common noise abatement technique is to route departing aircraft over noise-compatible areas immediately after takeoff. To be fully effective, the compatible corridor must be relatively wide and closely aligned with the runway so that turns over the area are practical.

Departure Turn Evaluation

The previously discussed San Carlos Airport Noise Abatement Procedures include the following departure routes, depicted on **Exhibit 4A** and described below:

- *Runway 30 Crosswind Departures:* “Belmont Slough” departure. Climb straight out, parallel to Highway 101. Fly your crosswind turn so that your ground track remains just northwest of the diamond-shaped waterway as depicted on the noise abatement map. (Do not overfly the diamond-shaped waterway). Fly out the Belmont Slough. Avoid overflying homes on either side of the slough. Caution: Remain northwest of the KNBR radio towers to avoid inbound traffic. (Stay clear of San Francisco International Airport [SFO] Class B airspace)
- *Runway 30 Downwind Departures:* Delay your downwind turn until reaching 800’ mean sea level (MSL). Continue climbing at reduced power/RPM setting until past housing. Make left 45 degree turn off the downwind at pilot’s discretion or continue downwind. (Contact Palo Alto Tower prior to entering PAO Class D airspace)

- *Runway 30 Woodside Departure:* Delay your downwind turn until reaching 800' MSL. Continue climbing at reduced power/RPM setting until past housing. Proceed on downwind until abeam Woodside Road prior to initiating a right turn.
- *Runway 30 Upwind Departures:* "Bay Meadows" departure. Climb straight out, parallel Highway 101, until abeam the race track, (6 DME from SFO VOR) then turn left to a south-westerly heading, remaining south of Highway 92. (Stay clear of SFO Class B airspace)
- *Runway 12 departures:* Aircraft departing Runway turn left 20 degrees to a heading of 100 degrees as soon as is safe and after passing the end of the runway.
- *Runway 12 Southbound and Westbound:* "Woodside" departure. Continue outbound on a heading of 100 degrees until abeam Woodside Road prior to initiating a right turn. Contact Palo Alto Tower prior to entering PAO Class D airspace)
- *Runway 12 Crosswind Departures and Pattern Traffic:* Begin your left crosswind turn as soon as traffic permits.

As shown on the exhibit, the noise abatement arrivals and departures for San Carlos Airport have been developed to avoid direct overflight of the noise sensitive areas, while remaining consistent with the local airspace conditions near the Airport.

Departure Turns Conclusion

Revisions to these turns occur outside of the 65 CNEL noise exposure contours and therefore would not result in changes to the noise conditions for the purposes of this study. FAA disapproval of a departure turn for the purposes of Part 150 is likely because these turn procedures do not result in reducing noise-sensitive impacts within the 65 CNEL contour. However, these established departure turn procedures direct aircraft overflights over noise compatible corridors and away from concentrated residential areas and therefore should remain as local noise abatement measure outside of the 14 CFR Part 150 process.

Departure Turns Recommendation

Departure turn procedures should not be included for review and approval under 14 CFR Part 150. These established departure turns outlined in the San Carlos Airport Noise Abatement Procedures should remain as local noise abatement measures outside of the 14 CFR Part 150 process.

Visual and Offset Instrument Approaches

Approaches involving turns relatively close to the Airport can sometimes be defined over noise-compatible corridors. These can be defined as either visual flight rules (VFR) approaches or non-precision instrument approaches. A stabilized, straight-in final approach of at least one mile should be provided. If large aircraft are involved, a longer straight-in final approach of two to three miles is necessary.

Visual and Offset Instrument Approaches Evaluation

The previously discussed San Carlos Airport Noise Abatement Procedures include the following arrival routes, depicted on **Exhibit 4A** and described below:

- Runway 30 From North/Northwest: Make entry via the Steinberger Slough (Southeast of KNBR radio towers). Caution: Traffic departing via Belmont Slough (3/4 mile north of radio towers).
- Runway 30 From Southwest through Northwest: Remain at least 1,000' above ground level (AGL). Make entry overhead the airport northeast bound. Cross overhead mid-field at or above 1,200' MSL (Remain below SFO Class B airspace). Caution: Traffic pattern at 800' MSL.
- Runway 30 Straight-in Entry: Remain at or above 1,000' MSL until passing Kaiser Hospital (Remain below SFO Class B airspace).
- Runway 12: Avoid aerobatic-style short approaches over the homes and buildings north of the airport.
- Runway 30: Bayside Visual Approach: This approach routes aircraft over portions of San Francisco Bay on approach to San Carlos Airport. (Following the six-month test period, which concluded in January 2017, FAA began its analysis of the approach and will consider community, environmental, and operational impacts in the findings on the Bayside Visual Approach and presented its findings to the public in September 2017.)

Visual and Offset Instrument Approaches Conclusion

As previously discussed, the San Carlos Airport Noise Abatement Procedures have been developed to avoid direct overflight of the noise-sensitive areas, while remaining consistent with the local airspace conditions near the Airport. Revisions to these arrivals occur outside of the 65 CNEL noise exposure contours and therefore would not result in changes to the noise conditions for the purposes of this study. FAA disapproval of arrival procedures for the purposes of 14 CFR Part 150 is likely because these turn procedures do not result in a reduction of noise-sensitive impacts within the 65 CNEL noise contour. However, these established visual approach procedures direct aircraft overflights over noise-compatible corridors and away from concentrated residential areas and therefore should remain as a local noise abatement measures outside of the 14 CFR Part 150 process.

Visual and Offset Instrument Approaches Recommendation

Visual and offset instrument approach procedures should not be included for review and approval under 14 CFR Part 150. The established visual approach procedures should remain as local noise abatement measures outside of the 14 CFR Part 150 process.

Midfield Departures

Midfield departures refer to aircraft beginning their departure from a point, usually a taxiway intersection (commonly referred to as an intersection takeoff) near midfield. While these operations are usually undertaken to reduce taxi time, such operations can help centralize departure spool-up noise.

Midfield Departures Evaluation and Conclusion

Due to the relatively short runway length (2,600 feet), midfield departures would inhibit nearly all fixed wing aircraft from safely departing the Airport. In addition, residents located north of the airport would likely experience greater levels of aircraft noise, since most aircraft would not have sufficient distance in which to gain altitude prior to initiating the previously discussed noise abatement turns. Additionally, aircraft that could gain sufficient altitude would be operated at higher thrust levels, which would also generate higher noise levels over noise-sensitive areas near the airport.

Midfield Departures Recommendation

This alternative should not be considered for inclusion in the NCP.

AIRPORT FACILITIES

In some cases, airport facilities can be developed or altered to reduce airport noise in noise-sensitive areas. The range of airport facility changes considered for this study are shown on **Exhibit 4C**. As shown on the exhibit, runways can be built or lengthened to shift aircraft noise to compatible areas. Runway thresholds can be displaced or relocated to shift noise, and barriers can be built to shield noise-sensitive areas from aircraft noise on the ground at the airport.

New Runways and Runway Extensions

New runways aligned with compatible land development or runway extensions shifting aircraft operations farther away from residential areas are proven means of noise abatement. New runways are most effective where there are large compatible areas near an airport and existing runways are aligned with residential areas.

New Runways and Runway Extensions Evaluation and Conclusion

San Carlos Airport is surrounded by development on all sides. This makes the prospect of constructing a new runway or runway extension for noise abatement infeasible due to the high cost of moving Holly Street and Skyway Road, filling the Smith Slough, and purchasing property that is already developed.

NOISE ABATEMENT ALTERNATIVES

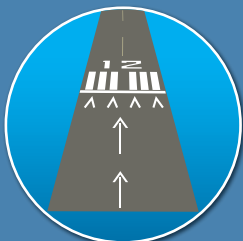
Facilities Development



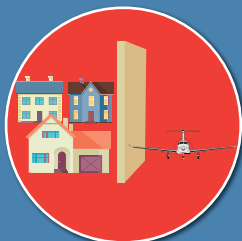
Runway Lengthening



New Runways



Displaced/Relocated Thresholds



Acoustic Shielding

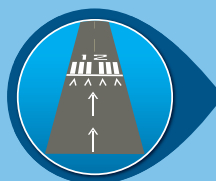
Will These Options Work for San Carlos Airport?



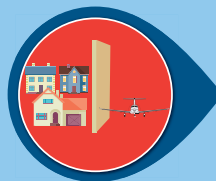
- ✗ SQL is landlocked and limited to 2,600' of runway



- ✗ SQL is contained on 110 acres, additional runways are not possible



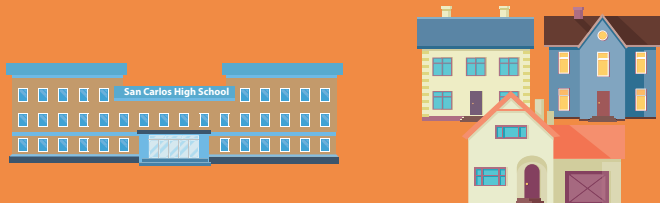
- ✗ SQL has only 2,600' of runway and threshold relocation/displacement would jeopardize safety
- ✗ Most effective when noise-sensitive land uses are located near the runway ends



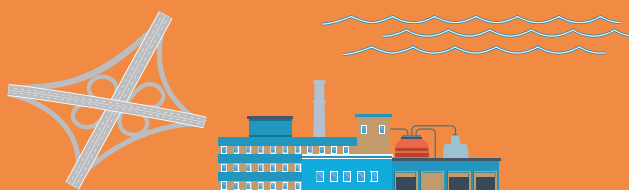
- ✗ Nearest noise-sensitive area is located west of the airport
- ✗ Significant distance from noise source to barrier location and noise-sensitive use

How Do They Help?

Shift noise from noise-sensitive area...



to noise-compatible area



New Runways and Runway Extensions Recommendation

This alternative should not be considered for inclusion in the NCP.

Displaced and Relocated Thresholds

A displaced threshold shifts the touchdown zone for landings farther down the runway. A relocated threshold involves shifting both the touchdown point and the takeoff initiation point (the original runway end is completely relocated). These techniques can promote noise abatement by effectively increasing the altitude of aircraft at any given point beneath the approach. The amount of noise reduction depends on the increased altitude which, in turn, depends on the length of the displacement. Another potential noise abatement benefit of runway displacement may be the increased distance between the aircraft and noise-sensitive uses adjacent to the runway from the point at which reverse thrust is applied after touchdown.

Displaced and Relocated Thresholds Evaluation and Conclusion

The distance of a threshold displacement must consider the runway length required for aircraft landing, in addition to the amount of noise reduction provided by the displacement. A considerable displacement is needed to produce a significant reduction in noise. (For example, if a runway threshold is displaced 1,000 feet, the altitude of an aircraft along the approach path would increase by only 50 feet.)

Unlike threshold displacement, threshold relocation increases noise off the runway end opposite the relocation because of the shift in the point of takeoff. Aircraft would be at lower altitudes at any given downrange location after takeoff than they would be without the relocation. Any reductions in arrival noise caused by threshold relocations would be offset by increases in departure noise off the opposite runway end.

As previously noted, the runway at San Carlos Airport is 2,600 feet long. Any measure that would reduce the available runway length at San Carlos would reduce safety margins of aircraft currently operating at the Airport.

Displaced and Relocated Thresholds Recommendation

This alternative should not be considered for inclusion in the NCP.

Acoustical Barriers

Acoustical barriers, such as noise walls or berms, are intended to shield areas from ground-based noise emissions from aircraft powering up for takeoff and rolling down the runway. It is also possible to use the orientation of buildings on the airport to provide a noise barrier to protect nearby residential areas from noise. Noise walls act best over relatively short distances, and their benefits are greatly affected

by surface topography and wind conditions. The effectiveness of a barrier is directly related to the distance of the noise source from the receiver and the distance of each from the barrier itself, as well as the angle between the ends of the berm and the receiver.

While noise walls and berms can attenuate noise, they sometimes are criticized by airport neighbors because they obstruct views. Another common complaint is that airport noise can become more alarming, particularly noise from unusual events, because people are unable to see the cause of the noise.

Acoustical Barriers Evaluation and Conclusion

An evaluation of the height and the distance between the wall and noise emitter (aircraft), and the distance between the wall and the sensitive receptor (residence) must be considered. **Exhibit 4D** depicts an example sound wall for San Carlos Airport. As shown on the exhibit, three cross sections were drawn to evaluate an example 20-foot-tall acoustical barrier located on the west side of Highway 101. As shown in the exhibit, in each of the cross sections, noise from an aircraft on the ground would be obstructed by several existing buildings between the Airport and the residential areas west of Industrial Road. Also shown on the exhibit is an aircraft 100 feet above the ground. As depicted, the 20-foot-tall acoustic would provide no benefit to the receptor for aircraft noise generated by aircraft above the ground. Increasing the height of the acoustic barrier to a height that would provide a potential benefit would result in a structure more than 40 feet tall, which is considered infeasible given the potential costs. Additionally, FAA would likely disapprove this measure as there are no impacts within the 65 CNEL noise contours currently or in the five-year forecast condition.

Acoustical Barriers Recommendation

This alternative should not be considered for inclusion in the NCP.

Aircraft Run-up Location and Enclosures

Engine run-ups are a necessary part of aircraft service and maintenance. They are used to diagnose problems and test the effectiveness of maintenance work. Run-up noise can be especially disturbing due to its unpredictable nature. While noise from takeoffs and landings is relatively brief and has a particular pattern to which a person can adjust, the duration of the run-up can vary from 30 seconds to several minutes, and the listener has no way of knowing how long any given run-up will be. If the run-up is at or near full power, the noise level can be extremely high.

The location of aircraft run-ups can vary depending on the number of maintenance businesses on an airport and available ramp area for these testing procedures to occur. Designating an area for maintenance run-ups away from noise-sensitive land uses can be an effective way to reduce noise impacts from these operations.

An engine run-up enclosure is a special kind of noise barrier which can be appropriate at airports with aircraft engine maintenance operations. Run-up enclosures are designed so that aircraft can taxi or be

towed into them to perform run-up procedures, while shielding the surrounding areas from noise. The structures are designed to absorb and deflect the noise from the run-up, thus reducing noise levels off the airport.

Aircraft Run-up Location and Enclosures Evaluation and Conclusion

Heavy aircraft engine maintenance that requires high thrust level engine run-up activity is not conducted on a regular basis at San Carlos Airport. Therefore, a run-up enclosure does not require further consideration.

Aircraft Run-up Location and Enclosures Recommendation

This alternative should not be considered for inclusion in the NCP.

AIRCRAFT OPERATIONAL PROCEDURES

Aircraft operational procedures are measures a pilot can take to reduce the noise an aircraft makes during takeoff, landing, and in-flight. It is important to note that safety is the first and foremost decision a pilot must consider when flying. Therefore, although there may be recommended aircraft operational procedures that reduce noise, it may not always be safe to use them.

Reduced Thrust Takeoffs

A reduced thrust takeoff for jet aircraft involves taking off with less than full thrust. A reduced power setting is used throughout both takeoff roll and climb. Use of the procedure depends on aircraft weight, weather and wind conditions, pavement conditions, and runway length.

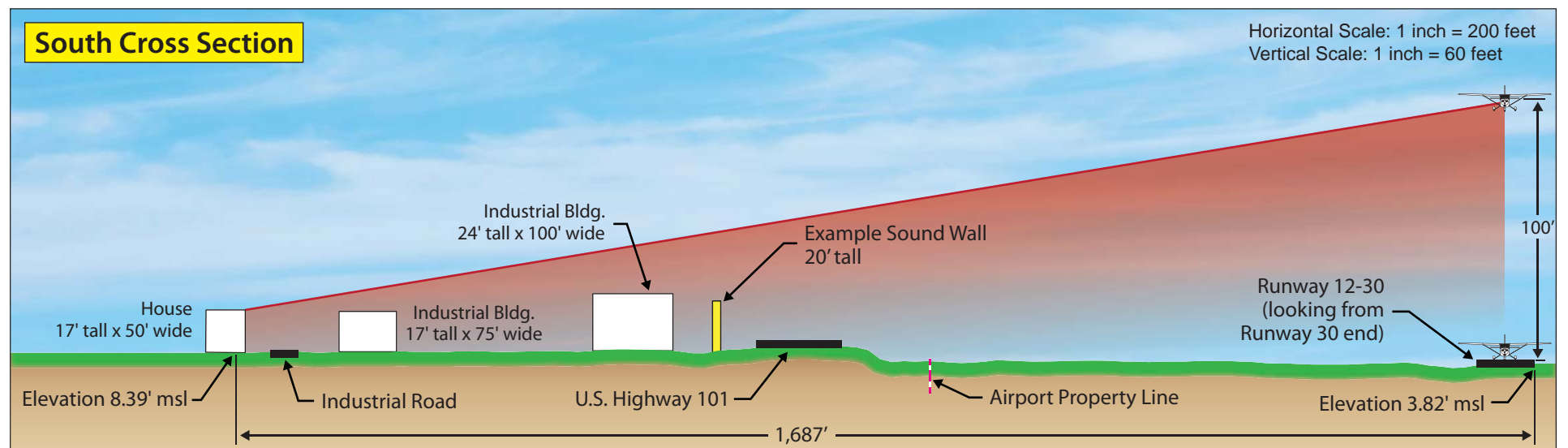
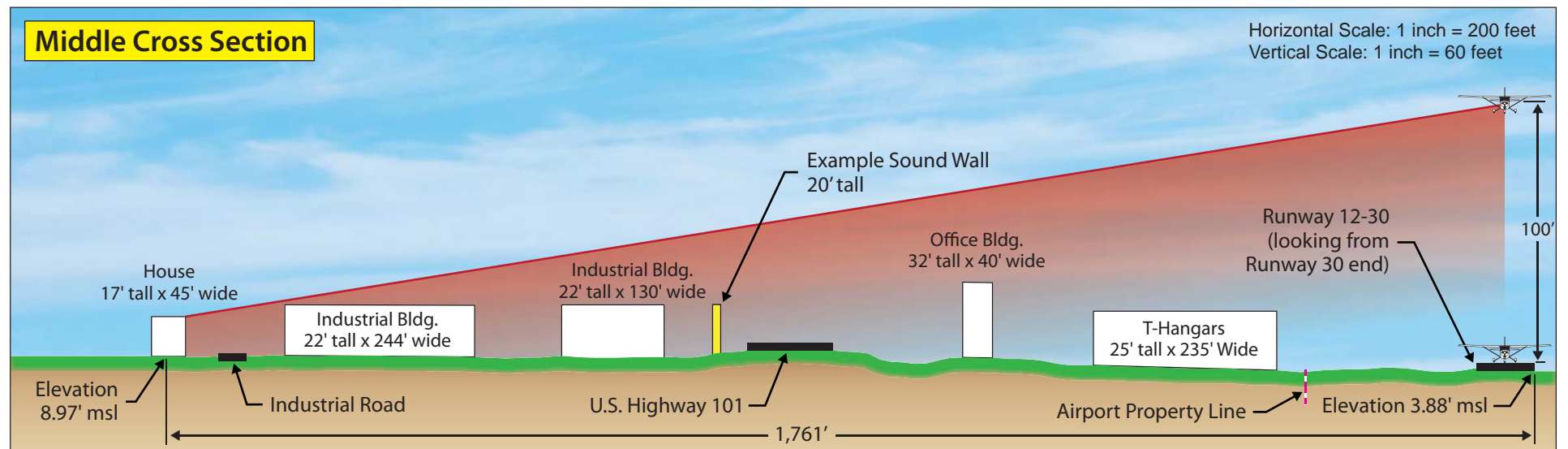
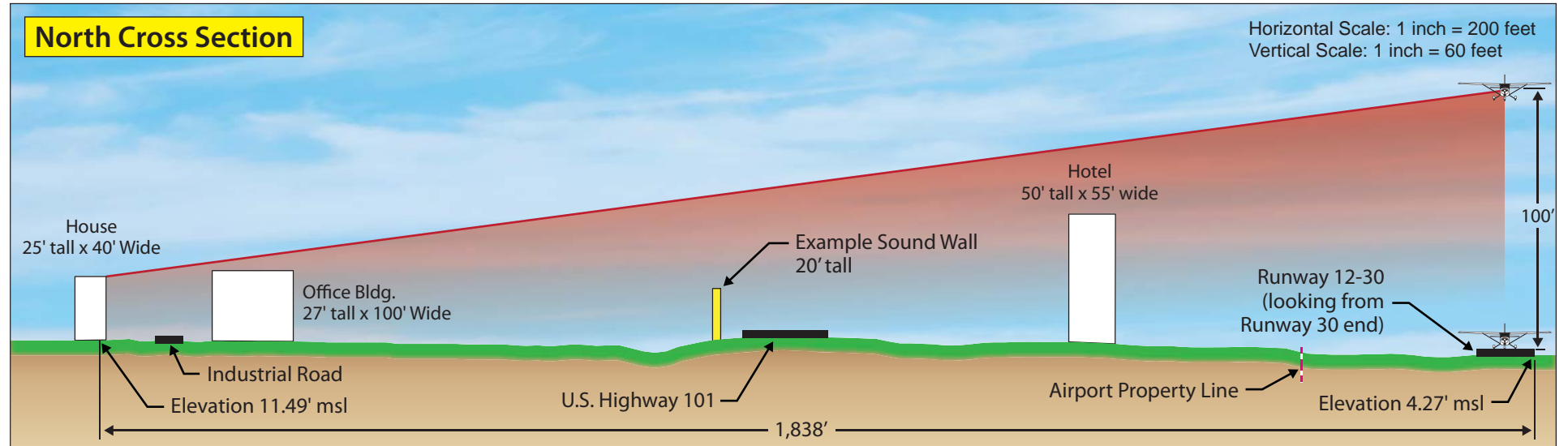
Reduced Thrust Takeoffs Evaluation and Conclusion

In practice, business jet operators use reduced thrust departures to conserve fuel, reduce engine wear, and abate noise. Additional efforts to encourage the use of deeper reduced thrust takeoffs could reduce the operational control and safety of an aircraft and are unlikely to yield noise abatement benefits. Also, since these conditions vary considerably, it is not possible to mandate safely the use of reduced thrust departures.

As previously noted, the San Carlos Airport Noise Abatement Procedures include a voluntary recommendation to reduce power/RPM as soon as safe and practical with a note stating that, "Most aircraft noise

Aircraft operational procedures which may reduce noise impacts are shown on **Exhibit 4E** and include:

- Reduced thrust takeoffs;
 - Thrust cutbacks after takeoff;
 - Maximum climb departures;
 - Minimum approach altitudes;
 - Use of minimum flaps during approaches;
 - Steeper approach angles; and,
 - Limitations on the use of reverse thrust during landings.
-



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NOISE ABATEMENT ALTERNATIVES

Aircraft Operating Procedures



Reduced Thrust Takeoffs



Thrust Cutbacks After Takeoff



Maximum Climb Departures



Minimum Approach Altitudes



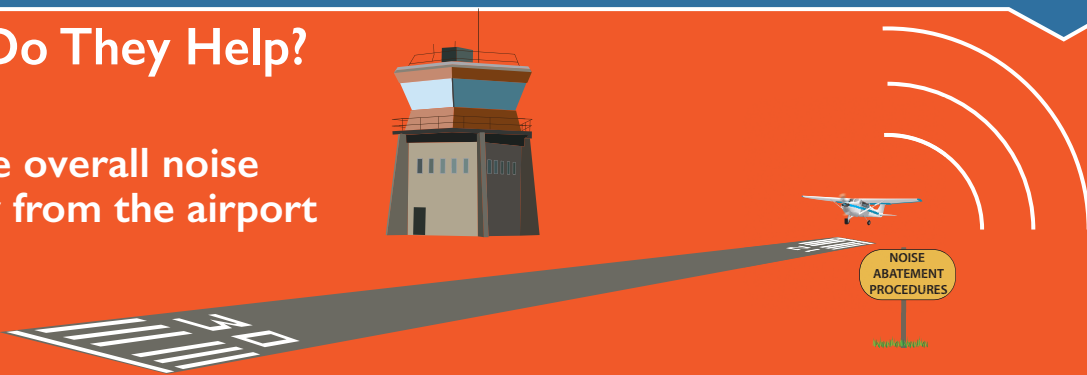
Approach Profiles



Limitations on Reverse Thrust on Landing

How Do They Help?

Reduce overall noise energy from the airport



Will These Options Work for San Carlos Airport?



Reduces safety margin on 2,600 foot runway



Current voluntary noise abatement procedures:
1. Stay above 1,000' until reaching hospital (Rwy 12)
2. Overhead approaches from the southwest



Manufacturers provide suggested thrust cutbacks after takeoff to reduce noise and fuel consumption
 Mandated thrust cutbacks are problematic to get approved and enforce



Non-standard approach procedures reduce safety margins. Class B airspace ceiling limits effectiveness



San Francisco Class B airspace prevents max climb procedure from being effective



Short runway and limited business jet operations eliminates this measure

is generated by propeller tip noise. This is especially true when propeller tip speeds approach supersonic speeds. Even a small reduction of 100 to 200 RPM can produce a significant decrease in noise levels.” Because of the safety implications of these procedures, they are best left to the discretion of pilots and aircraft operators. Additionally, with the given length of the runway at San Carlos Airport (2,600 feet), use of this procedure could reduce safety at the Airport. Reduced thrust takeoffs do not merit further consideration.

Reduced Thrust Takeoffs Recommendation

This alternative should not be considered for inclusion in the NCP.

Thrust Cutbacks for Jets

Standardized thrust cutback departure procedures have been established by each aircraft manufacturer to promote safe and efficient use of the aircraft and for noise abatement. While the procedures of each aircraft manufacturer differ somewhat, they all involve thrust reduction soon after takeoff and initial acceleration. This reduction normally occurs between 1,000 and 3,000 feet above the ground.

The amount of thrust reduction depends on aircraft weight, temperature, and flap setting. A significant, but safe, reduction in thrust often can reduce the size of noise contours, but also can increase noise down-range from an airport.

Thrust Cutbacks for Jets Evaluation and Conclusion

While some airports have defined special thrust cutback departure procedures, approval and implementation of these procedures is problematic. First, pilots are generally concerned about the consequences of a proliferation of airport-specific procedures. As the number of procedures increases, it becomes more and more difficult for pilots to become proficient at all of them while maintaining comfortable safety margins. It is similar to asking motorists to comply with a different set of braking and acceleration procedures at every intersection in a city. In any case, safety requires that the use of thrust cutbacks be left to the discretion of the pilot and aircraft manufacturer, based on weather and the operational characteristics of the aircraft.

Industry standard thrust cutback departure procedures and manufacturers’ quiet flying procedures are already used by many business jet operators. Procedures that allow aircraft to gain more altitude before reducing thrust levels are preferred, given the location of noise-sensitive development around the airport. For example, the nearest noise-sensitive land use measured along the extended runway centerline is 8,100 feet to the northwest and 7,600 feet to the southeast. Efforts to mandate use of these procedures, however, are not advised. As a critical flight operation, the use of thrust cutbacks in any given situation should be left to the discretion of the pilot to avoid eroding safety margins. As discussed in Chapter Two – Aviation Noise, jet operations account for less than four percent of overall operations at San Carlos Airport. Therefore, developing special thrust cutback procedures for San Carlos Airport would have a minimal effect on the noise exposure contours.

Finally, there are no impacts within the 65 CNEL contour currently or in the five-year forecast condition. Therefore, mandating thrust cutbacks for jets does not merit further consideration.

Thrust Cutbacks for Jets Recommendation

This alternative should not be considered for inclusion in the NCP.

Maximum Climb Departures

Maximum climb departures can reduce noise exposure over populated areas some distance from an airport. The procedure requires the use of maximum thrust with no cutback on departure. Consequently, the potential noise reductions in the outlying areas are at the expense of significant noise increases closer to the airport.

Maximum Climb Departures Evaluation and Conclusion

The use of maximum climb, or best angle departure procedures can, in some cases, reduce noise exposure over populated areas some distance from the airport. If this procedure were to be used for departures at San Carlos, the potential noise reductions in the outlying areas are at the expense of dramatic noise increases in areas closer to the airport. For example, this could increase noise in the neighborhoods north of the airport for aircraft departing on Runway 30 and turning to the east.

Airspace conflicts with the San Francisco International Airport Class B airspace are also a concern when considering maximum climb departures at San Carlos Airport. As discussed in Chapter One – Inventory, the base of Class B airspace over San Carlos Airport starts at 1,500 feet above mean sea level (MSL) east of the airport and 2,000 feet MSL west of the airport. To fly in Class B airspace, aircraft must have special radio and navigation equipment and must obtain an ATCT clearance.

For the reasons stated above, maximum climb, or best angle departure procedures, do not merit further consideration.

Maximum Climb Departures Recommendation

This alternative should not be considered for inclusion in the NCP.

Minimum Approach Altitudes

Minimum approach altitude procedures involve an air traffic control (ATC) requirement that all positively controlled approaches be conducted at a specified minimum altitude until the aircraft must begin its descent to land. This would affect only aircraft some distance from the airport and well outside the noise contours. Since aircraft on approach are using little power, they tend to be relatively quiet. Accordingly, increases in approach altitudes result in only very small reductions in single-event noise.

Minimum Approach Altitudes Evaluation and Conclusion

The pattern altitude at San Carlos Airport is 800 feet MSL (805 feet AGL). Minimum altitudes would apply to aircraft some distance from the airport, well outside the noise exposure contour area. Increases in approach altitude can yield only small reductions in noise. Even doubling the altitude of aircraft within the traffic pattern or circling approach would achieve only a noise reduction of four to six decibels. Raising the pattern altitude would also create potential conflicts with the San Francisco International Airport Class B airspace. Additionally, raising the pattern altitude would enlarge the pattern, as aircraft would have to extend each leg of the traffic pattern to climb to, or descend from, the increased altitude.

Raising approach altitudes at San Carlos Airport would yield very small noise reductions well outside the 65 CNEL noise contour. In addition, raising the traffic pattern altitude would potentially conflict with the local airspace. Therefore, raising approach altitudes will not be considered further.

Minimum Approach Altitudes Recommendation

This alternative should not be considered for inclusion in the NCP.

Minimum Flaps During Approach and Two-Stage Descent Profiles

Approach procedures to reduce noise impacts were attempted in the early days of noise abatement, but are no longer favorably received. The procedures include the minimal use of flaps in order to reduce power settings, airframe noise, and the use of two-stage descent profiles.

Minimum Flaps During Approach and Two-Stage Descent Profiles Evaluation and Conclusion

Use of minimum flaps and two-stage descent profiles raise safety concerns because they are nonstandard and require an aircraft to be operated outside its optimal safe operating configuration. The higher descent rates and faster approach speeds reduce the amount time for a pilot to react to potentially hazardous situations and also increase the distance required to stop an aircraft on the ground. A pilot using a full flap landing will land at a slower speed, which will provide additional runway length for the landing roll. Given the relatively short runway available at the Airport, increasing the stopping distance required, would reduce safety. Additionally, some of these procedures have been found to increase noise because of the power applications needed to arrest high sink rates.

Because these procedures reduce safety margins and are of little practical noise abatement benefit, they will not be considered further for San Carlos Airport.

Minimum Flaps During Approach and Two-Stage Descent Profiles Recommendation

This alternative should not be considered for inclusion in the NCP.

Continuous Descent Profiles

Continuous descent approaches involve maintaining a constant-angle descent (commonly three degrees) during landing, until meeting an airport's established approach procedure. Continuous descent approaches (CDA) are designed to reduce fuel consumption and noise compared to conventional approaches that "stair-step" as the aircraft descends. A CDA starts, ideally, from the top of descent (i.e., at cruise altitude) and allows the aircraft flying its individual optimal vertical profile down to runway threshold.

Continuous Descent Profiles Evaluation and Conclusion

The noise benefits that a CDA offers are limited to locations typically between 10 and 25 miles from the runway. There is no difference between a CDA and a conventional approach once the aircraft using the latter joins the final glide path resulting in no change to the CNEL noise exposure contours.

As previously discussed, the lowest portion of the San Francisco International Airport Class B airspace is 1,500 feet MSL at San Carlos Airport. Use of a CDA at San Carlos Airport may require aircraft to operate within the Class B airspace. To fly through Class B airspace, aircraft must have special radio and navigation equipment and must obtain an air traffic control clearance. This could also potentially result in additional flight time and delays as aircraft would need to be sequenced with aircraft on approach to San Francisco International Airport.

Because of the lack of noise reduction benefits within the 65 CNEL noise exposure contours and potential conflicts with San Francisco International Airport, continuous descent approaches will not be considered further for San Carlos Airport.

Continuous Decent Profiles Recommendation

This alternative should not be considered for inclusion in the NCP.

Reverse Thrust Restrictions

Thrust reversal is routinely used to slow jet aircraft immediately after touchdown. This is an important safety procedure which has the added benefit of reducing brake wear. Limits on the use of thrust reversal can reduce noise impacts off the sides of the runways, although they would not significantly reduce the size of the noise contours. Enforced restrictions on the use of reverse thrust, however, are not considered fully safe.

Reverse Thrust Restrictions Evaluation and Conclusion

Business jets account for approximately four percent of the operations at San Carlos Airport; therefore, the effectiveness of this measure would be limited. Limitations on the use of reverse thrust increase runway occupancy time and increase brake wear on aircraft. As an operational flight procedure with a

direct effect on safety, decisions about whether to use reverse thrust should be left to the discretion of pilots. Also, given the relatively short runway available at the Airport, using this type of procedure may reduce safety margins. Additionally, FAA would likely disapprove this measure as there are no impacts within the 65 CNEL noise contours currently or in the five-year forecast condition. This procedure does not merit further consideration.

Reverse Thrust Restrictions Recommendation

This alternative should not be considered for inclusion in the NCP.

AIRPORT REGULATIONS

As shown on **Exhibit 4F**, several airport regulation alternatives were evaluated. It is important to note Part 150 requires airports, when developing Noise Compatibility Programs, to study the possible implementation of airport use restrictions to abate aircraft noise. Courts have recognized the rights of airport proprietors to reduce their liability for aircraft noise by imposing restrictions, which are reasonable, and do not violate contractual agreements with the FAA, conditioning the receipt of federal aid, known as grant assurances. In addition, constitutional prohibitions on unjust discrimination and the imposition of undue burdens on interstate commerce must be respected. The restrictions must also be crafted to avoid infringing on regulatory areas preempted by the federal government. Finally, the regulations must be evaluated under the requirements of 14 CFR Part 161. Additional information regarding 14 CFR Part 161 can be found in the Resource Library included in the appendices.

Part 161 sets forth requirements for notice and approval of local restrictions on aircraft noise levels and airport access. Part 161, which was developed in response to the *Airport Noise and Capacity Act of 1990*, applies to local airport restrictions that would have the effect of limiting operations of Stage 2 or 3 aircraft.

Airport noise and access restrictions may be proposed by an airport operator in its Part 150 Noise Compatibility Program. The requirements of Part 161 need to be met before a recommended measure in a Part 150 Noise Compatibility Program can be implemented. It should also be noted that it is FAA policy that airport use restrictions should be considered only as a measure of last resort, when other mitigation measures are inadequate to satisfactorily address a noise problem and a restriction is the only remaining option that could provide noise relief (see FAA Order 5190.6B, *Airport Compliance Manual*).

NOISE ABATEMENT ALTERNATIVES

Airport Restriction and Regulation



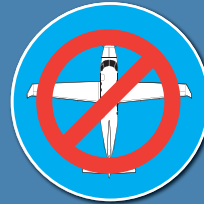
Curfews



Noise Based
Landing Fees



Capacity
Limitations



Aircraft Type
Restrictions



Ground/
Training Activity
Restrictions

How Do They Help?

Reduce overall noise energy from the airport



Will These Options Work for San Carlos Airport?



X FAA disapproval of airport restrictions and regulations is likely because there are no noise-sensitive land uses within the 2022 65 Community Noise Equivalent Level (CNEL) noise exposure contours

14 CFR Part 161

In the *Airport Noise and Capacity Act (ANCA) of 1990*, Congress not only established a national phase-out policy for Stage 2 aircraft weighing more than 75,000 pounds, but it also established analytical and procedural requirements for airports desiring to establish noise or access restrictions on Stage 3 aircraft. Regulations implementing these requirements are published in Part 161. As of December 31, 2015, all Stage 2 aircraft are banned from operating in the contiguous United States unless they have been modified to meet Stage 3 requirements.

For restrictions on Stage 3 aircraft, Part 161 requires a much more rigorous analysis, as well as final FAA approval of the restriction. Before approving a local Stage 3 noise or access restriction, the FAA must make the following findings:

- The restriction is reasonable, non-arbitrary, and non-discriminatory.
- The restriction does not create an undue burden on interstate or foreign commerce.
- The restriction maintains safe and efficient use of navigable airspace.
- The restriction does not conflict with any existing federal statute or regulation.
- The applicant has provided adequate opportunity for public comment on the proposed restriction.
- The restriction does not create an undue burden on the national aviation system.

Additional information regarding Part 161 studies undertaken to date can be found in the Resource Library located at the end of this document.

REGULATORY ALTERNATIVES

Nighttime Curfews and Operating Restrictions

There are three types of curfews or nighttime operating restrictions:

- (1) Closure of an airport to all arrivals and departures (a full curfew);
- (2) Closure to departures only; and,
- (3) Closure to arrivals and departures by aircraft exceeding specified noise levels.

Nighttime Curfews and Operating Restrictions Evaluation and Conclusion

The time during which nighttime restrictions could be applied varies. The CNEL metric applies a 10-decibel penalty to noise occurring between 10:00 p.m. and 7:00 a.m., and a 4.77 decibel penalty to noise occurring between 7:00 p.m. and 10:00 p.m. The 10:00 p.m. to 7:00 a.m. period could be defined as a curfew period. A shorter period, corresponding to the very late night hours, from midnight to 6:00 a.m. could also be specified.

Full Curfews: While full curfews may resolve concerns about nighttime aircraft noise, they can be indiscriminately harsh. Not only would the loudest operations be prohibited, but quiet operations by light

aircraft would also be banned by a full curfew. Full curfews also deprive the community of the services of some potentially important nighttime airport users.

Important economic reasons drive nighttime airport activity. Early morning departures are often attractive for business travelers who wish to reach their destinations with a large part of the workday ahead of them. Not only is this a personal convenience, but it can result in a significant savings in the cost of travel by reducing the need for overnight stays. Accordingly, early morning departures are often very popular. Similarly, late night arrivals are important in allowing travelers to return home without incurring the costs of another night away.

Prohibition of Nighttime Departures: The prohibition of nighttime departures would allow aircraft to return home, but would prohibit departures, which are generally louder than arrivals. Although somewhat less restrictive, this would have similar impacts at San Carlos Airport as a full curfew. It would interfere with corporations in their attempts to schedule early morning departures for the business travel market.

As with a full curfew, a nighttime prohibition on departures would restrict access to the airport by Stage 3 aircraft. This would require a full Part 161 analysis and FAA approval of the restriction before it could be implemented.

Nighttime Restrictions Based on Aircraft Noise Levels: Nighttime operating restrictions can be designed to apply to only those aircraft which exceed specified noise levels. If it is to be effective in reducing the size of the CNEL noise contours, the restricted noise level would have to be set to restrict the loudest, most commonly used aircraft at the airport. These restrictions would be subject to the special analysis procedures of Part 161. Any restrictions affecting Stage 3 aircraft would have to receive FAA approval.

Curfews and nighttime operating restrictions can be an effective way to reduce the size of CNEL noise contours around an airport. Because of the extra 10-decibel weight assigned to nighttime noise, removing a single nighttime operation is equivalent to eliminating 10 daytime operations. The effect on the noise contours can be significant.

However, curfews and nighttime operating restrictions could have potentially adverse effects on local general aviation and the region's economy. Additionally, implementation of nighttime restrictions can be costly, problematic, and require the completion, and subsequent FAA approval, of a Part 161 Study. FAA disapproval of a curfew is likely because there are no impacts within the 65 CNEL contour.

Nighttime Curfews and Operating Restrictions Conclusion

This alternative should not be considered for inclusion in the NCP.

Noise-Based Landing Fees

Differential landing fees based on either the noise level or the time of arrival have been used at some airports as incentives to use quieter aircraft or to operate at less sensitive times. A variable schedule of landing fees would be established based on the relative loudness of the aircraft, with departures by loud aircraft at night being charged the most, and arrivals by quiet aircraft during the day being charged the least. To avoid discrimination between airport users, the fee must relate to both the time of day and certificated approach noise levels. Fees from such a program can finance noise abatement activities. This restriction does not provide a noise abatement benefit unless the fees are high enough to discourage use of the airport by the loudest aircraft.

Noise-Based Landing Fees Evaluation and Conclusion

On August 8, 2017, the San Mateo County Board of Supervisors approved Resolution 075369 authorizing a landing fee of \$75 per operation for charter aircraft operators at San Carlos Airport. The resolution states that the revenue will be used to offset additional costs related to runway striping, runway and taxiway maintenance, pilot and community outreach and education programs, and associated flight management databases. It is important to note that this is not a noise-based landing fee and is applied at all times of the day. Developing a noise-based landing fee would be considered an airport noise restriction under Part 161. A Part 161 analysis would be required before such a fee system could be implemented. Any fee structure changes that would place a noise surcharge on aircraft would require FAA approval prior to implementation.

A noise-based landing fee system is intended to provide strong incentives for aircraft owners to convert their fleets to quieter aircraft and to operate during daytime hours. Converting the existing landing fee structure to a noise-based landing fee is vulnerable to legal challenges. Additionally, FAA disapproval is likely because there are no impacts within the 65 CNEL current or five-year noise exposure contour condition.

Noise-Based Landing Fees Recommendation

This alternative should not be considered for inclusion in the NCP.

Capacity Limitations

Capacity limitations have been used by airports encroached upon by noise-sensitive development to control cumulative noise exposure. This kind of restriction would impose a cap on the number of scheduled operations. This is an imprecise way to control aircraft noise, as unscheduled operations would not be subject to the limit. Additionally, the limit on scheduled operations actually provides no incentive for conversion to quieter aircraft. Rather, if passenger demand increases, charter providers could respond by converting to larger aircraft with more seats, which often (but not always) tend to be noisier than smaller aircraft in the same Part 36 stage classification.

Capacity Limitations Evaluation and Conclusion

Airport capacity limitations are intended to control noise related to scheduled aircraft activity. Since most of the operations at San Carlos Airport are unscheduled (88 percent), a capacity limit to control noise would have limited benefits. In addition, FAA disapproval is likely because there are no impacts within the 65 CNEL current or five-year noise exposure contour condition. For this reason, operational capacity limitations will not be discussed further.

Capacity Limitations Recommendation

This alternative should not be considered for inclusion in the NCP.

Noise Budgets

In the late 1980s, noise budgets gained attention as a potential noise abatement tool. After the enactment of ANCA, interest in noise budgets waned. Noise budgets are designed to limit airport noise and allocate noise among airport users. The intent is to encourage aircraft operators to convert to quieter aircraft or to shift operations to less noise-sensitive hours. Before ANCA, the intent was to encourage conversion to Stage 3 aircraft and to discourage the use of Stage 2 aircraft. As previously mentioned in Chapter One - Inventory, Stage 2 business jets less than 75,000 pounds are no longer able to fly in the contiguous United States after December 31, 2015, in accordance with Title 49, United States Code (USC) § 47354. Therefore, conversion to Stage 3 aircraft is already mandated by Congress.

Noise Budgets Evaluation and Conclusion

Noise budgets are complex methods of promoting airport noise reduction. They are particularly vulnerable to attack on grounds of discrimination and interference with interstate commerce. Noise budgets are extremely difficult to design in a way that will be seen as fair by all airport users and are likely to be quite expensive to develop. Negotiations on noise budget design and noise allocations are likely to be long and contentious, and would require the assistance of noise consultants and attorneys. The costs of administering the system would also be substantial. The bookkeeping requirements are complex, and additional administrative staff would be required. Additionally, FAA disapproval is likely because there are no impacts within the 65 CNEL current or five-year noise exposure contour condition.

Noise Budgets Recommendation

This alternative should not be considered for inclusion in the NCP.

Restrictions Based on Aircraft Noise Levels

Outright restrictions on the use of aircraft exceeding certain noise levels can reduce cumulative noise exposure at an airport. Aircraft producing noise above certain thresholds, as defined in Part 36 or International Civil Aviation Organization (ICAO) Annex 16-1H, could be prohibited from operating at the airport at all or during certain times of the day. A variation is to impose a non-addition rule, prohibiting the addition of new flights by aircraft exceeding the threshold level at all or certain times of the day. These restrictions would be subject to the special analysis procedures of Part 161. Any restrictions affecting Stage 3 aircraft would have to receive FAA approval.

Noise limits based on certification levels have the virtue of being fixed national standards which are understood by all in the industry. They are average values, however, and do not consider variations in noise levels based on different methods of operating the aircraft. As an alternative, restrictions could be based on measured noise levels at the airport. This has the advantage of focusing on noise produced in a given situation and, in theory, gives aircraft operators increased flexibility to comply with the restrictions by designing special approach and departure procedures to minimize noise. It has the disadvantage of requiring extra administrative effort to design testing procedures, monitor tests, interpret monitoring data, and design the restrictions.

Restrictions Based on Aircraft Noise Levels Evaluation and Conclusion

In March 2017, San Mateo County released a draft noise ordinance for San Carlos Airport which would apply to aircraft rated in Part 36 or Annex 16-1H with an A-weighted decibel (dBA) maximum noise level for certification purposes that is greater than 74.5 dBA. Under the draft ordinance, which has not been adopted, aircraft exceeding the noise threshold would be subject to a curfew from 9:00 pm through and including 5:59:59 am the following morning. Additionally, a two-hour shoulder period before and after the curfew period is outlined in the draft ordinance. The draft ordinance states that the airport would be closed to aircraft exceeding the noise threshold during the curfew period and would be limited to no more than one takeoff and one landing during each of the shoulder periods. The draft ordinance includes exemptions for pilot training, medical transport, government operated and/or military aircraft, emergency operations, and weather or mechanical delays. To date, no action has been taken by the San Mateo County Board of Supervisors on this ordinance.

Whether threshold noise levels are based on certification levels or measured results, care must be taken to ensure that the restriction does not fall with undue harshness on a particular operator. The feasibility of complying with the restriction, given existing technologies and equipment, must also be considered. Such a restriction would be subject to legal challenges and rejection by the FAA as unjust discrimination and potentially burdensome to interstate commerce.

FAA would likely disapprove this measure as there are no impacts within the 65 CNEL noise contours currently or in the five-year forecast condition. Additionally, the requirements of a costly 14 CFR Part 161 Study would have to be met before any restriction on Stage 3 aircraft could be implemented. Nota-

bly, no airports have been successful when attempting to establish a restriction under Part 161. Additional information regarding Part 161 studies can be found in the Resource Library, located in the appendices of this document.

Restrictions Based on Aircraft Noise Levels Recommendation

This alternative should not be considered for inclusion in the NCP.

Touch-and-Go Restrictions

Restrictions on touch-and-go or multiple approach operations can be effective in reducing noise when those operations are extremely noisy, unusually frequent, or occur at very noise-sensitive times of the day. At many airports, touch-and-go operations are associated primarily with pilot training, although this type of operation is also done by licensed pilots practicing approaches.

Touch-and-Go Restrictions Evaluation and Conclusion

Touch-and-go and multiple approaches are frequently performed at San Carlos Airport by both fixed wing and helicopter aircraft. Based on the operations count used to develop the 2017 noise exposure contours, there were 47,377 local general aviation operations, or 45 percent of the total operations at San Carlos Airport. Generally, these training sessions involve multiple approaches or touch-and-go operations. The general aviation touch-and-go operations are done mainly by light, single-engine aircraft, and Robinson R22 and R44 helicopters.

As previously mentioned, the current San Carlos Airport Noise Abatement Procedures also discourage repetitive training operations in the traffic pattern from two hours after sunset to 8:00 a.m. the following day. On weekends and holidays, the procedures request that no touch-and-goes occur after 6:30 p.m. until 9:30 a.m. the following day.

Formalizing a restriction on touch-and-go operations would have legal ramifications as it would conflict with grant assurances, could conflict with the terms of local fixed base operator leases, and require FAA approval of a Part 161 Study. FAA disapproval of a restriction on training operations is likely because there are no impacts within the 65 CNEL noise contours at San Carlos Airport.

Touch-and-Go Restrictions Recommendation

Touch-and-go restrictions should not be included for review and approval under 14 CFR Part 150. The established voluntary measure of discouraging touch-and-go operations after sunset to 8:00 a.m., on weekends, and holidays should remain as a local noise abatement measure outside the 14 CFR Part 150 process.

Engine Run-up Restrictions

Engine run-ups are a necessary and critical part of aircraft operation and maintenance. Engine run-ups are often more disruptive than aircraft overflight noise because they are more unpredictable and usually last longer than overflights.

Engine Run-up Restrictions Evaluation and Conclusion

Pre-flight engine run-ups are a necessary part of checking the aircraft prior to takeoff. Pre-flight run-ups also have not been a significant source of annoyance around the airport and restrictions on this activity will not be considered further.

Engine Run-up Restrictions Recommendation

This alternative should not be considered for inclusion in the NCP.

ADDITIONAL CONSIDERATIONS

As stated in the beginning of this chapter, San Carlos Airport has been engaged with pilots and the public through participation with the San Carlos Airport Noise Working Group and publication of the San Carlos Airport Noise Abatement Procedures. This educational program could be further expanded to include local residents on a more regular basis. This expanded educational program could have several components, some of which are directed at reducing noise through pilot education and others that are intended to raise the awareness of current and future residents about the existence of the Airport.

These programs could be a cooperative approach that includes the following efforts:

- Continue to distribute voluntary Noise Abatement Procedure brochures and maintain on-airport noise abatement signage.
- Continue to coordinate with the FAA regarding noise abatement procedures, including the Bayside Visual Approach.
- Hold monthly meetings with pilots and students to discuss safety and noise abatement issues at the Airport.
- Establish a real estate agent outreach program to educate real estate agents and potential homebuyers about San Carlos Airport operations and its presence in the community.
- Continue Airport open house events to allow the public to visit the airport and learn about its operations.
- Consider the following revisions to the voluntary San Carlos Airport Noise Abatement Procedures:
 - Depict the helicopter training pattern area located west of the Airport and east of Industrial Road. This is listed as a noise abatement procedure, but is not depicted on the accompanying map. The helicopter information could be incorporated into the existing voluntary Noise Abatement Procedures document, or as part of a separate, helicopter-specific document.

- Upon finalization, reflect the updated SFO Class B Airspace. FAA is in the process of updating the Class B airspace near San Carlos Airport to reflect advances in aviation technology which allows for more efficient flight and repeatable and predictable flight paths. A draft of the modified Class B airspace was presented in January 2017, but a specific timeline for implementation has not been established.
- Revise and rename the Runway 30 Bay Meadows Departure. The Bay Meadows Departure was named for the Bay Meadows Racetrack, which was a horseracing facility that closed in 2008. The current procedure directs pilots to fly straight-out from Runway 30 until reaching the Bay Meadows Racetrack site and then turning left (southwest). As the racetrack no longer exists, it may be confusing for pilots not familiar with the area to turn at the appropriate time.

Options for revising this procedure include establishing a GPS waypoint departure procedure to replicate the existing visual procedure or establishing a new visual procedure in which pilots would continue to the U.S. 101 and U.S. 92 highway interchange before turning, as shown on **Exhibit 4G**. Establishing a GPS departure would require aircraft to be equipped with specialized equipment.

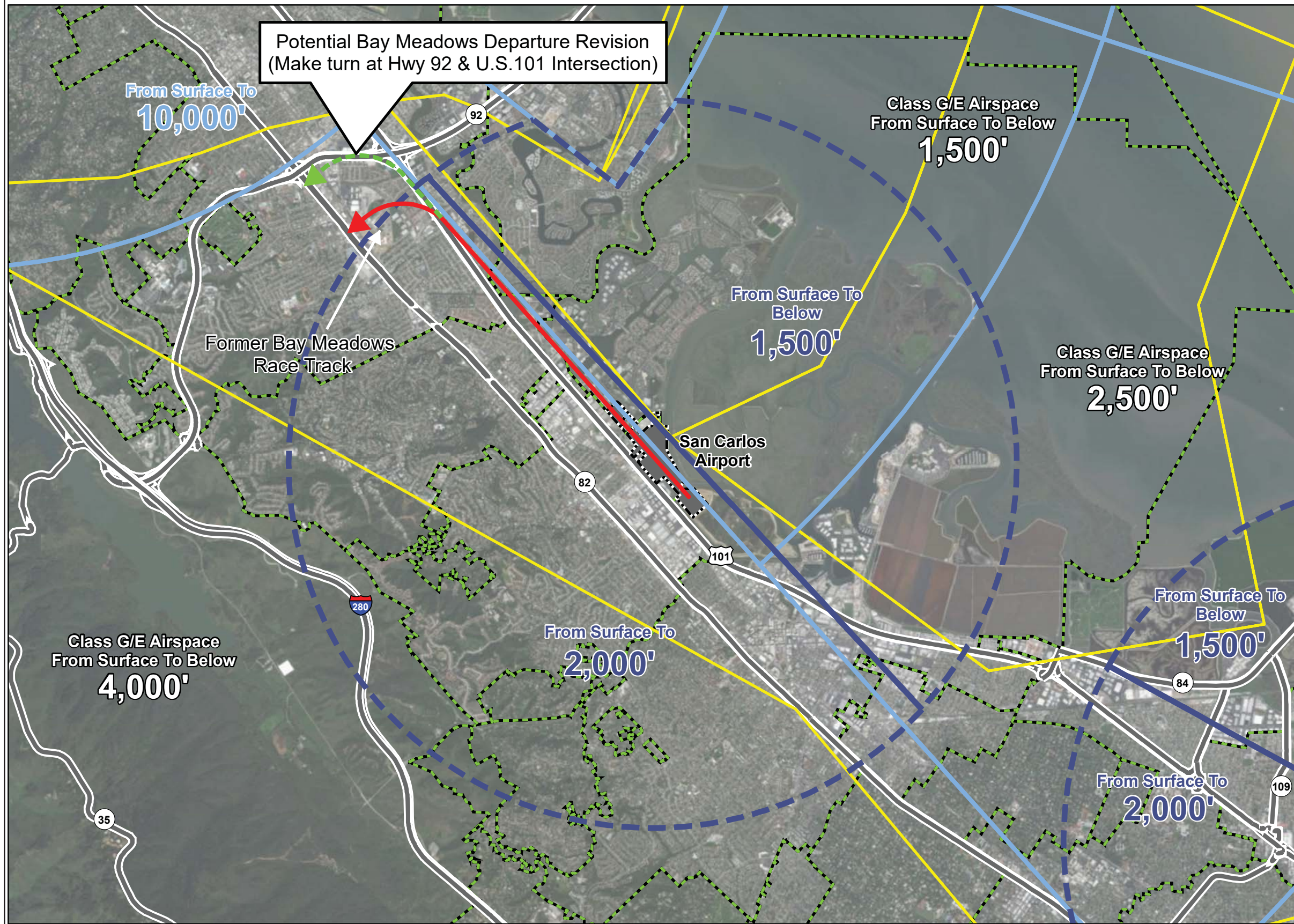
Using the highway interchange may result in aircraft entering the SFO Class B airspace. As previously discussed, to operate in Class B airspace, aircraft must have two-way radio capability and an altitude encoding (Mode C) transponder. Additionally, pilots must have specialized training and must be cleared to enter into Class B airspace by communicating with the San Francisco International Airport tower. However, the previously discussed SFO Class B airspace revision would result in shifting the Class B airspace farther north, which would allow aircraft to make the turn at the interchange and avoid the Class B airspace. Depending on the timeline for implementation of the previously discussed SFO Class B airspace revision, the Airport could coordinate with SFO ATCT to obtain a waiver for pilots departing Runway 30 and turning southwest. The waiver would allow pilots, with prior approval, to enter into the current Class B airspace without the equipment and training provisions outlined above.

SUMMARY

This chapter analyzes the range of potential noise abatement techniques for use at San Carlos Airport. As a result of the limited number of noise-sensitive impacts, the only viable noise abatement measure continues to be modifications to the voluntary San Carlos Airport Noise Abatement Procedures and community awareness program. **Table 4A** summarizes the recommendation for each of the alternatives discussed in this chapter. The results of this analysis will be reviewed by the Planning Advisory Committee and the general public, and final recommendations will be presented in Chapter Six – Noise Compatibility Plan.

TABLE 4A
Summary of Noise Abatement Alternatives
San Carlos Airport

Measure	Further Consideration Under Part 150	Further Consideration for Local Implementation
Preferential and Rotational Runway Use	No	Yes. The current preferential runway use program should remain as a local measure outside the 14 CFR Part 150 process.
Departure Turns	No	Yes. The established departure turns outlined in the San Carlos Airport Noise Abatement Procedures should remain as local noise abatement measures.
Visual and Offset Instrument Approaches	No	Yes. The established visual approach procedures should remain as a local noise abatement measure.
Midfield Departures	No	No
New Runways and Runway Extensions	No	No
Displaced and Relocated Thresholds	No	No
Acoustical Barriers	No	No
Aircraft Run-up Location and Enclosures	No	No
Reduced Thrust Takeoffs	No	No
Thrust Cutbacks for Jets	No	No
Maximum Climb Departures	No	No
Minimum Approach Altitudes	No	No
Minimum Flaps During Approach and Two-Stage Descent Profiles	No	No
Continuous Descent Profiles	No	No
Reverse Thrust Restrictions	No	No
Nighttime Curfews and Operating Restrictions	No	No
Noise-Based Landing Fees	No	No
Capacity Limitations	No	No
Noise Budgets	No	No
Restrictions Based on Aircraft Noise Levels	No	No
Touch-and-Go Restrictions	No	Yes. The voluntary measure of discouraging touch-and-goes from sunset to 8:00 a.m., during weekends, and holidays should remain as a local noise abatement measure.
Engine Run-up Restrictions	No	No
Additional Considerations		
Continue to distribute San Carlos Airport Noise Abatement Procedure brochure and maintain on-airport noise abatement signage	No	Yes
Continue to investigate deviations from the Noise Abatement Procedures when complaints are received	No	Yes
Continue to coordinate with the FAA regarding noise abatement procedures, including the Bayside Visual Approach.	No	Yes
Hold monthly meetings with pilots and students to discuss safety and noise abatement issues at the Airport.	No	Yes
Establish a real estate agent outreach program to educate real estate agents and potential homebuyers about San Carlos Airport operations and its presence in the community.	No	Yes
Continue Airport open house events to allow the public to visit the airport and learn about its operations.	No	Yes
Revise the San Carlos Airport Noise Abatement Procedures to reflect current conditions.	No	Yes



LEGEND

- Airport Property
- San Carlos and Palo Alto Class D Airspace
- SFO Class B Airspace
- Proposed SFO Class B Airspace¹
- Bay Meadows Departure (SQL Noise Abatement Procedures)
- Highways
- Jurisdictional Boundary

¹Proposed Class B Airspace Modification, January 30, 2017, FAA Northern California TRACON.

Note:

- Class B Airspace
 - Aircraft must have two-way radio capability and an altitude encoding (Mode C*) transponder
 - Pilots must have specialized training
 - Pilots must be cleared into Class B airspace
- Class D Airspace
 - Must be in communication with control tower
 - Airspace reverts to Class G when tower is closed (9:00pm - 7:00am)
- Class E Airspace
 - Exists at & above 700' above ground level (agl) in areas not otherwise denoted
 - Is considered controlled airspace
- Class G Airspace
 - Exists from the surface to at or below 700' agl. Not controlled by air traffic control

*Any aircraft operating within 30nm of SFO must have a Mode C transponder.

Source: ESRI Basemap Imagery (2014), San Carlos Airport, FAA.

N



1 inch = 5,000 feet



Chapter Five

Land Use Alternatives



CHAPTER FIVE

Land Use Alternatives

The San Carlos Airport area has a long history of airport land use compatibility planning (ALUCP) dating back to the first ALUCP, the *San Mateo County Comprehensive Airport Land Use Plan* from 1996 and recently updated in 2015. Aircraft noise is one compatibility factor considered in an ALUCP. A 14 CFR Part 150 Study's sole focus is "aircraft noise compatibility with a deeper dive into addressing aircraft noise land use compatibility." The purpose of this chapter is to review land use compatibility specifically as it relates to noise compatibility between the Airport and its surrounding environs. There are many tools that can be employed by the Airport to ensure compatibility. These techniques are grouped into three categories: policy, regulatory, and expenditure techniques. The first two techniques – policy and regulatory – guide future development; expenditure techniques involve payments for mitigation assistance.

POLICY TECHNIQUES

GENERAL PLAN POLICIES

A community's general plan, as well as project review guidelines, are considered policy techniques that can help guide future development. The following sections look at specific general plan policies from the cities of San Carlos and Redwood City, as well as San Mateo County, since the Airport's noise exposure contours fall within all three jurisdictions.

General Plan Policy Evaluation

City of San Carlos

The *San Carlos 2030 General Plan* (October 2009) Noise Element includes several policies and actions regarding noise at the Airport, as previously outlined in Chapter One. The policy that most influences compatible development around the Airport is Policy NOI-1.11.

POLICY NOI-1.11: Ensure that proposed noise-sensitive land uses include appropriate mitigation to reduce noise impacts from aircraft operations at San Carlos Airport. Work with the San Carlos Airport Pilots Association and San Mateo County to continue to refine and implement the Airport’s noise abatement procedures.

Redwood City

Redwood City has one goal and two policies, among others outlined in Chapter One, that work in concert to protect the Airport from incompatible development.

GOAL PS-10: Minimize risks of potential hazards in the vicinity of San Carlos Airport.

POLICY PS-10.1: Work to achieve consistency between General Plan land use and related policies and the San Carlos Airport Comprehensive Land Use Plan, as is appropriate for Redwood City. Measures may include restrictions on permitted uses and development criteria, including height restrictions.

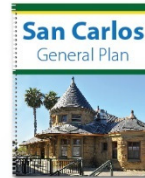
POLICY PS-14.2: Require that proposed land use policy actions (such as a General Plan amendment, Zoning amendment, or a Precise Plan) within the identified aircraft noise contours for San Carlos Airport are:

- Reviewed by the Airport Land Use Commission (C/CAG¹ Board);
- Mitigated for potential noise impacts, as appropriate to applicable City noise standards, by the developer; and,
- Consistent with the Aircraft Noise/Land Use Compatibility Standards in the San Mateo County Airport Land Use Plan.

GENERAL PLAN

A General Plan establishes policies for development and improvement of the future community.

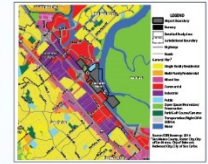
General Plans have **2** parts:



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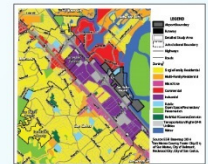


- Outlines policies for future development

- Identifies the type and location of future development

ZONING

Zoning governs the use and development of land, and is legally enforceable. General plans provide the basis for the local zoning ordinance.



¹ City/County Association of Governments of San Mateo County

San Mateo County

San Mateo County has also taken steps to protect the San Carlos Airport, as seen in policies related to noise compatible development in their general plan, as well as the *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport* (ALUCP) (October 2015).

POLICY 16.27: Airport Land Use Commission Noise Planning Efforts. Encourage and support the Airport Land Use Commission to continue existing efforts toward promoting noise compatible development surrounding the County's airports.

General Plan Policy Conclusion

All three jurisdictions have already taken active steps to protect the San Carlos Airport by incorporating policies into their respective general planning documents. To ensure future compatibility, these jurisdictions should stay engaged with Airport management of how they can continually protect the Airport, as well as the noise-sensitive dwellings within the community.

A policy is a broad and overarching statement, often adopted by a government body, that provides general future guidance.

General Plan Policy Recommendation

This alternative does not need to be considered for inclusion in the NCP.

GENERAL PLAN MAP

The purpose of General Plan land use maps is to identify the type and location of future development and redevelopment within a jurisdiction. These maps also provide a graphical representation in support of the General Plan policies for a jurisdiction. Depicting airport noise exposure contours on General Plan land use maps reinforces airport land use compatibility policies as well as informs decision-makers and potential developers where aircraft noise should be incorporated into the planning process. The City of San Carlos, City of Redwood City, and San Mateo County each have adopted land use policies and plans that incorporate noise contours other than the 65 CNEL. For the purposes of this 14 CFR Part 150 Noise Compatibility Planning Study, the 2017 and 2022 65 CNEL NEM will be considered.

General Plan Map Evaluation

City of San Carlos

The currently approved General Plan Land Use Map comes from the *San Carlos 2030 General Plan* (October 2009), which is reviewed in this NCP with updated current and future noise contours to assess noise exposure in sensitive areas of the community. The currently approved General Plan Land Use Map

data is shown on **Exhibit 5A** with future (2022) 65 CNEL noise contours.^{2,3} The future (2022) 65 CNEL noise contours extend onto areas all considered compatible uses by local land use policy standards, such as commercial, industrial, and open space..

City of Redwood City

The Redwood City General Plan Land Use Map, from the *Redwood City General Plan* (October 2010), shows that the areas around the Airport encompassed by the future (2022) noise contours are currently planned for compatible uses (see **Exhibit 5A**). The areas around the Airport that are within Redwood City’s jurisdiction consist of open space and commercial uses, both of which are not noise-sensitive uses. If the City of Redwood City adheres to the adopted General Plan Land Use Map, compatibility around the Airport should be maintained.

San Mateo County

San Mateo County does not have a general plan map.

General Plan Map Conclusion

To ensure continued land use compatibility within the environs of the Airport, the City of San Carlos and Redwood City could incorporate the 2022 65 CNEL NEM as part of their respective jurisdictions general plan maps. This addition would help identify areas of significant noise exposure as an aid to decision-makers when considering potential general plan map revisions. For instance, should a proposal be introduced to convert areas currently planned and developed with compatible land uses to non-compatible uses, the noise contour would serve as a reminder to reconsider the land use change.

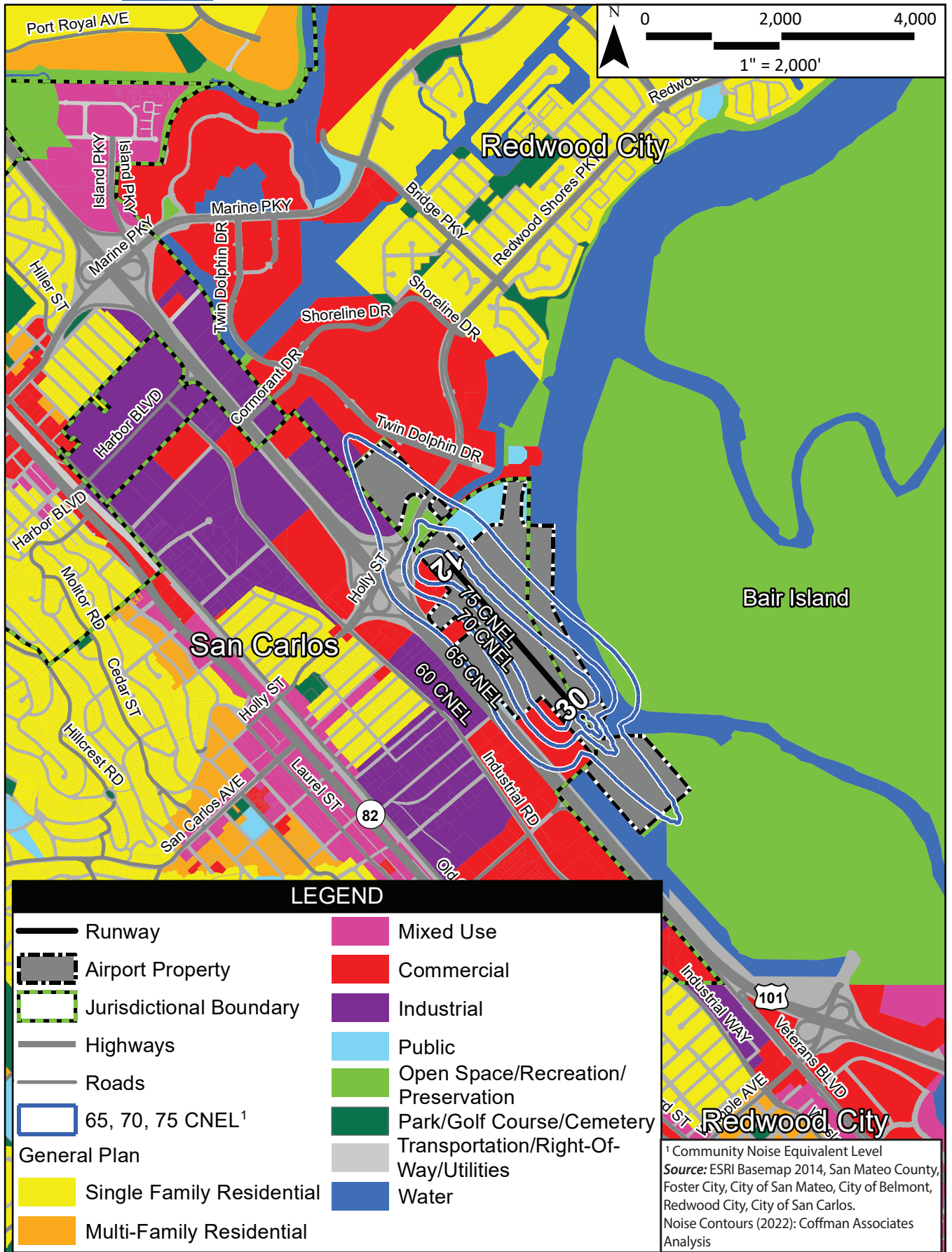
General Plan Map Recommendation

This alternative should not be considered for inclusion in the Noise Compatibility Plan (NCP) as the City of San Carlos, City of Redwood City, and San Mateo County each have adopted land use policies and plans that incorporate noise contours other than the 65 CNEL.

-
- #### Sample Project Review Criteria
- ✓ Advise Airport management of development proposals that include noise-sensitive uses near SQL.
 - ✓ Determine the sensitivity of the land use to aircraft noise based on its location within the overlay zones or noise exposure contours.
 - ✓ Locate noise-sensitive public facilities outside the 60 CNEL noise contour and away from approach paths when possible.
 - ✓ Discourage the approval of rezoning, exceptions, variances, and conditional uses that introduce noise-sensitive development in areas located near noise-impacted areas.
-

² Only future (2022) noise contours are depicted as they represent slightly larger contours than the current (2017) contours.

³ The General Plan Land Use Map in the *San Carlos 2030 General Plan* (October 2009) does not reflect the current Airport property line at the time of this study. The Airport has acquired additional property north of Runway end 12 since the *San Carlos 2030 General Plan* was adopted in October 2009.



PROJECT REVIEW GUIDELINES

Planning commissions and local governing bodies are often required to use their own discretion and judgement when making recommendations and decisions regarding community development issues, such as general plan amendments, rezonings, variances, conditional use applications, subdivision applications, and proposed public improvement projects. The exercise of this discretion is constrained by the legal requirements of the applicable ordinances. Where opportunities remain for planning commissions and governing bodies to use their own discretion in the review of development proposals, it may be appropriate to adopt procedures ensuring consideration of noise compatibility issues in their deliberations.

Project Review Guidelines Evaluation

In the *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport* (ALUCP) (October 2015), there are six noise compatibility criteria and policies for the Airport, as described in Chapter One. These noise policies address the uses that are/are not compatible within certain noise contours, and, when applicable, the mitigation that would be necessary for certain types of use. These noise compatibility policies are applicable to all jurisdictions surrounding the Airport, which includes the cities of San Carlos and Redwood City, as well as San Mateo County.

City of San Carlos

The City's General Plan Action CSS-5.1 directs the City of San Carlos to submit proposed development plans within the Airport Influence Area (AIA) boundaries of the San Carlos Airport to the San Mateo County Airport Land Use Commission for review and action, pursuant to California Public Utilities Code Section 21676(b), prior to final action by the City. Applicants are made aware of this and are directed to reach out to staff at San Mateo County and the City's Community Development staff to coordinate back and forth throughout the entire process.

City of Redwood City

The Redwood City Community Development Department has multiple planning applications required for development proposals; however, none of these documents address whether a given development proposal is within an AIA, within a published noise contour for the San Carlos Airport, or in the general vicinity of the Airport.⁴

⁴ <http://www.redwoodcity.org/departments/community-development-department/planning-housing/planning-services/planning-permits-fees>

San Mateo County

As discussed above, proposed development plans within the Airport's AIA are submitted to the San Mateo County Airport Land Use Commission for review.

Project Review Guidelines Conclusion

The City of San Carlos and San Mateo County use the Airport Land Use Commission as a compatibility check for development proposals within the San Carlos Airport AIA. The City of Redwood City does not have any development policies at the municipal level, and should consider establishing development review guidelines that are triggered when proposed development is near the Airport or under an established flight route. Like the City of San Carlos and San Mateo County, the AIA could be used as the first check for land use compatibility. Sound insulation standards and development restrictions for proposed development within the Airport's AIA could then be applied.

Project Review Guidelines Recommendation

The City of Redwood City should consider incorporating project review guidelines into their proposed development review process.

REGULATORY TECHNIQUES

COMPATIBLE LAND USE ZONING

The most commonly used land use control is zoning. Zoning is an exercise of the local government's policy power that enables that body to designate the uses that are permitted for each parcel of land. Zoning usually consists of an ordinance which specifies land development and use constraints, as well as a map identifying zoning classifications for each parcel. A primary advantage of compatible use zoning is that it may be used to promote land use compatibility while leaving the land in private ownership, on the tax rolls, and economically productive.

A frequently used zoning technique for airport noise compatibility planning is to eliminate noise-sensitive land use zoning from the noise-impacted area(s) and replace it with commercial, industrial, open space, or other compatible zoning designations. Zoning is not without limitations, though, and it is not necessarily permanent. In most jurisdictions, the current legislative body is not bound by prior zoning actions and it may change that zoning. Con-

What is a regulatory technique?

A land use development control that is established through local legislation.

Regulatory techniques include:

- Compatible Use Zoning
 - Zoning Density Changes
 - Subdivision Regulations
 - Building Codes
 - Transfer of Development Rights
 - Environmental Zoning
 - Fair Disclosure Regulations
 - Capital Improvement Programming
 - Airport Compatibility Overlay Zoning
-

sequently, compatible zoning is subject to continual pressure for change from both urban development and those who might profit from such changes.

Compatible Land Use Zoning Evaluation

City of San Carlos

The current zoning map for the City of San Carlos (December 2011) has all areas around the Airport zoned for commercial and industrial uses. As mentioned above, the current (2017) and future (2022) noise contours extend off Airport property; however, they remain within noise-compatible zones. Further, the area around the Airport is already developed with commercial and industrial uses, thus posing a minimal risk for future incompatible development given the remaining parcels are not suitable for construction.

City of Redwood City

The Redwood City Zoning Map (April 2014) shows that uses south of the Airport are zoned for industrial, residential, and commercial uses. These uses are outside of the 65 CNEL noise contour for the Airport; however, the City should consider the noise from the Airport, including noise generated under established flight routes, prior to rezoning any areas to noise-sensitive uses.

San Mateo County

The San Mateo County zoning map indicates that there are no parcels of land near the Airport within County jurisdiction, as all areas are already incorporated by either the City of San Carlos or the City of Redwood City.

Compatible Land Use Zoning Conclusion

Currently, all land areas within the noise contours for the San Carlos Airport are zoned for compatible land uses and no changes are needed.

Compatible Land Use Zoning Recommendation

This alternative should not be considered for inclusion in the NCP as the areas within the Airport's noise contours are already zoned compatibly.

CHANGE IN RESIDENTIAL DENSITY

Conventional zoning may also be used to promote land use compatibility by reducing the number of future impacts within high noise areas rather than preventing residential development altogether. This can be achieved by reducing the permitted housing density (i.e., dwelling units per acre) in noise-impacted areas.

Change in Residential Density Evaluation and Conclusion

As indicated by the growth risk analysis presented in Chapter Three, there is no potential for development of noise-sensitive land uses on the undeveloped parcels within the 2012 and 2017 noise exposure contours; therefore, a change in residential density is not warranted for the City of San Carlos, the City of Redwood City, or San Mateo County.

Change in Residential Density Recommendation

This alternative should not be considered for inclusion in the NCP.

SUBDIVISION REGULATIONS

A city's subdivision regulations establish standards for site planning, lot layout, and the design of public improvements. They can encourage compatible development around an airport by requiring the consideration of aircraft noise during the plan review by public officials. This could be in the form of requiring noise attenuation features in the site plan or a decrease or shift in the density of portions of the development.

Subdivision regulations can be used to require sound insulation standards for new development by requiring compliance with building codes. Additionally, they can be used to inform prospective property owners of the risk of aircraft noise. In some communities, noise levels are shown on the final subdivision plats, either by drawing the noise contours on the plats or by assigning noise levels to the lots. This makes the noise information a matter of public record. It is important to note that while these levels are recorded with the lot, the noise exposure level can change over time.

Subdivision Regulations Evaluation and Conclusion

Subdivision regulations are generally most useful in areas that are underdeveloped as a means for providing land use compatibility protection as development occurs. This alternative is appropriate only in undeveloped areas and not in fully developed urban areas, like the areas around San Carlos Airport. As presented in Chapter Three, the only undeveloped parcels within the 65 to 75 CNEL noise contours consist of multiple portions of parcels that are not likely to be suitable for development.

Subdivision Regulations Recommendation

This alternative should not be considered for inclusion in the NCP.

BUILDING CODES

Building codes regulate the construction of buildings by establishing standards for materials and construction techniques to protect the health, safety, and welfare of residents. Additionally, they address

structural concerns, ventilation, and insulation, each of which influences the noise attenuation capabilities of a building. Building codes commonly apply to both new construction and major alterations to existing structures; however, they can vary by municipality as they are local laws.

Building codes can require sound insulation in the construction of noise-sensitive uses in areas subject to high aircraft noise levels. Requirements for sound insulation are customarily related to noise exposure levels with increasingly stringent standards for areas of greater noise exposure. Most sound insulation code standards describe in detail the required improvements needed to achieve a given level of noise reduction.

Building Code Evaluation

City of San Carlos

The City of San Carlos has adopted Title 24 California Building Code (CBC), Volumes 1 and 2 (including appendices, amendments, and modifications) in lieu of creating a local building code. As mentioned in Chapter One of this plan, Section 1207.4 of the CBC establishes standards for interior room noise attributable to outside noise sources. These minimum noise insulation performance standards require that the CNEL does not exceed 45 dB in any habitable room.⁵ Land uses surrounding the Airport are, however, currently developed with non-noise-sensitive uses.

The City of San Carlos *Economic Development Plan 2016-2019* identifies the East Side Industrial Area, located between Old County Road and Highway 101, excluding the existing residential uses, as the City's major business and commercial district. The plan notes that this area has, "developed an identity as a regional home improvement destination and various stakeholders are interested in seeing more industrial arts businesses locate on the East Side. Industrial arts businesses tend to be small craft-type businesses producing small, often high end, products, such as furniture, clothing, and food and beverage products." For additional information regarding the City of San Carlos *Economic Development Plan 2016-2019*, refer to Chapter One and Exhibit 1G found in the San Carlos Airport Noise Exposure Maps Document. The General Plan Land Use Map also indicates that the areas around the Airport are only planned for compatible uses in the future.

City of Redwood City

The City of Redwood City, like the City of San Carlos, has also adopted Title 24 of the CBC, as shown in Article IV, Section 9.40 of Redwood City's zoning ordinance. The zoning code notes that should there be a conflict in the provision of adopted State codes and other codes or provisions adopted by the City, the most restrictive provision should apply.

⁵ The California Code of Regulations uses the day-night average sound level (Ldn) or the community noise equivalent level (CNEL) to be consistent with the noise element of the local general plan.

San Mateo County

Chapter 18.6 of the County's Zoning Regulations⁶ (December 2012) require all new development in the Airport Overlay District to submit an acoustical analysis to demonstrate that the new construction has been designed to comply with an interior CNEL (with windows closed) to not exceed an annual CNEL of 55 dB.

Building Code Conclusion

The cities of San Carlos and San Mateo have already adopted building standards that require the CNEL does not exceed 45 dB in any habitable room, and the County has interior noise standards for new developments within the Airport's Overlay District. Additionally, all three jurisdictions are subject to the policies in the ALUCP, providing an added safeguard for development around the Airport. Lastly, land uses surrounding the Airport that are within the mapped future and existing noise contours are presently developed with noise-compatible land uses.

Building Code Recommendation

This alternative should not be considered for inclusion in the NCP.

TRANSFER OF DEVELOPMENT RIGHTS

Land ownership includes a bundle of rights to the use of land. These rights include access, mineral, limited rights to airspace above the land, and land development. Transfer of development rights (TDR) is based on the idea that each right has a market value which can be separated and sold without selling the entire property.

TDR was developed to preserve environmentally critical areas without having to buy them with public funds. The technique involves dividing the municipality into sending and receiving zones. Sending zones are areas where environmental preservation and minimal development are desired, and receiving zones are areas where additional development is wanted and has existing services and infrastructure to accommodate growth.

Development rights, measured in terms of development density, are assigned through the zoning ordinance. If developers in the receiving areas can secure additional development rights, they can build at greater densities than typically allowed by the zoning ordinance. Interested developers could purchase these rights from landowners in the sending zones and apply them to projects within receiving zones. In

What is a sending zone?

An area where environmental preservation and minimal development are desired, like farmland or forests.

What is a receiving zone?

An area where development is desired, like an urbanized area.

⁶ https://planning.smcgov.org/sites/planning.smcgov.org/files/2012_ZoneRegs%5BFINAL%5D_0.pdf

this way, the public can benefit from preserving environmentally valuable land while the owner of that land can be paid for preserving it, and the potential return on investment for the developer increases.

Transfer of Development Rights Evaluation and Conclusion

TDR can be difficult to justify solely for airport land use compatibility purposes as it often involves significant start-up costs and staff time for management. If a local jurisdiction is already using or considering TDR, airport compatibility criteria could be incorporated with other environmental factors in the design of the program. Conventional land use regulations and planning are therefore better alternatives to addressing noise compatibility issues at the Airport. Further, this technique is not applicable because the Airport is already developed with compatible uses and thus there are no undeveloped parcels that could benefit from this technique.

Transfer of Development Rights Recommendation

This alternative should not be considered for inclusion in this NCP.

ENVIRONMENTAL ZONING

Special zoning regulations to preserve environmentally sensitive areas or protect development from environmental hazards can also be used to promote land use compatibility near airports. Some common types include floodplain overlay zoning, which restricts or prohibits development in all or parts of a floodplain, and steep slope zoning, which requires low development densities and special construction standards. All types of environmental zoning can be used to restrict the development of noise-sensitive uses in environmentally sensitive areas that are also impacted by aircraft.

Types of environmental zoning:

- Floodplain overlay zoning
 - Steep slope zoning
 - Wetland preservation zoning
 - Forestry zoning
 - Biological corridor zoning
-

Environmental Zoning Evaluation and Conclusion

Environmental zoning is already being used to protect the eastern and southern portions of the Airport given the location of Bair Island Ecological Reserve. Other opportunities to expand environmental zoning as a land use control to reduce noise-sensitive development encroachment do not exist because these parcels are already developed.

Environmental Zoning Recommendation

This alternative is already being used to its fullest extent to protect the Airport. Therefore, this alternative should not be considered for inclusion in this NCP.

FAIR DISCLOSURE REGULATIONS

Fair disclosure regulations, also known as real estate disclosures, are intended to ensure that prospective property buyers are informed that the property is or will be exposed to potentially disruptive aircraft noise. This type of regulation is typically set at the state level, so the disclosure requirements can vary widely. Some states have the airport location as an actual item on the disclosure form, whereas other states leave it up to the seller to disclose noise-exposure areas.

At the most formal level, fair disclosure can be implemented through regulations requiring the seller and agent to provide a notice of aircraft exposure on the real estate listing sheet and at the time a sales contract is executed. Additionally, any easements should be revealed at the time of closing. Fair disclosure regulations can place a high responsibility on real estate agents and lenders to disclose this information if legislation is not properly drafted. To ensure effectiveness, the disclosure regulations should clearly define the airport noise levels or overlay districts impacting the property and direct buyers to airport officials for more information.

Fair Disclosure Regulations Evaluation

As of January 1, 2004, the State of California requires a real estate disclosure as a condition of the sale of most residential property if it is located near an airport and is within its AIA. As discussed in Chapter One, San Carlos Airport has two AIAs – AIA “A” and AIA “B” (see **Exhibit 5B**).⁷ Per California state statutes (California Business and Professional Code Section 11010 and California Civil Code Sections 1102.6, 1103.4, and 1353), there is specific information that must be included in the notice of intention related to the sale or lease of subdivided lands and condominium conversions and to the sale of certain existing residential property located within an AIA. It must be stated that the property is presently located near an airport, more specifically within an AIA. Due to the property’s location, it must be disclosed that it may be subject to some annoyances or inconveniences typically associated with airports, including noise, vibration, or odors. Although the sensitivity to these annoyances varies from person to person, it is necessary to acknowledge and accept that these annoyances are acceptable to the prospective property owner prior to the purchase of the property.

Section 11010 of the California Business and Professional Code defines an **airport influence area** as, “an area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses as determined by an airport land use commission.”

Fair Disclosure Regulations Conclusion

Current State requirements are already in place in all three jurisdictions. Furthermore, it is recommended in the ALUCP that the Airport proximity disclosure be required for all real estate transactions involving private property – both new and existing – within the AIA of San Carlos Airport.

⁷ The California Real Estate Disclosure requirement is applicable to both AIAs; however, only AIA B must undergo a formal review by the Airport Land Use Commission/City/County Association of Governments of San Mateo County.

Fair Disclosure Regulations Recommendation

This alternative is already a land use control in place to protect the Airport. Therefore, this alternative should not be considered for inclusion in this NCP.

CAPITAL IMPROVEMENT PROGRAMMING

Major projects, such as roadway improvements or the extension of sanitary and storm sewers, can indirectly promote development. In the context of airport land use compatibility planning, this could result in additional non-compatible development near an airport.

Capital Improvement Programming Evaluation and Conclusion

This technique is only applicable when there are undeveloped parcels of land, which is not the case around the San Carlos Airport. As previously discussed, the only undeveloped parcels within the 65 to 75 CNEL noise contours consist of multiple portions of parcels that are not likely to be suitable for development.

Capital Improvement Programming Recommendation

This alternative should not be considered for inclusion in this NCP.

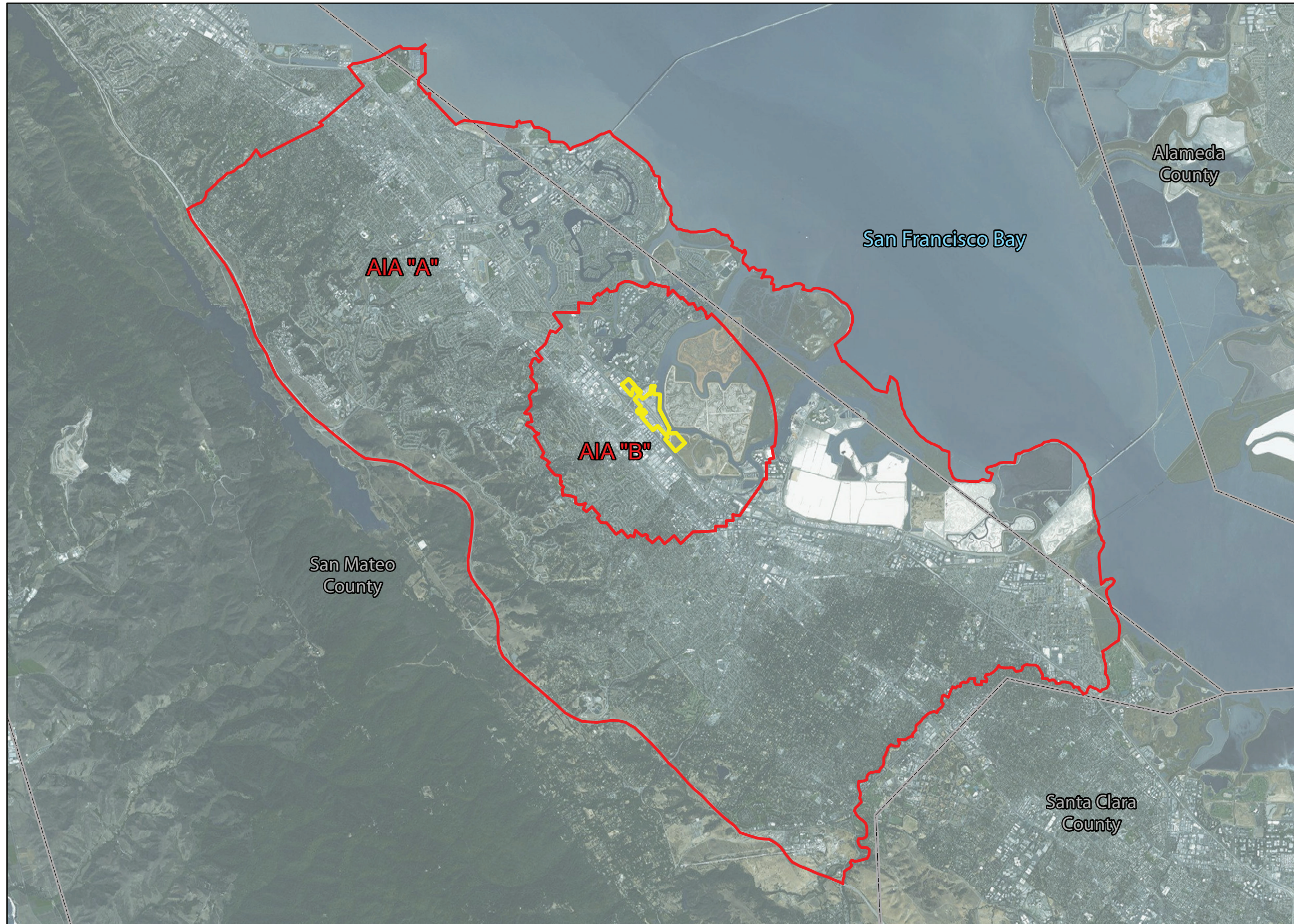
AIRPORT COMPATIBILITY OVERLAY ZONING

Airport compatibility overlay zoning is intended to provide an additional layer of special purpose regulations to address specific environmental conditions or problems by setting performance standards to protect the public. Overlay zoning involves the creation of one or more zoning districts that supplement the regulations of the general-purpose zoning districts. Within the context of airport compatibility planning, these controls are often used to regulate the height of structures within runway approach areas or to promote compatible development with aircraft noise levels. Airport compatibility overlay zoning is used around many airports to establish land use controls to protect the public's health, safety, and welfare from conflicts that may arise between aviation and urban development.



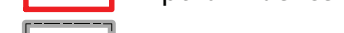
Airport compatibility overlay zoning is generally established where the underlying zoning (i.e., residential, industrial, etc.) remains in place and is supplemented with additional regulations by the overlay zone. The land within the overlay zone is subject to the requirements of both zoning ordinances: the underlying zone and the overlay zone. The strictest requirements of both zones apply to the affected parcel.

What are the advantages of airport compatibility overlay zoning?

- Simplicity of required amendments
 - Ease of administration
 - Clear relationship of the regulations to their purpose
 - Minimal impact of the regulations on the application of the zoning ordinance in other parts of the community
-

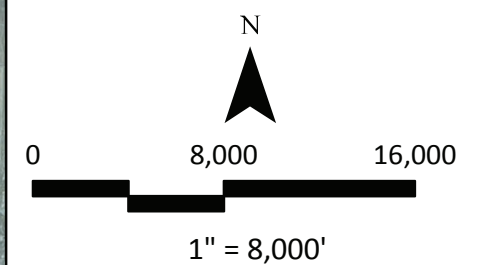


LEGEND

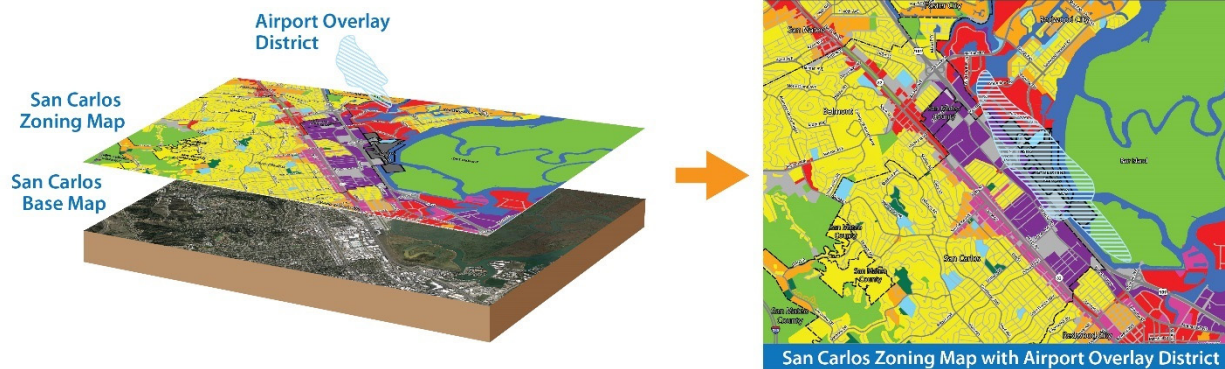
-  Airport Boundary
-  Airport Influence Area (AIA)
-  County Boundary

Source: ESRI Basemap 2014,
San Mateo County.

Source:



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The intent of airport compatibility overlay zoning is to avoid problems associated with incompatible development in high noise areas. Regulations in this type of overlay zoning can prohibit noise-sensitive land uses, if the underlying zone permits land uses to provide an opportunity for the economically viable use of the land.

Airport Compatibility Overlay Zoning Evaluation

City of San Carlos

As mentioned in Chapter One, Chapter 18.09 of the San Carlos Municipal Code (updated February 17, 2017) designates an Airport District, explaining the purpose, use restrictions, land use regulations, and development standards near San Carlos Airport. The purpose of Chapter 18.09 is to protect the land uses around the Airport from potential hazards, which includes noise exposure.⁸ Exhibit 1J in Chapter One illustrates the Airport District, showing that the only area that must adhere to the regulations of the Airport District are the parts of Airport property within the City of San Carlos' jurisdictional limits.

City of Redwood City

The City of Redwood City does not have airport overlay zoning.

San Mateo County

As described in Chapter One, Chapter 18.6 of the San Mateo County Zoning Regulations (December 2012) defines the Airport Overlay (A-O) District, which provides a margin of safety at the Airport's runway ends by limiting the concentration of people where hazards from aircraft are considered the greatest. The uses permitted in the A-O District consist of all permitted uses in the underlying district, except for residential or uses with more than three persons occupying the site at any one time. Any new development in this district is subject to the development standards of the underlying zoning district, and all new uses must meet the performance standards of the underlying district.

⁸ <https://www.codepublishing.com/CA/SanCarlos/#!/html/SanCarlos18/SanCarlos1809.html>

The *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport* (ALUCP) (October 2015) acts as an airport overlay district in that its AIAs extend into the jurisdictions discussed in this NCP. One of the primary duties of the ALUC is to review and determine the compatibility of proposed local agency land use policy actions, including general and specific plan amendments and rezonings resulting in a land use change within an AIA of any public use airport in San Mateo County, with the applicable policies, standards, and criteria contained in the ALUCP. As such, the ALUCP is essentially a policy driven airport overlay zone that should protect the uses within its purview.

It should be noted, however, that the currently adopted ALUCP does *not* include Surf Air's PC-12 aircraft operations as Surf Air was not a tenant at the time the study was completed. This specific aircraft is louder on its approach than departure, extending the future noise contours in this NCP farther to the south than what is presently shown on the future noise contours in the ALUCP. Therefore, the ALUCP should incorporate the 2022 noise exposure contours generated in this NCP until a new, twenty-year forecast contour can be prepared for the ALUCP.

Airport Compatibility Overlay Zoning Conclusion

Although most all of the land area around the Airport is already developed with compatible uses, there is always the risk of incompatible development encroachment. The presently adopted ALUCP acts as an airport overlay zone for the San Carlos Airport; however, without the most current future noise contours, there are some potential gaps in coverage. To fully protect the Airport from incompatible uses in the future, the ALUCP should adopt the future (2022) noise contours presented in this NCP until a new 20-year contour can be developed for incorporation into the ALUCP.

Airport Compatibility Overlay Zoning Recommendation

The future noise exposure contours presented in this NCP should be used in place of the future noise exposure contours in the ALUCP until an updated, 20-year forecast can be implemented into the ALUCP.

EXPENDITURE TECHNIQUES

Expenditure measures are usually considered as a last resort for controlling noise impacts because they are often disruptive, expensive, and sometimes controversial. These measures are potentially eligible for FAA funding assistance through the noise set-aside portion of the Airport Improvement Program (AIP) if they are approved within a Part 150 NCP.

To be eligible for FAA approval and funding, these project locations must be within the 65 CNEL noise contour based on existing conditions or the five-year forecast conditions, whichever is greater. Historically, properties within noise contours exceeding 65 CNEL have received much higher priority for mitigation funding than properties located within lesser contours, like the 55 or 60 CNEL noise contours.

Because there are no existing noise-sensitive land uses within the 65 CNEL contour – both current (2017) and future noise contours (2022) – expenditure techniques are an unlikely land management technique that will be necessary for noise mitigation in the environs of San Carlos Airport, and thus none are recommended for inclusion in this NCP. Expenditure techniques that could be useful to the Airport in the future, should noise-sensitive entities be developed, are explained below.

PROPERTY ACQUISITION

The intent of property acquisition is to remove residences from severely noise-impacted areas, as well as to prevent incompatible uses from being developed near the Airport. This can be an effective way to ensure complete noise compatibility around an airport, although it has several drawbacks:

- Potentially excessive costs
- Very complex
- High administrative effort
- Disruption to lives of residents in acquisition area
- Risk of considerable damage to character of established neighborhoods

Under federal regulations,⁹ land may be acquired for noise mitigation with funding through the noise-set-aside of the AIP. For eligibility, the property must be within the 65 CNEL noise contour and be developed with noise-sensitive land uses; however, it can be difficult to establish a high priority outside of the 70 or 75 CNEL noise contours because the FAA actively supports airport ownership of land impacted by noise above 75 CNEL.

Property acquisition is typically accomplished through voluntary programs in which the purchaser - usually the jurisdiction - notifies property owners when it is ready to negotiate the purchase of their land and home(s). In some instances, the purchaser can use eminent domain to complete an acquisition if the property owner will not voluntarily relinquish the rights to the land.

Land use management techniques that involve direct expenditures:

- Property Acquisition
 - Sound Insulation
 - Noise and Avigation Easement Purchase
 - Sales Assurance
 - Development Rights Acquisition
-

Factors to consider in a property acquisition:

- Pace and phasing of acquisition
 - How to deal with unwilling residents
 - Care and management of vacant lots
 - Availability of other housing
 - Effect on local institutions – schools, churches – due to acquisition
 - Avoiding blight of acquired areas
 - Adhering to requirements of the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*
-

⁹ FAA Order 5100.38D, Appendix R, Table R-6, Item e

Property Acquisition Evaluation and Conclusion

There are no noise-sensitive properties within the 65, 70, or 75 CNEL noise contours in the areas surrounding San Carlos Airport, both currently and forecasted five years in the future (2022).

Property Acquisition Recommendation

This alternative should not be considered for inclusion in this NCP.

SOUND INSULATION

Noise-sensitive land uses may be retrofitted to include sound insulation to reduce interior noise levels. Sound insulation can improve the outdoor-to-indoor noise level of a structure by five to ten decibels. Sound insulation strategies can include window and door replacement, caulking, weatherstripping, and installing central air ventilation so that the windows can be kept closed only if the structure does not already have a central air ventilation system. However, benefits of these improvements are only realized if windows and doors are closed, so ventilation systems may also be incorporated.

In addition to previously discussed criteria, FAA has provided specific guidance for sound insulation programs, as outlined in FAA Order 5100-48D, *Airport Improvement Handbook*, Appendix R, effective February 26, 2019. Sound insulation programs require a two-step eligibility process:

1. The noise-impacted, non-compatible structures must be located within an airport's existing or future 65 CNEL contour; and,
2. The structure must have an existing interior noise level of 45 CNEL or greater as measured with the windows closed.

A sound insulation program requires local administrative support in addition to meeting the above FAA requirements. Prior to initiating a program, the following actions would be necessary:

- Establish a program boundary
- Create program guidelines
- Train technical staff or hire qualified consultants to manage the program
- Develop a list of approved contractors
- Establish program phasing and prioritization

Sound Insulation Evaluation and Conclusion

There are no noise-sensitive land uses within the current or future 65 CNEL noise contour for San Carlos Airport, thus negating the need for a sound insulation program.

Sound Insulation Recommendation

This alternative should not be considered for inclusion in this NCP.

NOISE AND AVIGATION EASEMENT PURCHASE

An easement is a right held by one person to make use of the land of another for a limited purpose. In the context of airport noise compatibility planning, two general types of easements are possible:

1. Positive easements: allows someone to make noise over the land
2. Negative easements: prevents the creation or continuation of unprotected noise-sensitive uses on the property.

An advantage of easements over zoning is that they can be permanent, whereas the zoning designation of a parcel may be changed. Acquisition of easements does not reduce the noise impacts on people or change the non-compatible land uses to compatible uses. Locally, an important aspect of this land use management strategy is that the property remains on the tax rolls and available for compatible development by the land owners.

Noise and avigation easements give an airport the right to direct aircraft over property, creating related annoyances, without the threat of a lawsuit. These easements run with the land and serve as a limited means of notifying prospective property owners of the impact of airport noise. The purchase of noise and avigation easements within the 65 CNEL is eligible for federal funding assistance through the noise set-aside of the AIP. Purchase of noise and avigation easements over existing homes may be appropriate if noise substantially interferes with the full enjoyment of the property. **Table 5A** outlines the advantages and disadvantages of this method.

TABLE 5A
Advantages/Disadvantages of Noise and Avigation Easements

Advantages	Disadvantages
Legal protection for the airport	Does not mitigate noise, just compensates property owners for inconvenience
Limited fulfillment of fair disclosure objectives	Future owners do not receive similar compensation, but are still exposed to aircraft noise
Neighbors who have diminished property enjoyment are compensated	Risk of airport becoming target of complaints, controversy, political pressure, and possibly lawsuits

Noise and Avigation Easement Purchase Evaluation and Conclusion

Given the lack of noise-sensitive uses in the 65 CNEL noise contours of the Airport, this is not a viable noise mitigation technique.

Noise and Avigation Easement Purchase Recommendation

This alternative should not be considered for inclusion in this NCP.

SALES ASSURANCE

Under a sales assurance program, an airport offers to supplement any bona fide purchase offer up to an amount equal to fair market value to homes within the 65 CNEL noise contour. The airport guarantees the property owner of receiving the appraised value, or some increment thereof, regardless of the final sales price that is negotiated with a buyer. To prevent collusion between buyer and seller, to the detriment of the airport, the airport must approve the listing price for the home and any downward adjustment of that price. In return for participation in the program, the airport could require the property owners to give the airport an aviation easement. Sales assurance programs keeps properties on the tax rolls of the city the airport operates in. Similarly, a city would not be exposing itself to the liability of repairing the property and risking financial losses for resolving code deficiencies.

Sales Assurance Evaluation and Conclusion

Because there are no properties within the 65 CNEL noise contour that are considered noise-sensitive, a sales assurance program is not a useful noise management strategy for the Airport.

Sales Assurance Recommendation

This alternative should not be considered for inclusion in this NCP.

DEVELOPMENT RIGHTS ACQUISITION

The ownership of land involves the ownership of a bundle of rights to the use of that land and to develop it to the extent permitted by government regulations, such as zoning, health and safety laws, and environmental laws. A property owner can sell some of these rights while still retaining title to the land. For example, a property owner surrenders some of the rights of their property when he or she grants someone an easement or sells the mineral rights. One of the rights a property owner can sell is the right to develop the property for urban uses.

The advantage of purchasing development rights is that it assures complete protection from incompatible development, and the property owners can receive compensation for any perceived loss. Additionally, the property can be kept in private ownership, in productive use, and on the tax rolls all whilst protecting an airport from incompatible development. The main disadvantage is the potentially high cost of the development rights, in return for which the buyer receives only a very limited interest in the property. In urbanizing areas where property owners have a reasonable basis for development expectations, development rights can cost nearly as much as the full fee title. In rural areas, development rights can be an economical alternative to fee simple acquisition.

Development Rights Acquisition Evaluation and Conclusion

This alternative is appropriate only in undeveloped areas, not in fully developed urban areas, such as the area surrounding San Carlos Airport. Further, the only undeveloped land near the Airport is already owned by the Airport, negating the use of a method like development rights acquisition as a land use control.

Development Rights Acquisition Recommendation

This alternative should not be considered for inclusion in this NCP.

PRELIMINARY LAND USE ALTERNATIVES REVIEW

Table 5B summarizes the land use techniques that could be used by the San Carlos Airport to control noise-sensitive development encroachment. These are to be reviewed by the Planning Advisory Committee, Airport staff, and the public. Refinements to these preliminary measures may be necessary prior to final plan development. Additionally, more detailed consideration for the implementation of these recommendations is necessary.

TABLE 5B
Land Use Management Techniques Evaluation
San Carlos Airport

Land Use Alternative	City of San Carlos	Redwood City	San Mateo County	Cost	Implementing Agency
POLICY TECHNIQUES					
General Plan (3 parts)					
- Policies	✓	✓	✓	N/A	N/A
- Map (Add 65 CNEL noise contours to the general plan map)	N/A	N/A	N/A	N/A	N/A
- Project Review Guidelines	✓	Incorporate project review guidelines into their proposed development review process.	✓	N/A	N/A
REGULATORY TECHNIQUES					
Compatible Use Zoning	N/A	N/A	N/A	N/A	N/A
Change in Residential Density	N/A	N/A	N/A	N/A	N/A
Subdivision Regulations	N/A	N/A	N/A	N/A	N/A
Building Codes	✓	✓	✓	N/A	N/A
Transfer of Development Rights	N/A	N/A	N/A	N/A	N/A
Environmental Zoning	✓	✓	N/A	N/A	N/A
Fair Disclosure Regulations	✓	✓	✓	N/A	N/A
Capital Improvement Programming	N/A	N/A	N/A	N/A	N/A
Airport Compatibility Overlay Zoning	✓	✓	Incorporate NCP future noise exposure contours to ALUCP until updated 20-year forecast can be implemented.	Administrative	San Mateo County
EXPENDITURE TECHNIQUES					
Property Acquisition	N/A	N/A	N/A	N/A	N/A
Sound Insulation	N/A	N/A	N/A	N/A	N/A
Noise and Avigation Easement Purchase	N/A	N/A	N/A	N/A	N/A
Sales Assurance	N/A	N/A	N/A	N/A	N/A
Development Rights Acquisition	N/A	N/A	N/A	N/A	N/A

N/A – Not Applicable

✓ – indicates technique is already in use



Chapter Six

Noise Compatibility Program



CHAPTER SIX

Noise Compatibility Program

The 14 CFR Part 150 Noise Compatibility Program (NCP) for San Carlos Airport includes measures to abate aircraft noise, control land development, and implement and update the program. Part 150 requires that the program apply to a period of no less than five years into the future, although it may apply to a longer period if the sponsor so desires. This Noise Compatibility Program has been developed based on a ten-year planning period.

The objective of the noise compatibility planning process is to improve the compatibility between aircraft operations and noise-sensitive land uses in the area, while allowing the Airport to continue to serve its role in the aviation transportation network in the community, state, and nation. The NCP includes three elements to satisfy this objective.

The **Noise Abatement Element** includes voluntary noise abatement measures selected from the alternatives evaluated in Chapter Four, Noise Abatement Alternatives.

The **Land Use Management Element** includes measures to mitigate or prevent noise impacts on existing noise-impacted land uses and future land use development in the Airport environs. All the land use management techniques were evaluated in Chapter Five, Land Use Alternatives.

The **Program Management Element** includes procedures and documents for implementing the recommended voluntary noise abatement and land use measures, monitoring the progress of the program, and updating the Noise Compatibility Program.

Each measure of the NCP is summarized in **Tables 6B** and **6C** at the end of this chapter. For each measure, these tables include a brief description, the entity responsible for implementation of each measure, the estimated cost of each measure, the proposed timing, and potential sources of funding.

NOISE ABATEMENT ELEMENT

Potential noise abatement techniques were analyzed for use at San Carlos Airport in Chapter Four. For the purposes of 14 CFR Part 150, there are no viable noise abatement measures because there are no noise-sensitive land use impacts within the 65 CNEL noise exposure contours in either the existing condition or five-year forecast condition. However, there are several voluntary noise abatement measures that can continue to be implemented locally outside 14 CFR Part 150. These measures are discussed at the end of this chapter.

NOISE CONTOURS

The recommended voluntary noise abatement measures do not involve any changes that would alter the 2017 or 2022 baseline noise exposure contours, shown in **Exhibits 6A** and **6B**.

LAND USE MANAGEMENT ELEMENT

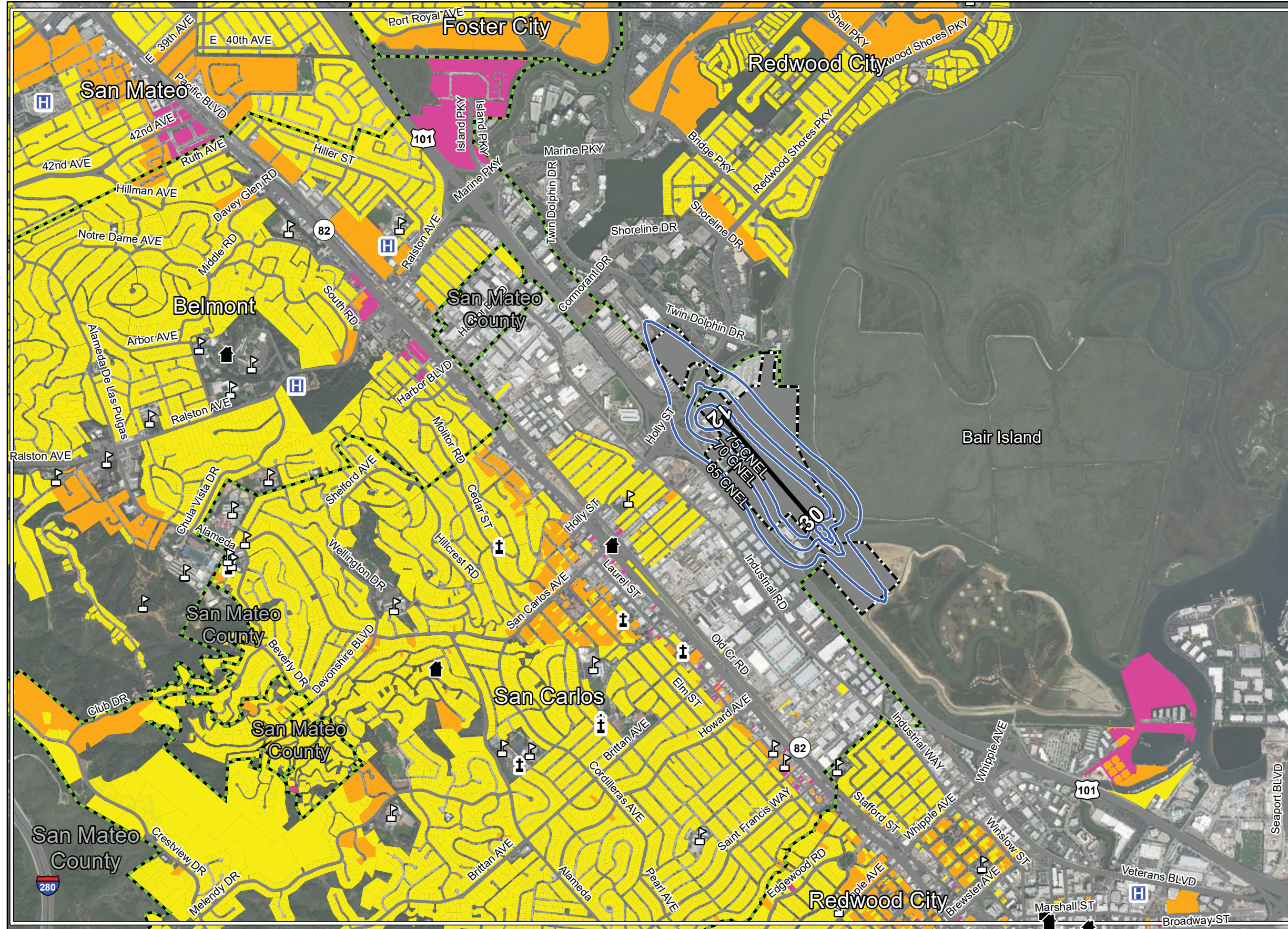
The recommended land use mitigation measures for the vicinity of San Carlos Airport are presented on the following pages and summarized within **Table 6B**. The following land use measures listed below include updates or amendments to applicable planning documents within the cities of San Carlos and Redwood City, as well as San Mateo County.

- 1. Encourage Redwood City to incorporate project review guidelines into their development review process.**

Description. The City of Redwood City does not have any development policies at the municipal level, and should consider establishing development review guidelines that are triggered when proposed development is near the Airport or under an established flight route. Similar to the City of San Carlos and San Mateo County, the AIA could be used as the first check for land use compatibility. Sound insulation standards and development restrictions for proposed development within the noise exposure contours and above could then be applied. A checklist addressing the following criteria could be adopted for proposed projects within the airport vicinity:

Advise the airport management of development proposals that include noise-sensitive uses within the airport vicinity.

Determine the sensitivity of the subject land use to aircraft noise based on their location within the Airport Influence Area or noise exposure contours.



LEGEND

- Runway
- Detailed Study Area
- Jurisdictional Boundary
- Airport Property Boundary
- Highways
- Roads

Noise Sensitive Facilities

- School
- Hospital
- Place of Worship
- Historic Properties¹

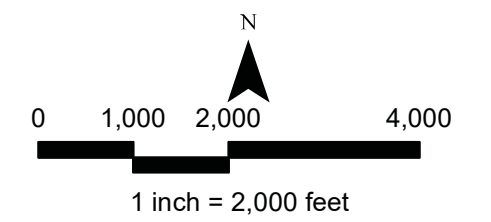
Noise Sensitive Land Uses²

- Single Family Residential
- Multi-Family Residential
- Mixed Use

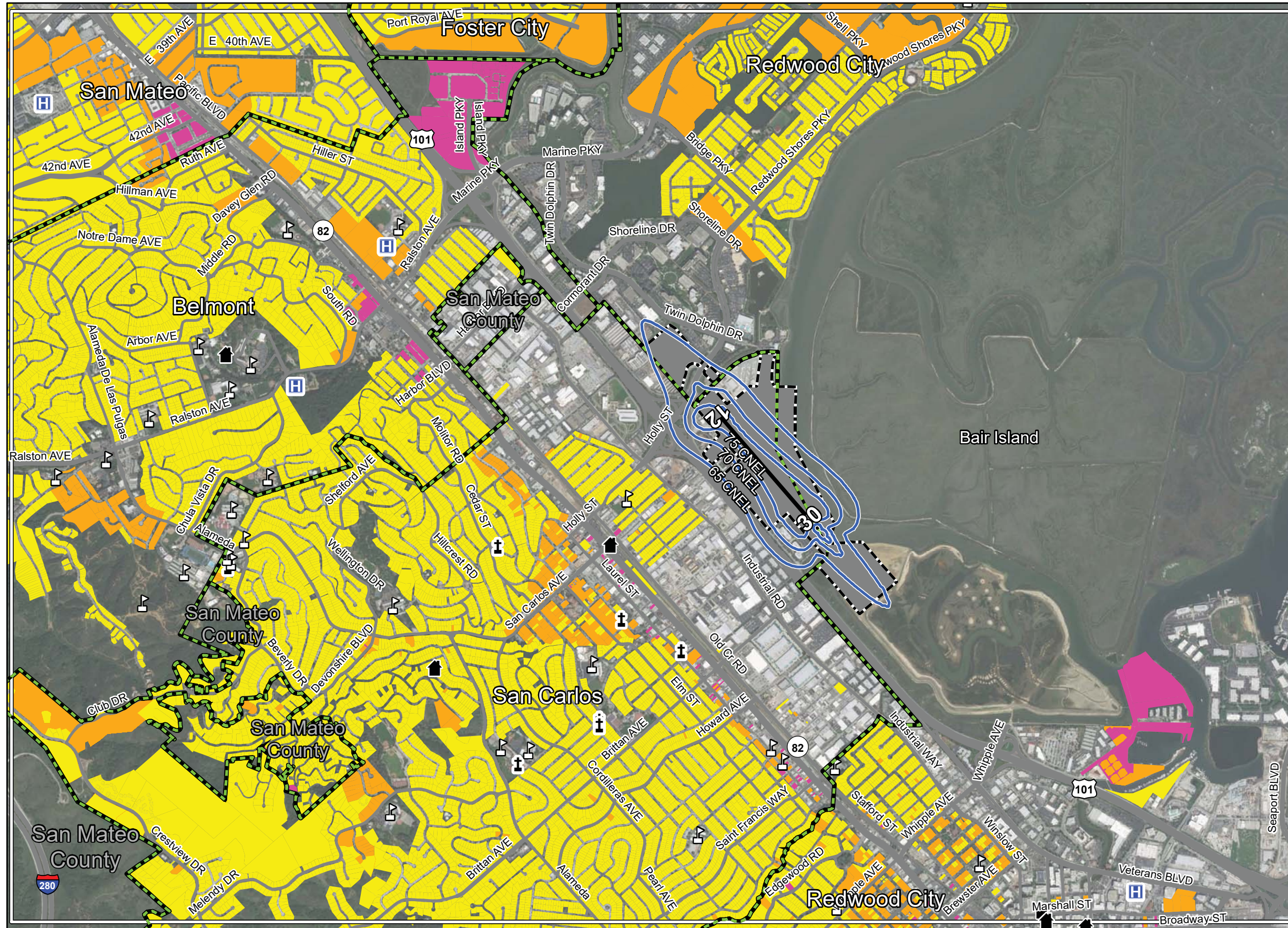
2017 Noise Contours

- 65, 70, 75 CNEL

¹National Park Service.
²San Mateo County, Foster City, City of San Mateo, City of Belmont, Redwood City, City of San Carlos.
 Source: ESRI Basemap Imagery (2014)



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LEGEND

- Runway
- Detailed Study Area
- Jurisdictional Boundary
- Airport Property Boundary
- Highways
- Roads

Noise Sensitive Facilities

- School
- Hospital
- Place of Worship
- Historic Properties¹

Noise Sensitive Land Uses²

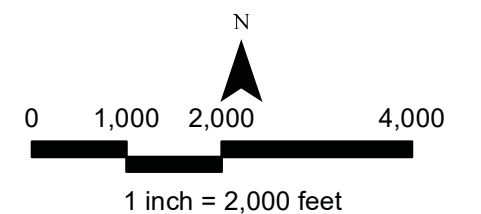
- Single Family Residential
- Multi-Family Residential
- Mixed Use

2022 Noise Contours

- 65, 70, 75 CNEL

¹National Park Service.

²San Mateo County, Foster City, City of San Mateo, City of Belmont, Redwood City, City of San Carlos. Source: ESRI Basemap Imagery (2014)



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Locate noise-sensitive public facilities outside the noise exposure contours and away from approach and departure paths whenever possible.

Discourage the approval of rezonings, exceptions, variances, and conditional uses which introduce noise-sensitive development into areas located near noise-impacted areas.

Implementation Actions. This measure can be established by amending the Redwood City development review process as described above.

Costs and Funding. Adoption of this measure would involve administrative expenses for Redwood City. These expenses would be paid out of the City of Redwood City's operating budget.

Timing. Amendments to general plans take time to prepare and process. The required amendments for this measure are projected for 2019.

2. Encourage the San Mateo County Airport Land Use Commission to incorporate 2022 noise exposure contours into San Carlos Airport ALUCP until an updated 20-year forecast can be implemented.

Description. The currently adopted *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport* does not include Surf Air's PC-12 aircraft operations as Surf Air was not a tenant at the time the study was completed. This specific aircraft is louder on its approach than departure, extending the future noise contours in this NCP farther to the south than what is presently shown on the future noise contours in the ALUCP. Therefore, the ALUCP should incorporate the 2022 noise exposure contours until a new, 20-year forecast contour can be prepared for the *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport*.

Implementation Actions. This measure can be established by amending the *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport* as described above.

Costs and Funding. Adoption of this measure would involve administrative expenses for the San Mateo County Airport Land Use Commission. These expenses would be paid out of the San Mateo County Airport Land Use Commission's operating budget.

Timing. Amendments to general plans take time to prepare and process. The required amendments for this measure are projected for 2019.

PROGRAM MANAGEMENT ELEMENT

The success of the Noise Compatibility Program requires a continuing effort to monitor compliance and identify new or unanticipated problems and changing conditions. Three program management measures are recommended at San Carlos Airport. San Mateo County, as Airport operator, is responsible for implementing these measures. They are discussed below and summarized in **Table 6B**.

PROGRAM MANAGEMENT ELEMENT

1. Continue use of the Airport's noise complaint handling system.

Description. San Carlos Airport staff has a formal system to receive, track, record, and respond to airport noise complaints. Noise complaints can be submitted online or by telephone. When complaints about pilots not adhering to the voluntary noise abatement procedures are submitted, Airport staff investigates the complaint. Staff uses the Airport's radar system to verify procedure compliance, then checks the ATCT audio records to determine if the pilot was instructed to deviate from the procedure. If the pilot was instructed to deviate from the procedure by the ATCT, no further action is taken. If the pilot was not instructed to deviate from the procedure, Airport staff prepares a letter documenting the findings. The letter includes a description of the event, map of the radar flight track showing the deviation, and a copy of the Airport's voluntary noise abatement procedures. Copies of the letter are sent to the pilot, ATCT, San Mateo County Deputy Director of Public Works, and the San Carlos Airport Pilots' Association.

Implementation Actions. This is an ongoing measure which is implemented.

Costs and Funding. The airport and San Mateo County will continue to incur administrative costs associated with receiving and responding to noise complaints.

Timing. This is an ongoing measure that should be continued.

2. Update Noise Exposure Maps and Noise Compatibility Program.

Description. The Airport management should review the Noise Compatibility Program and consider revisions and refinements as necessary. A complete plan update will be needed periodically to respond to changing conditions in the local area and in the aviation industry. By law (49 USC 47503), FAA must rely on only those noise exposure maps that reflect current or reasonably projected conditions. FAA Order 5100-38D, Change 1, *Airport Improvement Program Handbook*, February 26, 2019, addresses the requirements for current valid noise exposure contours. In general, NEMs less than five years old are considered current, unless conditions have created a significant change that would affect noise contours. NEM noise exposure contours older than five years must be certified by the sponsor and updated as required in FAA Order 5100-38D. An update may be needed sooner, however, if major changes occur. An update may not be needed until later if conditions at the Airport and in the surrounding area remain stable. The FAA interprets this to mean an increase in noise levels of 1.5 CNEL or more above 65 CNEL, over non-compatible areas that had formerly been compatible (FAA Order 1050.1F, Section B-1.4).

Proposed changes to the NCP should be reviewed by the FAA and all affected aircraft operators and local agencies. Proposed changes should be submitted to the FAA for approval after local consultation and a public hearing to comply with Part 150.

Implementation Actions. No specific implementation actions, other than those discussed above, are required.

Costs and Funding. Costs of a complete update of the Noise Compatibility Program are estimated at \$300,000. This would be eligible for up to 90 percent funding from the FAA. San Mateo County would be responsible for the remaining 10 percent. This would come from the Airport operating budget.

Timing. This should be done as necessary. Updates are typically needed every 7 to 10 years, depending on how much change occurs at the Airport and in the local area. For planning purposes, one update can be expected over the next 10 years.

3. Monitor implementation of the Part 150 Noise Compatibility Program.

Description. The Airport management must monitor compliance with the Noise Abatement Element. This will involve checking periodically with the cities of San Carlos and Redwood City, as well as the San Mateo County Airport Land Use Commission regarding compliance with the recommendations. An annual summary report should be prepared to indicate the status of each item on the checklist. A monitoring checklist is included in **Appendix G**.

Implementation Actions. No specific implementation actions are required other than those discussed in the description of this measure.

Timing. This should be done as necessary.

RESIDUAL NOISE IMPACTS

Table 6A shows the number of dwelling units exposed to noise for baseline conditions and after implementation of the Noise Compatibility Plan. For both the 2017 baseline and 2022 forecast conditions, zero dwelling units are impacted by noise at or above 65 CNEL.

	65-70 CNEL	70-75 CNEL	75+ CNEL
2017 Noise-Sensitive Land Uses			
Single Family Residential	0.0	0.0	0.0
Multi-Family Residential	0.0	0.0	0.0
Noise-Sensitive Institutions	0.0	0.0	0.0
Total	0.0	0.0	0.0
2022 Noise-Sensitive Land Uses			
Single Family Residential	0.0	0.0	0.0
Multi-Family Residential	0.0	0.0	0.0
Noise-Sensitive Institutions	0.0	0.0	0.0
Total	0.0	0.0	0.0
Population			
2017 Noise Exposure Contours	0.0	0.0	0.0
Total	0.0	0.0	0.0
2022 Noise Exposure Contours	0.0	0.0	0.0
Total	0.0	0.0	0.0

Source: Coffman Associates' analysis.

Note: The 60 CNEL noise exposure contour and summary of impacts can be found in Appendix F.

Table 6A also shows the population exposed to noise with implementation of the Noise Compatibility Plan in comparison with baseline conditions. For both the 2017 baseline and 2022 forecast conditions, 0 people are impacted by noise above 65 CNEL.

SUMMARY OF NOISE COMPATIBILITY MEASURES FOR REVIEW UNDER 14 CFR PART 150

The Noise Compatibility Measures for San Carlos Airport for review under 14 CFR Part 150 are summarized in **Table 6B**. The total cost of the program is estimated at \$300,000, which represents the estimated cost for updating the Noise Compatibility Plan.

TABLE 6B
Summary of Noise Compatibility Program Measures
For Review Under 14 CFR Part 150
San Carlos Airport

Measure	Cost to Airport Or Government	Direct Cost to Users	Timing	Lead Responsibility	Potential Funding Sources
LAND USE MANAGEMENT ELEMENT					
1. Encourage Redwood City to incorporate project review guidelines into their pro-posed development review process.	Administrative	None	2019	San Mateo County	Redwood City Operating Budget
2. Encourage the San Mateo County Airport Land Use Commission to incorporate 2022 noise exposure contours into San Carlos Airport ALUCP until updated 20-year forecast can be implemented.	Administrative	None	2019	San Mateo County	San Mateo County Airport Land Use Commission Operating Budget
PROGRAM MANAGEMENT ELEMENT					
1. Continue use of the Airport's noise complaint handling system.	Administrative	None	Ongoing	San Mateo County Aviation Department	San Mateo County Aviation Department Operating Budget
2. Update Noise Exposure Maps and Noise Compatibility Program.	\$300,000	None	2027	San Mateo County Aviation Department	FAA, San Mateo County Aviation Department Capital Budget
3. Monitor implementation of the Part 150 Noise Compatibility Program.	Administrative	None	Ongoing	San Mateo County Aviation Department	San Mateo County Aviation Department Operating Budget
Total Cost and Funding Source	Funding Source			Amount	Percent
	FAA			\$270,000	90.0%
	San Mateo County Aviation Department Budget			\$30,000	10.0%
	Total Cost			\$300,000	100.0%

Most of the cost (90 percent) would be eligible for FAA funding through the noise set-aside portion of the Federal Airport Improvement Program. Ten percent of the cost (\$30,000) would come from San Mateo County's capital budget.

LOCAL NOISE COMPATIBILITY MEASURES NOT SUBMITTED FOR 14 CFR PART 150 REVIEW

Land Use

The following information is provided to maintain consistency with local adopted land use planning documents, including the *Comprehensive Airport Land Use Compatibility Plan for San Carlos Airport* (ALUCP) and the General Plans for the cities of San Carlos and San Mateo and San Mateo County. During preparation of the Noise Compatibility Plan, two alternatives for this measure were considered: one with the 2022 65 CNEL noise contour and one with the 2022 60 CNEL noise contour. The 2022 65 CNEL noise contour is discussed further in Chapter 5 on pages 5-3 and 5-4.

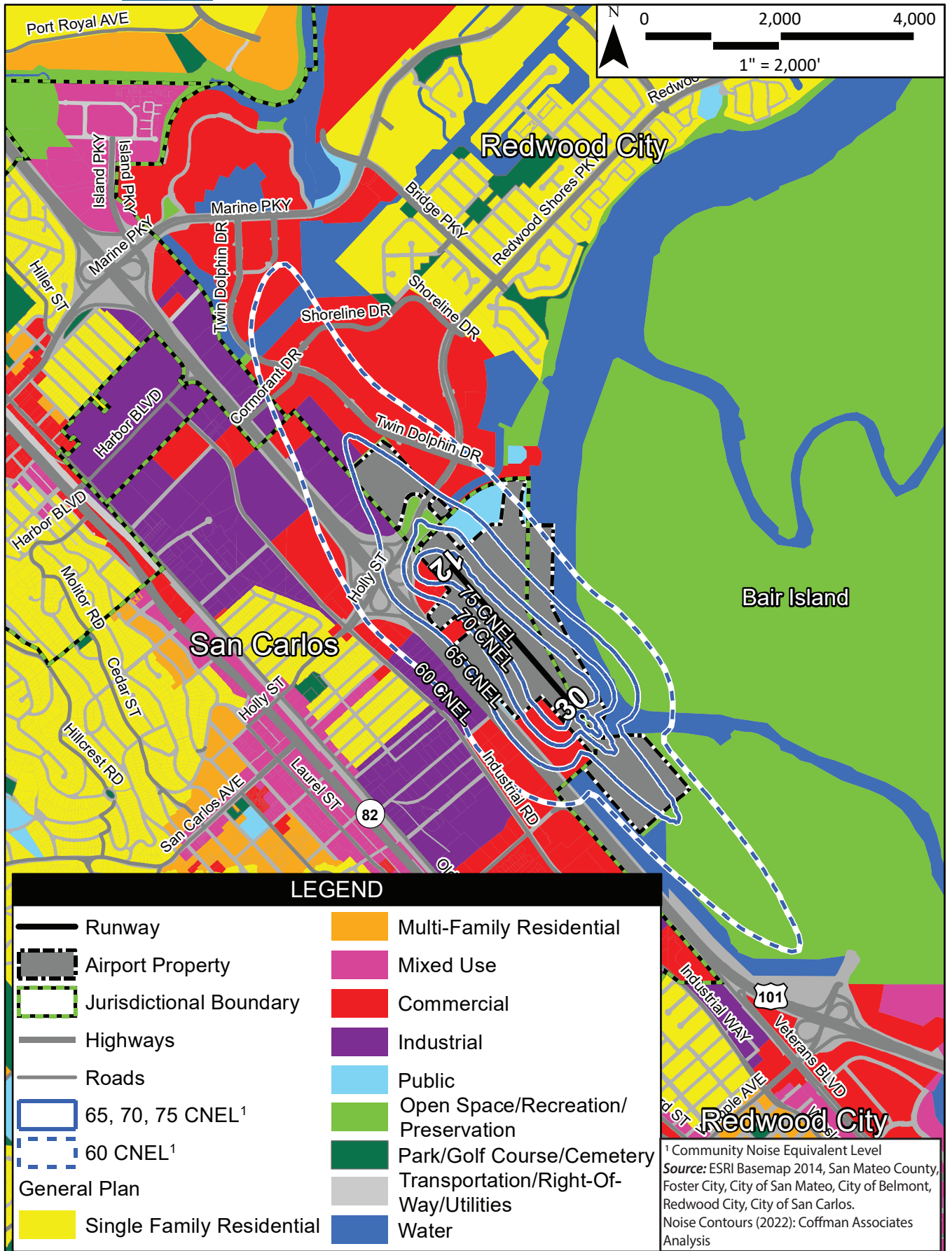
As shown on **Exhibit 6C**, the 60 CNEL noise contour is just east of Industrial Road.¹ On the eastern side of Industrial Road, there are commercial and industrial planned land uses; however, just on the western side of it, the planned land uses include single-family residential and mixed-used residential. The Airport should be aware of the potential incompatible development infringement in the 60 CNEL noise contour to ensure that future uses remain compatible with policies outlined in the *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport* (October 2015).

To ensure continued land use compatibility within the environs of the Airport, San Mateo County should encourage the City of San Carlos and Redwood City to incorporate the 2022 60 CNEL noise contours shown in **Appendix F** as part of their respective general plan maps. This addition would help identify areas of noise exposure as an aid to decision-makers when considering potential general plan map revisions. For instance, should a proposal be introduced to convert areas currently planned and developed with compatible land uses to non-compatible uses, the noise contour would serve as a reminder to reconsider the land use change. This measure can be established by amending the cities of San Carlos and Redwood City General Plans as described above. Adoption of this measure would involve administrative expenses for the City of San Carlos and Redwood City. These expenses would be paid out of the respective city's operating budget. Amendments to general plans take time to prepare and process. The required amendments for this measure are projected for 2019.

Noise Abatement

Under 14 CFR Part 150 regulations, an approved noise abatement measure must reduce the impacts within the 65 CNEL to be approved under this program. The previous section reveals that there are no noise-sensitive land uses located within the noise exposure contours. However, the San Carlos Airport receives a high number of noise complaints from areas surrounding the airport. For example, in 2018,

¹ Note that local land use policy requires the 60 CNEL noise contour to be shown; however, there is no federal requirement to map the 60 CNEL noise contour.



the San Carlos Airport received 9,665 noise complaints total which were submitted from 212 households. In response to community concerns, San Carlos Airport has been engaged with pilots and the public through participation with the San Carlos Airport Noise Working Group and publication of the voluntary San Carlos Airport Noise Abatement Procedures.

This outreach program is recommended to have several components, some of which are directed at reducing noise through educating transient pilots that are not familiar with San Carlos Airport's local procedures, and others that are intended to raise the awareness of current and future residents about the existence of the Airport.

These programs could be a cooperative approach that includes the following efforts:

- Continue to distribute voluntary Noise Abatement Procedure brochures and maintain on-airport noise abatement signage.
- Continue to coordinate with the FAA regarding voluntary noise abatement procedures, including the Bayside Visual Approach.
- Hold meetings with student and transient pilots, and flight schools upon request, to discuss the airport's voluntary noise abatement procedures.
- Establish a real estate agent outreach program to educate real estate agents and potential home-buyers about San Carlos Airport operations and its presence in the community.
- Continue Airport events to allow the public to visit the airport and learn about its operations.
- Revise the San Carlos Voluntary Airport Noise Abatement Procedures:
 - Depict the helicopter training pattern area located west of the Airport and east of Industrial Road. This is listed as a noise abatement procedure but is not depicted on the accompanying map. The helicopter information could be incorporated into the existing voluntary Noise Abatement Procedures document, or as part of a separate, helicopter-specific document.
 - Upon finalization, reflect the updated SFO Class B Airspace. FAA is in the process of updating the Class B airspace near San Carlos Airport to reflect advances in aviation technology which allows for more efficient flight and repeatable and predictable flight paths. A draft of the modified Class B airspace was presented in January 2017, but a specific timeline for implementation has not been established.
 - Revise and rename the Runway 30 Bay Meadows Departure. The Bay Meadows Departure was named for the Bay Meadows Racetrack, which was a horseracing facility that closed in 2008. The current procedure directs pilots to fly straight-out from Runway 30 until reaching the Bay Meadows Racetrack site and then turning left (southwest). As the racetrack no longer exists, it may be confusing for pilots not familiar with the area to turn at the appropriate time.
Using the highway interchange may result in aircraft entering the SFO Class B airspace. As previously discussed, to operate in Class B airspace, aircraft must have two-way radio capability and an altitude encoding (Mode C) transponder. Additionally, pilots must have specialized training and must be cleared to enter into Class B airspace by communicating with the San Francisco International Airport tower. However, the previously discussed SFO Class B airspace revision would result in shifting the Class B airspace farther north, which would allow aircraft to make the turn at the interchange and avoid the Class B airspace.

SUMMARY OF LOCAL NOISE COMPATIBILITY MEASURES NOT SUBMITTED FOR 14 CFR PART 150 REVIEW

The Noise Compatibility Measures for San Carlos Airport for local implementation are summarized in **Table 6C**. The only measure requiring funding beyond normal administrative expenses is the cost of updating and printing the pilot’s guide. An estimate for updating, redesign, and printing the pilot’s guide is \$5,000. It is anticipated that this expense will be funded with San Mateo County Aviation Department budget.

TABLE 6C
Summary of Noise Compatibility Program Measures
Not for Review Under 14 CFR Part 150
San Carlos Airport

Measure	Cost to Airport Or Government	Direct Cost to Users	Timing	Lead Responsibility	
LOCAL NOISE COMPATIBILITY MEASURES					
1. Encourage the cities of San Carlos and Redwood City to add the 2022 noise exposure contours to the general plan maps	Administrative	None	2019	San Mateo County	
2. Continue to distribute voluntary Noise Abatement Procedure brochures and maintain on-airport noise abatement signage.	Administrative	None	Ongoing	San Mateo County Aviation Department	
3. Continue to coordinate with the FAA regarding voluntary noise abatement procedures, including the Bayside Visual Approach.	Administrative	None	Ongoing	San Mateo County Aviation Department	
4. Hold meetings as necessary with pilots and students to discuss safety and noise abatement issues at the Airport.	Administrative	None	2018	San Mateo County Aviation Department	
5. Establish a real estate agent outreach program to educate real estate agents and potential homebuyers about San Carlos Airport operations and its presence in the community.	Administrative	None	2018	San Mateo County Aviation Department	
6. Continue Airport events to allow the public to visit the airport and learn about its operations.	Administrative	None	Ongoing	San Mateo County Aviation Department	
7. Revise the voluntary San Carlos Airport Noise Abatement Procedures.	\$5,000	None	2018	San Mateo County Aviation Department	
				Funding Source	Amount
				San Mateo County Aviation Dept. Budget	\$5,000
				Total Cost	\$5,000



Appendix A

Planning Advisory Committee

**SAN CARLOS AIRPORT
14 CFR PART 150 NOISE COMPATIBILITY PROGRAM
PLANNING ADVISORY COMMITTEE (PAC)**

<p>Ms. Rochelle Kiner Deputy Director of Public Works Administration and Airports 555 County Center, 5th Floor Redwood City, California 94063 (650) 599-1423 rkiner@smcgov.org</p>	<p>Ms. Camille Garibaldi Environmental Protection Specialist, SFO-613 FAA San Francisco Airports District Office 1000 Marina Blvd, Suite 220 Brisbane, California 94005-183 (650) 827-7613 camille.garibaldi@faa.gov</p>
<p>Ms. Gretchen Kelly Airport Manager San Mateo County Airports 620 Airport Way, Suite 10 San Carlos, California 94070 (650) 573-3700 gkelly@smcgov.org</p>	<p>Mr. Christopher St. Peter Assistant Airport Manager San Mateo County Airports 620 Airport Way, Suite 10 San Carlos, California 94070 (650) 573-3700 cstpeter@smcgov.org</p>
<p>Mr. Rick Stein Interim San Carlos Air Traffic Manager rick.stein@SERCO-NA.com</p> <p>Ms. Stacey Maye San Carlos Air Traffic Manager stacey.maye@SERCO-NA.com</p> <p>San Carlos Airport Traffic Control Tower 779 Skyway Road San Carlos, California 94070 (650) 592-5289</p>	<p>Ms. Thann McLeod Manager of Airspace, Procedures, Planning & Requirements FAA Northern California TRACON 11375 Douglas Road Mather, California 95655 (916) 366-4008 Thann.mcleod@faa.gov</p>
<p>Mr. Philip Crimmins, CEQA + Noise California Department of Transportation Division of Aeronautics MS 40 P. O. Box 942874 Sacramento, CA 94274-0001 (916)-654-7075 philip.crimmins@dot.ca.gov</p>	<p>Ms. Sandy Wong Executive Director C/CAG San Mateo County 555 County Center, 5th Floor Redwood City, California 94063 (650) 599-1409 slwong@smcgov.org</p>
<p>Ms. Tara Peterson Assistant City Manager City of San Carlos 600 Elm Street, First Floor San Carlos, CA 94070 (650) 802-4263 tpeterson@cityofsancarlos.org</p>	<p>Ms. Melissa Diaz Stevenson City Manager City of Redwood City 1017 Middlefield Road Redwood City, CA 94063 (650) 780-7301 mdiaz@redwoodcity.org</p>

<p>Mr. Kevin M. Miller City Manager City of Foster City City Hall - 610 Foster City Blvd. Foster City, California 94404 (650) 286-3232 manager@fostercity.org</p>	<p>Mr. Carlos de Melo Community Development Director City of Belmont One Twin Pines Lane #340 Belmont, California 94002 (650) 595-7408 cdemelo@belmont.gov</p>
<p>Ms. Stacy Howard Regional Representative National Business Aviation Assoc., Inc. 41695 N. Coyote Rd. Queen Creek, AZ 85140 (480)-987-0352 showard@nbaa.org</p>	<p>Mr. Alex Gertsen Director of Airports and Infrastructure National Business Aviation Assoc., Inc. 202-737-4477 1200 G Street NW Suite 1100 Washington DC 20005 agertsen@nbaa.org</p>
<p>Ms. April Gafford Founder JATO Aviation 620 Airport Way, Suite 8 San Carlos, California 94070 (650) 654-5286 agafford@jatoaviation.com</p>	<p>UJ Emetron President Diamond Aviation 620 Airport Way, Suite 5 San Carlos, California 94070 (650) 591-7644 info@DiamondCharter.com</p>
<p>Mr. Rich Newman Board Member San Carlos Airport Association 1141 Capuchino Avenue #1934 PO Box 1934 Burlingame, CA 94011-1934 (650) 259-9559 rnewman@rochex.com</p>	<p>Mr. Hans Plesman President Business Association of San Carlos Airport c/o Jeffrey Bass Hiller Aviation Museum 601 Skyway Road San Carlos, California 94070 sqlaviation@aol.com</p>
<p>Ms. Sue Nix President Redwood Shores Community Association 274 Redwood Shores Parkway, PMB 603 Redwood City, California 94065-1173 (650) 333-4822 suenix@rsca.org</p>	<p>Mr. Dimitri Vandellos President Greater East San Carlos Neighborhood Association 988 Montgomery Street San Carlos, California 94070 (650) 592-5210 dvandellos@gmail.com</p>
<p>Mr. Steve Monowitz Community Development Director County of San Mateo 455 County Center, 2nd Floor Redwood City, CA 94063 (650) 363-1861 SMonowitz@smcgov.org</p>	<p>Mr. Alex D. McIntyre City Manager, City of Menlo Park 701 Laurel Street Menlo Park, CA 94025 (650) 330-6610 admccintyre@menlopark.org</p>

<p>Mr. Joe Straton Calm the Skies Representative 6 Sweet William Lane Menlo Park, CA 94025 joestraton@hotmail.com (650) 814-9927</p>	<p>Mr. Chris Hunter Chief of Staff Supervisor Don Horsley, District 3 400 County Center, BOS 104 Redwood City, California 94063 (650) 599-1024 chunter@smcgov.org</p>
<p>Ms. Carol Ford President, San Carlos Airpot Pilots Association P.O. Box 1183 San Carlos, CA 94070 carol_ford@sbcglobal.net</p>	<p>Mr. Irving Torres Legislative Aide Supervisor Warren Slocum, District 4 400 County Center, BOS 104 Redwood City, California 94063 (650) 363-4801 itorres@smcgov.org</p>
<p>Mr. Dan Dyer, Owner San Carlos Flight Center 655 Skyway Road, Suite 215 San Carlos, CA 94070 650-964-1700 dan@sancarlosflight.com</p>	<p>Ms. Linda R. Wolin Legislative Aide, Office of Supervisor Dave Pine San Mateo County Board of Supervisors, District 1 400 County Center Redwood City, CA 94063 (650)363-4571 lwolin@smcgov.org</p>
<p>Mr. George Rodericks City Manager, Town of Atherton 91 Ashfield Road, Atherton, CA 94027 (650) 752-0504 grodericks@ci.atherton.ca.us</p>	<p>Ms. Melissa McCaffrey Regional Manager AOPA/Airport Owners and Pilots Association melissa.mccaffrey@aopa.org</p>



Appendix B

Coordination, Consultation, and Public Involvement

APPENDIX B

COORDINATION, CONSULTATION, AND PUBLIC INVOLVEMENT

The public, Airport users, and local, state and federal agencies were given the opportunity to review and comment on the Noise Compatibility Program (NCP) and supporting documentation. Project materials were made available for local review and discussion throughout the process via physical hand-outs and a dedicated project website.

Local coordination was conducted through a study committee, the Planning Advisory Committee (PAC), formed to provide input and feedback on the NCP. The PAC included local residents, Airport users, community officials and staff, local business representatives, the California Department of Transportation – Division of Aeronautics (Caltrans), and the Federal Aviation Administration (FAA). The PAC reviewed and commented on the working papers throughout the study process. Comments from the PAC were received during group discussion at the PAC meetings, as well as through written comments, all of which were appropriately incorporated into this document or otherwise addressed. A list of the PAC members is included in **Appendix A**.

The PAC met four (4) times total during the preparation of both the Noise Exposure Maps (NEM) document and the NCP. The first two meetings were held during the NEM and materials associated with those meetings can be found in Appendix B of the Title 14 of the Code of Federal Regulations, Part 150 (14 CFR Part 150) Noise Exposure Map document for San Carlos Airport. The last two meetings were held to review the Chapter Four – Noise Abatement Alternative, Chapter Five – Land Use Alternatives, and Chapter Six – Noise Compatibility Program.

- **PAC Meeting #3:** This meeting was held on November 8, 2017, to discuss noise abatement and land use alternatives for reducing noise impacts within the environs of San Carlos Airport.
- **PAC Meeting #4:** This meeting was held on March 21, 2018, to discuss Chapter Six, the draft noise compatibility program.

A presentation was also given to the San Carlos City Council on September 24, 2018. The purpose of this presentation was to brief the City Council on the status and recommendations of the Noise Compatibility Study.

Following each PAC meeting, the public was invited to participate in a series of Public Information Workshops. These workshops were structured informally, in an open-house format, using display boards to present information throughout the meeting room. The meetings allowed interested participants to acquire information about the 14 CFR Part 150 Study process, noise abatement, compatible land use planning, and program implementation. Participants could also ask questions and express concerns. The meetings were intended to encourage two-way communication between Airport staff, consultants, and residents.

In addition to the PAC meetings, two (2) technical conferences were convened by the consultant on August 3, 2017. The purpose of the conferences was to assist in the initial development of noise abatement and land use alternatives. Airport traffic control tower (ATCT) staff, FAA, and local aircraft operators were invited to the Aviation Technical Conference. Representatives from local planning agencies were invited to the Land Use Technical Conference.

Study materials were also made available on a project-specific website for the duration of the study process at <http://sancarlosnoise.airportstudy.com/>.

This appendix includes documentation of meeting announcements, meeting agendas, meeting minutes, sign-in sheets, meeting advertisements, and written comments received.

AVIATION TECHNICAL CONFERENCE

August 3, 2017 from 9:00 – 10:30 a.m.
San Carlos Airport Terminal, 620 Skyway Road

Materials from the Aviation Technical Conference included the following:

- Invitation Letter
- Meeting Handout
- Sign-In Sheet(s)

From: [Kory Lewis](#)
To: camille.garibaldi@faa.gov; rick.stein@SERCO-NA.com; stacey.maye@SERCO-NA.com; Thann.mcleod@faa.gov; showard@nbaa.org; agertsen@nbaa.org; melissa.mccaffrey@aopa.org; agafford@jatoaviation.com; info@DiamondCharter.com; rnewman@rochex.com; sqlaviation@aol.com; carol.ford@sbcglobal.net; dan@sancarlosflight.com
Cc: [Gretchen Kelly](#); [Chris St. Peter](#); [Jim Harris](#); [Dave Fitz](#); [Tresa Carter](#)
Subject: San Carlos Airport – Part 150 Noise Compatibility Study Planning Advisory Committee Meeting and Aviation Technical Conference
Date: Friday, July 14, 2017 9:33:54 AM

Dear Planning Advisory Committee Member:

The second Planning Advisory Committee (PAC) Meeting for the Noise Compatibility Plan at the San Carlos Airport has been scheduled for:

Wednesday, August 2, 2017
2:00 p.m. – 4:00 p.m.
Hiller Aviation Museum
601 Skyway Road
San Carlos, California 94070

Since our last meeting on April 20, 2017, much work on the Plan has been accomplished, including an inventory of the Airport's facilities, area noise and land use regulations, and preparation of current and future noise contours. The material to be discussed at the PAC meeting will be in the form of three draft working papers, as follows:

Chapter One: Inventory
Chapter Two: Aviation Noise
Chapter Three: Noise Impacts

These documents will be mailed to you prior to the committee meeting for your review. A public workshop has also been scheduled for later that evening, from **6:00 to 7:30 p.m.** also at the **Hiller Aviation Museum**.

In addition, we are requesting your attendance at the upcoming Aviation Technical Conference scheduled as part of the San Carlos Airport Noise Compatibility Plan. The meeting is anticipated to last one and a half hours and is set for:

Thursday, August 3, 2017
9:00 a.m. – 10:30 a.m.
San Carlos Airport Conference Room
620 Airport Way
San Carlos, California 94070

The purpose of the Aviation Technical Conference is to review and discuss preliminary ideas for aircraft noise mitigation efforts near San Carlos Airport. Those invited to the meeting include those familiar with aviation, such as pilots, air traffic controllers, and corporate aviation officials, in addition to FAA officials and Airport management. Our goal is to discuss the technical aspects of

various potential noise abatement techniques that may deserve consideration at San Carlos Airport. We hope to reach a consensus on the ideas that have merit and deserve further study. We will go on to develop a detailed working paper evaluating noise abatement alternatives based on our independent analysis and the input gained from this meeting.

We look forward to meeting with you on **August 2** and **August 3, 2017**. In the meantime, if you have any questions, please contact Gretchen Kelly, Airport Manager, at (650) 573-3700. If you have technical questions about the plan, please contact David Fitz at (816) 524-3500.

Sincerely,

Kory Lewis

Kory Lewis

Associate

237 NW Blue Parkway, Suite 100

Lee's Summit, MO 64063

816-524-3500 • 816-524-2575 (FAX)

www.coffmanassociates.com





14 CFR Part 150 Noise Compatibility Study

AVIATION TECHNICAL CONFERENCE

MEETING ATTENDANCE RECORD

Meeting: Aviation Technical Conference Date: August 3, 2017 Time: 9:00 - 10:30 a.m.
 Place: San Carlos Airport Conference Room
 620 Airport Way, San Carlos, CA 94070

Please Print Neatly

NAME and ADDRESS

PHONE # / E-MAIL

NAME and ADDRESS		PHONE # / E-MAIL	
1.	Rich Newman (by phone)	Phone #:	
		E-mail:	
2.	Kory Lewin Coffman Associates	Phone #:	
		E-mail:	
3.	JIM HARRIS COFFMAN ASSOCIATES	Phone #:	602-993-6999
		E-mail:	jmharris@coffmanassociates.com
4.	Paul Fitz Coffman Associates	Phone #:	
		E-mail:	
5.	KESQ CARTER WOTFMAN ASSOCIATES	Phone #:	
		E-mail:	
6.	BRETCHEN KELLY SAN CARLOS AIRPORT	Phone #:	650.573.3700
		E-mail:	GRELLY@SMC60V.ORG
7.	Christopher St. Peter San Carlos Airport / San Mateo County	Phone #:	650.573.3700
		E-mail:	cs+pete@smc60v.org
8.		Phone #:	
		E-mail:	
9.		Phone #:	
		E-mail:	
10.		Phone #:	
		E-mail:	

CFR 14 Part 150 Noise Compatibility Study Meeting Summary

Meeting with: SQL Part 150 Aviation Tech Conference
Attendance See attached attendance list

Meeting Date: August 3, 2017; 9:00 a.m.
Location: San Carlos Airport Conference Room

Summary

The meeting started at 9:00 a.m. with introductions of the participants (see attached sign-in sheet). Mr. Kory Lewis from Coffman Associates provided each participant a handout containing the material to be covered during the meeting.

Mr. Lewis discussed current runway use and flight routes used for noise abatement at San Carlos Airport. Mr. Lewis mentioned that the Bay Meadows race track no longer exists, which was the landmark used to determine the noise abatement turn when departing Runway 30 and heading to south and southwest destinations.

Potential changes to San Francisco's Class B airspace, considered separately from the Part 150 study, could potentially benefit the Bay Meadows noise abatement procedure by allowing aircraft to fly farther west and gain more altitude before turning to the south or southeast. Changes to San Francisco's Class B airspace could be in effect in 18 to 24 months.

A wavier was discussed that would allow pilots to fly into this area of San Francisco's Class B that would allow aircraft to use the intersection of Highways 92 and 100 as a landmark for the noise abatement turn for the Bay Meadows procedure.

San Mateo County Aviation staff said they would assist Coffman Associates in obtaining the revised Class B airspace map.

Calm winds runway use was discussed. Calm winds in the area occur mostly at night when the airport traffic control tower (ATCT) is closed. Local pilots generally use Runway 12 for arrivals and departures during these conditions, when traffic permits.

Mr. Lewis reviewed facility development, aircraft operating procedures, and restrictions. Mr. Lewis discussed the applicability of each alternative measure and why these procedures had limited effectiveness for noise abatement at San Carlos Airport.

Mr. Dave Fitz from Coffman Associates asked if there were any additional comments or suggestions.

Three issues were offered:

- Early turns before the diamond
- Following the Belmont Sough
- Bay Meadows early turns

A question was asked of staff on how voluntary noise abatement procedures are enforced. Ms. Gretchen Kelly from the San Mateo County Aviation Department said that pilots who do not follow the noise abatement procedures are sent a letter. The San Carlos Pilots Association, airport business/flight schools, ATCT, and Public Works Director are all copied on this letter.

Another issue was brought up concerning the proposed residential development in Redwood City. This area falls within an area under a noise abatement departure procedure from Runway 12. This departure procedure was asked for by Redwood City. Staff said they would research the history of this procedure.

No more comments or questions were offered and the meeting was adjourned.

#

LAND USE TECHNICAL CONFERENCE

August 3, 2017 from 1:00 – 2:30 p.m.
San Carlos Airport Terminal, 620 Skyway Road

Materials from the Land Use Technical Conference included the following:

- Invitation Letter
- Meeting Handout
- Sign-In Sheet(s)

From: [Kory Lewis](#)
To: slwong@smcgov.org; tpatterson@cityofsancarlos.org; mdiaz@redwoodcity.org; manager@fostercity.org; cdemelo@belmont.gov; SMonowitz@smcgov.org; grodericks@ci.atherton.ca.us; admcintyre@menlopark.org
Cc: [Gretchen Kelly](#); [Chris St. Peter](#); [Jim Harris](#); [Dave Fitz](#); [Tresa Carter](#)
Subject: San Carlos Airport – Part 150 Noise Compatibility Study Planning Advisory Committee Meeting and Land Use Technical Conference
Date: Friday, July 14, 2017 9:34:03 AM

Dear Planning Advisory Committee Member:

The second Planning Advisory Committee (PAC) Meeting for the Noise Compatibility Plan at the San Carlos Airport has been scheduled for:

Wednesday, August 2, 2017
2:00 p.m. – 4:00 p.m.
Hiller Aviation Museum
601 Skyway Road
San Carlos, California 94070

Since our last meeting on April 20, 2017, much work on the Plan has been accomplished, including an inventory of the Airport's facilities, area noise and land use regulations, and preparation of current and future noise contours. The material to be discussed at the PAC meeting will be in the form of three draft working papers, as follows:

Chapter One: Inventory
Chapter Two: Aviation Noise
Chapter Three: Noise Impacts

These documents will be mailed to you prior to the committee meeting for your review. A public workshop has also been scheduled for later that **evening**, from **6:00 to 7:30 p.m.** also at the **Hiller Aviation Museum**.

In addition, we are requesting your attendance at the upcoming Land Use Technical Conference scheduled as part of the San Carlos Airport Noise Compatibility Plan. The meeting is anticipated to last one and a half hours and is set for:

Thursday, August 3, 2017
1:00 p.m. – 2:30 p.m.
San Carlos Airport Conference Room
620 Airport Way
San Carlos, California 94070

The purpose of the Land Use Technical Conference is to review and discuss preliminary ideas for promoting land use compatibility in the Airport vicinity. Those invited to the meeting include land use technical professionals, such as local planners, and Airport management. Our intent is to discuss the technical aspects of various potential land use management techniques which may deserve consideration in the San Carlos Airport area. We hope to reach consensus on the ideas that appear

to have merit and deserve further study. We will go on to develop a detailed working paper evaluating land use alternatives based on our independent analysis and the input gained at the meeting.

We look forward to meeting with you on **August 2** and **August 3, 2017**. In the meantime, if you have any questions, please contact Gretchen Kelly, Airport Manager, at (650) 573-3700. If you have technical questions about the plan, please contact myself at (816) 524-3500.

Sincerely,

Kory Lewis

Kory Lewis

Associate

237 NW Blue Parkway, Suite 100

Lee's Summit, MO 64063

816-524-3500 • 816-524-2575 (FAX)

www.coffmanassociates.com



14 CFR Part 150 Noise Compatibility Study

LAND USE TECHNICAL CONFERENCE

MEETING ATTENDANCE RECORD



Meeting: Land Use Technical Conference

Date: August 3, 2017

Time: 1:00 - 2:30 p.m.

Place: San Carlos Airport Conference Room

620 Airport Way, San Carlos, CA 94070

Please Print Neatly

NAME and ADDRESS

PHONE # / E-MAIL

1. Kristen Flores, Senior Management Analyst
City of San Carlos

Phone #: (650) 802-4204

E-mail: KFlores@cityofsancarlos.org

2. Dave Fitz, Principal
Coffman Associates (Lee's Summit, MO)

Phone #: (816) 524-3500

E-mail: dfitz@coffmanassociates.com

3. Kory Lewis, Planner
Coffman Associates (Lee's Summit, MO)

Phone #: (816) 524-3500

E-mail: klewis@coffmanassociates.com

4. Tresa Carter, Planner
Coffman Associates (Lee's Summit, MO)

Phone #: (816) 524-3500

E-mail: tcarter@coffmanassociates.com

5. Gretchen Kelly, Airport Manager
San Carlos Airport

Phone #: (650) 573-3700

E-mail: gkelly@smcgov.org

6. Chris St. Peter, Assistant Airport Manager
San Carlos Airport

Phone #:

E-mail: cstpeter@smcgov.org

7. _____

Phone #:

E-mail:

8. _____

Phone #:

E-mail:

9. _____

Phone #:

E-mail:

10. _____

Phone #:

E-mail:

CFR 14 Part 150 Noise Compatibility Study Meeting Summary

Meeting with:	SQL Part 150 Land Use Tech Conference	Meeting Date:	August 3, 2017; 1:00 p.m.
Attendance	See attached attendance list	Location:	San Carlos Airport Conference Room

Summary

The meeting started at 10:30 a.m. with introductions of the participants (see attached sign-in sheet). Ms. Tresa Carter from Coffman Associates provided each participant with a handout containing the material to be covered during the meeting.

Ms. Carter explained that the purpose of this meeting is to bring together area planning agency representatives to discuss possible land use management techniques to help prevent the encroachment of noise-sensitive land uses within the area surrounding the San Carlos Airport.

Ms. Carter discussed the tables from Chapter Two that indicate there are no noise-sensitive land uses within the 60 to 75 CNEL noise contours. Ms. Carter then went on to explain the three types of techniques that can be used to control land uses surrounding an airport: policy, regulatory, and expenditure. She explained what each of these types of techniques means. Although not all types of techniques will be applicable to San Carlos Airport, the FAA requires the consultant to analyze all types of land use controls.

Ms. Carter reviewed general plan policies from the City of San Carlos, Redwood City, and San Mateo County that all protect incompatible uses near the airport. In discussing the general plan maps for each jurisdiction, she suggested considering adding noise contours from this NCP to each general plan map. Participants agreed this was a good suggestion.

A discussion on project review guidelines started when Ms. Carter asked the City of San Carlos Senior Management Analyst, Kristen Flores, what the City's process is when a land use is proposed within the airport's 60 CNEL noise contour. Ms. Flores replied that she would have to inquire with the City's planning staff and get back to us.

Next, Ms. Carter explained the types of regulatory techniques that may or may not be applicable to the San Carlos Airport. Techniques that were discussed included: compatible land use zoning, change in residential density, subdivision regulations, building codes, transfer of development rights, environmental zoning, fair disclosure regulations, capital improvement programming, and airport compatibility overlay zoning.

During the explanation of airport compatibility overlay zoning, the San Carlos Airport Manager, Gretchen Kelly, noted that she was unaware that this was a land use control currently in place as it was not identified in the Airport Land Use Compatibility plan from 2015.

Ms. Carter briefly discussed expenditure techniques. None of these techniques were considered viable options as they are generally only condoned by the FAA when there are noise-sensitive land uses within current and/or future noise contours, which is not the case for the San Carlos Airport.

Lastly, Ms. Carter reviewed the land use alternatives table, which was a matrix showing all potential land use controls and if the affected jurisdiction was using it or not.

Ms. Carter asked if there were any additional comments or suggestions, but no more comments or questions were offered and the meeting was adjourned.

#

PLANNING ADVISORY COMMITTEE (PAC) MEETING #3

November 8, 2017 from 2:00 – 4:00p.m.
Hiller Aviation Museum, 601 Skyway Road

Materials from the fourth PAC meeting included the following:

- Invitation Letter
- Meeting Agenda
- Sign-In Sheet(s)
- Meeting Notes
- Comment Sheets/Comments Received

Dave Fitz

From: Dave Fitz
Sent: Tuesday, October 10, 2017 12:02 PM
To: Dave Fitz
Cc: Gretchen Kelly (gkelly@smcgov.org); Christopher St. Peter; Jim Harris; Kory Lewis; Tresa Carter
Subject: San Carlos Airport – Part 150 Noise Compatibility Study Planning Advisory Committee Meeting #3

TO: Ms. Rochelle Kiner, Ms. Camille Garibaldi, Ms. Stacey Maye, Ms. Thann McLeod, Mr. Philip Crimmins, Ms. Sandy Wong, Ms. Tara Peterson, Ms. Melissa Diaz Stevenson, Mr. Kevin M. Miller, Mr. Carlos de Melo, Ms. Stacy Howard, Mr. Alex Gertsen, Ms. Melissa McCaffrey, Ms. April Gafford, UJ Emetron, Mr. Rich Newman, Mr. Hans Plesman, Mr. James Cvengros, Mr. Dimitri Vandellos, Mr. Steve Monowitz, Mr. Chris Hunter, Ms. Carol Ford, Mr. Irving Torres, Mr. Dan Dyer, Ms. Linda R. Wolin, Mr. Joe Straton, Mr. George Rodericks, and Mr. Alex D. McIntyre,

RE: San Carlos Airport – 14 CFR Part 150 Noise Compatibility Plan

Dear Planning Advisory Committee Member:

The third Planning Advisory Committee (PAC) meeting for the Noise Compatibility Plan at the San Carlos Airport has been scheduled for:

Wednesday, November 8, 2017

2:00 p.m. – 4:00 p.m.

Hiller Aviation Museum

601 Skyway Road

San Carlos, California 94070

Since our last meeting on August 2, 2017, a considerable amount of work has been accomplished, including preparation of the Draft Final Noise Exposure Maps (NEM) document, noise abatement alternatives, and land use alternatives working papers. The Draft Final NEM includes revised Chapters One, Two, and Three, as well as documents outlining the public outreach process. The Draft Final NEM can be downloaded at: <http://sancarlosnoise.airportstudy.com/noise-study-documents/>. The material to be discussed at the PAC meeting will be in the form of two draft working papers, as follows:

Chapter Four: Noise Abatement Alternatives

Chapter Five: Land Use Alternatives

These documents will be mailed to you prior to the committee meeting for your review. A public workshop has also been scheduled later that evening, from 6:00 p.m. to 7:30 p.m., also at the Hiller Aviation Museum.

We look forward to meeting with you on November 8, 2017. In the meantime, if you have any questions, please contact Gretchen Kelly, Airport Manager, at (650) 573-3700. If you have technical questions about the plan, please contact me at (816) 524-3500.

Sincerely,

Dave Fitz, AICP, LEED Green Associate
Principal

Dave Fitz, AICP, LEED Green Associate | Principal

237 NW Blue Parkway, Suite 100, Lee's Summit, MO 64083
816-524-3500 • www.coffmanassociates.com

Coffman
Associates
Airport Consultants

Planning for Your Success!



**SAN CARLOS AIRPORT
14 CFR PART 150 NOISE COMPATIBILITY PROGRAM
Planning Advisory Committee Meeting #3
November 8, 2017 from 2:00 p.m. to 4:00 p.m.
Hiller Aviation Museum, 601 Skyway Road, San Carlos**

Agenda

- Welcome & Introductions
 Gretchen Kelly, Airport Manager, County of San Mateo
- Study Process
 Jim Harris, Coffman Associates
- Review of Noise Exposure Maps and Impacts
 Kory Lewis, Coffman Associates
- Review of Chapter 4, Noise Abatement Alternatives
 Kory Lewis, Coffman Associates
- Review of Chapter 5, Land Use Alternatives
 Dave Fitz, Coffman Associates
- Issues Discussion
 - Dave Fitz, Coffman Associates
- Adjournment (Public Workshop Reminder)



14 CFR Part 150 Noise Compatibility Study
**PLANNING ADVISORY COMMITTEE
 MEETING ATTENDANCE RECORD**

Meeting: Planning Advisory Committee Meeting #3

Date: November 8, 2017

Time: 2:00 p.m.

Place: Hiller Aviation Museum

601 Skyway Road, San Carlos, CA

Please Print Neatly

NAME and ADDRESS

PHONE # / E-MAIL

1.	<u>Jim Cevengros</u>	<u>650-478-9399</u>
2.	<u>Susie Kalkin CICAG</u>	<u>CEVENSIR@aol.com</u>
3.	<u>CAROL FORD PO Box 1183 San Carlos CA Cyclohard Ave / 94070</u>	<u>650-599-1467</u> <u>kkalkin@smcgov.org</u>
4.	<u>Richard Newman PO Box 1934 Burlingame, CA 94011</u>	<u>650-591-8308</u> <u>carol.ford@segeglobal.net</u>
5.	<u>GEORGE RODERICKS 71 ASHFIELD RD ATHERTON 94027</u>	<u>650-259-9559</u> <u>RNEWMAN@ROCKET.COM</u>
6.	<u>SCOT MARSTED 990 Cherry St San Carlos 94070</u>	<u>(650) 752-0504</u> <u>groderrick@ci.atherton.ca.us</u>
7.	<u>JOE STRATAN 6 WILL LN MP 94025</u>	<u>650-450-0990</u> <u>sam@gene.com</u>
8.	<u>CAMILLE GARIBALDI FAA SF-ADO 1000 MARINA BLVD, S220, BRISBANE CA 94005</u>	<u>652 364 3783</u> <u>JOESTRATAN@FAA.MAIL</u>
9.	<u>DAVI HOWARD 620 AIRPORT WAY SAN CARLOS CA 94070</u>	<u>650 827-7613</u> <u>Camille.Garibaldi@faa.gov</u>
10.	<u>Michael Byrne San Carlos Airport</u>	<u>650 573 3700</u> <u>dHOWARD@SMCGOV.ORG</u>
		<u>650-573-3700</u> <u>Mbyrne@smc.gov.org</u>

NAME and ADDRESS	PHONE # / E-MAIL
11. EURETCHEN KELLY, AIRPORT MANAGER 620 AIRPORTWAY #10, SAN CARLOS, CA 94070	Phone #: 650.573.3700 E-mail: EKELLY@SMCGOU.ORG
12. Rochelle Kiner 555 County Center 5 th Floor, Redwood City	Phone #: 650-599-1423 E-mail: rkiner@smc.gov.org
13. Paul Magginietti, Board Member GESC 1023 Springfield Drive, San Carlos, CA 94070	Phone #: 650-553-5681 E-mail: pmaggini@hotmai.com
14. STEVE MAGGINETTI @ ESC (consultant) 725 PACIFIC GROVE	Phone #: _____ E-mail: _____
15. HANS PLESMAN SAN CARLOS AVIATION 620 AIRPORTWAY #9 SAN CARLOS CA	Phone #: 650-592-2322 E-mail: JQLAVIATION@AOL.COM
16. Linda Wiza office of SMC Supervisor Dave Pire	Phone #: _____ E-mail: lwiza@smc.gov.org
17. _____	Phone #: _____ E-mail: _____
18. _____	Phone #: _____ E-mail: _____
19. _____	Phone #: _____ E-mail: _____
20. _____	Phone #: _____ E-mail: _____
21. _____	Phone #: _____ E-mail: _____
22. _____	Phone #: _____ E-mail: _____
23. _____	Phone #: _____ E-mail: _____
24. _____	Phone #: _____ E-mail: _____
25. _____	Phone #: _____ E-mail: _____

CFR 14 Part 150 Noise Compatibility Study Meeting Summary

Meeting with: SQL Part 150 Planning Advisory Committee
Attendance: See attached attendance list

Meeting Date: November 8, 2017; 2:00 p.m.
Location: Hiller Aviation Museum

Summary

The third meeting of the Planning Advisory Committee (PAC) for the San Carlos Airport (SQL) Part 150 Study was held November 8, 2017 at the Hiller Aviation Museum. Gretchen Kelly, San Mateo County Airports Manager, welcomed everyone and thanked them for their participation on the PAC. Jim Harris from Coffman Associates asked everyone on the committee to introduce themselves and reviewed the study process.

Kory Lewis from Coffman Associates reviewed revisions to the Noise Exposure Map document based upon comments received.

Scot Marsters, resident, asked if operations will be increasing.

Kory Lewis responded, yes, a small increase in operations is forecasted over the next five years and operations data can be found on page 2-5 of the document.

Hans Plesman from San Carlos Aviation explained that an operation is a takeoff or a landing.

Steve Magginetti, GESC, asked if the airport influence area is shown in the document.

Kory Lewis responded that the airport influence area is defined in the San Mateo County Airport Land Use Compatibility Plan and included in the Noise Exposure Map document on Exhibit 1J.

Joe Straton, resident, asked if letters to the pilots are generated by the new system.

Gretchen Kelly responded that letters to the pilots are already being generated.

Paul Magginetti, GESC, asked if they could get the data on specific noise complaints.

Gretchen Kelly responded that the flight track could be shared, but not the pilot's name, for the person who filed the complaint.

Steve Magginetti said complaints should be filed with Washington, D.C.

Scot Marsters said he was concerned that Exhibit 4A, San Carlos Noise Abatement Procedures, was out of date.

Dave Fitz reviewed the noise abatement alternatives analysis.

Carol Ford, San Carlos Pilot's Association, said that the change in the land use pattern around the airport has made some of these procedures less effective.

Steve Magginetti said he would like to see alternatives that address overhead approaches and helicopter traffic patterns over his neighborhood.

Davi Howard from the San Mateo County Aviation Department explained the differences between fixed wing and helicopter operating procedures and how they operate into and out of San Carlos Airport.

Scot Marsters asked if the tower watches aircraft and makes sure they follow the procedures.

Davi Howard explained how the tower instructs the pilots.

Scot Marsters suggested that a wall be constructed between all the buildings along the 101 to create a noise barrier from the airport and highway noise.

Rich Newman, San Carlos Pilot's Association, said that there is no appetite for pilot counseling. Carol Ford agreed with this position.

Scot Marsters said that something at the airport changed two years ago that made noise from the airport worse.

Rich Newman said he believed that a previous tower manager who made changes without communicating with pilots or the public and heightened sensitivity due to Surf Air operations are what changed.

Dave Fitz said updates to this graphic in the form of recommendations could come from this study.

Rochelle Kiner from San Mateo County Public Works asked if the Class B Airspace change will be part of the study.

Dave Fitz said yes, the airspace change will be looked at in terms of how it will influence arrival and departure procedures.

Dave Fitz discussed the land use alternatives and their applicability for the City of San Carlos, Redwood City, and San Mateo County. He reiterated that because there are no noise-sensitive land uses within the 65 CNEL or greater noise contour, FAA would likely disapprove measures that do not show a benefit as measured by reducing noise-sensitive land uses with the contour of significance (65 CNEL).

Dave Fitz explained that expenditure techniques such as property acquisition, sound insulation, and aviation easement purchase would not receive FAA approval because there are no noise-sensitive land uses within the 65 CNEL noise contours.

Dave Fitz asked if there were any more questions; none were offered.

Dave Fitz reminded everyone about the public information workshop later in the evening and the meeting was adjourned.

#

SAN CARLOS AIRPORT

14 CFR Part 150 Study Planning Advisory Committee Members

October 20, 2017

Attached are draft working papers for the San Carlos Airport Part 150 Study. The following materials are the topic of the upcoming PAC meeting on **Wednesday, November 8, 2017 at 2:00 p.m.** at the Hiller Aviation Museum.

PART 150 STUDY

CHAPTER FOUR – NOISE ABATEMENT ALTERNATIVES

CHAPTER FIVE – LAND USE ALTERNATIVES

I have read the working papers and have no comments.

I have read the working papers and have the following comments. (Please add extra sheets if necessary.)

Please mail this response sheet by November 22, 2017 to:

COFFMAN ASSOCIATES, INC.
237 N.W. Blue Parkway, Suite 100
Lee's Summit, Missouri 64063

Attn: David Fitz, dfitz@coffmanassociates.com

Name: James Cvengros
Representing: Adventures Community Assoc.
Phone: 650-478-9399
Email: CVENGRO@aol.com

PUBLIC INFORMATION WORKSHOP #3
November 8, 2017 from 6:00 – 7:30p.m.
Hiller Aviation Museum, 601 Skyway Road

Materials from the third Public Information Workshop included the following:

- Meeting Advertisement
- Sign-In Sheet(s)
- Comment Sheet(s)

The third public workshop was advertised via the following methods:

- Email announcements were sent to the airport tenant and community distribution lists

Dave Fitz

From: Gretchen Kelly <gkelly@smcgov.org>
Sent: Friday, October 06, 2017 8:47 PM
To: Gretchen Kelly
Subject: Public Information Workshop #3 regarding the San Carlos Airport Part 150 Noise Study
Attachments: Ad 11-8-17.pdf

Community Members & Airport Users,

The third Public Information Workshop regarding the Part 150 Noise Study for the San Carlos Airport will be held on Wednesday, November 8, 2017 at 6:00 PM until 7:30 PM at the Hiller Aviation Museum (address below):

*Hiller Aviation Museum
601 Skyway Road
San Carlos, CA 94070*

The topic of the third Public Workshop will be the Draft Noise Exposure Maps Document and Noise Compatibility Study Alternatives. The Draft Noise Exposure Maps (NEM) Document is available online at: <http://sancarlosnoise.airportstudy.com>. The Public Comment period for the NEM will be open until 5:00 PM on November 17, 2017 (comments can be made at the website noted above).

The Public Workshop is an Open House Format - Please Drop In Anytime - Everyone is Welcome!

Please see the attached flyer about the Public Workshop #3 (which your organization is welcome to distribute).

For additional information about the Public Workshop, please visit the San Carlos Airport Part 150 Noise Study website at <http://sancarlosnoise.airportstudy.com> or contact the San Carlos Airport Office at 650.573.3700.

Thank you,

Gretchen Kelly
San Mateo County Airports Manager
Half Moon Bay Airport & San Carlos Airport
Office 650.573.3700

San Carlos Airport

Public Information Workshop #3

Regarding the

Draft Noise Exposure Maps Document and 14 CFR Part 150 Noise Compatibility Study Alternatives

Wednesday, November 8, 2017
6:00 - 7:30 P.M.

at the
Hiller Aviation Museum
601 Skyway Road
San Carlos, CA 94070

Everyone Welcome

Open House Format - Please Drop In Anytime

For more information please contact the
San Carlos Airport at 650.573.3700

The Draft Noise Exposure Maps (NEM) Document
is available online at:

<http://sancarlosnoise.airportstudy.com>

The Public Comment for the NEM will end
at 5 p.m. on November 17, 2017.^{B-26}



14 CFR Part 150 Noise Compatibility Study

PUBLIC INFORMATION WORKSHOP

MEETING ATTENDANCE RECORD



Meeting: Public Information Workshop Meeting #3

Date: November 8, 2017

Time: 6:00 - 7:30 p.m.

Place: Hiller Aviation Museum

601 Skyway Road, San Carlos, CA

Please Print Neatly

NAME and ADDRESS

PHONE # / E-MAIL

1.	<u>Michael Brak</u> <u>SMC Airports</u>	Phone #: <u>650 573 3740</u> E-mail:
2.	<u>DAVI HOWARD</u> <u>SMC AIRPORTS</u>	Phone #: <u>650 573 3700</u> E-mail:
3.	<u>Nancy Crampton</u>	Phone #: <u>650 257-3639</u> E-mail: <u>NancyCrampton@yale2.com</u>
4.	<u>Jim Crampton</u>	Phone #: <u>650 257-3639</u> E-mail: <u>jcrampton@yahoo.com</u>
5.	<u>Matt Leddy</u> <u>275 D street, Redwood City, CA 94063</u>	Phone #: <u>650-366-3620</u> E-mail: <u>mtleddy@sbcglobal.net</u>
6.	<u>Ann Mankens</u> <u>290 Cherry San Carlos CA</u>	Phone #: _____ E-mail: _____
7.	<u>John McClellan</u> <u>736 11th Ave Modesto Calif.</u>	Phone #: _____ E-mail: _____
8.	<u>Gura Nehring</u> <u>SCAPA</u>	Phone #: <u>(650) 400-9837</u> E-mail: <u>cnehring@sbcglobal.net</u>
9.	<u>Steve Maggionetti</u> <u>725 Hillcrest, Pacific Grove</u>	Phone #: <u>925-9763 8766</u> E-mail: <u>SteveMaggionetti7</u>
10.	_____	Phone #: <u>@MSA.kom</u> E-mail: _____

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: Mark Boslet
<markboz@gmail.com>
Sent: Thursday, August 24, 2017 11:15 AM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: Aircraft noise during final approach and take off

From: Mark Boslet <markboz@gmail.com>
Subject: Aircraft noise during final approach and take off

Organization:

305 Louis Lane

Redwood City, California 94063

Comments

You allowed an aircraft to land at San Carlos Airport at 11:20 pm on Aug. 23. You also allowed multiple aircraft to take off from the airport shortly after 6 am on Aug. 24. All the aircraft pass at low altitude over 800 condominiums off of Bair Island Road during their final approach or take off. When the aircraft land so late and take off so early, residents are left with only 6.5 hours of quiet time for sleep. Federal health authorities recommend eight hours of sleep for adults and children. In my opinion, this is no way to treat your neighbors.

--

This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: Mark Boslet <markboz@gmail.com>
Sent: Saturday, August 26, 2017 11:24 AM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: Airplane Noise During Final Approach To Airport

From: Mark Boslet <markboz@gmail.com>
Subject: Airplane Noise During Final Approach To Airport

Organization:

305 Louis Lane

Redwood City, CA 94063

Comments

You permitted a Surf Air aircraft to land at your airport at 11:11 pm Friday night, Aug. 25. You then permitted an aircraft to take off from the airport at 6:40 am Saturday morning, Aug. 26. Both aircraft passed at low altitude over 800 condominiums off Bair Island Road either during the final approach to the airport or the take off from the airport. That left 7.5 hours of quiet time at the condominium for sleep. Federal health authorities recommend 8 hours of sleep for adults and children. In my opinion this is not an appropriate way to treat your neighbors.

--
This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: Mark Boslet
<markboz@gmail.com>
Sent: Monday, August 28, 2017 11:38 AM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: Airplane Noise During Final Approach And Takeoff

From: Mark Boslet <markboz@gmail.com>
Subject: Airplane Noise During Final Approach And Takeoff

Organization:

305 Louis Lane

Redwood City, California 94063

Comments

You permitted aircraft to take off from San Carlos Airport at 6:10 am and 6:18 am on Aug. 28 passing at low altitude over my condo complex and neighboring complexes during initial departure from the airport. Their ascents made loud noises for residents and awoke people from sleep. There are 800 condominiums in the flight path immediately after take off. But there are unoccupied commercial and industrial properties within a half mile on either side of the condominium complexes that could be passed over instead. In my mind, this is no way to treat a neighbor.

--
This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: Mark Boslet <markboz@gmail.com>
Sent: Tuesday, August 29, 2017 12:19 PM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: Airplane Noise

From: Mark Boslet <markboz@gmail.com>
Subject: Airplane Noise

Organization:

305 Louis Lane

Redwood City, California 94063

Comments

On Aug 28 you permitted an aircraft to take off from the airport at 10:54 pm. On Aug. 29, you permitted an aircraft to land at the airport at 4:54 am. On Aug 29 you permitted aircraft to take off from the airport at 6:08 am and 6:20 am. On Aug 29, you permitted a Surf Air aircraft to land at the airport at 6:25 am. All the aircraft passed at low altitude over a cluster of 800 residential condominiums 1.5 miles from the airport, either during final approach or initial take off. How do you expect residents of the condominiums to sleep with traffic continuing through the night? In my opinion this is no way to treat neighbors, especially when unoccupied commercial and industry properties are within one half a mile of the condominiums in either direction. Can't you instruct the pilots to fly one half mile either east or west of the condominiums?

--

This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: Mark Boslet <markboz@gmail.com>
Sent: Wednesday, August 30, 2017 12:16 PM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: Airplane Noise

From: Mark Boslet <markboz@gmail.com>
Subject: Airplane Noise

Organization:

305 Louis Lane

Redwood City, California 94063

Comments

On Aug 29, 2017 you permitted Surf Air aircraft to land at San Carlos Airport at 10:37 pm and 11:01 pm. On Aug. 30, 2017, you permitted aircraft to depart from the airport at 6:09 m and 6:12 am. All aircraft passed at low altitude over a cluster of 800 residential condominiums 1.5 miles from the airport during their final approach or initial ascent. All the aircraft made loud noise, disrupting sleep and activities for residents of the condo complexes. All this disruption could have been avoided by having the aircraft fly a half mile either to the east or west of the condos. I urge you to make this modest change.

--
This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: Mark Boslet
<markboz@gmail.com>
Sent: Wednesday, September 20, 2017 12:10 PM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: Repeated Aircraft Noise

From: Mark Boslet <markboz@gmail.com>
Subject: Repeated Aircraft Noise

Organization:

305 Louis Lane

Redwood City, California 94063

Comments

On Sept. 19, 2017, you permitted a Surf Air aircraft and a second aircraft at 10:25 pm and 10:31 pm to pass at low altitude over my condo complex and neighboring complexes during their final approach to the airport making long, loud noises. In doing so they passed over 800 residential condominiums when flying a half mile to the east or west would have taken them over unoccupied commercial or industrial properties. More so their late night schedule meant that residents of the condominium complexes had only had 7.5 hours of quiet time for sleep before Surf Air planes started taking off again at 6 am. Federal health authorities recommend eight hours of sleep for children and adults. It is hard to imagine why you made this route decision.

This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: Mark Boslet <markboz@gmail.com>
Sent: Thursday, September 21, 2017 3:02 PM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: Airplane Noise

From: Mark Boslet <markboz@gmail.com>
Subject: Airplane Noise

Organization:

305 Louis Lane

Redwood City, California 94063

Comments

On Sept. 21 you permitted three aircraft including two Surf Air aircraft at 10:32 pm, 11:12 pm and 11:36 pm to pass at low altitude over my condo complex and neighboring complexes during its final approach to the airport making a long, loud noise. In doing so they passed over 800 residential condominiums when flying a half mile to the east or west would have taken them over unoccupied commercial or industrial properties. Their late night schedule meant that residents of the condominium complexes had only had 6.5 hours of quiet time for sleep before Surf Air planes started taking off again at 6 am. Federal health authorities recommend eight hours of sleep for children and adults.

--
This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: Nancy Crampton <nancycrampton@yahoo.com>
Sent: Wednesday, October 11, 2017 3:14 PM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Airport Noise Study

From: Nancy Crampton <nancycrampton@yahoo.com>
Subject: San Carlos Airport Noise Study

Organization:
One Marina HOA
631 True Wind Way #216

Redwood City, CA 94063

Comments

I attended the two informational meetings about the current noise study being conducted for the San Carlos Airport. Thank you so much for having these periodic meetings and trying to keep the area residents informed about the study. I assume the study is being conducted because of the noise associated with the flights of Surf Air planes. I have several concerns with some of the information I received at this meeting. These concerns are: the flight path change that occurred this past year, noise level comparisons, average daily noise levels and hours of operation.

In the past year the landing flight path of the Surf Air planes has been changed. This change was the result of the complaints of residents in Palo Alto, Menlo Park and Atherton. Previously the planes flew west of 101 and up the 101 corridor. Now they fly up the bay, turn at the cement plant on Bayport Blvd. and fly directly over the Bair Island neighborhood in Redwood City. The maps being used by the study do not show the current level of homes in the area directly under the Surf Air flights. There are now over 1100 residences in this area with almost 500 more in the planning stage.

When planes flew over the peninsula areas that complained, they were at a higher altitude when they flew overhead. The Bair Island neighborhoods are much closer to the airport, and the planes fly at a much lower altitude causing much more noise. The maps we reviewed at the meeting and here on line, show the listening points for determining the noise of the aircraft south of the airport to be on the west side of 101. However, the noisiest planes that are causing the disturbance are flying on the east side of 101, therefore the listening points are not "catching" the direct noise of the very loud Surf Air planes.

My second concern is about the noise ratings. The various planes that land at the airport are shown with decibel ratings. The study captures the CNEL rating. What is the comparison? Are the 2 ratings similar, different, the same? I was told there is no conversion to compare the two. How do we know that the CNEL level is higher or lower than the decibel rating?

The average daily noise level that is the culmination of the study does not deal with the excessive noise emitted by one set of airplanes, the Surf Air flights. This would be similar to comparing the temperature of an area that is 60 at night and 110 in the day time and saying it has an average temperature of 85. It just doesn't really tell the entire story. Most of the planes that fly in and out of San Carlos Airport are very quiet. It is the Surf Air planes that cause the noise and the complaints.

For my last point, could the San Carlos Airport have hours of operation? San Jose does and it is a commercial airport. San Carlos is not a commercial airport. The commuter planes that fly overhead at 5:57, 6:05 and then again about 6:30 have everyone awake who lives in the Bair Island area. This doesn't seem right. The tax paying residents who live under this flight path should not have to suffer the noise that gives out of towners the right to ruin their sleep. The airport could stop most of the complaining by opening at 7 am and closing at 9pm.

I was told at the meeting that the FAA sets the standards of such studies. My reaction to the study is that the FAA does not want to do anything to curtail airplane flights.

--
This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: Mark Boslet <markboz@gmail.com>
Sent: Friday, October 13, 2017 12:26 PM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: Aircraft noise during final approach and take off

From: Mark Boslet <markboz@gmail.com>
Subject: Aircraft noise during final approach and take off

Organization:

305 Louis Lane

Redwood City, CA 94063

Comments

On Thursday Oct. 12, a Surf Air aircraft passed at low altitude over my condo complex and neighboring complexes during its final approach to the airport making a long, loud noise. In doing so it passed over 800 residential condominiums when flying a half mile to the east or west would have taken it over unoccupied commercial or industrial properties. Its late night schedule meant that residents of the condominium complexes had only 6 hours of quiet time for sleep before Surf Air planes started taking off again at 6 am. Federal health authorities recommend eight hours of sleep for children and adults. It is inappropriate for your aircraft to fly late night and early morning routes over residential neighborhoods, especially ones so close to the airport where aircraft are 500 or so feet above the ground. You are not taking the welfare of residents into consideration as you grant commercial aircraft the chance to make a profit.

--
This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

Dave Fitz, AICP, LEED Green Associate | Principal
Coffman Associates, Inc. | 237 NW Blue Parkway, Suite 100, Lee's Summit, MO 64063
816-524-3500 | 816-309-3456 (cell) | coffmanassociates.com
Planning for Your Success!

From: Matt Leddy [mailto:mtleddy@sbcglobal.net]
Sent: Monday, October 16, 2017 12:49 PM
To: Dave Fitz <dfitz@coffmanassociates.com>
Cc: gkelly@smcgov.org
Subject: SAN CARLOS AIRPORT 14 CFR Part 150 Draft Noise Exposure Maps September 2017

David Fitz
Coffman Associates

Dear Mr. Fitz,

I have a question concerning consultation with federal agencies that manage natural resources regarding San Carlos Airport noise exposure. I am particularly interested in the Don Edwards San Francisco Bay National Wildlife Refuge which is included in the September 2017 San Carlos Airport Part 150 Noise Compatibility Study, Draft Noise Exposure Maps document.

The report mentions that federal agencies were given the opportunity to review and comment on the NEM and supporting documentation, but I couldn't find any listing in the report of which specific federal agencies managing this natural resource were contacted, nor could I find any responses from such federal agencies.

Can you provide me with the list of federal agencies contacted and their responses to the Draft NEM report?

Thank you for your assistance.

Sincerely,

Matt Leddy

DAVE CORTESE
PRESIDENT, BOARD OF SUPERVISORS
COUNTY OF SANTA CLARA SUPERVISOR, THIRD DISTRICT
COUNTY GOVERNMENT CENTER, EAST WING
70 WEST HEDDING STREET, 10TH FLOOR
SAN JOSE, CALIFORNIA 95110
TEL (408) 298-5030 FAX (408) 298-6637
dave.cortese@san-clara.gov | www.supervisorcortese.org



October 19, 2017

Mr. James W. Lomen
District Manager, FAA
San Francisco Airports District Office
1000 Marina Blvd, Suite 220
Brisbane, California 94005-1835

Dear Mr. Lomen:

I represent residents of North Sunnyvale as their County representative. I have been following the changes made by the FAA in converting a route to Blind Visual Approach (BVA) which has greatly impacted the lives of these residents by a substantial increase in airport noise. I wanted to submit this letter as part of the public comment regarding the BVA.

The initial change was part of a flawed process that did not engage the residents of Sunnyvale or their elected leadership as part of the discussion. Also during the six month evaluation period Sunnyvale residents were not made aware of the complaint process. I understand Council Member Griffith of Sunnyvale raised the same concerns. Based upon this flawed process and lack of engagement with Sunnyvale I urge you to work together with Surf Air to design a flight path and approach that doesn't impact these residents.

Thank you for your consideration.

Sincerely,

Dave Cortese

President, Santa Clara County Board of Supervisors

Dave Fitz

From: Matt Leddy <mtleddy@sbcglobal.net>
Sent: Monday, October 23, 2017 10:00 PM
To: Dave Fitz
Cc: gkelly@smcgov.org; Christopher St. Peter; Jim Harris; Kory Lewis; Tresa Carter
Subject: Re: SAN CARLOS AIRPORT 14 CFR Part 150 Draft Noise Exposure Maps September 2017

Hi Dave,

Thank you for getting back to me so quickly.

I see that the San Carlos Noise Airport Study webpage has a place to submit comments on the draft Noise Study. Are there other ways to submit comments, and will those comments be included in the final Noise Study documents?

Thank you again,
Matt

From: Dave Fitz <dfitz@coffmanassociates.com>
To: Matt Leddy <mtleddy@sbcglobal.net>
Cc: "gkelly@smcgov.org" <gkelly@smcgov.org>; Christopher St. Peter <cstpeter@smcgov.org>; Jim Harris <jmharris@coffmanassociates.com>; Kory Lewis <klewis@coffmanassociates.com>; Tresa Carter <tcarter@coffmanassociates.com>
Sent: Tuesday, October 17, 2017 9:25 AM
Subject: RE: SAN CARLOS AIRPORT 14 CFR Part 150 Draft Noise Exposure Maps September 2017

Mr. Leddy,

Thank you for your interest in the San Carlos Airport Title 14 CFR Part 150 Noise Compatibility Study (14 CFR Part 150). The Federal Aviation Administration (FAA) is the lead agency when preparing 14 CFR Part 150 Studies. Federal officials referred to in the certification statement associated with aeronautics are within the FAA. A complete description of the Consultation process for the Draft Final San Carlos Airport Noise Exposure Document can be found in Appendix B. This description includes the names of the FAA officials that have participated in the 14 CFR Part 150 Study to date.

If a recommendation from the 14 CFR Part 150 Study results in a potential impact to the Don Edwards San Francisco Wildlife Refuge, the FAA, as the lead agency, would consult directly with the U.S. Fish and Wildlife Service.

The San Mateo County Aviation Division has a working relationship with the U.S. Fish and Wildlife Service due to the proximity of Bair Island to San Carlos Airport. Per your suggestion, we will include Paul Souza, USFWS Regional Director on our contact list for meetings and provide a link to the draft study materials.

Again, thank you for your interest in the San Carlos Airport 14 CFR Part 150 Study.

Dave

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: Mark Boslet <markboz@gmail.com>
Sent: Tuesday, October 24, 2017 11:55 AM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: Airplane Noise During Final Approach And Takeoff

From: Mark Boslet <markboz@gmail.com>
Subject: Airplane Noise During Final Approach And Takeoff

Organization:

305 Louis Lane

Redwood City, CA 94063

Comments

Objection To Bayside Visual Approach

I am a homeowner who lives off of Bair Island Road in Redwood City about 1.5 miles from the San Carlos Airport. My condominium is part of a cluster of 800 condominiums and apartments in four adjacent developments directly in the flight path for the final approach to San Carlos Airport and for the initial ascent from the airport for early morning and other flights. In other words, the Surf Air Pilatus and other aircraft fly at low altitude hourly or more frequently over our homes all day starting at 6 am and continuing frequently to 11:15 pm or later at night.

On Oct. 23, an aircraft passed at low altitude over my condo complex and neighboring complexes during its final approach to the airport at 11:50 pm making a long, loud noise. In doing so it passed over 800 residential condominiums when flying a half mile to the east or west would have taken it over unoccupied commercial or industrial properties Its late night schedule meant that residents of the condominium complexes had only 6 hours of quiet time for sleep before Surf Air planes started taking off again at 6 am. Federal health authorities recommend eight hours of sleep for children and adults.

Your late night and early morning service is a hardship for your residential neighbors and you have permitted this hardship to continue to months and months and months...

--

This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: Mark Boslet <markboz@gmail.com>
Sent: Friday, November 03, 2017 11:49 AM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: Noise At San Carlos Disturbs Neighbors' Sleep

From: Mark Boslet <markboz@gmail.com>
Subject: Noise At San Carlos Disturbs Neighbors' Sleep

Organization:

305 Louis Lane

Redwood City, CA 94063

Comments

San Carlos Airport repeatedly allows late night aircraft to land at its facilities creating a hardship for neighbors. The aircraft pass at low altitude over condo complexes 1.5 miles from the airport during final approach to the airport making long, loud noises and disrupting residents. They pass over the 800 residential condominiums when flying a half mile to the east or west would take them over unoccupied commercial or industrial properties. When they land late at night (as one did at 11:06 pm on Nov. 2) residents of the condominium complexes get only 6 or 7 hours of quiet time for sleep before Surf Air planes started taking off again at 6 am. The Surf Air aircraft pass at low altitude over the condo complexes during their initial ascent from the airport. Federal health authorities recommend eight hours of sleep for children and adults. Your activities create repeated hardships for neighbors of the airport

--
This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

I have heard several times from multiple parties that pilots would never violate altitude limitations because it is contrary to the regulations and all pilots would never violate the regulations! This perplexes me! That is tantamount to saying that the posted speed limit of 65 MPH on the 101 freeway so we can know with confidence that no driver will ever exceed the speed limit? Am I missing something?

Along the same lines it troubles me to hear from the San Carlos Pilots associations that they know of no pilot that has ever violated any regulations? That is amazing?

My experience with pilots is that 90% of them are decent people who when they understand they will follow the rules. Some don't know the regulations very well but when counseled as to what they are, they are willing to comply. There is approximately 10% of pilots that just can't seem to know how to follow rules and really have no interest in it! But all pilots just like everyone else do make an errors.

As a designated remedial trainer for the FAA FAST team, certificated accident reconstructionist and qualified in understanding and developing a culture within a Safety Management System. I know that a few people can dramatically increase risk with just their bad behavior. I also know that in a healthy safety culture errors are reported all the time and errors are not punished if they were accidental. A safety system that never finds anyone in error is not a safety culture at all.

Safety Management Systems have been around for about a decade now. The 14CFR Part 121 carriers must have one as well as part 135 operators. Is there a planned deadline date for implementing SMS at SQL? If you wish to know more about this I would be glad to spend a few hours with you to explain it, pro-bono. You can begin by referencing AC 120-92B.

Attached is a report by the World Health Organization on the effects of noise in health. It would be great if our long term goal could be to reach these levels of quiet.

Regarding Surf Air:

As a 14CFR Part 135 operator they must have longer runway requirements than 14 CFR part 91 operators. Typically the 2600 feet at SQL is sufficient and in some cases they exceed that. If you are interested in that I do have access to some performance charts for the PC-12

A recent change to 14 CFR part 36, helicopter noise limits requires all new helicopters to meet stage 3 noise requirements. Can we limit the airport to the stage 3 limit recently adopted? Anything that is stage 1 or 2 historically has never operated at this airport for many years.

Since this form does not include an option for attachments please see the email to Gretchen Kelly for the attached documents that reference Noise Impacts on Health "Assessing Current Scientific Knowledge, Uncertainties and Gaps in Quantifying Climate Change, Noise and Air Quality Aviation Impacts" and the World Health Organization study on "Burden of disease from environmental noise".

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This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

14 CFR Part 150 Noise Compatibility Study
**PUBLIC INFORMATION WORKSHOP
MEETING COMMENT FORM**



Meeting: Public Information Workshop Meeting #3 Date: November 8, 2017 Time: 6:00 - 7:30 p.m.

Place: Hiller Aviation Museum

Please Print Neatly

601 Skyway Road, San Carlos, CA

Consider changing mid-field overflight
to Kelly Moore / Hearl Depot.

Mail to:
COFFMAN ASSOCIATES, INC.
237 N.W. Blue Parkway, Suite 100
Lee's Summit, MO 64063
www.coffmanassociates.com

Comments can also be submitted
on the project website: sancarlosnoise.airportstudy.com

November 12, 2017

David Fitz
Coffman Associates, Inc.
237 NW Blue Parkway, Suite 100
Lee's Summit, MO 64063

RE: 2017 Draft San Carlos Airport 14 CFR Part 150 Noise Compatibility Study

Dear Mr. Fitz:

Thank you for the opportunity to comment on the September 2017 Draft San Carlos Airport 14 CFR Part 150 Noise Compatibility Study, including the Draft Final Exposure Maps (10/6/2017), Noise Abatement Alternatives (10/10/2017), and Land Use Alternatives (10/10/2017).

I am a resident of Redwood City and have been a frequent visitor to Inner Bair Island, located to the south of San Carlos Airport. Over the last 30 years I've seen many changes to the island. In the last few years since the island reopened to the public, there has been an amazing transformation from what was a dry pond into a vibrant tidal marsh of San Francisco Bay. Inner Bair Island has become one of my favorite places to observe and enjoy the birds and other wildlife that have become abundant as the island has undergone restoration. I have also been concerned about increasing noise levels at Inner Bair Island caused by changes in aircraft activity at San Carlos Airport that occurred after 2010 while the island was closed for restoration.

Background on Inner Bair Island

In 1999, the U.S. Fish and Wildlife Service acquired Bair Island from the Peninsula Open Space Trust, who had stepped forward to purchase the land from a private developer. The island (actually three islands, Inner, Middle and Outer Bair), was then incorporated into the Don Edwards San Francisco Bay National Wildlife Refuge. In 2016, with restoration to salt marsh habitats well underway, all of the recreational trails on Inner Bair Island were opened to the public.

Bair Island is a unique piece of the history of restoration in San Francisco Bay. It is a testament to the vision of a handful of local residents who stopped Redwood City from allowing development on the island 35 years ago. The Bair Island story is an inspiration to everyday citizens, and an important example of non-profit organizations, such as the Peninsula Open Space Trust, and government agencies working together to preserve our Bay. (Figure 1)

The Refuge describes Bair Island as, "*A Breath of Fresh Air Amid the Urban Jungle*"¹, and, "*In the increasingly developed and fast-paced Bay Area, places like Bair Island, and the Don Edwards San Francisco Bay NWR as a whole, provide quiet spaces for the public to enjoy the natural beauty of the Bay Area.*"¹ (Figure 2)

The value of a quiet respite is reflected in visitor survey responses describing what makes the Refuge unique ²:

- *For me, it's a great place to be still, quiet, and filled with the sight and sound of the surrounding life.*
- *Very peaceful and enjoyed the wildlife.*
- *I love visiting this refuge. It is peaceful and filled with magnificent birds.*
- *Offers an oasis/refuge from the surrounding urban setting. Conservation of the land and wildlife is integral to a balanced life for human and our co-inhabitants.*
- *The location off of the bay is great and not making it commercial, but rather quiet is very appreciated.*
- *It is close to a populated area, yet offers a wildlife experience. It gives a chance to commune with nature without going far.*
- *Opportunity for a quiet walk near where I work, for exercise, and to get out of the office.*

Bair Island, like the rest of the Don Edwards Wildlife Refuge is a place where the absence of loud noise is an important component of the visitor experience while observing wildlife and enjoying other recreational uses. **The National Wildlife Refuge System considers these wildlife-dependent uses to be a priority general public use³.** Loud aircraft noise is not compatible with the current public uses at this special place.

FAA Policy on Noise-Sensitive Federally Managed Lands

The FAA has set very clear policy regarding airport noise over noise-sensitive federally managed lands, stating:

*The FAA shares the national concern for the preservation of the natural environment. A critical objective in the FAA Strategic Plan is to provide leadership in mitigating the environmental impact of aviation. It is the policy of the FAA in its management of the navigable airspace over locations in national parks and other federally managed areas with **unique noise-sensitive values** to exercise leadership in achieving an appropriate balance between efficiency, technological practicability, and environmental concerns, while maintaining the highest level of safety. This policy envisions joint efforts between the FAA and the Federal agencies managing these locations to enhance the compatibility between management of the airspace and the management goals of these agencies.*

Dedicated to
Carolyn and Ralph Nobles
 and the Friends of Redwood City
 with deep gratitude for igniting the spark that
 saved these baylands for future generations.

Figure 1. Sign located at Bair Island, installed by the U.S. Fish and Wildlife Service in honor of Carolyn and Ralph Nobles, two of the Redwood City residents who spearheaded the effort to save Bair Island from development in 1982.

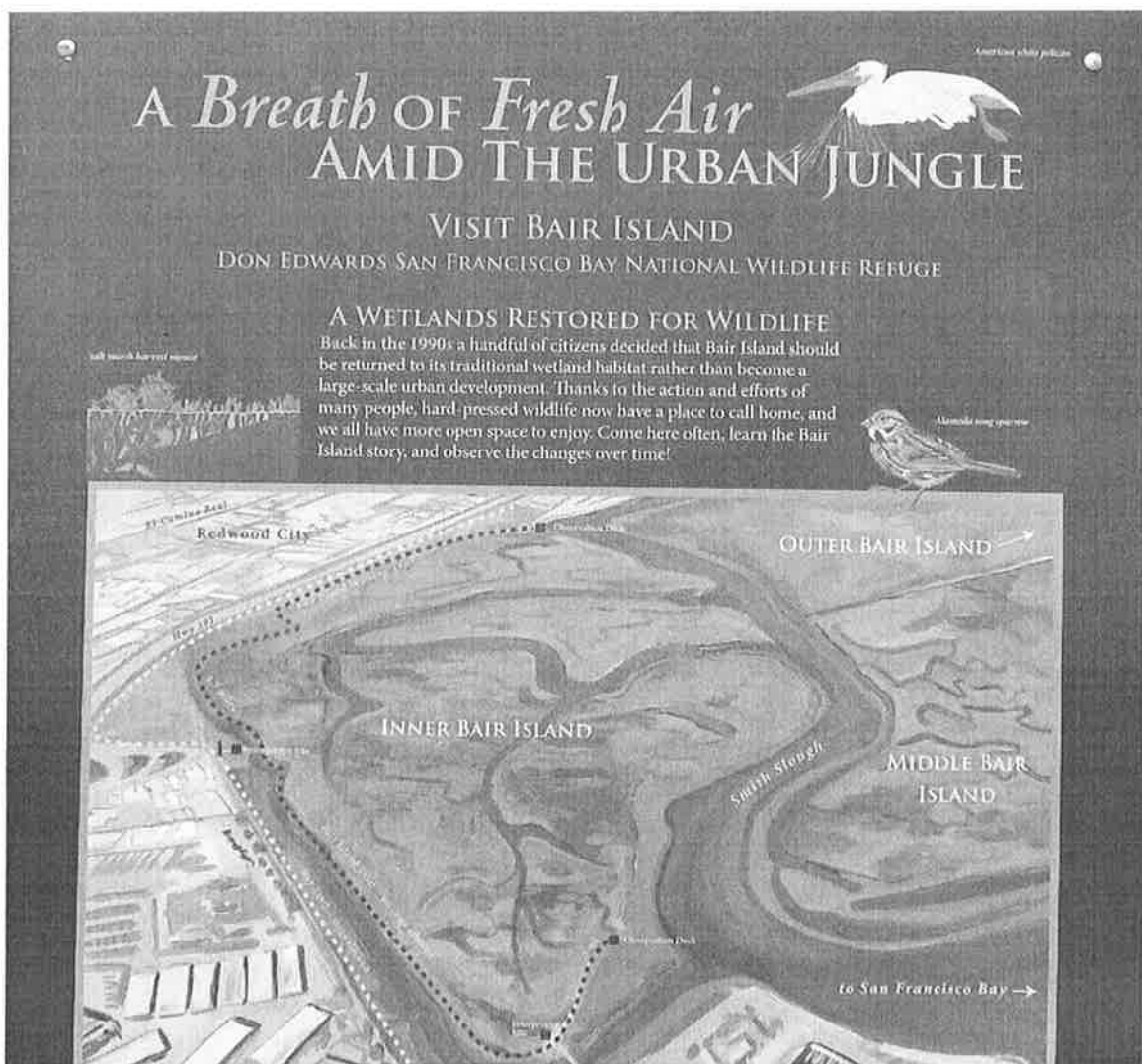


Figure 2. Sign at the entrance to Bair Island.

*The National Park System and other natural resource management areas under Federal jurisdiction include many locations with unique values which merit special environmental protection. **Some areas provide opportunities for solitude and natural quiet and allow visitors to experience nature unaffected by civilization.** Some provide opportunities for people to visit historically authentic settings, as they existed before the introduction of mechanized power. Others contain designated wilderness, critical habitat for endangered species, or solemnity of purpose, which would be diminished by the intrusion of noise. While aircraft noise is not the only noise or environmental impact that may be incompatible with areas having such unique values, this is the area of FAA's special expertise and jurisdiction.*

*In order to carry out the policy effectively, **FAA staff and management will-***

***Consult actively with other Federal agencies to identify and mitigate appropriately aircraft noise levels that are not compatible with designated locations in federally managed areas.** Such consultation will ensure that any resulting mitigation strategies will not transfer impacts to other noise-sensitive locations within or beyond the federally managed area. The FAA will evaluate appropriate airspace management options in consultation with the Federal agencies administering these resources to identify particular locations of concern on a priority basis. Such evaluation of alternatives will ensure that safety is not derogated and that technological and economic factors are weighed consistent with the FAA's responsibilities under 49 USC §§40101-46507 (former Federal Aviation Act).*

Develop or refine on a continuing basis methods and criteria to assess aircraft noise on designated locations in federally managed areas, in conjunction with the Federal Interagency Committee on Aviation Noise (FICAN). Recognizing the lack of complete information and agreement on noise methodology, metrics, noise effects on animals, and appropriate land use compatibility criteria for uniquely quiet areas, the FAA in conjunction with the FICAN will continue to develop, refine, and reach more effectively aircraft noise impacts on unique national land and water resources. ⁴

Consultation Required with the Don Edwards San Francisco Bay National Wildlife Refuge

The Part 150 study must be, “developed in consultation with state and public agencies and planning agencies whose area, or **any portion of whose area, of jurisdiction is within the 65 CNEL contour, FAA regional officials, other Federal officials having local responsibility for land uses depicted on the map, and regular aeronautical users of the airport,**” (Page i-2).

The 2017 Noise Contours map clearly shows the 65 CNEL contour extending over the public trail going out to the northern observation platform at Inner Bair Island. Unfortunately, noise from the airport has increased significantly over the northern portion of the trail since 2013, and is **predicted to increase even more over the next five years** (Figure 3).

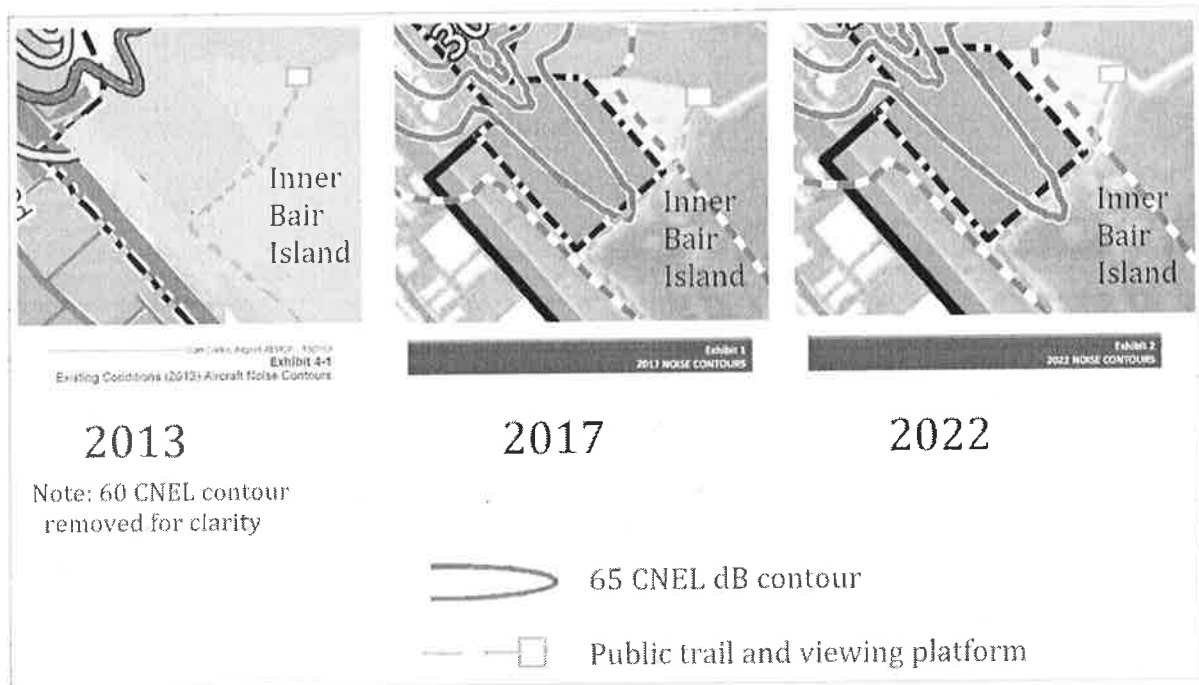


Figure 3. The 65 CNEL dB noise contour (in red) at San Carlos Airport from 2013, 2017, and projected to 2022 (C). Noise exposure is considered significant, “*when a noise-sensitive land use located at or above 65 CNEL experiences a noise increase of at least 1.5 CNEL.*” (Part 150 Study, Page 1-5). Images are adapted from the Final Comprehensive Airport Land Use Compatibility Plan For the Environs of San Carlos Airport, October 2015 Exhibit 4-1, and the September 2017 San Carlos Airport 14 CFR Part 150 Noise Compatibility Study, Draft Noise Exposure Maps Exhibits 1 and 2.






Consultation with the Don Edwards San Francisco Bay National Wildlife Refuge on the current and projected increase in aircraft noise over the Refuge is required. The results of any consultation with the Refuge need to be included in the final version of the San Carlos Airport Noise Compatibility Study Noise Exposure Maps, Noise Abatement Alternatives, Land Use Alternatives, and Noise Compatibility Program.

2017 Draft Part 150 Noise Compatibility Study Determination of Non-sensitivity of Bair Island

The Part 150 Study finding that, “*There are no non-compatible land uses within the 65-70 CNEL noise contour.*” (Page 3-6) is based on a land use compatibility/noise contour table, Exhibit 3A (Figure 4 below). However, since “wildlife refuge” is not listed, the table does not address visitor sensitivity to noise for this unique land use.

Additionally, determination of noise impacts to Bair Island visitors requires consultation with the U.S. Fish and Wildlife Service, the federal agency managing the Refuge. The results of consultation regarding the noise-sensitivity of this Refuge land need to be included in the Part 150 Noise Compatibility Study report.

The Draft Noise Compatibility Study discussion on noise impacts at the 65 CNEL level (Page 3-4) includes comments on impacts to residential land uses, schools and other public use facilities, hospitals, nursing homes, places of worship, auditoriums, concert halls, outdoor music shells, agricultural uses and livestock farming, but no mention of wildlife refuges. Since FAA guidelines in Exhibit 3A do not provide clear guidance on this land use, this analysis must rely on consultation with the U.S. Fish and Wildlife Service.

LAND USE		Yearly Day-Night Average Sound Level (DNL) in Decibels					
		Below 65	65-70	70-75	75-80	80-85	Over 85
Recreational							
	Outdoor sports arenas and spectator sports	Y	Y ⁵	Y ⁵	N	N	N
	Outdoor music shells, amphitheaters	Y	N	N	N	N	N
	Nature exhibits and zoos	Y	Y	N	N	N	N
	Amusements, parks, resorts, and camps	Y	Y	Y	N	N	N
	Golf courses, riding stables, and water recreation	Y	Y	25	30	N	N

The designations contained in this table do not constitute a federal determination that any use of land covered by the program is acceptable under federal, state, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally-determined land uses for those determined to be appropriate by local authorities in response to locally-determined needs and values in achieving noise compatible land uses.

Figure 4. Portion of Exhibit 3A from the 2017 Draft San Carlos Airport 14 CFR Part 150 Noise Compatibility Study. Break line represents portions of the table removed for brevity.

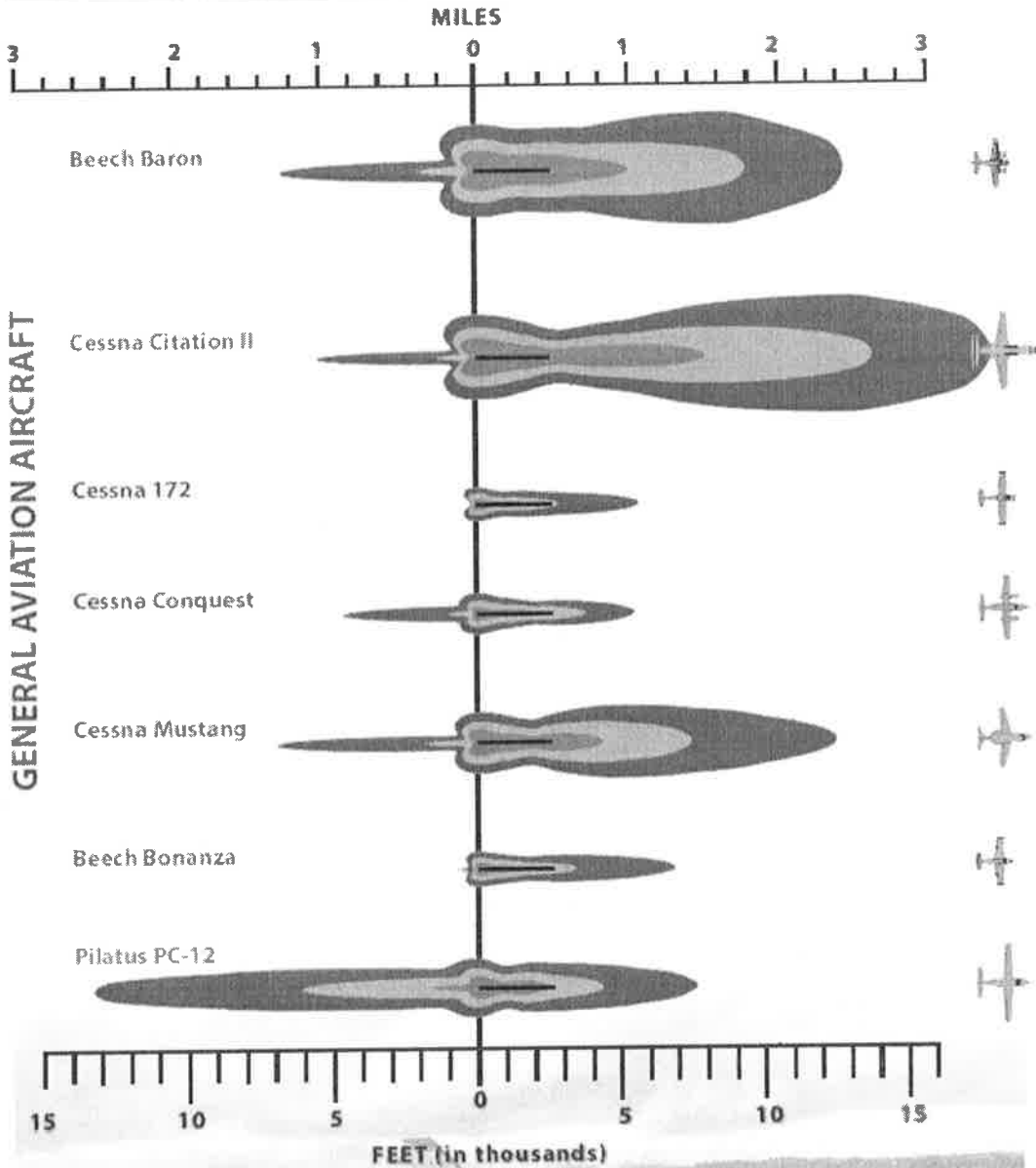
Airport Noise Increases Over Inner Bair Island

Between 2013 and 2017, the total annual operations at San Carlos Airport actually decreased by 5.4%, whereas air taxi flights increased from 2.5% to 17.6% of the total airport flight activity.⁵ By 2022 air taxi flights are predicted to increase even more, to 18.8% of the total airport activity.

Currently, Surf Air accounts for 12% of the total flights into San Carlos Airport⁶, and they utilize the **aircraft type with the loudest noise contour upon arrival at San Carlos Airport, the Pilatus PC-12** (Exhibit 2A on the next page). Of those planes arriving, 99% arrive from the southeast flying low over Bair Island (Table 2E). The impacts of these loud, frequent arrivals by the PC-12 on visitors at Bair Island need to be considered in the noise analysis for San Carlos Airport.

San Carlos Airport

14 CFR Part 150 Noise Compatibility Study



The contours represent sound exposure levels (SEL) of 85, 90 and 95 dB for one arrival and one departure of each aircraft type. The outer contour represents 85 dB SEL. The inner contour represents 95 dB SEL.

Aviation Noise - DRAFT

2-3

Exhibit 2A
NOISE FOOTPRINT COMPARISON

Source: Coffman Associates 2017

Noise Abatement Alternatives for Bair Island

Methods cited in the study for reducing the size of noise contours include **restricting the number or type of aircraft** allowed to operate at San Carlos Airport (Page 4-6). It seems that specifically reducing the number of Pilatus PC-12 landing at the airport, or completely restricting this type of aircraft would alleviate much of the noise impacts to visitors at Bair Island. Mitigations for reducing aircraft noise over Refuge lands should be included in the discussion in the Noise Abatement Alternatives Chapter.

Thank you for giving my comments your careful consideration. Please notify me of any meetings or additional draft studies or final reports as they become available.

Sincerely,



Matthew Leddy
mtleddy@sbcglobal.net
650-366-3620

Cc: Gretchen Kelly, Airport Manager, San Mateo County Airports
San Mateo County Board of Supervisors
Paul Souza, USFWS Regional Director
Anne Morkill, Complex Manager USFWS San Francisco Bay Wildlife Refuge Complex
Jared Underwood, Refuge Manager, Don Edwards SF Bay National Wildlife Refuge

References:

1. <http://peninsulapress.com/2017/03/08/bair-island-bay-area-redwood-city/>
2. National Wildlife Refuge Visitor Survey 2012: Individual Refuge Results for Don Edwards San Francisco Bay National Wildlife Refuge, by Alia M. Dietsch, Natalie R. Sexton, Lynne Koontz, and Shannon J. Conk. Available at: [https://pubs.usgs.gov/ds/754/CaliforniaNevadaRegion\(R8\)/Don%20Edwards%20San%20Francisco%20Bay%20NWR%20-%20NWR%20visitor%20survey%202012.pdf](https://pubs.usgs.gov/ds/754/CaliforniaNevadaRegion(R8)/Don%20Edwards%20San%20Francisco%20Bay%20NWR%20-%20NWR%20visitor%20survey%202012.pdf)
3. National Wildlife Refuge System Improvement Act of 1997. Available at: https://www.fws.gov/refuge/Don_Edwards_San_Francisco_Bay/1997Act.html
4. Appendix 9. Noise Policy for Management of Airspace Over Federally Managed Lands, August 25, 2011. Available at: <http://tfmlearning.faa.gov/Publications/atpubs/AIR/airapp9.html>
5. Final Comprehensive Airport Land Use Compatibility Plan For the Environs of San Carlos Airport, October 2015. Available at: http://ccag.ca.gov/wp-content/uploads/2015/11/SQL_FinalALUCP_Oct15_read.pdf
6. Angela Vargo, Surf Air Director of Communications. The Almanac, June 18, 2017. Available at: <https://www.almanacnews.com/news/2017/06/18/protesters-picket-surf-air-at-san-carlos-airport>

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: Steve Magginetti <stevemagginetti7@msn.com>
Sent: Monday, November 13, 2017 8:13 PM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: Comments on 11-8-2017 Noise Study meeting and handouts

From: Steve Magginetti <stevemagginetti7@msn.com>
Subject: Comments on 11-8-2017 Noise Study meeting and handouts

Organization:
GESC

Comments

I have some responses about the noise compatibility study.

On page 2-18 it shows the comparison between a Cessna 182 and a Pilatus. These 2 charts represent rates of climb between the 2 aircraft. I note that the rate of climb between the 2 aircraft is almost identical. This is confusing given the Cessna 182 will climb approximately 900 feet per minute and the Pilatus PC-12 will climb at approximately 2000 feet per minute. Can you explain why that is presented this way or if I have misunderstood the data it is trying to represent?

There is some misinformation as to the accuracy of altitude reporting systems. I have heard the number of plus or minus 400 feet. The regulations are as follows:

The tolerance of an altimeter is found in 14 CFR part 43 appendix B table 1. As you can see the calibration tolerance for 1000 feet is plus or minus 20 feet.

The tolerance for transponders (all aircraft should have them) is found in 14CFR Part 43 appendix B (c) This says the tolerance for altitude reporting equipment on transponders the tolerance is plus or minus 125 feet. I know this well since I have calibrated thousands of systems over 40 years.

In the ATC JO7110.65W, ATC should perform a validation (ref section 5-2-17) if they observe a mode "C" read out that exceeds 300 ft. If it does not meet the 300 ft requirements the controller must ask the aircraft operator to shut down mode "C" and have the system repaired before the next flight.

Finally in 14CFR Part 91.217(a)(2) pilots are told that transmitted altitude must test and be observed to be within plus or minus 125 feet.

So as you can see the 400 foot tolerance is never mentioned and the pilots should understand the tolerance under 14 CFR part 91.217(a)(2) as plus or minus 125 feet. Any aircraft that exceeds this the 125 foot tolerance is now un-airworthy.

In regard to pilots determining airworthiness under 14CFR part 91.7 the short answer is that they cannot. A close read of the regulation says: The pilot in command of a civil aircraft is responsible for determining whether the aircraft is in a condition for safe flight." (ref the term airworthy 14 CFR part 3.5Determination of safe flight is performed by the pilot by doing the pre-flight inspection. A determination of airworthiness can only be made by a licensed aircraft technician 14 CFR part 43.3. A private pilot can perform preventative maintenance on the aircraft he owns, he cannot declare an aircraft airworthy after a 100hr / annual inspection.

On another matter of violations by pilots:

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: Scot Marsters <sam@gene.com>
Sent: Tuesday, November 14, 2017 10:32 PM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: Noise Study Comments

From: Scot Marsters <sam@gene.com>
Subject: Noise Study Comments

Organization:
Greater East San Carlos

Comments

- It would be great to have regular meetings between airport staff and nearby residents to look for solutions addressing noise issues that may not raise to the level of inclusion in the noise study, but are none the less impactful on the neighborhood's quality of life.
- It would be good to look at alternatives for aircraft approaching the airport from the west and find a route that does not fly directly over the GESC neighborhood. We see that some planes fly to the south of the neighborhood and cross the airfield closer to the end of the runway, which significantly reduces noise in the neighborhood.
- It might be worth a second look at whether short but tall sound walls at the end of streets would reduce noise from airplane run-ups into the neighborhood. (this maybe something the county could consider)
- It would be good to see the tower encourage helicopters flying near the neighborhood to fly east of Industrial road if they are headed north or south and if they are headed east or west they could try to stay north or south of the neighborhood.
- It will be great to finally see the neighborhood designated as an extremely noise sensitive area on maps and literature handed out to pilots.
- Could there be some additional fees for aircraft that arrive when the tower is not being staffed to encourage aircraft to not arrive in the quiet of the night?

--

This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: patty marsters <pattymm@sbcglobal.net>
Sent: Wednesday, November 15, 2017 1:58 PM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: san carlos airport study comments

From: patty marsters <pattymm@sbcglobal.net>
Subject: san carlos airport study comments

Organization:
san carlos resident
990 cherry

san carlos, ca 94070

Comments

The report offers limited relevance to the East San Carlos residents. The radar/flight tracks in 1N,1M and 2C don't show any helicopter traffic, unless the left-hand departure over the GESC neighborhood isn't a plane. Seems like any of the planes in 2A flying over GESC homes would be in the 85dBSEL range.

2F shows helicopter Departures go south over/east of Industrial--YES but why are some still taking off over the neighborhood? 2E Please move the departures over the airfield a littler farther south to avoid yellow residential. 2D Please move arrivals flight path a little further south to avoid yellow residential. Please acknowledge the East San Carlos residential neighborhood as a noise sensitive area that pilots should avoid as a rule.

Report discounts effectiveness of sound walls BUT consider limited placement along Skyway to block ground noise from airfield channeled towards homes by orientation of long hangars.

No rational given for reduction in military flights in 5 years.

--

This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: Mark Boslet <markboz@gmail.com>
Sent: Monday, November 20, 2017 1:59 PM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: Noise At San Carlos Airport

From: Mark Boslet <markboz@gmail.com>
Subject: Noise At San Carlos Airport

Organization:

305 Louis Lane

Redwood City, CA 94063

Comments

I am a homeowner who lives off of Bair Island Road in Redwood City about 1.5 miles from the San Carlos Airport. My condominium is part of a cluster of 800 condominiums and apartments in four adjacent developments directly in the flight path for the final approach to San Carlos Airport and for the initial ascent from the airport for aircraft following the Bayside Visual Approach. In other words, the Surf Air Pilatus and other aircraft fly at low altitude hourly or more frequently over our homes all day starting at 6 am and continuing frequently to 10pm or later at night creating loud disruptive noise and disturbing sleep and home activities.

Surf Air aircraft follow this path day after day, month after month, when flying a half mile to the east or west or north would take them over unoccupied commercial or industrial properties or undeveloped Bair Island.

The Bayside Visual Approach - particularly its final approach to and ascent from the airport creates hardships for this Redwood City neighborhood.

I hope you will include my comment in your noise study.

--

This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

Dave Fitz

From: sancarlosnoise.airportstudy.com - comments From: Mark Boslet <markboz@gmail.com>
Sent: Tuesday, December 05, 2017 1:07 PM
To: coffman.airportstudy@gmail.com; Dave Fitz; Kory Lewis; gkelly@smc.gov.org; Jim Harris
Subject: Late Night Noise Complaint

From: Mark Boslet <markboz@gmail.com>
Subject: Late Night Noise Complaint

Organization:

305 Louis Lane

Redwood City, CA 94063

Comments

I'm a resident of Redwood City who lives in a community of 800 condominiums and apartments about 1.5 miles from the San Carlos Airport. We experience regular traffic from Surf Air flights that pass over our community during their final approach to the airport and initial ascent from it. The loud noise we experience from the flights is a hardship for our neighborhood and it disrupts sleep and normal activities.

Last night, Dec. 4, 2017, we had Surf Air turboprops buzz our homes at 11:54 pm and 12:06 am. The aircraft woke residents from their sleep and inconvenienced our community. I can't believe you allow Surf Air or any aircraft to fly over a residential area at midnight. Do you simply not care about your neighbors?

--

This mail is sent via contact form on <http://sancarlosnoise.airportstudy.com>

Dave Fitz

From: Mark Boslet <markboz@gmail.com>
Sent: Monday, December 11, 2017 11:54 AM
To: Dave Fitz
Subject: Comment On Your Noise Compatibility Study
Attachments: Airport Route.pdf

Hi David,

I am a homeowner who lives off of Bair Island Road in Redwood City about 1.5 miles from the San Carlos Airport. I would like to offer a comment about air traffic to and from the airport and make sure my community is on your radar as you complete your Noise Compatibility Study.

We are a cluster of 800 condominiums and apartments in four adjacent developments directly in the flight path for aircraft following the Bayside Visual Approach to and from San Carlos Airport. What this means is that most of Surf Air's Pilatus turboprops pass directly overhead at low altitude on their final approach to San Carlos Airport and their morning initial ascent from the airport.

These flights start at 6 am and continue all day typically until 10 pm, 11 pm or 12 pm. They create loud disruptive noise and disturb sleep and home activities. When a late night flight lands at 11:30 pm, we homeowners have just 6.5 hours of quiet time for sleep before the first flight of the day departs at 6 am. This is a hardship for our neighborhood.

Relatively simple alternatives seem possible. If the Surf Air turboprops were to fly a half mile to the east, west or north of us, their path would take them over unoccupied commercial or industrial properties or undeveloped Bair Island.

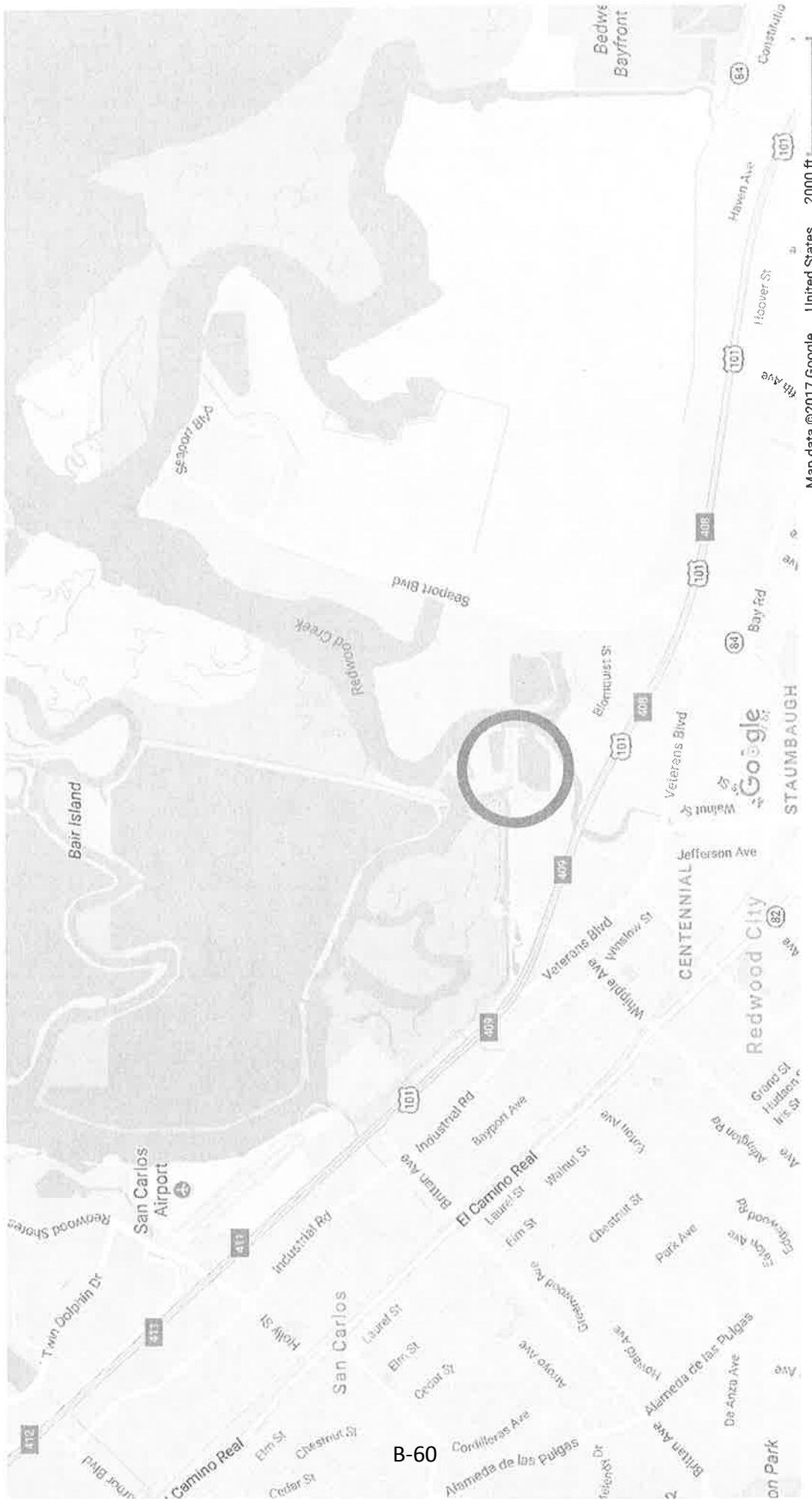
For example, if Surf Air aircraft chose to turn in from San Francisco Bay before reaching us and fly over the Cargill salt ponds adjacent to Seaport Blvd. before following Highway 101 to the airport, they would bypass us entirely. This route would avoid residential properties entirely and pass over commercial and industrial sites, including several car dealerships.

A second alternative would be for them to stay over San Francisco Bay until they reach unoccupied Bair Island, at which time they could turn and fly over the island to the airport.

I hope you will consider these alternate routes and the plight of our neighborhood as you consider ways to reduce the impact of airport noise on residential communities. I've attached a map to more easily locate our neighborhood. Please feel free to contact me if you would like to discuss.

Best,
Mark Boslet
305 Louis Lane
Redwood City, CA 94063
[408 888 1014](tel:4088881014)

Bayside Visual Approach takes Surf Air and other flights at low altitude directly over 800 residential condominiums inside red circle during final approach to and initial ascent from airport. Flights can be hourly or more frequent from 6 am to 11:30 pm and later



PLANNING ADVISORY COMMITTEE (PAC) MEETING #4

March 21, 2018 from 2:00 – 4:00p.m.
Hiller Aviation Museum, 601 Skyway Road

Materials from the fourth PAC meeting included the following:

- Invitation Letter
- Meeting Agenda
- Sign-In Sheet(s)
- Meeting Notes
- Comment Sheets/Comments Received

Dave Fitz

From: Dave Fitz
Sent: Thursday, February 15, 2018 1:32 PM
To: Dave Fitz
Cc: Jim Harris; Kory Lewis; gkelly@smcgov.org; Christopher St. Peter; Davi Howard
Subject: San Carlos Airport – Part 150 Noise Compatibility Study Planning Advisory Committee Meeting #4

TO: TO: Ms. Rochelle Kiner, Ms. Camille Garibaldi, Ms. Stacey Maye, Ms. Thann McLeod, Mr. Philip Crimmins, Ms. Susy Kalkin, Ms. Tara Peterson, Ms. Melissa Diaz Stevenson, Mr. Kevin M. Miller, Mr. Carlos de Melo, Ms. Stacy Howard, Mr. Alex Gertsen, Ms. Melissa McCaffrey, Ms. April Gafford, UJ Emetron, Mr. Rich Newman, Mr. Hans Plesman, Mr. James Cvengros, Mr. Dimitri Vandellos, Mr. Steve Monowitz, Mr. Chris Hunter, Ms. Carol Ford, Mr. Irving Torres, Mr. Dan Dyer, Ms. Linda R. Wolin, Mr. Joe Straton, Mr. George Rodericks, and Mr. Alex D. McIntyre,

Dear Planning Advisory Committee Member:

The fourth Planning Advisory Committee (PAC) meeting for the Noise Compatibility Plan at the San Carlos Airport has been scheduled for:

Wednesday, March 21, 2018
2:00 p.m. – 4:00 p.m.
Hiller Aviation Museum
601 Skyway Road
San Carlos, California 94070

Since our last meeting on November 8, 2017, a considerable amount of work has been accomplished, including revisions to the Draft Final Noise Exposure Maps (NEM) document and the noise compatibility program working paper. The material to be discussed at the PAC meeting will be in the form of one draft working paper, as follows:

Chapter Six: Noise Compatibility Program

This working paper will be mailed to you prior to the committee meeting for your review. A public workshop has also been scheduled later that evening, from **6:00 p.m. to 7:30 p.m.**, also at the **Hiller Aviation Museum**.

We look forward to meeting with you on **March 21, 2018**. In the meantime, if you have any questions, please contact Gretchen Kelly, Airport Manager, at (650) 573-3700. If you have technical questions about the plan, please contact me at (816) 524-3500.

Sincerely,

Dave Fitz, AICP, LEED Green Associate
Principal

Dave Fitz, AICP, LEED Green Associate | Principal
237 NW Blue Parkway, Suite 100, Lee's Summit, MO 64063
816-524-3500 • www.coffmanassociates.com

Coffman
Associates
Airport Consultants

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CC: Gretchen Kelly, Airport Manager

Christopher St. Peter, Assistant Airport Manager
Davi Howard, Airport Communications Specialist
Jim Harris, Principal – Coffman Associates
Kory Lewis, Associate – Coffman Associates

SAN CARLOS AIRPORT
14 CFR PART 150 NOISE COMPATIBILITY PROGRAM
Planning Advisory Committee Meeting #4
March 21, 2018 from 2:00 p.m. to 4:00 p.m.
Hiller Aviation Museum, 601 Skyway Road, San Carlos

Agenda

- Welcome & Introductions
Gretchen Kelly, Airport Manager, County of San Mateo
- Study Process
Jim Harris, Coffman Associates
- Review of Noise Compatibility Program
Kory Lewis, Coffman Associates
- Review of Local Compatibility Measures
Dave Fitz, Coffman Associates
- Issues Discussion
Dave Fitz, Coffman Associates
- Adjournment (Public Workshop Reminder)



14 CFR Part 150 Noise Compatibility Study

PLANNING ADVISORY COMMITTEE

MEETING ATTENDANCE RECORD

Meeting: Planning Advisory Committee Meeting #4

Date: March 21, 2018

Time: 2:00 p.m.

Place: Hiller Aviation Museum

601 Skyway Road, San Carlos, CA

Please Print Neatly

NAME and ADDRESS

PHONE # / E-MAIL

1.	<u>Stacey May</u> <u>SOL TOWEL</u>	Phone #: <u>650 547-5289</u> E-mail: <u>Stacey.maye@serco-na.com</u>
2.	<u>Chris Sipek</u> <u>SMC Airports</u>	Phone #: <u>650.573.3700</u> E-mail: <u>csipek@smc.gov.org</u>
3.	<u>Michael Byrne</u> <u>SMC Airports</u>	Phone #: <u>650 573 3700</u> E-mail: <u>Mbyrne@smc.gov.org</u>
4.	<u>Erin Kalkin</u> <u>C/CHG AUC</u>	Phone #: <u>650 599-1467</u> E-mail: <u>kkalkin@smc.gov.org</u>
5.	<u>DAVI HOWARD</u> <u>SMC AIRPORTS</u>	Phone #: <u>650 573 3700</u> E-mail: <u>dhoward@smc.gov.org</u>
6.	<u>Rochelle Kiner</u> <u>SMC Deputy Dir Admin & Airports</u>	Phone #: <u>650 599 1463</u> E-mail: <u>r.kiner@smc.gov.org</u>
7.	<u>GRETCHEN KELLY</u> <u>COUNTY AIRPORT MANAGER</u>	Phone #: <u>650.573.3700</u> E-mail: <u>GKELLY@SMCGOV.ORG</u>
8.	<u>Steven Turner</u> <u>Planning Manager - City of PUC</u>	Phone #: <u>Sturner@redwoodcity.org</u> E-mail: <u>650 780 5934</u>
9.	<u>Wanda Sanders</u> <u>AIRPORT MANAGER CITY MANAGER</u>	Phone #: <u>650-333-0248</u> E-mail: <u>wsanders@cityofsan-carlos.org</u>
10.	<u>JOE STRATON</u> <u>6 WILL LN MP</u>	Phone #: <u>650 514 9927</u> E-mail: <u>JSTRATON@HOTMAIL</u>

NAME and ADDRESS		PHONE # / E-MAIL
11.	Scot Masters GESC	Phone #: 650-450-0990 E-mail: sam@gone.com
12.	RICH NEWMAN SAN CARLOS AIRPORT ASSOCIATION	Phone #: _____ E-mail: _____
13.	Jim Crenshaw - Redwood Shores County Assn	Phone #: 450-637-9407 E-mail: crenshaw@aol.com
14.	Steve Wagner - Coffman Associates	Phone #: _____ E-mail: _____
15.	JIM HARRIS - COFFMAN ASSOCIATES	Phone #: 602-993-6999 E-mail: jharris@coffmanassociates.com
16.		Phone #: _____ E-mail: _____
17.		Phone #: _____ E-mail: _____
18.		Phone #: _____ E-mail: _____
19.		Phone #: _____ E-mail: _____
20.		Phone #: _____ E-mail: _____
21.		Phone #: _____ E-mail: _____
22.		Phone #: _____ E-mail: _____
23.		Phone #: _____ E-mail: _____
24.		Phone #: _____ E-mail: _____
25.		Phone #: _____ E-mail: _____

NAME and ADDRESS

PHONE # / E-MAIL

11.	SCOT MARSTERS GESC	Phone #: 650-450-0990 E-mail: Sam@gone.com
12.	RICH NEWMAN SAN CARLOS AIRPORT ASSOCIATION	Phone #: _____ E-mail: _____
13.	JIM CVENGRAS - Redwood Shores County Assn	Phone #: 450-637-9407 E-mail: CVENGRAS@aol.com
14.	Steve Wagner - Coffman Associates	Phone #: _____ E-mail: _____
15.	JIM HARRIS - COFFMAN ASSOCIATES	Phone #: 602-993-6999 E-mail: jharris@coffmanassociates.com
16.		Phone #: _____ E-mail: _____
17.		Phone #: _____ E-mail: _____
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23.		Phone #: _____ E-mail: _____
24.		Phone #: _____ E-mail: _____
25.		Phone #: _____ E-mail: _____

CFR 14 Part 150 Noise Compatibility Study Meeting Summary

Meeting with: SQL Part 150 Planning Advisory Committee
Attendance: See attached attendance list

Meeting Date: March 21, 2018; 2:00 p.m.
Location: Hiller Aviation Museum

Summary

The fourth meeting of the Planning Advisory Committee (PAC) for the San Carlos Airport (SQL) Part 150 Study was held March 21, 2018 at the Hiller Aviation Museum. Gretchen Kelly, San Mateo County Airports Manager, welcomed everyone. Jim Harris from Coffman Associates asked everyone on the committee to introduce themselves and reviewed the study process.

Kory Lewis from Coffman Associates presented the Noise Compatibility Measures to be submitted to FAA for review under 14 CFR Part 150.

Steven Turner, Redwood City Planning, suggested that the word “required” be removed from the timing section of Land Use Measure 1.

Susy Kalkin, San Mateo City/County Associates of Governments, asked why the 60 CNEL was not shown on the maps after Land Use Measure 1.

Kory Lewis explained that FAA required the 60 CNEL be removed from the maps in the chapter and put into an appendix.

Rich Newman, San Carlos Airport Pilot’s Association, said he is supportive of the program as long as it continues to be voluntary.

Joe Straton, resident, asked why Surf Air would purchase such a noisy aircraft.

Rich Newman explained that airlines purchase the aircraft that best fits their business model. He also explained that the Bayside approach was put into place to address Surf Air concerns.

Chris St. Peter, San Mateo County Aviation Department, said the Bayside approach was used 75 percent of the time in January.

Rich Newman said that he is not supportive of paying for a system to record noise complaints.

Dave Fitz said yes, the airspace change will be looked at in terms of how it will influence arrival and departure procedures.

Dave Fitz discussed measures that would not be reviewed by FAA under 14 CFR Part 150 and explained that these measures, while beneficial, would not receive approval by FAA because they would not eliminate noise-sensitive land uses from the 65 CNEL noise contours.

Dave Fitz asked if there were any more questions, none were offered.

Dave Fitz reminded everyone about the public information workshop later in the evening and the meeting was adjourned.

#

Dave Fitz

From: McCaffrey, Melissa <Melissa.McCaffrey@aopa.org>
Sent: Thursday, February 15, 2018 4:31 PM
To: Dave Fitz
Subject: Re: San Carlos Airport – Part 150 Noise Compatibility Study Planning Advisory Committee Meeting #4

Follow Up Flag: Follow up
Flag Status: Flagged

Thank you!

Melissa McCaffrey
Western Pacific Regional Manager, AOPA
p: 301.695.2228 | c: 386.366.1811

----- Original message -----

From: Dave Fitz <dfitz@coffmanassociates.com>
Date: 2/15/18 5:24 PM (GMT-05:00)
To: "McCaffrey, Melissa" <Melissa.McCaffrey@aopa.org>
Cc: Kory Lewis <klewis@coffmanassociates.com>
Subject: RE: San Carlos Airport – Part 150 Noise Compatibility Study Planning Advisory Committee Meeting #4

Melissa,
We have had a few members of the committee call in during the past two meetings. I will confirm that we will have a similar setup for this meeting and get back to you.

Dave

Dave Fitz, AICP, LEED Green Associate | Principal
Coffman Associates, Inc. | 237 NW Blue Parkway, Suite 100, Lee's Summit, MO 64063
816-524-3500 | 816-309-3456 (cell) | coffmanassociates.com
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From: McCaffrey, Melissa [mailto:Melissa.McCaffrey@aopa.org]
Sent: Thursday, February 15, 2018 3:02 PM
To: Dave Fitz <dfitz@coffmanassociates.com>
Subject: RE: San Carlos Airport – Part 150 Noise Compatibility Study Planning Advisory Committee Meeting #4

Hi Dave,
Will there be a dial in for the meeting by chance? Thanks.

Melissa McCaffrey
Western Pacific Regional Manager, AOPA
p: 301.695.2228 | c: 386.366.1811



From: Dave Fitz [mailto:dfitz@coffmanassociates.com]

Sent: Thursday, February 15, 2018 11:32 AM

To: Dave Fitz <dfitz@coffmanassociates.com>

Cc: Jim Harris <jmharris@coffmanassociates.com>; Kory Lewis <klewis@coffmanassociates.com>; gkelly@smcgov.org;
Christopher St. Peter <cstpeter@smcgov.org>; Davi Howard <dhoward@smcgov.org>

Subject: San Carlos Airport – Part 150 Noise Compatibility Study Planning Advisory Committee Meeting #4

TO: TO: Ms. Rochelle Kiner, Ms. Camille Garibaldi, Ms. Stacey Maye, Ms. Thann McLeod, Mr. Philip Crimmins, Ms. Susy Kalkin, Ms. Tara Peterson, Ms. Melissa Diaz Stevenson, Mr. Kevin M. Miller, Mr. Carlos de Melo, Ms. Stacy Howard, Mr. Alex Gertsen, Ms. Melissa McCaffrey, Ms. April Gafford, UJ Emetron, Mr. Rich Newman, Mr. Hans Plesman, Mr. James Cvengros, Mr. Dimitri Vandellos, Mr. Steve Monowitz, Mr. Chris Hunter, Ms. Carol Ford, Mr. Irving Torres, Mr. Dan Dyer, Ms. Linda R. Wolin, Mr. Joe Straton, Mr. George Rodericks, and Mr. Alex D. McIntyre,

Dear Planning Advisory Committee Member:

The fourth Planning Advisory Committee (PAC) meeting for the Noise Compatibility Plan at the San Carlos Airport has been scheduled for:

Wednesday, March 21, 2018
2:00 p.m. – 4:00 p.m.
Hiller Aviation Museum
601 Skyway Road
San Carlos, California 94070

Since our last meeting on November 8, 2017, a considerable amount of work has been accomplished, including revisions to the Draft Final Noise Exposure Maps (NEM) document and the noise compatibility program working paper. The material to be discussed at the PAC meeting will be in the form of one draft working paper, as follows:

Chapter Six: Noise Compatibility Program

This working paper will be mailed to you prior to the committee meeting for your review. A public workshop has also been scheduled later that evening, from **6:00 p.m. to 7:30 p.m.**, also at the **Hiller Aviation Museum**.

We look forward to meeting with you on **March 21, 2018**. In the meantime, if you have any questions, please contact Gretchen Kelly, Airport Manager, at (650) 573-3700. If you have technical questions about the plan, please contact me at (816) 524-3500.

Sincerely,

Dave Fitz, AICP, LEED Green Associate
Principal

Dave Fitz, AICP, LEED Green Associate | Principal
237 NW Blue Parkway, Suite 100, Lee's Summit, MO 64063
816-524-3500 • www.coffmanassociates.com

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CC: Gretchen Kelly, Airport Manager

Christopher St. Peter, Assistant Airport Manager
Davi Howard, Airport Communications Specialist
Jim Harris, Principal – Coffman Associates
Kory Lewis, Associate – Coffman Associates

Dave Fitz

From: joe straton <joestraton@hotmail.com>
Sent: Tuesday, March 13, 2018 10:13 AM
To: Dave Fitz
Subject: part 150 sql

Hi Fitz,

I plan to attend the meeting on 3/21 at 2 pm. Could you bring the slide for page 2-3? I have a question about those aircraft noise contours.

thanks, Joe Straton

Dave Fitz

From: Carol Ford <carol_ford@sbcglobal.net>
Sent: Friday, March 09, 2018 2:54 AM
To: Dave Fitz
Cc: Jim Harris; Kory Lewis; Rich Newman
Subject: Re: San Carlos Airport – Part 150 Noise Compatibility Study Planning Advisory Committee Meeting #4

Hi Dave,

Just wanted to let you know, I will be out of town and thus, unable to attend the session on the 21st.

Please note I share all of Rich's comments, especially concerning the inclusion of the word voluntary.

Thanks for all your work.

Best,
Carol

From: Dave Fitz <dfitz@coffmanassociates.com>
To: Dave Fitz <dfitz@coffmanassociates.com>
Cc: Jim Harris <jmharris@coffmanassociates.com>; Kory Lewis <klewis@coffmanassociates.com>; "gkelly@smcgov.org" <gkelly@smcgov.org>; Christopher St. Peter <cstpeter@smcgov.org>; David Howard <dhoward@smcgov.org>
Sent: Thursday, February 15, 2018 11:31 AM
Subject: San Carlos Airport – Part 150 Noise Compatibility Study Planning Advisory Committee Meeting #4

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Sincerely,

Dave Fitz, AICP, LEED Green Associate
Principal

Dave Fitz, AICP, LEED Green Associate | Principal

237 NW Blue Parkway, Suite 100, Lee's Summit, MO 64063
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Airport Consultants

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CC: Gretchen Kelly, Airport Manager
Christopher St. Peter, Assistant Airport Manager
Davi Howard, Airport Communications Specialist
Jim Harris, Principal – Coffman Associates
Kory Lewis, Associate – Coffman Associates

PUBLIC INFORMATION WORKSHOP #4
March 21, 2018 from 6:00 – 7:30p.m.
Hiller Aviation Museum, 601 Skyway Road

Materials from the fourth Public Information Workshop included the following:

- Meeting Advertisement
- Sign-In Sheet(s)
- Comment Sheet(s)

The fourth public workshop was advertised via the following methods:

- Email announcements were sent to the airport tenant and community distribution lists

From: **San Mateo County** <sanmateocounty@service.govdelivery.com>
Date: Mon, Mar 19, 2018 at 6:19 PM
Subject: San Carlos Airport Part 150 Study - 4th Public Information Meeting
To:



COUNTY OF SAN MATEO

EMAIL UPDATES

The 4th Public Information Workshop will be held Wednesday evening, March 21st, 2018, from 6:00 PM until 7:30 PM at the Hiller Aviation Museum at 601 Skyway Road in San Carlos.

The Public Information Workshop will be an Open House format. In the event you are unable to attend, all meeting materials and updates will be posted on the following website: <http://sancarlosnoise.airportstudy.com>

- [Ad+3-21-18+%28003%29.pdf](#)

 SHARE

Subscriber Services:

[Manage Preferences](#) | [Delete Profile](#) | [Help](#) | [County of San Mateo Website](#)

This email was sent to chris@chrisstoeter.net using GovDelivery Communications Cloud on behalf of San Mateo County 555
County Center Redwood, CA 94063 650-363-4000



San Carlos Airport

Public Information Workshop #4

Regarding the

14 CFR Part 150 Noise Compatibility Study

Wednesday, March 21, 2018

6:00 - 7:30 P.M.

at the

Hiller Aviation Museum

601 Skyway Road

San Carlos, CA 94070

Everyone Welcome

Open House Format - Please Drop In Anytime

For more information please contact the
San Carlos Airport at 650.573.3700

Public Information Workshop materials will
be posted online shortly after the meeting at
<http://sancarlosnoise.airportstudy.com>





14 CFR Part 150 Noise Compatibility Study

PUBLIC INFORMATION WORKSHOP

MEETING ATTENDANCE RECORD

Meeting: Public Information Workshop Meeting #4

Date: March 21, 2018 Time: 6:00 - 7:30 p.m.

Place: Hiller Aviation Museum

601 Skyway Road, San Carlos, CA 94070

Please Print Neatly

NAME and ADDRESS		PHONE # / E-MAIL	
1.	Shreen Nare SQL Bus	Phone #: 650 5925884	E-mail: Shreen-nare@sercon.com
2.	Mark Bostet	Phone #: 305 Louis Lane	E-mail: Bobwoodc@y
3.	Bert Ganoung	Phone #: 650-821-5100	E-mail: bert.ganoung@flysfair.com
4.	MARK ROEST 3329 Los Prados St. #1 San Mateo 94403-3035	Phone #: 650 888 3665	E-mail: MARK.LROEST@gmail.com
5.		Phone #:	E-mail:
6.		Phone #:	E-mail:
7.		Phone #:	E-mail:
8.		Phone #:	E-mail:
9.		Phone #:	E-mail:
10.		Phone #:	E-mail:

14 CFR Part 150 Noise Compatibility Study
**PUBLIC INFORMATION WORKSHOP
 MEETING ATTENDANCE RECORD**



Meeting: Public Information Workshop Meeting #4 Date: March 21, 2018 Time: 6:00 - 7:30 p.m.
 Place: Hillier Aviation Museum
601 Skyway Road, San Carlos, CA 94070

NAME and ADDRESS		PHONE # / E-MAIL	
1.	BRIAN IRVINE & CAROL IRVINE 405 CHARLOTT LN RWC. 94063	Phone #: 650-743-6508	E-mail: brian@brianirvine.com
2.	Jim Crampton 631 True Windway #216 RWC 94063	Phone #: 650-257-3639	E-mail: jCrampton@yahoo.com
3.	KACE CRAVIER SUCUSTA San Carlos	Phone #: 650 274 8555	E-mail:
4.	Tim Hilberg 1052 Sylvaq Dr. San Carlos CA 94070	Phone #: 650-454-5818	E-mail:
5.		Phone #:	E-mail:
6.		Phone #:	E-mail:
7.		Phone #:	E-mail:
8.		Phone #:	E-mail:
9.		Phone #:	E-mail:
10.		Phone #:	E-mail:

Dave Fitz

From: Airport Study Comment Form <noreply@airportstudy.com>
Sent: Monday, March 19, 2018 12:18 PM
To: Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Noise.airportstudy.com - comments

Name

Kristina Ho

Email

kristina.ho@gmail.com

Organization

Self

Address

915 Buckland Ave
San Carlos, California 94070
United States
[Map It](#)

Subject

Night time noise from SC Airport

Your Comments

More recently, the noise from the SC Airport has become more frequent at night time (3-4 loud aircraft each week). Last night (3/19), I heard a loud aircraft, what sounded like a helicopter flying over my house. I had just put my children to sleep (around 8pm) and I walked down the hallway and hear a really loud aircraft. I would hope that this type of noise at night is only on an exception basis rather than the norm. I skimmed through the Exposure Maps, but it's hard to tell what is considered to be acceptable and at what times during the day.

14 CFR Part 150 Noise Compatibility Study
**PUBLIC INFORMATION WORKSHOP
MEETING COMMENT FORM**



Meeting: Public Information Workshop Meeting #4 Date: March 21, 2018 Time: 6:00 - 7:30 p.m.

Place: Hiller Aviation Museum

Please Print Neatly

601 Skyway Road, San Carlos, CA 94070

Living in San Carlos near the intersection
of San Carlos Avenue and Alameda De Los Peñas
we have noticed much less noise from Surf
Air aircraft less aviation activity generally
One wonders if people who complain do so
out of purely altruistic motives.

Karl P.

Mail to:
COFFMAN ASSOCIATES, INC.
237 N.W. Blue Parkway, Suite 100
Lee's Summit, MO 64063
www.coffmanassociates.com

Comments can also be submitted
on the project website: sancarlosnoise.airportstudy.com

Dave Fitz

From: Airport Study Comment Form <noreply@airportstudy.com>
Sent: Wednesday, August 29, 2018 1:18 PM
To: Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Noise.airportstudy.com - comments

Name

Ilian Georgiev

Email

ilian.georgiev@gmail.com

Address

404 Portofino Dr
Apt 2
San Carlos, California 94070-3555
United States
[Map It](#)

Subject

I <3 The San Carlos Airport

Your Comments

I am so glad that it is in our community and I do not mind the noise at all.

Dave Fitz

From: Airport Study Comment Form <noreply@airportstudy.com>
Sent: Friday, September 14, 2018 12:13 PM
To: Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Noise.airportstudy.com - comments

Name

Robert Faust Faust

Email

rfaust6024@sbcglobal.net

Address

527 Compass Drive
Redwood City, California 94065
United States
[Map It](#)

Subject

I fully support our San Carlos Airport...

Your Comments

I moved to Redwood Shores in 1981. One of the reasons I liked it was on account of the airport and Sky Kitchen. The planes do not bother me or my family, and we enjoy watching them fly over.

Dave Fitz

From: Matt Leddy <mtleddy@sbcglobal.net>
Sent: Friday, September 14, 2018 5:11 PM
To: Dave Fitz
Subject: Re: 2017 Draft San Carlos Airport Noise Study Comments

Hi Dave,

I just received the notice for the September 26, 2018 San Carlos Airport Noise Study, thank you.

I checked Appendix B in the Noise Exposure Map document, and my November 12, 2017 comments are not included. I am assuming they are not included because the Noise Exposure Map document is dated September, 2017. I just want to check, at what point will that document be updated so that the public can read my comments?

Thanks very much, and have a good weekend,
Matt

From: Dave Fitz <dfitz@coffmanassociates.com>
To: Matt Leddy <mtleddy@sbcglobal.net>
Cc: "gkelly@smcgov.org" <gkelly@smcgov.org>; "dhorsley@smcgov.org" <dhorsley@smcgov.org>; Christopher St. Peter <cstpeter@smcgov.org>; Jim Harris <jmharris@coffmanassociates.com>; Kory Lewis <klewis@coffmanassociates.com>
Sent: Monday, April 2, 2018 11:36 AM
Subject: RE: 2017 Draft San Carlos Airport Noise Study Comments

Matt,

All comments we receive are put into a public coordination appendix for each document produced as part of this study. The first document, the Noise Exposure Map document, is made up of the first Chapters posted online. The Draft Noise Exposure Map document is posted online and Appendix B includes the comments we received on the first three chapters. If you provided us comments on the first three chapters and your comments are not in Appendix B- please let us know.

The second document, the Noise Compatibility Program, will be made up of the next three chapters posted online. The comment period on Chapter Six is still open. We will be working on revising these chapters and a holding a public hearing over the next few months. Once the public hearing is held, the Noise Compatibility Program and public coordination appendix will be posted online.

Dave

Dave Fitz, AICP, LEED Green Associate | Principal
Coffman Associates, Inc. | 237 NW Blue Parkway, Suite 100, Lee's Summit, MO 64063
816-524-3500 | 816-309-3456 (cell) | coffmanassociates.com
Planning for Your Success!

From: Matt Leddy <mtleddy@sbcglobal.net>
Sent: Monday, April 02, 2018 12:56 PM

To: Dave Fitz <dfitz@coffmanassociates.com>
Cc: gkelly@smcgov.org; dhorsley@smcgov.org
Subject: 2017 Draft San Carlos Airport Noise Study Comments

Hi Dave,

I have been checking the 150 Study website for public comments that have been submitted to see if the comments I sent you have been posted. I think it is important for the public to be able to review what people are submitting, and I don't see my comments on the 150 Study webpage. Are my comments posted anywhere for the public to review?

I have attached a copy of my comments for your convenience.

Thank you,
Matt

Dave Fitz

From: Airport Study Comment Form <noreply@airportstudy.com>
Sent: Sunday, September 16, 2018 1:54 PM
To: Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Noise.airportstudy.com - comments

Name

Laurie Bechtler

Email

lbechtler@outlook.com

Address

14 Cove Lane
Redwood City, California 940651053
United States
[Map It](#)

Subject

San Carlos airport noise

Your Comments

I have read through the documents regarding the airport noise, and I understand the fact that local guidelines are the primary means of noise reduction in this area.

I live in the Pelican Cove development, which is just to the north and slightly to the east of the diamond-shaped lagoon. Many aircraft take off to the northwest, then perform a turn very close to or even directly overhead our neighborhood. Some of the smaller airplanes are disturbingly low in altitude. If multiple airplanes are performing touch-and-go's at the same time, there can be 30 overflights in 45 minutes.

My requests are as follows:

- (1) Pilots performing touch-and-go circles should vary their return route to the airport with each circle.
- (2) Pilots should avoid very low altitude flights over residences (if you want to fly at 200 feet, then go over the slough and bay).
- (3) Pilots should perform their return turn over the slough, over Oracle, over the business park, or over the bay.
- (4) Pilots of aircraft known to be very noisy should be the most considerate when choosing their departure routes.

Dave Fitz

From: Airport Study Comment Form <noreply@airportstudy.com>
Sent: Friday, September 21, 2018 6:36 PM
To: Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Noise.airportstudy.com - comments

Name

Judy Ee

Email

Healthy892@yahoo.com

Address

Redwood shores, California 94065
United States
[Map It](#)

Subject

Airport noises

Your Comments

There are too many flights flying over my house. The noise is unacceptable. Something must be done about this

Dave Fitz

From: Dave Fitz
Sent: Wednesday, September 05, 2018 8:47 AM
To: pderner@nbaa.org
Cc: Stacy Howard; gkelly@smcgov.org; Kory Lewis; Jim Harris
Subject: FW: San Carlos Airport Pat 150 study

Mr. Derner,
Per Stacy's suggestion, here is a link to the San Carlos Airport 14 CFR Part 150 Noise Compatibility Study materials:
<http://sancarlosnoise.airportstudy.com/>

Please let us know if you have any questions.

Thank you.

Dave

Dave Fitz, AICP, LEED Green Associate | Principal
Coffman Associates, Inc. | 237 NW Blue Parkway, Suite 100, Lee's Summit, MO 64063
816-524-3500 | 816-309-3456 (cell) | coffmanassociates.com
Planning for Your Success!

From: Stacy Howard <stacykhoward@msn.com>
Sent: Saturday, September 01, 2018 9:19 PM
To: Dave Fitz <dfitz@coffmanassociates.com>
Cc: Phil Derner <pderner@nbaa.org>
Subject: Re: San Carlos Airport Pat 150 study

Dave:

I am at my summer residence. I recommend you send Phil a link to the documents on your website, and instructions for setting up a user name and password for all Coffman projects.

Stacy

On Aug 30, 2018, at 5:26 PM, Dave Fitz <dfitz@coffmanassociates.com> wrote:

Stacey,
Congratulations!! Unfortunately we mailed the material to you yesterday. Any chance you can forward the material to Mr. Derner?

Dave

Dave Fitz, AICP, LEED Green Associate | Principal
Coffman Associates, Inc. | 237 NW Blue Parkway, Suite 100, Lee's Summit, MO 64063
816-524-3500 | 816-309-3456 (cell) | coffmanassociates.com
Planning for Your Success!

From: Stacy Howard <stacykhoward@msn.com>
Sent: Thursday, August 30, 2018 6:56 PM
To: Dave Fitz <dfitz@coffmanassociates.com>
Cc: Phil Derner <pderner@nbaa.org>
Subject: San Carlos Airport Pat 150 study

Dear David:

I have retired as Regional Representative for the National Business Aviation Association. Please send all documents concerning the San Carlos Airport Part 150 study to the new NBAA Regional Rep, Mr. Phil Derner. He can be contacted at pderner@nbaa.org.

Thank you and best wishes on the study.

Stacy

SAN CARLOS AIRPORT

**14 CFR Part 150 Study
Planning Advisory Committee Members**

August 29, 2018

Attached is the revised Chapter Six, Noise Compatibility Program, for the San Carlos Airport Part 150 Study. The attached material is the topic of the upcoming Public Workshop/Hearing scheduled for **Wednesday, September 26, 2018 from 6:00 p.m. to 7:30 p.m.** at the Hiller Aviation Museum.

PART 150 STUDY

REVISED CHAPTER SIX – NOISE COMPATIBILITY PROGRAM

I have read the working papers and have no comments.

I have read the working papers and have the following comments. (Please add extra sheets if necessary.)

*DO THE CNEL CONTOURS INCLUDE THE RESULTS
OR ACCOUNT FOR TEMPERATURE INVERSION?*

Please mail this response sheet by October 12, 2018 to:

**COFFMAN ASSOCIATES, INC.
237 N.W. Blue Parkway, Suite 100
Lee's Summit, Missouri 64063
Attn: David Fitz, dfitz@coffmanassociates.com**

Name: STEVEN MACHIDA
Representing: CITY OF SAN CARLOS
Phone: 650-902-4703
Email: SMACHIDA@CITYOFSANCARLOS.ORG

Dave Fitz

From: Rich Newman <rnewman@rochex.com>
Sent: Wednesday, September 26, 2018 4:33 PM
To: Dave Fitz
Cc: Carol Ford (carol_ford@sbcglobal.net); Baum Michael (michael@secureav.com); Terrence Cross; Gretchen Kelly (gkelly@smcgov.org); Chris St. Peter; Linda Wolin
Subject: SQL Part 150 study

Hello Dave,

I had a few minutes (finally) to review the revised insert to the study materials.

I was a bit dismayed to see a few things I know I addressed, still in the materials, which we found highly objectionable:

1) Noise complaint handling system:

The document implies that deviations from the Voluntary Noise Abatement Program are investigated only when there is a complaint about a “violation”. From recent reports from the County, it appears that may not be the case. Unless there are specific complaints about specific flights, I am not understanding why specific flights are being investigated, reported and letters issued. This question is posed to airport management as well, but the text of the study appears to contradict the policy in the study text. I believe that the installation of equipment which can monitor flights encourages that activity, notwithstanding the existence or lack thereof, of specific complaints. The result is that the appearance is that the numbers of “violations” is growing, when in fact, that may not be the case.

2) Local Noise Compatibility Measures:

I recall making a point that there are not “thousands” of complaints, if you count each household as one complaint. Either the text should be revised, or a specific notation should be made (which I asked for in our last meeting) which makes clear that the “thousands” are from a very few households.

Another provision:

“Hold monthly meetings with pilots and students to discuss safety and noise abatement issues at the Airport”. The expressed agreement with the Board of Supervisors currently in place is that barring specific problems which require occasional meetings on specific matters, pilots will not be counseled or bothered with essentially scolding actions. This policy suggests that regular meetings are happening, or should happen. I recall specifically calling this provision out in our last meeting with the committee. This does position does not suggest that we object to outreach to non-local pilots or students (or new pilots). In fact, we encourage that practice.

I don't really want to engage during the public session tonight, as I expect that will be a bit of a circus, but I want to be sure that these points are made. If the suggestions we made were not to

be incorporated, I would have preferred to hear about it prior to the issuance of the revised study materials, so that the appropriate political objections could be lodged.

Thank you,

Rich Newman
For the San Carlos Airport Pilots Association

Richard M. Newman
Rochex & Rochex
Mailing address only:
1141 Capuchino Avenue, #1934
Burlingame, CA 94011-1934

Ph: 650-259-9559
Fx: 650-343-6111

CAL BRE 00596443
NMLS 349302/349071

Dave Fitz

From: Dimitri Vandellos <dvandellos@gmail.com>
Sent: Sunday, September 23, 2018 5:43 PM
To: Gretchen Kelly; Dave Fitz; Davi Howard
Cc: Scot Marsters; pdmaggine@hotmail.com; Tara Peterson; Rochelle Kiner; Michael Byrne; Mike Callagy; Tim Hilborn; Ben Fuller; Chris St. Peter; Priya Premchandran; Caroline Tudor; Holly Jones; aj.ross@gmail.com; Eric Vignola; Gina Vandellos
Subject: Re: San Carlos Airport Part 150 Study Public Hearing
Attachments: 2018-09-24 City Council - Public Agenda-2789.pdf; Public Hearing Ad 9-26-18.pdf

Hi Gretchen, Dave, and Davi,

I have heard from a number of residents that have expressed concern about the format of the Airport noise study meetings. Here is just one example:

I live on McCue and have been listening to these damn helicopters for years. They have to fly over 101 or some area away from people's homes. There are times the big helicopters fly over at 10:00 at night--- not acceptable!!! Also, regarding airplane traffic, one of these days a plane headed to/from San Carlos Airport is going to crash down onto someone's house.

I would like to know if this "hearing" for September 26 is just another meet and greet by a few of the airport staff. I have been to 3-4 of these "so called airport noise meetings" under the assumption that a meeting would take place. Unfortunately, myself along with many other frustrated neighbors, are greeted in a lobby with easels containing photos and charts, along with views for the future. The airport staff then proceeds to corral small groups of residents and have discussions, totally diffusing the issue of a meeting with residents to discuss airport noise. By conducting these small discussion groups is useless, and the frustration of the airport noise escalates with residents of the GESG neighborhoods.

Can you confirm that this session on September 26 will be a meeting with chairs set up for the audience and the airport staff in front of the group opposed to just another meet and greet? I want to see a meeting, where neighbors can ask important questions of the airport "powers that be". If it's just another meet and greet I will not be attending.

Would it be possible to change the format of this meeting from previous Noise Study meetings so that the community can be seated and ask questions to staff and the company doing the noise study directly? Just so that you know many people have expressed their frustrations with the format of the previous meetings and feel the same way.

I am also concerned that the Noise Study conclusions are being presented to San Carlos City Council **two days ahead of the community meeting**. From my perspective, this implies that feedback from the communities immediately surrounding the Airport at the final meeting will be irrelevant and that the Noise Study results will be presented in a way to show that the Airport has no impacts to the surrounding communities. Maybe this is just a scheduling issue, but the optics are poor from the Community's perspective.

For complete transparency, I've included my response to the person who reached out to me via email regarding this meeting.

Thanks for your consideration!

Dimitri

Begin forwarded message:

From: Dimitri Vandellos <gescpresident@gmail.com>
Subject: Re: Airport Noise Hearing
Date: September 23, 2018 at 3:14:00 PM PDT

Hi Kelly,

Thank you for the email! Yes the helicopters are extremely noisy and it is indeed frustrating to so many members of our community, especially since we keep complaining over and over about the same issues to the airport.

I had a 4 hour meeting a few weeks ago with Airport staff and the new flight control tower manager and expressed the same concerns that you (and many other residents) have to them directly.

There are a number of things they are trying to do to mitigate the impacts to our neighborhood. Unfortunately they are proceeding at a snails pace and that is not entirely their fault. They have to deal with the bureaucracy of the FAA which slows things down significantly. For example they petitioned to get more airspace north of the airport to be under San Carlos Airspace control and not SFO airspace control. Which succeeded, which is great! However in order to take advantage of that change the FAA also needed to raise height limit for the airspace under the San Carlos' Airport's control. Which they did not do! So now the airport is petitioning to get this change addressed. The upshot is that once this happens planes and helicopters can fly at higher altitudes than they are currently.

After my long discussion with Airport staff and the new air traffic control manager I have come to realize that many of the issues we are facing are the direct result of pilots behaving badly and being oblivious to how badly they are impacting our community. I encourage you to reach out to Davi Howard and express your frustrations to him directly. His number is (650) 573-2881. He is a good guy who has been hired expressly to address community issues and to do outreach to pilots who fly in and out of the airport. It is a slow process and I feel it will take time to get under control again.

I do feel airport staff are trying but I also I agree with you that the relationship with the airport and our community has taken a significant turn for the worse over the past few years. I agree with you that it is only a matter of **when** a helicopter or plane crashes into one of our homes not **if**, especially if the airport keeps allowing approaches and departures over our community at the low altitudes that we keep complaining about. Also Helicopters are supposed to be east of Industrial so whenever you notice one that isn't, please file a complaint. Yesterday late afternoon was really bad because several helicopters were doing pattern work over our community. This is a practice that I thought had been stopped. I have already contacted Davi and left him a message about this. So please talk to Davi directly and let him know your concerns.

I feel we have to keep working together with the airport to try and solve the issues, so please don't lose hope, and keep sending in your complaints to them so that they understand how impactful they have been to our community.

I will reach out to airport staff and the company hired by the FAA to ask them if the format for the meeting will be the same as the previous ones and will encourage them to change the format so that the community can express its concerns in a different format.

Thank you for reaching out!

Dimitri

On Aug 23, 2018, at 6:08 PM, Gretchen Kelly <gkelly@smcgov.org> wrote:

Hello GESC,

We have scheduled a public hearing for the San Carlos Airport's FAA funded Part 150 Noise Study. The Noise Study hearing will be held on Wednesday, September 26, 2018 from 6:00 PM until 7:30 PM at the Hiller Aviation Museum. Public comments will be received on the Study until October 12, 2018. The hearing is a Federal Aviation Administration (FAA) Part 150 Noise Study requirement. Comments received at the hearing and during the comment period will be included in the Study transcripts. Following the public comment period, the Noise Study will be presented to the FAA and County Board of Supervisors for consideration.

The San Carlos Airport Noise Study Public Hearing announcement is attached.

The GESC has been well represented throughout the Study by both residents and City representatives. The draft San Carlos Airport Noise Study can be viewed on the following website: <http://sancarlosnoise.airportstudy.com/>.

Please feel free to reach out with any questions or for additional information.

Best,
Gretchen

Gretchen Kelly

Manager, [San Mateo County](#) Airports
[Half Moon Bay & San Carlos](#) Airports
Office 650.573.3700

SAN CARLOS AIRPORT

14 CFR Part 150 Study Planning Advisory Committee Members

August 29, 2018

Attached is the revised Chapter Six, Noise Compatibility Program, for the San Carlos Airport Part 150 Study. The attached material is the topic of the upcoming Public Workshop/Hearing scheduled for **Wednesday, September 26, 2018 from 6:00 p.m. to 7:30 p.m.** at the Hiller Aviation Museum.

PART 150 STUDY

REVISED CHAPTER SIX – NOISE COMPATIBILITY PROGRAM



I have read the working papers and have no comments.



I have read the working papers and have the following comments. (Please add extra sheets if necessary.)

Please mail this response sheet by October 12, 2018 to:

COFFMAN ASSOCIATES, INC.
237 N.W. Blue Parkway, Suite 100
Lee's Summit, Missouri 64063
Attn: David Fitz, dfitz@coffmanassociates.com

Name: JEFF MONEDA
Representing: FOSTER CITY
Phone: 650-286-3288
Email: jmoneda@foster-city.org

SAN CARLOS AIRPORT

14 CFR Part 150 Study Planning Advisory Committee Members

August 29, 2018

Attached is the revised Chapter Six, Noise Compatibility Program, for the San Carlos Airport Part 150 Study. The attached material is the topic of the upcoming Public Workshop/Hearing scheduled for **Wednesday, September 26, 2018 from 6:00 p.m. to 7:30 p.m.** at the Hiller Aviation Museum.

PART 150 STUDY

REVISED CHAPTER SIX – NOISE COMPATIBILITY PROGRAM

I have read the working papers and have no comments.

I have read the working papers and have the following comments. (Please add extra sheets if necessary.)

Please mail this response sheet by October 12, 2018 to:

COFFMAN ASSOCIATES, INC.
237 N.W. Blue Parkway, Suite 100
Lee's Summit, Missouri 64063
Attn: David Fitz, dfitz@coffmanassociates.com

Name: Tara Peterson
Representing: City of San Carlos
Phone: 650 802 4230
Email: tpeterson@CityofsanCarlos.org

SAN CARLOS CITY COUNCIL BRIEFING
September 24, 2018 at 7:00 p.m.
600 Elm Street, San Carlos, CA 94070

Materials from the Community Meeting included the following:

- Meeting Agenda
- PowerPoint Presentation



CITY OF SAN CARLOS

City Council/Successor Agency to the Redevelopment Agency/Housing Authority Regular Meeting

September 24, 2018 7:00 P.M.
Council Chambers, City Hall
600 Elm Street, San Carlos, CA 94070
www.cityofsancarlos.org

AGENDA

City Council agenda materials may be viewed online at www.cityofsancarlos.org, in the City Clerk's office and in the San Carlos Library (610 Elm Street) at least 24 hours prior to a special meeting, and at least 72 hours prior to a regular meeting. Those persons wishing to address the Council should fill out a speaker card located in the meeting room and deliver the speaker card to the City Clerk or announce an intention to speak on an item once it is called.

MAYOR: **Bob Grassilli**

COUNCIL: **Ronald Collins, Matt Grocott, Cameron Johnson, Mark Olbert**

1. CALL TO ORDER
2. PLEDGE OF ALLEGIANCE
3. CHANGES TO THE ORDER OF THE AGENDA
4. PRESENTATIONS
 - a. Welcome Administrative Sergeant Jacob Trickett.
 - b. Receive a Presentation from San Mateo County's Noise Study Expert on the San Carlos Airport's Federal Aviation Administration (FAA) Funded Part 150 Noise Study.
 - c. Run-Through Digital Voting in Council Chambers.
 - d. Receive a Presentation on Insurance Services Office (ISO) Class One Fire Protection Rating.
5. PUBLIC COMMENT

Persons wishing to address the City Council on matters NOT on the posted agenda may do so.

Each speaker is limited to two minutes. If there are more than five individuals wishing to speak during public comment, the Mayor may draw five speaker cards from those

submitted to speak during this time, and the balance of the Public Comment speakers will be called upon at the end of the Council Meeting.

If the item you are speaking on is not listed on the agenda, please be advised that the City Council may briefly respond to statements made or questions posed as allowed under The Brown Act (Government Code Section 54954.2). The City Council's general policy is to refer items to staff for attention, or have a matter placed on a future City Council agenda for a more comprehensive action or report and formal public discussion and input at that time.

6. CONSENT CALENDAR

- a. Motion to Waive Reading of All Ordinances.
- b. Approve Minutes of September 10, 2018 City Council Regular Meeting.
- c. Adopt a Resolution Accepting a Grant of Public Access Easement from SC Landmark Hotels, LLC on a Portion of the Property at 800 East San Carlos Avenue and Authorizing the City Manager to Sign and Record the Easement.
- d. Adopt a Resolution Summarily Vacating a Public Utility Easement Over Adjacent Lots at 2666 and 2660 San Carlos Avenue.

7. STUDY SESSION

- a. Discuss Updates to the Elected Officials Salary and Benefit Resolution.

8. NEW BUSINESS

- a. Consideration of Adopting a Resolution Agreeing to Share in the Cost for Crossing Guard Services with the San Carlos School District for Fiscal Year 2018-19 for an Additional Crossing Guard Location at a Cost of \$8,321.87.

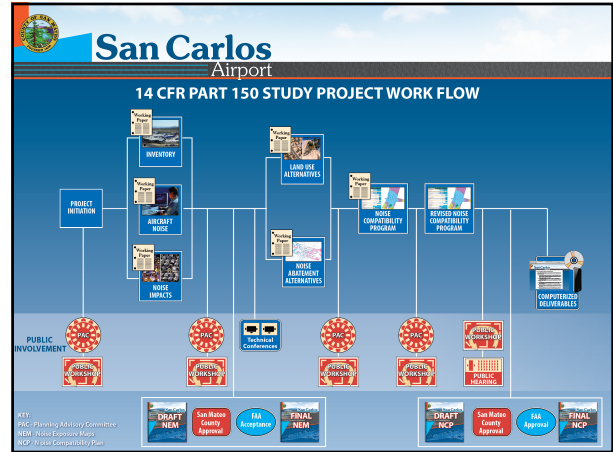
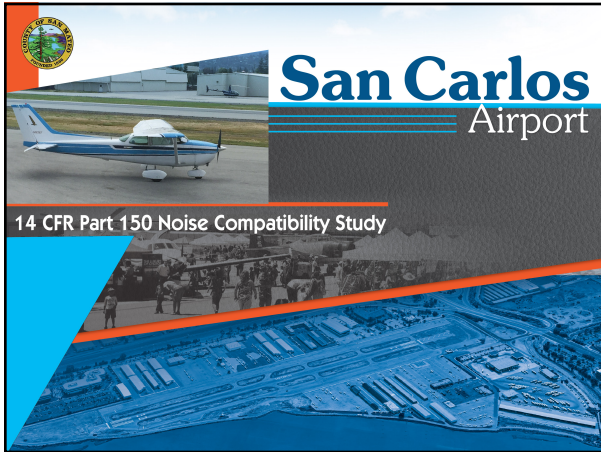
9. COUNCIL COMMUNICATIONS AND ANNOUNCEMENTS

- a. Council Members Report on Subcommittees, Regional Boards, Commissions and Committees.
- b. Staff Comments on City Administrative Business.

10. ADJOURNMENT

Any writings or documents provided to a majority of the City Council regarding any item on this agenda will be made available for public inspection at the City Clerk's Office at City Hall - 600 Elm Street, San Carlos, during normal business hours.

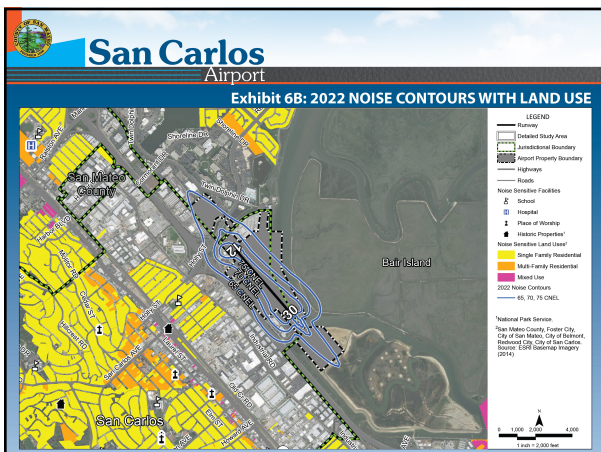
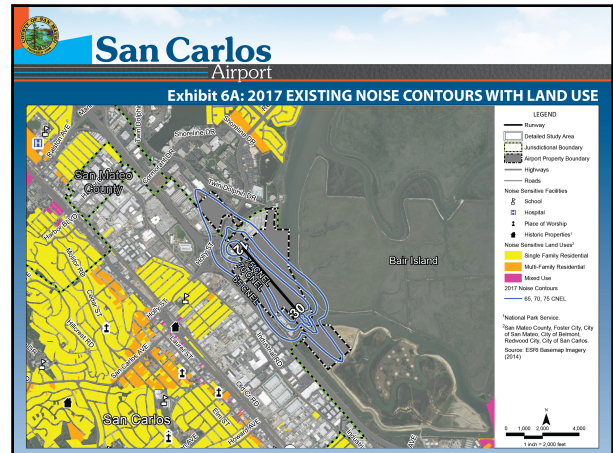
In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the City Clerk at (650) 802-4219. Notification in advance of the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting.



San Carlos Airport

Noise Exposure Maps

- 2017 Existing Condition
- 2022 Five-Year Forecast



San Carlos Airport

Table 6A: NOISE SENSITIVE LAND USES AND POPULATION EXPOSED TO THE 2017 AND 2022 AIRCRAFT NOISE ABOVE 65 CNEL

	65-70 CNEL	70-75 CNEL	75+ CNEL
2017 Noise-Sensitive Land Uses			
Single Family Residential	0.0	0.0	0.0
Multi-Family Residential	0.0	0.0	0.0
Noise-Sensitive Institutions	0.0	0.0	0.0
Total	0.0	0.0	0.0
2022 Noise-Sensitive Land Uses			
Single Family Residential	0.0	0.0	0.0
Multi-Family Residential	0.0	0.0	0.0
Noise-Sensitive Institutions	0.0	0.0	0.0
Total	0.0	0.0	0.0
Population			
2017 Noise Exposure Contours	0.0	0.0	0.0
Total	0.0	0.0	0.0
2022 Noise Exposure Contours	0.0	0.0	0.0
Total	0.0	0.0	0.0

Source: Coffman Associates' analysis.
Note: The 60 CNEL noise exposure contour and summary of impacts can be found in Appendix F.

San Carlos
Airport

Noise Compatibility Program

- Noise Abatement Element
- Land Use Management Element
- Program Management Element

San Carlos
Airport

Table 6B:
SUMMARY OF NOISE COMPATIBILITY PROGRAM
MEASURES FOR REVIEW UNDER 14 CFR PART 150

LAND USE MANAGEMENT ELEMENT	
Measure: 1. Encourage the cities of San Carlos and Redwood City to add the 2022 noise exposure contours to the general plan maps	
Cost to Airport Or Government	Administrative
Direct Cost to Users	None
Timing	2019
Lead Responsibility	San Mateo County
Potential Funding Sources	City of San Carlos and Redwood City Operating Budgets

San Carlos
Airport

Table 6B:
SUMMARY OF NOISE COMPATIBILITY PROGRAM
MEASURES FOR REVIEW UNDER 14 CFR PART 150

LAND USE MANAGEMENT ELEMENT	
Measure: 2. Encourage Redwood City to incorporate project review guidelines into their proposed development review process	
Cost to Airport Or Government	Administrative
Direct Cost to Users	None
Timing	2019
Lead Responsibility	San Mateo County
Potential Funding Sources	Redwood City Operating Budgets

San Carlos
Airport

Table 6B:
SUMMARY OF NOISE COMPATIBILITY PROGRAM
MEASURES FOR REVIEW UNDER 14 CFR PART 150

LAND USE MANAGEMENT ELEMENT	
Measure: 3. Encourage the San Mateo County Airport Land Use Commission to incorporate 2022 noise exposure contours into San Carlos Airport ALUCP until updated 20-year forecast can be implemented	
Cost to Airport Or Government	Administrative
Direct Cost to Users	None
Timing	2019
Lead Responsibility	San Mateo County
Potential Funding Sources	San Mateo County Airport Land Use Commission Operating Budget

San Carlos
Airport

Table 6B:
SUMMARY OF NOISE COMPATIBILITY PROGRAM
MEASURES FOR REVIEW UNDER 14 CFR PART 150

PROGRAM MANAGEMENT ELEMENT	
Measure: 1. Continue use of the Airport's noise complaint handling system.	
Cost to Airport Or Government	Administrative
Direct Cost to Users	None
Timing	Ongoing
Lead Responsibility	San Mateo County Aviation Department
Potential Funding Sources	San Mateo County Aviation Department Operating Budget

San Carlos
Airport

Table 6B:
SUMMARY OF NOISE COMPATIBILITY PROGRAM
MEASURES FOR REVIEW UNDER 14 CFR PART 150

PROGRAM MANAGEMENT ELEMENT	
Measure: 2. Update Noise Exposure Maps and Noise Compatibility Program.	
Cost to Airport Or Government	\$300,000
Direct Cost to Users	None
Timing	2027
Lead Responsibility	San Mateo County Aviation Department
Potential Funding Sources	San Mateo County Aviation Department Operating Budget

San Carlos
Airport

Table 6B:
SUMMARY OF NOISE COMPATIBILITY PROGRAM
MEASURES FOR REVIEW UNDER 14 CFR PART 150

PROGRAM MANAGEMENT ELEMENT

Measure:
3. Monitor implementation of the Part 150 Noise Compatibility Program.

Cost to Airport Or Government	Administrative
Direct Cost to Users	None
Timing	Ongoing
Lead Responsibility	San Mateo County Aviation Department
Potential Funding Sources	San Mateo County Aviation Department Operating Budget

San Carlos
Airport

Table 6B:
SUMMARY OF NOISE COMPATIBILITY PROGRAM
MEASURES FOR REVIEW UNDER 14 CFR PART 150

	Funding Source	Amount	Percent
Total Cost and Funding Source	FAA	\$270,000	90.0%
	San Mateo County Capital Budget	\$30,000	10.0%
		\$300,000	100.0%

San Carlos
Airport

Local Noise Compatibility Measures

San Carlos
Airport

Table 6C:
SUMMARY OF NOISE COMPATIBILITY PROGRAM
MEASURES NOT FOR REVIEW UNDER 14 CFR PART 150

LOCAL NOISE COMPATIBILITY MEASURES

Measure:
1. Continue to distribute Noise Abatement Procedure brochures and maintain on-airport noise abatement signage.

Cost to Airport Or Government	Administrative
Direct Cost to Users	None
Timing	Ongoing
Lead Responsibility	San Mateo County Aviation Department

San Carlos
Airport

Table 6C:
SUMMARY OF NOISE COMPATIBILITY PROGRAM
MEASURES NOT FOR REVIEW UNDER 14 CFR PART 150

LOCAL NOISE COMPATIBILITY MEASURES

Measure:
2. Continue to coordinate with the FAA regarding noise abatement procedures, including the Bayside Visual Approach.

Cost to Airport Or Government	Administrative
Direct Cost to Users	None
Timing	Ongoing
Lead Responsibility	San Mateo County Aviation Department

San Carlos
Airport

Table 6C:
SUMMARY OF NOISE COMPATIBILITY PROGRAM
MEASURES NOT FOR REVIEW UNDER 14 CFR PART 150

LOCAL NOISE COMPATIBILITY MEASURES

Measure:
3. Hold monthly meetings with pilots and students to discuss safety and noise abatement issues at the Airport.

Cost to Airport Or Government	Administrative
Direct Cost to Users	None
Timing	2018
Lead Responsibility	San Mateo County Aviation Department

San Carlos
Airport

Table 6C:
SUMMARY OF NOISE COMPATIBILITY PROGRAM
MEASURES NOT FOR REVIEW UNDER 14 CFR PART 150

LOCAL NOISE COMPATIBILITY MEASURES

Measure:
4. Establish a real estate agent outreach program to educate real estate agents and potential homebuyers about San Carlos Airport operations and its presence in the community.

Cost to Airport Or Government	Administrative
Direct Cost to Users	None
Timing	2018
Lead Responsibility	San Mateo County Aviation Department

San Carlos
Airport

Table 6C:
SUMMARY OF NOISE COMPATIBILITY PROGRAM
MEASURES NOT FOR REVIEW UNDER 14 CFR PART 150

LOCAL NOISE COMPATIBILITY MEASURES

Measure:
5. Continue Airport events to allow the public to visit the airport and learn about its operations.

Cost to Airport Or Government	Administrative
Direct Cost to Users	None
Timing	Ongoing
Lead Responsibility	San Mateo County Aviation Department

San Carlos
Airport

Table 6C:
SUMMARY OF NOISE COMPATIBILITY PROGRAM
MEASURES NOT FOR REVIEW UNDER 14 CFR PART 150

LOCAL NOISE COMPATIBILITY MEASURES

Measure:
6. Revise the San Carlos Airport Noise Abatement Procedures.

Cost to Airport Or Government	\$5,000
Direct Cost to Users	None
Timing	2018
Lead Responsibility	San Mateo County Aviation Department

San Carlos
Airport

Table 6C:
SUMMARY OF NOISE COMPATIBILITY PROGRAM
MEASURES NOT FOR REVIEW UNDER 14 CFR PART 150

	Funding Source	Amount
Total Cost and Funding Source	San Mateo County Capital Budget	\$5,000

San Carlos
Airport


San Carlos Airport
Public Hearing

Regarding the
14 CFR Part 150 Noise Compatibility Study
Wednesday, September 26, 2018
Public Workshop: 6:00 - 6:30 P.M.
Public Hearing: 6:30 - 7:30 P.M.

at the
Hiller Aviation Museum
601 Skyway Road
San Carlos, CA 94070

Everyone Welcome

For more information please contact
San Carlos Airport at 650.573.3700
<http://sancarloisnoise.airportstudy.com>



San Carlos
Airport

Thank You!

PUBLIC HEARING

September 26, 2018 from 6:00 – 7:30p.m.
Hiller Aviation Museum, 601 Skyway Road

Materials from Public Hearing included the following:

- Public Hearing Notices and Advertisement
- Sign-In Sheet(s)
- Speaker Forms
- Public Hearing Transcript
- Written Comment(s) Received During the Public Hearing
- Written Comment (s) Received After the Public Hearing and During the Official Comment Period

Shooting suspect had history of mer

THE ASSOCIATED PRESS

BALTIMORE — The suspect in a deadly shooting at a Florida video game tournament had previously been hospitalized for mental illness, according to court records in his home state of Maryland reviewed by The Associated Press.

Divorce filings from the parents of 24-year-old David Katz of Baltimore say that as an adolescent he was twice hospitalized in psychiatric facilities and was prescribed antipsychotic and antidepressant medications.

The records show Katz's parents disagreed on how to care for their troubled son, with his father claiming his estranged wife was exaggerating symptoms of mental illness as part of their long and bitter custody battle. The couple divorced in 2007.



David Katz

Jacksonville Sheriff Mike Williams has declined to comment on the gunman's motive.

The suspect's father, Richard Katz of Baltimore, and his mother, Elizabeth Katz of Columbia, Maryland, did not respond to phone messages Sunday or Monday. Efforts by the AP to reach them at their homes were also unsuccessful.

Katz opened fire Sunday at a gaming bar inside a collection of restaurants and shops in Jacksonville. He killed two people and wounded 10 others before fatally shooting himself during the "Madden NFL 19" tournament, authorities said.

The Howard County, Maryland, divorce filings say that David Katz played video games obsessively as a young adolescent, often refusing to go to school or to bathe. Elizabeth Katz, a toxicologist at the Department of Agriculture, said she confiscated some of her son's gaming equipment after finding him playing in the wee hours.

At one point, she put his gaming controllers in her bedroom behind a locked door and he punched a hole in the door, she said.

Elizabeth Katz said her youngest son had increasing difficulty concentrating following his parents' split. A judge awarded custody of the boy to his mother, with visitation rights to the father.

At times David "curled up into a ball," refused to attend school and sobbed, she said. She asserted that her ex-husband instructed

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN of a public hearing to be held by San Mateo County to receive testimony on the San Carlos Airport, Title 14 Code of Federal Regulations (CFR) Part 150 Noise Compatibility Program (NCP).

The public hearing has been scheduled for:
DATE: Wednesday, September 26, 2018

TIME: 6:00 p.m. to 6:30 p.m. for the workshop and 6:30 p.m. to 7:30 p.m. for the public hearing

LOCATION: Hiller Aviation Museum, 601 Skyway Road, San Carlos, California 94070

San Mateo County is in the process of finalizing the San Carlos Airport Federal Aviation Administration (FAA) funded Part 150 Noise Compatibility Program. As part of the NCP, existing and future airport noise impacts in the airport environs have been depicted. The intent of the hearing is to receive testimony on the program that is being formulated to address any incompatible land uses within the airport environs due to these noise impacts.

Copies of the FAA funded Part 150 Noise Compatibility Program for San Carlos Airport are available for reference at the Airport Administrative Office at the address listed below. The Part 150 document can also be viewed at <http://sanarlosnoise.airportstudy.com/>.

All interested persons are invited to attend the public hearing. Prior to the hearing, there will be a time when the public can view displays and interact with the project team from 6:00 p.m. to 6:30 p.m. Those desiring to testify on the Part 150 NCP may register prior to the public hearing at the hearing site and are encouraged to submit one copy of their testimony.

Attendance at the public hearing is not a prerequisite for submission of testimony. Written testimony, which is received by San Mateo County at the address listed below by 5:00 p.m. on October 12, 2018, will be included with the transcripts of the hearing and will be considered in the evaluation of the program:

Gretchen Kelly
Manager, San Mateo County Airports
620 Airport Way, Suite 10
San Carlos, CA 94070

Following the public comment period, the NCP will be submitted to the FAA and the County Board of Supervisors for consideration. For more information, visit the project website or call Gretchen Kelly, Manager, San Mateo County Airports at 650-573-3700.

The Hiller Museum is an accessible facility. For special accommodations at any meeting associated with this project, please contact the County at 650-573-3700 at least 72 hours prior to the meeting.

8/28/18
CNS-3168206#
SAN MATEO DAILY JOURNAL

Nation's top student loan o

THE ASSOCIATED PRESS

NEW YORK — The government's top official overseeing the \$1.5 trillion student loan market resigned in protest on Monday, citing what he says is the White House's open hostility toward protecting the nation's millions of student loan borrowers.

Seth Frotman will be stepping down as student loan ombudsman at the end of the week, according to his resignation letter, which was obtained by the Associated Press. He held that position since 2016, but has been with Consumer Financial Protection Bureau since its inception in 2011.

Frotman is the latest high-level departure from the CFPB since Mick Mulvaney, President Donald Trump's budget director, took over in late November. But Frotman's departure is especially noteworthy, since his non-partisan office is one of the few parts of the U.S. government that was tasked with handling student loan issues.

The office was at the center of the lawsuits against for-profit colleges like Corinthian Colleges and is currently heading up a lawsuit between the CFPB and Navient, one of the nation's largest student lenders. The Navient lawsuit has been mired in bureaucratic red tape as the Department of Education, headed by Betsy DeVos, has been unwilling to help the CFPB with their lawsuit. Since its creation, the student loan office has returned \$750 million to harmed borrowers.

"You have used the bureau to serve the wishes of the most powerful financial companies in America," Frotman wrote, addressing his letter to Mulvaney. "The damage you have done to the bureau betrays these families and sacrifices the financial futures of millions of Americans in communities across the country."

Congress created established the CFPB student loan comp that position is Rob Trump to be a comm

The ombudsman's the bureau's enforce ment loan market as on behalf of student thousands of compl among the first maj the growing issue of their loans.

But despite its w Frotman's student l under the umbrella ment. While at the organizational shak a move to downplay loans.

The student loan bureau has scaled b revising or rescindi place under the Oba

"Seth Frotman is loan complaint wit Goldstein, execut Responsible Lendir priorities of Mulva are fulfilling the m consumers from fin

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SAN MATEO DAILY JOURNAL**

**STATE OF CALIFORNIA
County of San Mateo**


The undersigned declares: That at all times hereinafter mentioned, affiant was a permanent resident of the United States, over the age of eighteen years old, and was at and during all said times. The Office Manager of the San Mateo Daily Journal, a newspaper published daily in the County of San Mateo, State of California. The notice mentioned was set in type no smaller than nonpareil and was preceded with words printed in black face type not smaller than size 6, describing and expressing in general terms, the purpose and character of the notice intended to be given; that the

CNS-3168206#

NOTICE OF PUBLIC HEARING

Of which the annexed is a printed copy was published and printed in said newspaper on the 28th Day of August 2018.

I declare under penalty of perjury that the foregoing is true and correct.



Paul Moiso

Dated at San Mateo, California,
this 28th day of Aug 2018.

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN of a public hearing to be held by San Mateo County to receive testimony on the San Carlos Airport, Title 14 Code of Federal Regulations (CFR) Part 150 Noise Compatibility Program (NCP).

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LOCATION: Hiller Aviation Museum, 601 Skyway Road, San Carlos, California 94070

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All interested persons are invited to attend the public hearing. Prior to the hearing, there will be a time when the public can view displays and interact with the project team from 6:00 p.m. to 6:30 p.m. Those desiring to testify on the Part 150 NCP may register prior to the public hearing at the hearing site and are encouraged to submit one copy of their testimony.

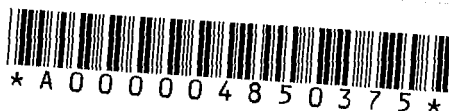
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Gretchen Kelly
Manager, San Mateo County Airports
620 Airport Way, Suite 10
San Carlos, CA 94070

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The Hiller Museum is an accessible facility. For special accommodations at any meeting associated with this project, please contact the County at 650-573-3700 at least 72 hours prior to the meeting.

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Dave Fitz

From: Dave Fitz
Sent: Friday, August 24, 2018 4:22 PM
To: Dave Fitz
Cc: gkelly@smcgov.org; 'Christopher St. Peter'; Davi Howard; Jim Harris; Kory Lewis
Subject: San Carlos Airport – Part 150 Noise Compatibility Study Public Workshop and Hearing

TO: Ms. Rochelle Kiner, Ms. Camille Garibaldi, Ms. Stacey Maye, Ms. Thann McLeod, Mr. Philip Crimmins, Ms. Sandy Wong, Ms. Tara Peterson, Ms. Melissa Diaz Stevenson, Mr. Kevin M. Miller, Mr. Carlos de Melo, Ms. Stacy Howard, Mr. Alex Gertsen, Ms. Melissa McCaffrey, Ms. April Gafford, UJ Emetron, Mr. Rich Newman, Mr. Hans Plesman, Mr. James Cvengros, Mr. Dimitri Vandellos, Mr. Steve Monowitz, Mr. Chris Hunter, Ms. Carol Ford, Mr. Irving Torres, Mr. Dan Dyer, Ms. Linda R. Wolin, Mr. Joe Straton, Mr. George Rodericks, Mr. Alex D. McIntyre, Gretchen Kelly, Christopher St. Peter, Davi Howard, Jim Harris, and Kory Lewis

RE: San Carlos Airport – 14 CFR Part 150 Noise Compatibility Study Public Workshop and Hearing

Dear Planning Advisory Committee Member:

The public workshop and hearing for the Noise Compatibility Plan at the San Carlos Airport has been scheduled for:

Wednesday, September 26, 2018
6:00 p.m. – 7:30 p.m.
Hiller Aviation Museum
601 Skyway Road
San Carlos, California 94070

Since our last meeting on March 21, 2018, the Final Noise Exposure Maps (NEM) document has officially been submitted to the Federal Aviation Administration (FAA) for acceptance under 14 CFR Part 150 guidelines. In addition, the comments we received on Chapter Six, Noise Compatibility Program, have been incorporated and the revised chapter is available on the project website: <http://sancarlosnoise.airportstudy.com>. A hard copy of Chapter Six will be mailed to you next week.

The workshop portion of the public meeting will be conducted in an open-house format between 6:00 and 6:30 p.m. It will include a variety of displays that explain and summarize the Federal Part 150 process, the project schedule, and technical details related to the development of the draft Noise Compatibility Plan. Attendance at the public workshop and hearing is not a prerequisite for submission of testimony. Written testimony will be received by San Mateo County at the address listed below until 5:00 p.m. on October 12, 2018 and will be included with the transcripts of the hearing, which will be considered in the evaluation of the program:

Gretchen Kelly
Manager
San Mateo County Airports
620 Airport Way, Suite 10
San Carlos, CA 94070

We look forward to meeting with you on **September 26, 2018**. In the meantime, if you have any questions, please contact Gretchen Kelly, Airport Manager, at (650) 573-3700. If you have technical questions about the plan, please contact me at (816) 524-3500.

Sincerely,
Dave Fitz, AICP, LEED Green Associate
Principal

Dave Fitz, AICP, LEED Green Associate | Principal

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14 CFR Part 150 Noise Compatibility Study



PUBLIC HEARING MEETING ATTENDANCE RECORD

Meeting: Public Hearing Date: September 26, 2018 Time: 6:00 - 7:30 p.m.
 Place: Hillier Aviation Museum
601 Skyway Road, San Carlos, CA 94070

NAME and ADDRESS

PHONE # / E-MAIL

NAME and ADDRESS	PHONE # / E-MAIL
1. <u>EILEEN MILLER</u> <u>756 NEWPORT, RWS</u>	Phone #: _____ E-mail: <u>millerellen@sbcglobal.net</u>
2. <u>Sharon Nelson</u> <u>734 NEWPORT CIRCLE, RWS</u>	Phone #: _____ E-mail: <u>sharonnelsonpv@gmail.com</u>
3. <u>Harvart Rodin</u> <u>24 Sandozker Place, B RWC</u>	Phone #: <u>650-593-6586</u> E-mail: <u>HarvartRodin@comcast.net</u>
4. <u>Darlene Taylor</u> <u>645 Waverley St. Palo Alto CA</u>	Phone #: _____ E-mail: <u>darlene.yaple@gmail.com</u>
5. <u>Rich Wagner</u> <u>704 Meuchling way</u>	Phone #: _____ E-mail: <u>r(w.wagner@gmail.com)</u>
6. <u>Scott Hightory</u> <u>946 McQue Ave San Carlos CA 94070</u>	Phone #: _____ E-mail: <u>scott@hightory.com</u>
7. <u>BOB KORTE</u> <u>605 SPAR DR REDWOOD CITY 94065</u>	Phone #: <u>408 396 4745</u> E-mail: <u>BOB@ROKTECHSALES.COM</u>
8. <u>Marie-Jo Fremont</u> <u>1750 Guinda St, Palo Alto, CA 94303</u>	Phone #: _____ E-mail: <u>mjfremont1@gmail.com</u>
9. <u>FRED LAM</u> <u>922 TOP BO REDWOOD CITY CA 94062</u>	Phone #: _____ E-mail: <u>fred92612@Yahoo.com</u>
10. <u>Nancy Baig HAM</u> <u>52 Pelican Lane, LWS CA 94065</u>	Phone #: <u>(650) 200-8588</u> E-mail: <u>N.BaigHAM@Comcast.net</u>

NAME and ADDRESS

PHONE # / E-MAIL

11.	THOMAS BRIA 478 37th AVE SAJ RAJASOO CA 94121	Phone #: 415 752-6313 E-mail: SUSPOJTE@ATT.NET
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13.		Phone #: E-mail: vice_davis@yahoo
14.	John Foid 455 Sturtevant Drive Redwood City CA 94065	Phone #: 510 415 7125 E-mail: John.Foid@live.com
15.	KATHLEEN WENTWORTH OFC of Congresswomen Jackie Speer	Phone #: 650.342.0300 E-mail:
16.	CAROL FORD SCAPA/RedShores	Phone #: 650591-8308 E-mail:
17.	MOHAMAD ZARREIFIAHAM 1085 ROCKPORT AVE. RWC, CA 94065	Phone #: Mamali123@gmail.com E-mail:
18.		Phone #: E-mail:
19.		Phone #: E-mail:
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24.		Phone #: E-mail:
25.		Phone #: E-mail:



14 CFR Part 150 Noise Compatibility Study

PUBLIC HEARING

MEETING ATTENDANCE RECORD

Meeting: Public Hearing Date: September 26, 2018 Time: 6:00 - 7:30 p.m.

Place: Hiller Aviation Museum

601 Skyway Road, San Carlos, CA 94070

Please Print Neatly

NAME and ADDRESS

PHONE # / E-MAIL

1.	CHIN Y LIM Redwood Shores	Phone #: E-mail: jimcyusa@gmail.com
2.	ROBERT A. PORCELLI SAN FRANCISCO	Phone #: E-mail: b.porc@lln.net
3.	WTD LEWIS SAN CARLOS	Phone #: E-mail: WTDLEWIS111@COMCAST.NET
4.	DAN DEMEO San Carlos FBSD	Phone #: E-mail: dan@rabbitksg.com
5.	Falekubans Redwood Shores	Phone #: E-mail: allamere62@gmail.com
6.	Scian Bramscomb El Granada	Phone #: E-mail: 650-888-1224
7.	PAUL WILLIAMS MOSS BEACH	Phone #: E-mail: 650 224 5608
8.	BEN PLOSHAN Redwood Shores	Phone #: E-mail: ben.ploshy@comcast.net
9.	ROBERT LEONG Redwood Shores	Phone #: E-mail: robkeong@yahoo.com
10.	LISA KERNS 9 CHANNEL DRIVE	Phone #: E-mail:

NAME and ADDRESS

PHONE # / E-MAIL

11.	Jerry Grainger 1512 Birch Ave ad 94010	Phone #: 415-860-9318 E-mail: GRAINGER@pacbell.net
12.	RICHARD NEUMAN SAN CARLOS PLOTS ASSOC	Phone #: _____ E-mail: _____
13.	_____	Phone #: _____ E-mail: _____
14.	_____	Phone #: _____ E-mail: _____
15.	_____	Phone #: _____ E-mail: _____
16.	_____	Phone #: _____ E-mail: _____
17.	_____	Phone #: _____ E-mail: _____
18.	_____	Phone #: _____ E-mail: _____
19.	_____	Phone #: _____ E-mail: _____
20.	_____	Phone #: _____ E-mail: _____
21.	_____	Phone #: _____ E-mail: _____
22.	_____	Phone #: _____ E-mail: _____
23.	_____	Phone #: _____ E-mail: _____
24.	_____	Phone #: _____ E-mail: _____
25.	_____	Phone #: _____ E-mail: _____

1
**San Carlos Airport
14 CFR Part 150 Noise Compatibility Program**



**PUBLIC HEARING
September 26, 2018**

Please fill out this form if you wish to speak at this hearing (*please print*).

Name Ben Kille
Address 1035 Sylvan Drive
San Carlos

Representing: (*check all boxes that apply*)

Airport tenant/user
(Name _____)

Citizens or neighborhood group (GESS)
(Name _____)

Local Government
(Name _____)

Private citizen

Local business or business group
(Name _____)

Other _____

Federal Agency
(Name _____)

2

**San Carlos Airport
14 CFR Part 150 Noise Compatibility Program**



**PUBLIC HEARING
September 26, 2018**

Please fill out this form if you wish to speak at this hearing (*please print*).

Name CHIN Y. LIAM
Address Redwood Shores

Representing: (*check all boxes that apply*)

Airport tenant/user
(Name _____)

Citizens or neighborhood group
(Name _____)

Local Government
(Name _____)

Private citizen

Local business or business group
(Name _____)

Other _____

Federal Agency
(Name _____)

3

San Carlos Airport 14 CFR Part 150 Noise Compatibility Program



PUBLIC HEARING September 26, 2018

Please fill out this form if you wish to speak at this hearing (*please print*).

Name ELLEN MILLER
Address 756 NEWPORT
RWS

Representing: (*check all boxes that apply*)

- Airport tenant/user
(Name _____)
- Local Government
(Name _____)
- Local business or business group
(Name _____)
- Federal Agency
(Name _____)
- Citizens or neighborhood group
(Name _____)
- Private citizen
- Other _____

4

San Carlos Airport 14 CFR Part 150 Noise Compatibility Program



PUBLIC HEARING September 26, 2018

Please fill out this form if you wish to speak at this hearing (*please print*).

Name Marie-Jo Fremont
Address 1750 Guinda St.
Palo Alto, CA 94303

Representing: (*check all boxes that apply*)

- Airport tenant/user
(Name _____)
- Local Government
(Name _____)
- Local business or business group
(Name _____)
- Federal Agency
(Name _____)
- Citizens or neighborhood group
(Name _____)
- Private citizen
- Other _____

5

San Carlos Airport 14 CFR Part 150 Noise Compatibility Program



PUBLIC HEARING September 26, 2018

Please fill out this form if you wish to speak at this hearing (*please print*).

Name John Zolck
Address 455 Starboard Drive Redwood City
CA 94065

Representing: (*check all boxes that apply*)

- Airport tenant/user
(Name _____)
- Citizens or neighborhood group
(Name Redwood Shores)
- Local Government
(Name _____)
- Private citizen
- Local business or business group
(Name _____)
- Other _____
- Federal Agency
(Name _____)

6

San Carlos Airport 14 CFR Part 150 Noise Compatibility Program



PUBLIC HEARING September 26, 2018

Please fill out this form if you wish to speak at this hearing (*please print*).

Name Dimitri Vandellos
Address 988 Montgomery

Representing: (*check all boxes that apply*)

- Airport tenant/user
(Name _____)
- Citizens or neighborhood group
(Name GESC)
- Local Government
(Name _____)
- Private citizen
- Local business or business group
(Name _____)
- Other _____
- Federal Agency
(Name _____)

7

San Carlos Airport 14 CFR Part 150 Noise Compatibility Program



PUBLIC HEARING September 26, 2018

Please fill out this form if you wish to speak at this hearing (*please print*).

Name ~~Dorlene Taylor~~ Jennifer
Address 845 Waverley St. Palo Alto

Representing: (*check all boxes that apply*)

- Airport tenant/user (Name _____)
- Local Government (Name _____)
- Local business or business group (Name _____)
- Federal Agency (Name _____)
- Citizens or neighborhood group (Name _____)
- Private citizen
- Other _____

8

San Carlos Airport 14 CFR Part 150 Noise Compatibility Program



PUBLIC HEARING September 26, 2018

Please fill out this form if you wish to speak at this hearing (*please print*).

Name Scott Highton
Address 996 McCue Ave.
San Carlos, CA 94070

Representing: (*check all boxes that apply*)

- Airport tenant/user (Name _____)
- Local Government (Name _____)
- Local business or business group (Name _____)
- Federal Agency (Name _____)
- Citizens or neighborhood group (Name _____)
- Private citizen
- Other _____

9

San Carlos Airport 14 CFR Part 150 Noise Compatibility Program



PUBLIC HEARING September 26, 2018

Please fill out this form if you wish to speak at this hearing (*please print*).

Name Daniene Yaptol
Address _____

Representing: (*check all boxes that apply*)

- Airport tenant/user (Name _____)
- Local Government (Name _____)
- Local business or business group (Name _____)
- Federal Agency (Name _____)
- Citizens or neighborhood group (Name _____)
- Private citizen
- Other _____

10

San Carlos Airport 14 CFR Part 150 Noise Compatibility Program



PUBLIC HEARING September 26, 2018

Please fill out this form if you wish to speak at this hearing (*please print*).

Name CAROL FORD
Address _____

Representing: (*check all boxes that apply*)

- Airport tenant/user (Name _____)
- Local Government (Name _____)
- Local business or business group (Name _____)
- Federal Agency (Name _____)
- Citizens or neighborhood group (Name _____)
- Private citizen
- Other Pres. SAN CARLOS
Airport Pilots Assoc

11

San Carlos Airport 14 CFR Part 150 Noise Compatibility Program



PUBLIC HEARING September 26, 2018

Please fill out this form if you wish to speak at this hearing (*please print*).

Name Paul Magginetti
Address 1023 Springfield Dr

Representing: (*check all boxes that apply*)

- Airport tenant/user (Name _____)
- Local Government (Name _____)
- Local business or business group (Name _____)
- Federal Agency (Name _____)
- Citizens or neighborhood group GESC (Name _____)
- Private citizen
- Other _____

12

San Carlos Airport 14 CFR Part 150 Noise Compatibility Program



PUBLIC HEARING September 26, 2018

Please fill out this form if you wish to speak at this hearing (*please print*).

Name Gina Vandell
Address 986 Montgomery SC

Representing: (*check all boxes that apply*)

- Airport tenant/user (Name _____)
- Local Government (Name _____)
- Local business or business group (Name _____)
- Federal Agency (Name _____)
- Citizens or neighborhood group (Name _____)
- Private citizen
- Other _____

13

San Carlos Airport
14 CFR Part 150 Noise Compatibility Program



PUBLIC HEARING
September 26, 2018

Please fill out this form if you wish to speak at this hearing (please print).

Name ROBERT LEONG
Address _____

Representing: (check all boxes that apply)

- Airport tenant/user (Name _____)
- Local Government (Name _____)
- Local business or business group (Name _____)
- Federal Agency (Name _____)
- Citizens or neighborhood group (Name _____)
- Private citizen
- Other _____

14

San Carlos Airport
14 CFR Part 150 Noise Compatibility Program



PUBLIC HEARING
September 26, 2018

Please fill out this form if you wish to speak at this hearing (please print).

Name Jerry Gainer
Address 1512 Black Mt. Rd
HS 94010

Representing: (check all boxes that apply)

- Airport tenant/user (Name Flying jets)
- Local Government (Name _____)
- Local business or business group (Name _____)
- Federal Agency (Name _____)
- Citizens or neighborhood group (Name _____)
- Private citizen
- Other _____

Page 1

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8
9 **PUBLIC HEARING RE: NOISE STUDY**
10 **REPORTER'S TRANSCRIPT OF PROCEEDINGS**
11 Wednesday, September 26, 2018
12 SAN CARLOS, CALIFORNIA
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25 Reported by: Tammy Moon, CSR 13184, RPR, CRR

Page 2

1 SAN CARLOS, CA; WEDNESDAY, SEPTEMBER 26, 2018; 6:48 p.m.
2
3 **MR. HOWARD:** Good evening, ladies and
4 gentlemen. My name is Davi Howard, and I work on staff
5 with -- with Gretchen and the rest of the airport staff
6 as the airport communications specialist. And this is
7 going to start the public forum portion of our event
8 this evening. And I have a short statement I'm going to
9 read for you guys so that we can get this started.
10 San Mateo County has prepared an airport noise
11 compatibility study program for the San Carlos Airport
12 based on the requirements and guidelines of Title 14 of
13 the Code of Federal Regulations, Part 150. The Noise
14 Compatibility Program proposes noise abatement, land use
15 management, and program management measures for the
16 areas surrounding the airport.
17 This public hearing is intended to give the
18 public the opportunity to present oral or written
19 testimony in favor of, in opposition to, or neutral
20 towards the Airport Noise Compatibility Program. The
21 public forum is not a forum for debate of the issues.
22 A written record will be made of all comments
23 presented at the hearing. Responses to all comments
24 will be prepared and included with the complete
25 documentation of the final Noise Compatibility Program.

Page 3

1 Each person submitting a "request to speak
2 form" will be allowed three minutes for oral comments
3 related to the Noise Compatibility Program. Additional
4 written comments will be accepted no later than the
5 close of normal business hours on October 12, 2018.
6 Gretchen Kelly, Manager, San Mateo County Airports, 620
7 Airport Way, Suite Ten, San Carlos, California, 94070.
8 Comments may also be submitted through the
9 project website. And we have that website number right
10 here. So those of you who filled out that form, we have
11 them here, and we will call each name and let you come
12 up one by one.
13 **DAVE FITZ:** So if you have speaker forms,
14 please hand them to Kory, and we'll get started.
15 **MR. HOWARD:** We'll have Mr. Ben Fuller.
16 **MR. FULLER:** Hello. My name is Ben Fuller.
17 I'm the president of the Greater East San Carlos
18 Neighborhood Association. I will talk about the good
19 and the bad and the ugly since we have organized this.
20 The good is we're all here. We have been
21 working with Gretchen and Davi and Rochelle and Chris
22 and all the folks who have been trying to understand
23 what's been going on. It's been happening for a couple
24 years that we have had helicopters and airplanes that we
25 never used to have in San Carlos coming over our

Page 4

1 neighborhood. And originally we were told nothing has
2 changed. But now we agree something has changed.
3 And I'm seeing a lot of folks in Redwood
4 Shores, and we're going to have our president in the
5 greater San Carlos neighborhood come in shortly and make
6 a speech.
7 The point is it's great there's a study. And
8 it's great Davi is here, and we have been talking with
9 him. What I think everyone will agree is that study
10 produced absolutely nothing. All it is is a
11 justification for these people to continue doing exactly
12 what they're doing, and zero change.
13 It's great that everybody's here. But we all
14 know that 65 CNEL is a meaningless thing. It's used by
15 the FAA to justify all this airport noise, but there's
16 been no change.
17 Now one of the things I have been told through
18 all of our research that we have been looking at this
19 very closely for two years is that San Carlos does not
20 have what's called an FAA tower.
21 So we've got incredibly overworked airport
22 flight control staff who, they work very long shifts.
23 There's only a few of them. They do their best. But
24 the reality is that the pilots are completely breaking
25 every rule. And all this talk about the pilots really

Page 5

1 care, the pilots don't care. They're flying -- they're
 2 doing over flights of our home that are not what they're
 3 supposed to be doing. They're making left turns when
 4 they're not supposed to be. Everybody is having
 5 airplanes directly over their homes.
 6 And voluntary noise abatement is an abject and
 7 complete farce. It does not work. And so as much as I
 8 enjoy these folks who did this study, and I think
 9 they're very good people. We have talked with them.
 10 They're very nice guys. There's nothing wrong with
 11 these guys. Right there. We applaud your efforts.
 12 There's just no impact. It's a total complete
 13 waste of time. So what I'm going to suggest is that the
 14 people from Redwood Shores please come and talk to the
 15 Greater San Carlos Neighborhood Association. We're
 16 going to be very serious about continuing this fight.
 17 This is a complete failure in terms of -- of any benefit
 18 that this community is going to get from this study, as
 19 much as I love the people involved. Thank you.
 20 **MR. HOWARD:** Thank you, Ben. And now Ms. Yin.
 21 **MS. YIN:** I thought that was a wonderful
 22 speech. And I have to rely on notes, unfortunately.
 23 But I echo everything you say. I agree absolutely. I
 24 disagree with the noise study. I don't think it shows
 25 anything at all.

Page 6

1 So I'm coming from a different perspective,
 2 from Redwood Shores. And I would like to share with you
 3 my experience and kind of provide the airport with what
 4 I think may be a practical solution, because I know you
 5 can't stop the flights.
 6 So Redwood Shores is right besides San Carlos.
 7 I get that. There will be some aircraft noise. But how
 8 much is too much? The FAA has restricted flight paths
 9 and concentrated them into a few designated ones.
 10 However, what about the unfortunate residents who live
 11 under these designated flight paths?
 12 Where I live, I can hear the planes taking off.
 13 I can see them taking off, and then they do a U-turn
 14 around the diamond shaped landmark. And then they come
 15 right back over me again, and I hear them two times
 16 longer than perhaps someone else somewhere else. And I
 17 don't see any airport study has addressed where I live.
 18 I don't see that there was a noise monitor where I live
 19 to document the doubling of noise that I experience.
 20 So anyway, so back to -- to my experience. So
 21 since starting to work from home this summer, I have
 22 noticed a regular, almost constant drone and vibration
 23 from airplanes flying overhead; some louder than others,
 24 and sometimes with only a couple of minutes between the
 25 planes.

Page 7

1 Due to the airport noise, I am unable to stay
 2 in the garden for long. And when I'm indoors, I'm
 3 unable to keep the windows open with resulting poor air
 4 quality. Even with all the dual-pane windows closed,
 5 the airplane noise and vibration still manages to filter
 6 through.
 7 I used to find the airplane charming. And now
 8 I hate them, because they're disrupting my quiet and
 9 peaceful life. I have reached the point where I have to
 10 leave my house, maybe take a drive in the car or go to
 11 the mall, just so I can enjoy some peace and quiet that
 12 I am unable to get in my own home.
 13 Since this experience began, I no longer play
 14 the stereo in the car just so I can soak up the silence
 15 there for once. When driving on the road or being in a
 16 public place is quieter and more peaceful than being
 17 alone in one's own home, it really says something,
 18 doesn't it?
 19 I understand that San Carlos Airport has also
 20 taken measures to address the noise issue, including the
 21 monthly meeting with pilots. And this study is one such
 22 example. I don't really like the results.
 23 I appreciate your efforts, and I think you guys
 24 are a wonderful bunch. However, as the volume
 25 increases, can you do better? Please do better.

Page 8

1 In the spirit of Silicon Valley, can you be
 2 more innovative? For example, can you redistribute air
 3 traffic along flight paths so that the brunt of the
 4 noise is not shouldered by unfortunate few but more
 5 equitably distributed over a broader area so that it is
 6 not excessive for any particular neighborhood, thus
 7 making it more tolerable to everyone? Thank you.
 8 **MR. HOWARD:** Ellen Miller.
 9 **MS. MILLER:** I don't need a mike.
 10 **MR. HOWARD:** We need the mike so the court
 11 reporter can hear you.
 12 **MS. MILLER:** There used to be a phone number
 13 that we could call to report planes that were too loud,
 14 too low, etc. Is there still a phone number?
 15 **MR. HOWARD:** Yes, ma'am.
 16 **MS. MILLER:** Would you please give it to us?
 17 **MR. HOWARD:** Yes.
 18 (Brief pause.)
 19 **MR. HOWARD:** Mari-Jo Fremont.
 20 **MS. FREMONT:** So my name is Mari-Jo Fremont,
 21 and I live in Palo Alto. I have experience with noise.
 22 I live in Palo Alto. I have experienced some noise of
 23 the circular planes aircraft near my home multiple times
 24 a day for many months until recently. Near my house,
 25 the planes flew at 1600 feet on their mid peninsula

Page 9

1 arrival routes to the San Carlos Airport. They are very
 2 noisy, and I hear them from inside the home with all my
 3 windows closed.
 4 So I have two requests. Number one request is
 5 stop Surf Air from using the San Carlos Airport. Surf
 6 Air is a commercial operation who has scheduled flights;
 7 is the startup who still has expansion plans. Their tag
 8 lines on their website is "now serving 11 destinations
 9 in California and Nevada with many more to come."
 10 Surf Air is not general aviation. Therefore,
 11 they should use commercial airports. And if they want
 12 to provide a premium experience, they can use the
 13 Atlantic Aviation Center in San Jose, for instance.
 14 My number two request until Surf Air stops,
 15 then find a best solution that has the smallest noise
 16 impact over residential areas. From a noise
 17 perspective, the approach over the mid peninsula is the
 18 worst, because the plane's flying at very low altitudes
 19 over many miles of residential areas many times a day.
 20 They could fly over the bay. They could fly over
 21 industrial areas. They can fly over freeways. But they
 22 shouldn't fly at low altitudes over miles and miles of
 23 residential neighborhoods.
 24 You can model multiple approaches. You can
 25 evaluate the cumulative noise impact on the residents.

Page 10

1 You can use multiple metrics to estimate the noise
 2 impact. You can compare and share the results with the
 3 public. You can then run experiments to measure the
 4 actual noise against the expecting noise. It can be
 5 done. So please do it.
 6 And for the record, I oppose the results of
 7 this 150 study, because it's faulty. The 65 CNEL metric
 8 does not represent the human impact of aircraft noise.
 9 **MR. HOWARD:** John Zolck.
 10 **MR. ZOLCK:** John Zolck from Redwood Shores.
 11 Thank you for the time. I think it's fitting that we're
 12 here in a museum, because I think that's the message
 13 that San Carlos' airport should become a bit of the
 14 past.
 15 I'd also like to volunteer the rooftop of my
 16 house for a noise collection point, because I do not
 17 believe that it's within the sound measurement levels.
 18 I don't have anything else to add, except for the fact
 19 that the noise has been continually increasing over the
 20 last ten years, and the flight paths have changed.
 21 Thank you.
 22 **MR. HOWARD:** Just as a reminder, you have three
 23 minutes. You have all been well within that timeframe.
 24 And as a -- another aside, that all these testimonies
 25 are going to be part of our public record that's going

Page 11

1 to the FAA as part of the Noise study.
 2 Dimitri Vandellos.
 3 **MR. VANDELLOS:** Hi. Dimitris Vandellos,
 4 president of the Greater East San Carlos Association.
 5 We've been working -- trying to work with the airport
 6 staff and county to try to get the noise issues under
 7 control. From our perspective, it's mixed results.
 8 I do agree with the other folks who have
 9 mentioned that 65 CNEL was just arbitrary. And one of
 10 the biggest issues that I have, or concerns that I have,
 11 is that when we brought up complaints, oftentimes we're
 12 told, hey, if it's noise, you kind of need to go to
 13 local authorities. So that would mean we would have to
 14 go to the police to talk about noise enforcement, which
 15 is a problem.
 16 However, I'm thinking that given that in San
 17 Carlos there are like 50, 55, 60-decibel noise limits
 18 within neighborhoods, that that could be an approach to
 19 use. And -- for interested folks that might be a way to
 20 work with the local communities to talk about
 21 enforcement of noise and not just have it handled by the
 22 airport. So -- that's highly problematic.
 23 And these noise contours averaging I think is a
 24 real problem, because that's not what we experienced as
 25 residents. We hear the full sound, so averaging it is

Page 12

1 very advantageous from the FAA noise study's
 2 perspective, but not to the community. And by the
 3 community, I mean everyone who is affected, because
 4 people are affected. All different ones.
 5 One of -- one of our residents informed me
 6 that Surf Air -- and this is a question I have in the
 7 study. That Surf Air, the impacts of Surf Air in the
 8 winds were not included in the study. Is that correct?
 9 **DAVE FITZ:** We're not answering questions. We
 10 will respond in writing to all your questions.
 11 **MR. VANDELLOS:** Okay. So I'm really concerned
 12 about that. That that's -- that isn't something that
 13 would be acceptable to us. Because if certain things
 14 were omitted from the study, then that would be highly
 15 problematic.
 16 And finally, I think we need greater
 17 transparency in the reporting of the noise complaints
 18 and what actually is done about them. And are they
 19 going to the FAA or not. So that's -- that's a big
 20 problem.
 21 We -- as a neighborhood group, we're trying to
 22 work with the airport to solve these problems. And I'm
 23 hoping that we can work with the airport to solve the
 24 problems. You know, but we will have to see how things
 25 progress. So I just recently called Davi, actually,

Page 13

1 about helicopters' pattern work and flying over our
 2 community at low altitudes.
 3 And one thing I think is really important for
 4 everyone to realize is noise isn't -- it's not just the
 5 impact of the noise. It's the impact of our health. I
 6 recently came back from vacation where I just wasn't
 7 hearing the planes every few seconds taking off,
 8 landing, flying over the top of my house. And I
 9 couldn't believe how much better I was sleeping. How
 10 much more calm I was.
 11 And the second I got home, there was a
 12 helicopter taking off, flying over the house at 500 feet
 13 or lower. And I don't understand why we don't -- why we
 14 can't have fines when these folks are doing things that
 15 are unsafe.
 16 And -- and we need to think about the impact on
 17 our health, how noise impacts health, not just take it
 18 away. I think that's very important.
 19 Some residents of the community had mentioned
 20 how the World Health Organization has brought up the
 21 fact on the incredible impact it has on our ability to
 22 live our lives and how it shortens our health and mental
 23 well being. So it's a critical critical issue. I'm
 24 glad we're doing this study, but I feel this study is
 25 significantly tilted in favor of the airport and that as

Page 14

1 opposed to the impacts of the community. Thanks.
 2 **MR. HOWARD:** Jennifer.
 3 **JENNIFER:** I hadn't expected to speak tonight,
 4 but I think I should at least -- I wanted to bring up a
 5 couple things that I have already heard that I think are
 6 valid concerns.
 7 First is that Surf Air's using the
 8 commercial -- the San Jose Airport. And it makes no
 9 sense. It's a commercial venture. It really needs to
 10 go out of San Jose Airport or out of Oakland. It has
 11 been heaven without them flying over the past month.
 12 And they -- we really need to figure out a way, even if
 13 we do it together.
 14 Folks, we need to figure out a way to get Surf
 15 Air out of here. We really need to work together on
 16 this. They shouldn't be here. It's not right.
 17 The other thing is if this continues with these
 18 commercial flights coming out, it's not just going to be
 19 Surf Air who allows this. It's going to be Surf Air and
 20 other things coming through here. We really need to be
 21 thinking together. They're not going to go through TSA.
 22 They passed a lot of things here to get these planes in,
 23 and it doesn't make any sense.
 24 The other thing is if they continue down this
 25 path, maybe we need to be working together to close this

Page 15

1 airport somehow. The reason I'm saying that is because
 2 think about it. When the FAA is showing us stuff,
 3 they're showing us San Francisco flights, Oakland
 4 flights, San Jose flights all interspersed with general
 5 aviation. How can that possibly be safe?
 6 We need to be asking the right questions here.
 7 Should this airport be closed? Should it? Maybe.
 8 We're in -- you know, we're metroplex where the -- there
 9 are a lot of planes in the area. We're putting general
 10 aviation together. Maybe we're not asking the right
 11 questions here.
 12 And the other thing is I am from Sunnyvale. So
 13 there was a shifting of airplanes. With that bayside
 14 approach everyone talks about, the shifting of the
 15 airplane noise to another community. And that's not
 16 right. Plain and simple. If the lead -- airport noise
 17 or airplane noise from the peninsula, but it shifts it
 18 over to us.
 19 A community that has no jurisdiction or control
 20 over this airport and is, by the way, not represented in
 21 any way in the planning advisory committee. So they're
 22 basically shifting it over to us. This is not right.
 23 We need to be working together to fix this problem.
 24 This isn't solving anything. So thank you very much,
 25 folks. I appreciate it.

Page 16

1 **MR. HOWARD:** Scott Highton.
 2 **MR. HIGHTON:** Thank you. My name is Scott. I
 3 live right across the freeway here. I live as close to
 4 the airport as anyone. The FAA actually used my yard as
 5 one of their recording points for their data collection.
 6 I hear the airport. I hear the train station.
 7 I hear the kids and their parents playing across the
 8 street. I hear construction downtown. I hear noise.
 9 Everything.
 10 It's kind of what I bought into when I moved
 11 here. My wife and I have been here for 30 plus years.
 12 The airport noise, to me, right across the freeway,
 13 doesn't sound that much different than it was 30 years
 14 ago when we moved here.
 15 When we moved here, we knew there was an
 16 airport across the freeway from us. We also knew there
 17 was a train station just across, the block away from us.
 18 We knew that there was a park, which we loved the idea
 19 of having a park right across the street from us.
 20 Get out Saturday mornings 8:30 with soccer and
 21 baseball games. Parents. That's noise. You don't
 22 often see through that. That's part of what we bought
 23 into. We love the fact that an airport is here, and
 24 then it is in the most densely -- one of the most
 25 densely populated air spaces around. And it's smack in

Page 17

1 the middle of our community. And that empowers us in
 2 the event of an emergency.
 3 If San Francisco Airport has to shut down for
 4 some reason, there's an earthquake, communications are
 5 out, these general aviation airports, San Carlos, Palo
 6 Alto, etc. are used for a lot of the rescue and
 7 management world.
 8 Fires. We don't have forest fires here, but
 9 there are other issues that we would face.
 10 The airport provides a huge tax revenue to our
 11 city and county. And it's hard to hear that somebody --
 12 that some of you, many of you, want to throw that away.
 13 And I keep coming back to the thought that there's not a
 14 lot of us in this room, based on the age and the amount
 15 of time the airport has been here, that didn't know an
 16 airport was here or a train station or the parks or
 17 whatever when you moved in.
 18 Now -- now you are saying, no. The airport has
 19 less importance than I do. It's looked at as a
 20 community basis. What's good for the entire community.
 21 So keep that in mind. When you choose where you are
 22 going to live, where you are going to buy your house or
 23 rent your house. What's around you.
 24 If you don't like the sounds of kids in the
 25 morning, don't buy a house next to a park where they're

Page 18

1 playing baseball and soccer every weekend or every
 2 afternoon or evening. If you don't want to hear train
 3 noise, don't buy a house near the railroad tracks or
 4 near the station. If you don't want to hear airplane
 5 noise, don't buy a house near the airport tract.
 6 Thank you.
 7 **UNIDENTIFIED SPEAKER:** The noise has increased
 8 since we bought the house.
 9 **MR. HIGHTON:** I'm right over there.
 10 **MR. HOWARD:** Okay. So let's stay on track
 11 here, you guys. We have got Darlene.
 12 **MS. YAPLEE:** Hi. I'm Darlene Yaplee from Palo
 13 Alto. Two questions. Why is the FAA not lowering the
 14 65 CNEL level to 55 as done in Europe?
 15 Second of all, the FAA is doing research with
 16 MIT. You can all Google that. They've come up with a
 17 variety of potential metrics that are a lot better than
 18 65 CNEL. And the question is when is the FAA going to
 19 start using these alternative metrics?
 20 Lastly, I'm opposed to the study, because one,
 21 it does use 65 CNEL that is not represented the actual
 22 experience on the ground.
 23 And second, you have not included communities
 24 that have been speaking up here. Palo Alto, Sunnyvale
 25 are just examples that are directly impacted by

Page 19

1 arrivals.
 2 **MR. HOWARD:** Next we have Carol Ford.
 3 **MS. FORD:** Hi. I'm Carol Ford. I'm the
 4 president of the San Carlos Airport Pilots' Association,
 5 and I also live in Redwood Shores and have for many
 6 years. And in fact, when I first moved in, there were
 7 over 300,000 airport operations a year. And now there's
 8 about 140,000, maybe 150,000.
 9 So actually, the noise has gone down over the
 10 years. And the main thing that I stress, because I'm
 11 also on the board of the Redwood Shores Community
 12 Association, is that it's very important for us to work
 13 together. And therefore, I have made a lot of effort to
 14 have disaster preparedness between airport and the
 15 community so that in the case of a disaster, there's a
 16 way for us to have an airlift of different -- goods and
 17 services that we might need thinking that the overpasses
 18 have gone down in -- in a big way, quote, unquote.
 19 And we also do constant education of our
 20 pilots, both pilots who are familiar with the airport
 21 and ones who might not be familiar with the airport. So
 22 they can follow the voluntarily noise abatement
 23 procedures which have been in effect for over 20 years
 24 with really good results.
 25 So I just wanted to put it on the record that

Page 20

1 we're concerned about the community. I live in the
 2 community, and we do understand the issue. Thank you.
 3 **MR. FULLER:** You should recuse yourself -- the
 4 Redwood Shores has no representation.
 5 **MR. HOWARD:** Anybody else that wants to say
 6 something?
 7 **MR. FULLER:** Redwood Shores has -- she can't be
 8 on the board.
 9 **UNIDENTIFIED SPEAKER:** She can't be on both
 10 boards. That's wrong.
 11 **MR. HOWARD:** This is going to conclude the
 12 public --
 13 **UNIDENTIFIED SPEAKER:** We're --
 14 **MR. FULLER:** We're putting in a protest. She
 15 should not be on the pilot -- and the Redwood Shores --
 16 **DAVE FITZ:** We'll suspend the hearing until
 17 7:30 or until somebody else rolls around, if anybody
 18 else wants to.
 19 **MR. FULLER:** You are a pilot, right? Yeah.
 20 Exactly. That's what I figured. All I'm saying is that
 21 the Redwood Shores Neighborhood Association has a
 22 conflict of interest that Carol Ford is representing the
 23 neighborhood association at the same time as she's
 24 representing the pilot.
 25 And that's why when I asked everybody from

Page 21

1 Redwood Shores who is your neighborhood association,
 2 nobody knew. And then somebody said I think there might
 3 be some relation between the airport neighborhood
 4 association.
 5 The Greater San Carlos Association does not
 6 have a representative from the airport on the
 7 association. This is totally inappropriate. Rochelle,
 8 you know this. She should step down from that -- either
 9 the pilot association or the neighborhood association.
 10 She should not be on both. She's not representing her
 11 community. All these people are stuck with the noise
 12 are not being represented.
 13 **DAVE FITZ:** This is not the forum for that.
 14 **MR. FULLER:** Make sure that's on the record.
 15 **DAVE FITZ:** Is there anyone else that would
 16 like to speak tonight?
 17 (Brief pause.)
 18 **MR. MAGGINETTI:** So my name is Paul Magginetti.
 19 I'm also a board member of GESC. I did take a very
 20 close look at particulars. Very first thing that I
 21 noticed is there are no contours that 60, 55, or 50 dB.
 22 And I looked at the FAA website, and it says
 23 right there in the community response to noise it has
 24 everything from 50, which is a suburban residential.
 25 55, which is -- 50 is quiet suburban residential. 55 is

Page 22

1 suburban residential. 60 is urban residential. 65 is
 2 noisy urban residential. So I don't understand why it
 3 was under -- contours are not on these maps.
 4 And in addition, night flights, when measuring
 5 the CNEL have a dB penalties that need to be added when
 6 there are flights between 7:00 p.m. and 10:00 p.m. and
 7 an additional ten dB penalty when there are flights
 8 between 10:00 p.m. and 7:00 a.m. Those are the flights
 9 that wake us up at night.
 10 So my question is were those included in the
 11 CNEL calculation of average dB. And also what
 12 percentage of those made up those noise events. Are we
 13 being awakened by ten percent of those events or is
 14 there something else?
 15 And also, in reading it in small print down
 16 below, it says local authorities are supposed to be the
 17 ones who decide what is too loud and what isn't. And in
 18 addition, we have a wildlife refuge. And part 150
 19 specifically says that it is not to be used to determine
 20 the noise levels over wildlife refuge. So if -- I can
 21 go on and on. But to me, this study is very flawed.
 22 **MR. HOWARD:** Gina Vandellos.
 23 **MS. VANDELLOS:** This will take 30 seconds. We
 24 bought our house 25 years ago, and we knew there was an
 25 airport. We knew there was a small plane.

Page 23

1 **MR. FULLER:** Are you a pilot?
 2 **MS. VANDELLOS:** No. We -- I'm saying that we
 3 knew there was -- a small plane airport and that there
 4 were very quiet little planes flying over our head
 5 occasionally.
 6 But all of a sudden, over the past three years,
 7 it's gotten crazy loud. But my most -- one of my
 8 important -- there's a lot of children in our community.
 9 And I have really liked for us to address the lead in
 10 the fuel.
 11 **UNIDENTIFIED SPEAKER:** Yeah. Absolutely.
 12 Yeah. Thank you.
 13 **MR. HOWARD:** Anyone else want to talk?
 14 (Brief pause.)
 15 **MR. HOWARD:** Ladies and gentlemen, this is
 16 Robert Leong.
 17 **MR. LEONG:** Thank you very much for announcing
 18 my name. This is unusual. But anyway, I thought and I
 19 just need to rebut the statement that we -- because we
 20 live in an area where there's an airport we should
 21 expect airport noise. Regardless of whether or not the
 22 noise increases, okay?
 23 So I think that's a very false statement. I
 24 just want to put on record that that is -- that makes no
 25 sense, okay? When I first started living here, the

Page 24

1 noise level was much much lower than it is now. The
 2 frequency was much less. They don't fly at night.
 3 Whereas now, I come across all these flights.
 4 That makes no sense, okay? And they are not -- well, we
 5 allowed that to happen. I don't see why that should be
 6 allowed to happen, but if that's the -- if that's the
 7 law, if that's the way planes fly, and you can allow
 8 them to fly any time of night, and there's no -- there's
 9 no implication to the pilot, that should not be the
 10 case. Okay?
 11 They should mandate the flight within a certain
 12 time period, okay? But, I mean, the reason I'm up here
 13 to speak is really just to put on record -- to just
 14 rebut the very common misperception by a lot of people
 15 who think that they're well informed that just because
 16 you live near the airport, we should expect airport
 17 noise, okay? If you don't want, go away, okay?
 18 Similarly, if you live near a railway station,
 19 expect railway station noise. That's fine, okay? To a
 20 certain extent. Once that noise increases, once the
 21 frequency of that noise increases, there is not one who
 22 lived there. When you started living there, it was not
 23 like that, okay? So please be understanding, be
 24 empathetic to your neighbor's logic.
 25 Thank you.

Page 25

1 MR. HOWARD: This is --
 2 MR. GRAINGER: My name is Jerry Grainger. And
 3 I am a pilot here in San Carlos Airport and have been
 4 for about 40 years. I can't -- I can't tell you that
 5 the noise level is higher or lower than before.
 6 I know this is a lot for the operations here.
 7 I know that the impact of the noise with the Surf Air
 8 has had a tremendous impact of everyone that flies here.
 9 I can tell you that for decades every one of the pilots
 10 that do operate here subscribes to a voluntary noise
 11 procedure that is taken very seriously and very
 12 conscientiously.
 13 And you also recognize this San Carlos Airport
 14 is part of a national transportation system which is
 15 just an isolated spot on the map that doesn't have
 16 anything to do with anything else. And the reason this
 17 has federal jurisdiction is because it is a part of
 18 national and international aviation system.
 19 I have heard a number of statements that have
 20 been quite inaccurate this evening. As understandable,
 21 aviation is a complex subject. But I have heard a lot
 22 of discussion about better communication. I think
 23 that's a better idea. I think communication is a better
 24 idea.
 25 I don't think grabbing the mike out of

Page 26

1 somebody's hand and stomping out and refusing to talk to
 2 pilots is a good idea. I want to thank you for your
 3 lenience. Everybody is trying to learn more about the
 4 subject. I would like to learn more about these studies
 5 myself. And hope you do too.
 6 MR. HOWARD: Any other questions? Anyone want
 7 to talk?
 8 DAVE FITZ: If you would like to fill out a
 9 form -- the reason for the form is so that we have your
 10 name for the record.
 11 UNIDENTIFIED SPEAKER: When do we get the
 12 questions answered?
 13 DAVE FITZ: That will be part of the final
 14 document. We'll have the transcript, and then we'll
 15 break down each comment and respond.
 16 I guess with that, we'll conclude the public
 17 hearing. We'll be around if you have any additional
 18 questions for a little bit. But we have to get out of
 19 here, because they'll want us out by eight o'clock. But
 20 I'm happy to answer any questions.
 21 (The matter concluded, 7:29 p.m.)
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 23
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Page 27

1 REPORTER'S CERTIFICATE
 2
 3
 4 I, TAMMY MOON, CSR No. 13184, Certified
 5 Shorthand Reporter, certify:
 6 That the foregoing proceedings were
 7 stenographically reported by me at the time and place
 8 therein set forth and were thereafter transcribed;
 9 That the foregoing is a true and correct
 10 transcript of my shorthand notes so taken.
 11 I further certify that I am not a relative or
 12 employee of any attorney or any of the parties nor
 13 financially interested in the action.
 14 I declare under penalty of perjury under the
 15 laws of California that the foregoing is true and
 16 correct.
 17 Dated this 7th day of October, 2018.
 18
 19
 20
 21 Tammy Moon, CSR NO. 13184
 22
 23
 24
 25

<p>A</p>	<p>3:24;5:5;6:23;15:13 airport (53) 2:5,6,10,11,16,20; 3:7;4:15,21;6:3,17;7:1, 19;9:1,5;10:13;11:5, 22;12:22,23;13:25; 14:8,10;15:1,7,16,20; 16:4,6,12,16,23;17:3, 10,15,16,18;18:5;19:4, 7,14,20,21;21:3,6; 22:25;23:3,20,21; 24:16,16;25:3,13 Airports (3) 3:6;9:11;17:5 Air's (1) 14:7 allow (1) 24:7 allowed (3) 3:2;24:5,6 allows (1) 14:19 almost (1) 6:22 alone (1) 7:17 along (1) 8:3 alternative (1) 18:19 altitudes (3) 9:18,22;13:2 Alto (5) 8:21,22;17:6;18:13, 24 amount (1) 17:14 announcing (1) 23:17 answered (1) 26:12 applaud (1) 5:11 appreciate (2) 7:23;15:25 approach (3) 9:17;11:18;15:14 approaches (1) 9:24 arbitrary (1) 11:9 area (3) 8:5;15:9;23:20 areas (4) 2:16;9:16,19,21 around (5) 6:14;16:25;17:23; 20:17;26:17 arrival (1) 9:1 arrivals (1) 19:1 aside (1)</p>	<p>10:24 Association (13) 3:18;5:15;11:4;19:4, 12;20:21,23;21:1,4,5,7, 9,9 Atlantic (1) 9:13 authorities (2) 11:13;22:16 average (1) 22:11 averaging (2) 11:23,25 aviation (7) 9:10,13;15:5,10; 17:5;25:18,21 awakened (1) 22:13 away (4) 13:18;16:17;17:12; 24:17</p>	<p>block (1) 16:17 board (3) 19:11;20:8;21:19 boards (1) 20:10 both (3) 19:20;20:9;21:10 bought (4) 16:10,22;18:8;22:24 break (1) 26:15 breaking (1) 4:24 Brief (3) 8:18;21:17;23:14 bring (1) 14:4 broader (1) 8:5 brought (2) 11:11;13:20 brunt (1) 8:3 bunch (1) 7:24 business (1) 3:5 buy (4) 17:22,25;18:3,5</p>	<p>10:13 Carol (3) 19:2,3;20:22 case (2) 19:15;24:10 Center (1) 9:13 certain (3) 12:13;24:11,20 change (2) 4:12,16 changed (3) 4:2,2;10:20 charming (1) 7:7 children (1) 23:8 choose (1) 17:21 Chris (1) 3:21 circular (1) 8:23 city (1) 17:11 close (4) 3:5;14:25;16:3; 21:20 closed (3) 7:4;9:3;15:7 closely (1) 4:19 CNEL (8) 4:14;10:7;11:9; 18:14,18,21;22:5,11 Code (1) 2:13 collection (2) 10:16;16:5 coming (5) 3:25;6:1;14:18,20; 17:13 comment (1) 26:15 comments (5) 2:22,23;3:2,4,8 commercial (5) 9:6,11;14:8,9,18 committee (1) 15:21 common (1) 24:14 communication (2) 25:22,23 communications (2) 2:6;17:4 communities (2) 11:20;18:23 community (18) 5:18;12:2,3;13:2,19; 14:1;15:15,19;17:1,20, 20;19:11,15;20:1,2; 21:11,23;23:8</p>
		<p>B</p>		
		<p>back (4) 6:15,20;13:6;17:13 bad (1) 3:19 baseball (2) 16:21;18:1 based (2) 2:12;17:14 basically (1) 15:22 basis (1) 17:20 bay (1) 9:20 bayside (1) 15:13 become (1) 10:13 began (1) 7:13 below (1) 22:16 Ben (3) 3:15,16;5:20 benefit (1) 5:17 besides (1) 6:6 best (2) 4:23;9:15 better (7) 7:25,25;13:9;18:17; 25:22,23,23 big (2) 12:19;19:18 biggest (1) 11:10 bit (2) 10:13;26:18</p>	<p>C</p>	
<p>abatement (3) 2:14;5:6;19:22 ability (1) 13:21 abject (1) 5:6 absolutely (3) 4:10;5:23;23:11 acceptable (1) 12:13 accepted (1) 3:4 across (7) 16:3,7,12,16,17,19; 24:3 actual (2) 10:4;18:21 actually (4) 12:18,25;16:4;19:9 add (1) 10:18 added (1) 22:5 addition (2) 22:4,18 Additional (3) 3:3;22:7;26:17 address (2) 7:20;23:9 addressed (1) 6:17 advantageous (1) 12:1 advisory (1) 15:21 affected (2) 12:3,4 afternoon (1) 18:2 again (1) 6:15 against (1) 10:4 age (1) 17:14 ago (2) 16:14;22:24 agree (4) 4:2,9;5:23;11:8 air (14) 7:3;8:2;9:5,6,10,14; 12:6,7,7;14:15,19,19; 16:25;25:7 aircraft (3) 6:7;8:23;10:8 airlift (1) 19:16 airplane (5) 7:5,7;15:15,17;18:4 airplanes (4)</p>			<p>CA (1) 2:1 calculation (1) 22:11 CALIFORNIA (3) 1:12;3:7;9:9 call (2) 3:11;8:13 called (2) 4:20;12:25 calm (1) 13:10 came (1) 13:6 can (24) 2:9;6:12,13;7:11,14, 25;8:1,2,11;9:12,21,24, 24;10:1,2,3,4;12:23; 15:5;18:16;19:22; 22:20;24:7;25:9 car (2) 7:10,14 care (2) 5:1,1 CARLOS (20) 1:12;2:1,11;3:7,17, 25;4:5,19;5:15;6:6; 7:19;9:1,5;11:4,17; 17:5;19:4;21:5;25:3,13 Carlos' (1)</p>	

<p>compare (1) 10:2</p> <p>compatibility (5) 2:11,14,20,25;3:3</p> <p>complaints (2) 11:11;12:17</p> <p>complete (4) 2:24;5:7,12,17</p> <p>completely (1) 4:24</p> <p>complex (1) 25:21</p> <p>concentrated (1) 6:9</p> <p>concerned (2) 12:11;20:1</p> <p>concerns (2) 11:10;14:6</p> <p>conclude (2) 20:11;26:16</p> <p>concluded (1) 26:21</p> <p>conflict (1) 20:22</p> <p>conscientiously (1) 25:12</p> <p>constant (2) 6:22;19:19</p> <p>construction (1) 16:8</p> <p>continually (1) 10:19</p> <p>continue (2) 4:11;14:24</p> <p>continues (1) 14:17</p> <p>continuing (1) 5:16</p> <p>contours (3) 11:23;21:21;22:3</p> <p>control (3) 4:22;11:7;15:19</p> <p>County (4) 2:10;3:6;11:6;17:11</p> <p>couple (3) 3:23;6:24;14:5</p> <p>court (1) 8:10</p> <p>crazy (1) 23:7</p> <p>critical (2) 13:23,23</p> <p>CRR (1) 1:25</p> <p>CSR (1) 1:25</p> <p>cumulative (1) 9:25</p>	<p>data (1) 16:5</p> <p>DAVE (7) 3:13;12:9;20:16; 21:13,15;26:8,13</p> <p>Davi (4) 2:4;3:21;4:8;12:25</p> <p>day (2) 8:24;9:19</p> <p>dB (4) 21:21;22:5,7,11</p> <p>debate (1) 2:21</p> <p>decades (1) 25:9</p> <p>decide (1) 22:17</p> <p>densely (2) 16:24,25</p> <p>designated (2) 6:9,11</p> <p>destinations (1) 9:8</p> <p>determine (1) 22:19</p> <p>diamond (1) 6:14</p> <p>different (4) 6:1;12:4;16:13; 19:16</p> <p>Dimitri (1) 11:2</p> <p>Dimitris (1) 11:3</p> <p>directly (2) 5:5;18:25</p> <p>disagree (1) 5:24</p> <p>disaster (2) 19:14,15</p> <p>discussion (1) 25:22</p> <p>disrupting (1) 7:8</p> <p>distributed (1) 8:5</p> <p>document (2) 6:19;26:14</p> <p>documentation (1) 2:25</p> <p>done (3) 10:5;12:18;18:14</p> <p>doubling (1) 6:19</p> <p>down (7) 14:24;17:3;19:9,18; 21:8;22:15;26:15</p> <p>downtown (1) 16:8</p> <p>drive (1) 7:10</p> <p>driving (1) 7:15</p>	<p>drone (1) 6:22</p> <p>dual-pane (1) 7:4</p> <p>Due (1) 7:1</p>	<p>Everybody (3) 5:4;20:25;26:3</p> <p>everybody's (1) 4:13</p> <p>everyone (6) 4:9;8:7;12:3;13:4; 15:14;25:8</p> <p>exactly (2) 4:11;20:20</p> <p>example (2) 7:22;8:2</p> <p>examples (1) 18:25</p> <p>except (1) 10:18</p> <p>excessive (1) 8:6</p> <p>expansion (1) 9:7</p> <p>expect (3) 23:21;24:16,19</p> <p>expected (1) 14:3</p> <p>expecting (1) 10:4</p> <p>experience (7) 6:3,19,20;7:13;8:21; 9:12;18:22</p> <p>experienced (2) 8:22;11:24</p> <p>experiments (1) 10:3</p> <p>extent (1) 24:20</p>	<p>8:25;13:12</p> <p>few (4) 4:23;6:9;8:4;13:7</p> <p>fight (1) 5:16</p> <p>figure (2) 14:12,14</p> <p>figured (1) 20:20</p> <p>fill (1) 26:8</p> <p>filled (1) 3:10</p> <p>filter (1) 7:5</p> <p>final (2) 2:25;26:13</p> <p>finally (1) 12:16</p> <p>find (2) 7:7;9:15</p> <p>fine (1) 24:19</p> <p>finer (1) 13:14</p> <p>Fires (2) 17:8,8</p> <p>First (4) 14:7;19:6;21:20; 23:25</p> <p>fitting (1) 10:11</p> <p>FITZ (7) 3:13;12:9;20:16; 21:13,15;26:8,13</p> <p>fix (1) 15:23</p> <p>flawed (1) 22:21</p> <p>flew (1) 8:25</p> <p>flies (1) 25:8</p> <p>flight (6) 4:22;6:8,11;8:3; 10:20;24:11</p> <p>flights (12) 5:2;6:5;9:6;14:18; 15:3,4,4;22:4,6,7,8; 24:3</p> <p>fly (7) 9:20,20,21,22;24:2,7, 8</p> <p>flying (8) 5:1;6:23;9:18;13:1,8, 12;14:11;23:4</p> <p>folks (8) 3:22;4:3;5:8;11:8, 19;13:14;14:14;15:25</p> <p>follow (1) 19:22</p> <p>Ford (4) 19:2,3,3;20:22</p>
		E		
		<p>earthquake (1) 17:4</p> <p>East (2) 3:17;11:4</p> <p>echo (1) 5:23</p> <p>education (1) 19:19</p> <p>effect (1) 19:23</p> <p>effort (1) 19:13</p> <p>efforts (2) 5:11;7:23</p> <p>eight (1) 26:19</p> <p>either (1) 21:8</p> <p>Ellen (1) 8:8</p> <p>else (10) 6:16,16;10:18;20:5, 17,18;21:15;22:14; 23:13;25:16</p> <p>emergency (1) 17:2</p> <p>empathetic (1) 24:24</p> <p>empowers (1) 17:1</p> <p>enforcement (2) 11:14,21</p> <p>enjoy (2) 5:8;7:11</p> <p>entire (1) 17:20</p> <p>equitably (1) 8:5</p> <p>estimate (1) 10:1</p> <p>etc (2) 8:14;17:6</p> <p>Europe (1) 18:14</p> <p>evaluate (1) 9:25</p> <p>Even (2) 7:4;14:12</p> <p>evening (4) 2:3,8;18:2;25:20</p> <p>event (2) 2:7;17:2</p> <p>events (2) 22:12,13</p>	F	
			<p>FAA (12) 4:15,20;6:8;11:1; 12:1,19;15:2;16:4; 18:13,15,18;21:22</p> <p>face (1) 17:9</p> <p>fact (4) 10:18;13:21;16:23; 19:6</p> <p>failure (1) 5:17</p> <p>false (1) 23:23</p> <p>familiar (2) 19:20,21</p> <p>farce (1) 5:7</p> <p>faulty (1) 10:7</p> <p>favor (2) 2:19;13:25</p> <p>Federal (2) 2:13;25:17</p> <p>feel (1) 13:24</p> <p>feet (2)</p>	
D				
<p>Darlene (2) 18:11,12</p>				

<p>forest (1) 17:8 form (4) 3:2,10;26:9,9 forms (1) 3:13 forum (4) 2:7,21,21;21:13 Francisco (2) 15:3;17:3 freeway (3) 16:3,12,16 freeways (1) 9:21 Fremont (3) 8:19,20,20 frequency (2) 24:2,21 fuel (1) 23:10 full (1) 11:25 Fuller (9) 3:15,16,16;20:3,7,14, 19;21:14;23:1</p>	<p>18:22 group (1) 12:21 guess (1) 26:16 guidelines (1) 2:12 guys (5) 2:9;5:10,11;7:23; 18:11</p>	<p>homes (1) 5:5 hope (1) 26:5 hoping (1) 12:23 hours (1) 3:5 house (12) 7:10;8:24;10:16; 13:8,12;17:22,23,25; 18:3,5,8;22:24 HOWARD (22) 2:3,4;3:15;5:20;8:8, 10,15,17,19;10:9,22; 14:2;16:1;18:10;19:2; 20:5,11;22:22;23:13, 15;25:1;26:6 huge (1) 17:10 human (1) 10:8</p>	<p>informed (2) 12:5;24:15 innovative (1) 8:2 inside (1) 9:2 instance (1) 9:13 intended (1) 2:17 interest (1) 20:22 interested (1) 11:19 international (1) 25:18 interspersed (1) 15:4 into (3) 6:9;16:10,23 involved (1) 5:19 isolated (1) 25:15 issue (3) 7:20;13:23;20:2 issues (4) 2:21;11:6,10;17:9</p>	<p style="text-align: center;">L</p> <p>ladies (2) 2:3;23:15 land (1) 2:14 landing (1) 13:8 landmark (1) 6:14 last (1) 10:20 Lastly (1) 18:20 later (1) 3:4 law (1) 24:7 lead (2) 15:16;23:9 learn (2) 26:3,4 least (1) 14:4 leave (1) 7:10 left (1) 5:3 lenience (1) 26:3 Leong (2) 23:16,17 less (2) 17:19;24:2 level (3) 18:14;24:1;25:5 levels (2) 10:17;22:20 life (1) 7:9 liked (1) 23:9 limits (1) 11:17 lines (1) 9:8 little (2) 23:4;26:18 live (15) 6:10,12,17,18;8:21, 22;13:22;16:3,3;17:22; 19:5;20:1;23:20;24:16, 18 lived (1) 24:22 lives (1) 13:22 living (2) 23:25;24:22 local (3) 11:13,20;22:16 logic (1)</p>
G	H	I	J	
<p>games (1) 16:21 garden (1) 7:2 general (4) 9:10;15:4,9;17:5 gentlemen (2) 2:4;23:15 GESC (1) 21:19 Gina (1) 22:22 given (1) 11:16 glad (1) 13:24 Good (7) 2:3;3:18,20;5:9; 17:20;19:24;26:2 goods (1) 19:16 Google (1) 18:16 grabbing (1) 25:25 GRAINGER (2) 25:2,2 great (3) 4:7,8,13 Greater (6) 3:17;4:5;5:15;11:4; 12:16;21:5 Gretchen (3) 2:5;3:6,21 ground (1)</p>	<p>hand (2) 3:14;26:1 handled (1) 11:21 happen (2) 24:5,6 happening (1) 3:23 happy (1) 26:20 hard (1) 17:11 hate (1) 7:8 head (1) 23:4 health (5) 13:5,17,17,20,22 hear (13) 6:12,15;8:11;9:2; 11:25;16:6,6,7,8,8; 17:11;18:2,4 heard (3) 14:5;25:19,21 HEARING (6) 1:9;2:17,23;13:7; 20:16;26:17 heaven (1) 14:11 helicopter (1) 13:12 helicopters (1) 3:24 helicopters' (1) 13:1 Hello (1) 3:16 hey (1) 11:12 Hi (3) 11:3;18:12;19:3 higher (1) 25:5 highly (2) 11:22;12:14 Highton (3) 16:1,2;18:9 home (7) 5:2;6:21;7:12,17; 8:23;9:2;13:11</p>	<p>idea (4) 16:18;25:23,24;26:2 impact (11) 5:12;9:16,25;10:2,8; 13:5,5,16,21;25:7,8 impacted (1) 18:25 impacts (3) 12:7;13:17;14:1 implication (1) 24:9 importance (1) 17:19 important (4) 13:3,18;19:12;23:8 inaccurate (1) 25:20 inappropriate (1) 21:7 included (4) 2:24;12:8;18:23; 22:10 including (1) 7:20 increased (1) 18:7 increases (4) 7:25;23:22;24:20,21 increasing (1) 10:19 incredible (1) 13:21 incredibly (1) 4:21 indoors (1) 7:2 industrial (1) 9:21</p>	<p>Jennifer (2) 14:2,3 Jerry (1) 25:2 John (2) 10:9,10 Jose (4) 9:13;14:8,10;15:4 jurisdiction (2) 15:19;25:17 justification (1) 4:11 justify (1) 4:15</p>	
		K	<p>keep (3) 7:3;17:13,21 Kelly (1) 3:6 kids (2) 16:7;17:24 kind (3) 6:3;11:12;16:10 knew (7) 16:15,16,18;21:2; 22:24,25;23:3 Kory (1) 3:14</p>	

<p>24:24 long (2) 4:22;7:2 longer (2) 6:16;7:13 look (1) 21:20 looked (2) 17:19;21:22 looking (1) 4:18 lot (11) 4:3;14:22;15:9;17:6, 14;18:17;19:13;23:8; 24:14;25:6,21 loud (3) 8:13;22:17;23:7 louder (1) 6:23 love (2) 5:19;16:23 loved (1) 16:18 low (4) 8:14;9:18,22;13:2 lower (3) 13:13;24:1;25:5 lowering (1) 18:13</p>	<p>matter (1) 26:21 may (2) 3:8;6:4 maybe (5) 7:10;14:25;15:7,10; 19:8 mean (3) 11:13;12:3;24:12 meaningless (1) 4:14 measure (1) 10:3 measurement (1) 10:17 measures (2) 2:15;7:20 measuring (1) 22:4 meeting (1) 7:21 member (1) 21:19 mental (1) 13:22 mentioned (2) 11:9;13:19 message (1) 10:12 metric (1) 10:7 metrics (3) 10:1;18:17,19 metroplex (1) 15:8 mid (2) 8:25;9:17 middle (1) 17:1 might (4) 11:19;19:17,21;21:2 mike (3) 8:9,10;25:25 miles (3) 9:19,22,22 Miller (4) 8:8,9,12,16 mind (1) 17:21 minutes (3) 3:2;6:24;10:23 misperception (1) 24:14 MIT (1) 18:16 mixed (1) 11:7 model (1) 9:24 monitor (1) 6:18 month (1) 14:11</p>	<p>monthly (1) 7:21 months (1) 8:24 Moon (1) 1:25 more (8) 7:16;8:2,4,7;9:9; 13:10;26:3,4 morning (1) 17:25 mornings (1) 16:20 most (3) 16:24,24;23:7 moved (5) 16:10,14,15;17:17; 19:6 much (12) 5:7,19;6:8,8;13:9,10; 15:24;16:13;23:17; 24:1,1,2 multiple (3) 8:23;9:24;10:1 museum (1) 10:12 myself (1) 26:5</p>	<p>night (4) 22:4,9;24:2,8 nobody (1) 21:2 NOISE (65) 1:9;2:10,13,14,20, 25;3:3;4:15;5:6,24;6:7, 18,19;7:1,5,20;8:4,21, 22;9:15,16,25;10:1,4,4, 8,16,19;11:1,6,12,14, 17,21,23;12:1,17;13:4, 5,17;15:15,16,17;16:8, 12,21;18:3,5,7;19:9,22; 21:11,23;22:12,20; 23:21,22;24:1,17,19, 20,21;25:5,7,10 noisy (2) 9:2;22:2 normal (1) 3:5 notes (1) 5:22 noticed (2) 6:22;21:21 number (6) 3:9;8:12,14;9:4,14; 25:19</p>	<p>25:10 operation (1) 9:6 operations (2) 19:7;25:6 opportunity (1) 2:18 oppose (1) 10:6 opposed (2) 14:1;18:20 opposition (1) 2:19 oral (2) 2:18;3:2 Organization (1) 13:20 organized (1) 3:19 originally (1) 4:1 others (1) 6:23 out (14) 3:10;14:10,10,12,14, 15,18;16:20;17:5; 25:25;26:1,8,18,19 over (27) 3:25;5:2,5;6:15;8:5; 9:16,17,19,20,20,21, 22;10:19;13:1,8,12; 14:11;15:18,20,22; 18:9;19:7,9,23;22:20; 23:4,6 overhead (1) 6:23 overpasses (1) 19:17 overworked (1) 4:21 own (2) 7:12,17</p>
M		N	O	
<p>ma'am (1) 8:15 Magginetti (2) 21:18,18 main (1) 19:10 makes (3) 14:8;23:24;24:4 making (2) 5:3;8:7 mall (1) 7:11 management (3) 2:15,15;17:7 Manager (1) 3:6 manages (1) 7:5 mandate (1) 24:11 many (6) 8:24;9:9,19,19; 17:12;19:5 map (1) 25:15 maps (1) 22:3 Mari-Jo (2) 8:19,20 Mateo (2) 2:10;3:6</p>		<p>name (9) 2:4;3:11,16;8:20; 16:2;21:18;23:18;25:2; 26:10 national (2) 25:14,18 near (7) 8:23,24;18:3,4,5; 24:16,18 need (15) 8:9,10;11:12;12:16; 13:16;14:12,14,15,20, 25;15:6,23;19:17;22:5; 23:19 needs (1) 14:9 Neighborhood (11) 3:18;4:1,5;5:15;8:6; 12:21;20:21,23;21:1,3, 9 neighborhoods (2) 9:23;11:18 neighbor's (1) 24:24 neutral (1) 2:19 Nevada (1) 9:9 next (2) 17:25;19:2 nice (1) 5:10</p>	<p>Oakland (2) 14:10;15:3 occasionally (1) 23:5 o'clock (1) 26:19 October (1) 3:5 off (4) 6:12,13;13:7,12 often (1) 16:22 oftentimes (1) 11:11 omitted (1) 12:14 once (3) 7:15;24:20,20 one (15) 3:12,12;4:17;7:21; 9:4;11:9;12:5,5;13:3; 16:5,24;18:20;23:7; 24:21;25:9 ones (4) 6:9;12:4;19:21; 22:17 one's (1) 7:17 only (2) 4:23;6:24 open (1) 7:3 operate (1)</p>	
			P	
			<p>Palo (5) 8:21,22;17:5;18:12, 24 parents (2) 16:7,21 park (3) 16:18,19;17:25 parks (1) 17:16 Part (8) 2:13;10:25;11:1; 16:22;22:18;25:14,17; 26:13 particular (1) 8:6 particulars (1) 21:20 passed (1)</p>	

<p>14:22 past (3) 10:14;14:11;23:6 path (1) 14:25 paths (4) 6:8,11;8:3;10:20 pattern (1) 13:1 Paul (1) 21:18 pause (3) 8:18;21:17;23:14 peace (1) 7:11 peaceful (2) 7:9,16 penalties (1) 22:5 penalty (1) 22:7 peninsula (3) 8:25;9:17;15:17 people (7) 4:11;5:9,14,19;12:4; 21:11;24:14 percent (1) 22:13 percentage (1) 22:12 perhaps (1) 6:16 period (1) 24:12 person (1) 3:1 perspective (4) 6:1;9:17;11:7;12:2 phone (2) 8:12,14 pilot (7) 20:15,19,24;21:9; 23:1;24:9;25:3 pilots (8) 4:24,25;5:1;7:21; 19:20,20;25:9;26:2 Pilots' (1) 19:4 place (1) 7:16 Plain (1) 15:16 plane (2) 22:25;23:3 planes (10) 6:12,25;8:13,23,25; 13:7;14:22;15:9;23:4; 24:7 plane's (1) 9:18 planning (1) 15:21 plans (1)</p>	<p>9:7 play (1) 7:13 playing (2) 16:7;18:1 please (6) 3:14;5:14;7:25;8:16; 10:5;24:23 plus (1) 16:11 pm (5) 2:1;22:6,6,8;26:21 point (3) 4:7;7:9;10:16 points (1) 16:5 police (1) 11:14 poor (1) 7:3 populated (1) 16:25 portion (1) 2:7 possibly (1) 15:5 potential (1) 18:17 practical (1) 6:4 premium (1) 9:12 prepared (2) 2:10,24 preparedness (1) 19:14 present (1) 2:18 presented (1) 2:23 president (4) 3:17;4:4;11:4;19:4 print (1) 22:15 problem (4) 11:15,24;12:20; 15:23 problematic (2) 11:22;12:15 problems (2) 12:22,24 procedure (1) 25:11 procedures (1) 19:23 PROCEEDINGS (1) 1:10 produced (1) 4:10 program (6) 2:11,14,15,20,25;3:3 progress (1) 12:25</p>	<p>project (1) 3:9 proposes (1) 2:14 protest (1) 20:14 provide (2) 6:3;9:12 provides (1) 17:10 PUBLIC (10) 1:9;2:7,17,18,21; 7:16;10:3,25;20:12; 26:16 put (3) 19:25;23:24;24:13 putting (2) 15:9;20:14</p>	<p>recognize (1) 25:13 record (8) 2:22;10:6,25;19:25; 21:14;23:24;24:13; 26:10 recording (1) 16:5 recuse (1) 20:3 redistribute (1) 8:2 Redwood (12) 4:3;5:14;6:2,6; 10:10;19:5,11;20:4,7, 15,21;21:1 refuge (2) 22:18,20 refusing (1) 26:1 Regardless (1) 23:21 regular (1) 6:22 Regulations (1) 2:13 related (1) 3:3 relation (1) 21:3 rely (1) 5:22 reminder (1) 10:22 rent (1) 17:23 report (1) 8:13 Reported (1) 1:25 reporter (1) 8:11 REPORTER'S (1) 1:10 reporting (1) 12:17 represent (1) 10:8 representation (1) 20:4 representative (1) 21:6 represented (3) 15:20;18:21;21:12 representing (3) 20:22,24;21:10 request (3) 3:1;9:4,14 requests (1) 9:4 requirements (1) 2:12 rescue (1)</p>	<p>17:6 research (2) 4:18;18:15 residential (8) 9:16,19,23;21:24,25; 22:1,1,2 residents (5) 6:10;9:25;11:25; 12:5;13:19 respond (2) 12:10;26:15 response (1) 21:23 Responses (1) 2:23 rest (1) 2:5 restricted (1) 6:8 resulting (1) 7:3 results (5) 7:22;10:2,6;11:7; 19:24 revenue (1) 17:10 right (15) 3:9;5:11;6:6,15; 14:16;15:6,10,16,22; 16:3,12,19;18:9;20:19; 21:23 road (1) 7:15 Robert (1) 23:16 Rochelle (2) 3:21;21:7 rolls (1) 20:17 rooftop (1) 10:15 room (1) 17:14 routes (1) 9:1 RPR (1) 1:25 rule (1) 4:25 run (1) 10:3</p>
		Q		
		<p>quality (1) 7:4 quiet (4) 7:8,11;21:25;23:4 quieter (1) 7:16 quite (1) 25:20 quote (1) 19:18</p>		
		R		
		<p>railroad (1) 18:3 railway (2) 24:18,19 RE (1) 1:9 reached (1) 7:9 read (1) 2:9 reading (1) 22:15 real (1) 11:24 reality (1) 4:24 realize (1) 13:4 really (12) 4:25;7:17,22;12:11; 13:3;14:9,12,15,20; 19:24;23:9;24:13 reason (5) 15:1;17:4;24:12; 25:16;26:9 rebut (2) 23:19;24:14 recently (3) 8:24;12:25;13:6</p>		
				S
				<p>safe (1) 15:5 same (1) 20:23 SAN (29) 1:12;2:1,10,11;3:6,7, 17,25;4:5,19;5:15;6:6; 7:19;9:1,5,13;10:13; 11:4,16;14:8,10;15:3,</p>

4;17:3,5;19:4;21:5; 25:3,13 Saturday (1) 16:20 saying (4) 15:1;17:18;20:20; 23:2 scheduled (1) 9:6 Scott (2) 16:1,2 second (3) 13:11;18:15,23 seconds (2) 13:7;22:23 seeing (1) 4:3 sense (4) 14:9,23;23:25;24:4 September (2) 1:11;2:1 serious (1) 5:16 seriously (1) 25:11 services (1) 19:17 serving (1) 9:8 shaped (1) 6:14 share (2) 6:2;10:2 shifting (3) 15:13,14,22 shifts (2) 4:22;15:17 Shores (12) 4:4;5:14;6:2,6; 10:10;19:5,11;20:4,7, 15,21;21:1 short (1) 2:8 shortens (1) 13:22 shortly (1) 4:5 shouldered (1) 8:4 showing (2) 15:2,3 shows (1) 5:24 shut (1) 17:3 significantly (1) 13:25 silence (1) 7:14 Silicon (1) 8:1 Similarly (1) 24:18	simple (1) 15:16 sleeping (1) 13:9 smack (1) 16:25 small (3) 22:15,25;23:3 smallest (1) 9:15 soak (1) 7:14 soccer (2) 16:20;18:1 solution (2) 6:4;9:15 solve (2) 12:22,23 solving (1) 15:24 somebody (3) 17:11;20:17;21:2 somebody's (1) 26:1 somehow (1) 15:1 someone (1) 6:16 sometimes (1) 6:24 somewhere (1) 6:16 sound (3) 10:17;11:25;16:13 sounds (1) 17:24 spaces (1) 16:25 speak (4) 3:1;14:3;21:16; 24:13 speaker (6) 3:13;18:7;20:9,13; 23:11;26:11 speaking (1) 18:24 specialist (1) 2:6 specifically (1) 22:19 speech (2) 4:6;5:22 spirit (1) 8:1 spot (1) 25:15 staff (4) 2:4,5;4:22;11:6 start (2) 2:7;18:19 started (4) 2:9;3:14;23:25; 24:22	starting (1) 6:21 startup (1) 9:7 statement (3) 2:8;23:19,23 statements (1) 25:19 station (6) 16:6,17;17:16;18:4; 24:18,19 stay (2) 7:1;18:10 step (1) 21:8 stereo (1) 7:14 still (3) 7:5;8:14;9:7 stomping (1) 26:1 stop (2) 6:5;9:5 stops (1) 9:14 street (2) 16:8,19 stress (1) 19:10 stuck (1) 21:11 studies (1) 26:4 STUDY (18) 1:9;2:11;4:7,9;5:8, 18,24;6:17;7:21;10:7; 11:1;12:7,8,14;13:24, 24;18:20;22:21 study's (1) 12:1 stuff (1) 15:2 subject (2) 25:21;26:4 submitted (1) 3:8 submitting (1) 3:1 subscribes (1) 25:10 suburban (3) 21:24,25;22:1 sudden (1) 23:6 suggest (1) 5:13 Suite (1) 3:7 summer (1) 6:21 Sunnyvale (2) 15:12;18:24 supposed (3)	5:3,4;22:16 sure (1) 21:14 Surf (12) 9:5,5,10,14;12:6,7,7; 14:7,14,19,19;25:7 surrounding (1) 2:16 suspend (1) 20:16 system (2) 25:14,18	told (3) 4:1,17;11:12 tolerable (1) 8:7 tonight (2) 14:3;21:16 top (1) 13:8 total (1) 5:12 totally (1) 21:7 towards (1) 2:20 tower (1) 4:20 track (1) 18:10 tracks (1) 18:3 tract (1) 18:5 traffic (1) 8:3 train (4) 16:6,17;17:16;18:2 TRANSCRIPT (2) 1:10;26:14 transparency (1) 12:17 transportation (1) 25:14 tremendous (1) 25:8 try (1) 11:6 trying (4) 3:22;11:5;12:21; 26:3 TSA (1) 14:21 turns (1) 5:3 two (5) 4:19;6:15;9:4,14; 18:13
T				
U				
				ugly (1) 3:19 unable (3) 7:1,3,12 under (3) 6:11;11:6;22:3 understandable (1) 25:20 unfortunate (2) 6:10;8:4 unfortunately (1) 5:22 UNIDENTIFIED (5) 18:7;20:9,13;23:11;

26:11 unquote (1) 19:18 unsafe (1) 13:15 unusual (1) 23:18 up (10) 3:12;7:14;11:11; 13:20;14:4;18:16,24; 22:9,12;24:12 urban (2) 22:1,2 use (6) 2:14;9:11,12;10:1; 11:19;18:21 used (7) 3:25;4:14;7:7;8:12; 16:4;17:6;22:19 using (3) 9:5;14:7;18:19 U-turn (1) 6:13	3:9,9;9:8;21:22 Wednesday (2) 1:11;2:1 weekend (1) 18:1 what's (4) 3:23;4:20;17:20,23 Whereas (1) 24:3 wife (1) 16:11 wildlife (2) 22:18,20 windows (3) 7:3,4;9:3 winds (1) 12:8 within (4) 10:17,23;11:18; 24:11 without (1) 14:11 wonderful (2) 5:21;7:24 work (11) 2:4;4:22;5:7;6:21; 11:5,20;12:22,23;13:1; 14:15;19:12 working (4) 3:21;11:5;14:25; 15:23 World (2) 13:20;17:7 worst (1) 9:18 writing (1) 12:10 written (3) 2:18,22;3:4 wrong (2) 5:10;20:10		620 (1) 3:6 65 (7) 4:14;10:7;11:9; 18:14,18,21;22:1
		1	
		10:00 (2) 22:6,8 11 (1) 9:8 12 (1) 3:5 13184 (1) 1:25 14 (1) 2:12 140,000 (1) 19:8 150 (3) 2:13;10:7;22:18 150,000 (1) 19:8 1600 (1) 8:25	7
			7:00 (2) 22:6,8 7:29 (1) 26:21 7:30 (1) 20:17
			8
			8:30 (1) 16:20
			9
		2	94070 (1) 3:7
		20 (1) 19:23 2018 (3) 1:11;2:1;3:5 25 (1) 22:24 26 (2) 1:11;2:1	
		3	
		30 (3) 16:11,13;22:23 300,000 (1) 19:7	
		4	
		40 (1) 25:4	
		5	
		50 (4) 11:17;21:21,24,25 500 (1) 13:12 55 (5) 11:17;18:14;21:21, 25,25	
		6	
		6:48 (1) 2:1 60 (2) 21:21;22:1 60-decibel (1) 11:17	
V			
vacation (1) 13:6 valid (1) 14:6 Valley (1) 8:1 Vandellos (7) 11:2,3,3;12:11; 22:22,23;23:2 variety (1) 18:17 venture (1) 14:9 vibration (2) 6:22;7:5 volume (1) 7:24 voluntarily (1) 19:22 voluntary (2) 5:6;25:10 volunteer (1) 10:15	Y Yaplee (2) 18:12,12 yard (1) 16:4 year (1) 19:7 years (11) 3:24;4:19;10:20; 16:11,13;19:6,10,23; 22:24;23:6;25:4 Yin (2) 5:20,21		
W			
wake (1) 22:9 wants (2) 20:5,18 waste (1) 5:13 Way (9) 3:7;11:19;14:12,14; 15:20,21;19:16,18; 24:7 website (4)	Z zero (1) 4:12 Zolck (3) 10:9,10,10		

Written Comment(s) Received During the Public Hearing

14 CFR Part 150 Noise Compatibility Study



PUBLIC HEARING COMMENT FORM

Meeting: Public Hearing Date: September 26, 2018 Time: 6:00 - 7:30 p.m.

Place: Hiller Aviation Museum

Please Print Neatly

601 Skyway Road, San Carlos, CA 94070

What are the touch-and-go practice rules?
Morning start time ordinances?
Allowed to fly close to housing?

What is the process to file a complaint

Why are there no representatives from
Sunnyvale or Cupertino on the committee?
That is where the noise is shifted

CNEL does not reflect noise impact
to residents. Use additional metrics
to reflect true impact

dB-C contours should be used for land
use planning

Please make comments by October 12, 2018 to:

COFFMAN ASSOCIATES, INC.
237 N.W. Blue Parkway, Suite 100
Lee's Summit, MO 64063

Comments can also be submitted
on the project website: sancarlosnoise.airportstudy.com

14 CFR Part 150 Noise Compatibility Study

PUBLIC HEARING COMMENT FORM



Meeting: Public Hearing Date: September 26, 2018 Time: 6:00 - 7:30 p.m.

Place: Hiller Aviation Museum

Please Print Neatly

601 Skyway Road, San Carlos, CA 94070

I would like to see the San Carlos
airport closed. This is a waste of
tax payers money.

any expenses to close would be offset
by the sell of the land and the taxes
on property.

Thank you
John Zolck
510 415 7125

Please make comments by October 12, 2018 to:
COFFMAN ASSOCIATES, INC.
237 N.W. Blue Parkway, Suite 100
Lee's Summit, MO 64063

Comments can also be submitted
on the project website: sancarlosnoise.airportstudy.com

Comments to Noise Compatibility Program Chapter Six

14CFR Part 150

- Page 6.1, Objective: Specifically what is the role of the airport in serving the community, state and nation? A role is assumed, but never stated.
- Page 6.2, Noise Abatement Element: The statement that there are no noise-sensitive land use impacts within the 65 CNEL contours is arbitrary and irrelevant. The 65dB level applies to a noisy urban residential area. Why are no contours presented at 50, 55 and 60dB, Quiet Suburban Residential, Suburban Residential and Urban Residential respectively. See https://www.faa.gov/regulations_policies/policy_guidance/noise/community/.

As stated in the Airport Desk Reference, 1f “The responsibility for determining the acceptable and permissible land uses ... rests with the local authorities ...” Part 150 is not intended to substitute federally determined land uses for those determined appropriate by local authorities. Furthermore, there is an adjacent wildlife refuge. ADR part 2b states that “The responsible FAA officials should not use Part 150 guidelines to determine aviation noise impacts on wildlife.” In these contexts, I would like to know why lower CNEL contours were not mapped?

- Contour maps 6.3 to 6.8: Were the appropriate 5dB and 10 dB penalties applied for aircraft operations between 7:00 to 10:00PM and 10:00PM to 7:00AM respectively as required by the ADR? These are required to calculate CNEL. If not, why not. If so what percentage of the data do these events represent?
- Land use element 3, page 6.8: Why was the Surf Air data omitted? Surf Air was a tenant during the study. What other data has been omitted from this study and why? Projections to 2022 without this data imply no such noisy aircraft will be allowed in the future. Is this the intention? If not, there is no reason to delete data.
- Program Management Element page 6.8: The complaint handling system sends copies of letters to the pilot, ATCT, San Mateo County Deputy Director of Public Works and the San Carlos Airport Pilots’ Association. Why is this information not shared with the public? Why is it not trended to determine the efficacy of the voluntary San Carlos Noise Abatement Procedures?
- Residual Noise Impacts, page 6.10: Table 6A shows a conspicuous lack of data. Would this be true if the Surf Air data had not been removed? Appendix F is missing from the mailed package as are any contours at 55 and 50dB. Why is that?
- Page 6.11 Table 6B: No costs are directed to the users. They are the root cause of the noise, yet bear no cost or consequences for the noise they create. Why is that? Without consequences, nothing will change and the voluntary San Carlos Noise Abatement Procedures is doomed to failure.
- Page 6.13 Table 6C: The tiny budget allowed for Noise Compatibility Program Measures is a joke. The cost is entirely subsidized by the taxpayer with no incentive for pilots to comply with the voluntary San Carlos Noise Abatement Procedures.

Written Comment(s) Received After the
Public Hearing and During the Official
Comment Period

Dave Fitz

From: Airport Study Comment Form <noreply@airportstudy.com>
Sent: Monday, September 24, 2018 1:50 AM
To: Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Noise.airportstudy.com - comments

Name

Linda Popky

Email

linda@popky.com

Organization

Linda

Address

10 Portofino Circle
Redwood Shores, California 94065
United States
[Map It](#)

Subject

Input on Noise From Airport

Your Comments

Unfortunately, I cannot attend the hearing on the 26th. However, I would like to comment on the situation.

I have lived in Redwood Shores, near Steinberger Slough, for over 6 years. I did recognize when I bought the property that I was near an airport, but the noise didn't bother me until the beginning of 2018.

Ever since the beginning of this year, the noise has been significantly louder and more bothersome. Nothing has changed on my side: My house is the same, my windows are the same (usually closed, because I have air conditioning), my habits haven't changed--I have worked from home since I moved here in 2012. Yet the noise is much worse over the last 7-9 months.

I've spoken to the airport people. They asked me to write down the exact time I heard loud aircraft overhead. I did that for about 2 weeks, but it happened frequently enough that I had a long list. I sent this to them and never heard anything back. I know other people have complained about the noise as well.

My guess is one or more of several things have happened:

1. There are more aircraft landing/taking off, or a different mix of aircraft than previously.
2. The flight pattern has changed so that aircraft are flying over my house at a lower altitude.
3. Pilots are not following prescribed procedures and are "buzzing" over us rather than taking off/landing in a more controlled manner.
4. Something else I'm not aware of?

I want to be clear that I understand the airport was here before me, and I am not against it per se, but I do think the noise needs to be reasonable. Again, from 2012 to early 2018, this was NOT a problem. Sometimes these planes are so loud, I think they are going to come right down over my head. Please figure out what's different and bring back the peacefulness we had in Redwood Shores before this year.

Thank you for your help.

Linda

Dave Fitz

From: Airport Study Comment Form <noreply@airportstudy.com>
Sent: Wednesday, September 26, 2018 5:36 PM
To: Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Noise.airportstudy.com - comments

Name

Paul Magginetti

Email

pdmaggine@hotmail.com

Organization

GESC

Address

1023 Springfield Drive
San Carlos, California 94070
United States
[Map It](#)

Subject

Comments to Noise Compatibility Program Chapter Six 14CFR Part 150

Your Comments

Comments to Noise Compatibility Program Chapter Six 14CFR Part 150

- Page 6.1, Objective: Specifically what is the role of the airport in serving the community, state and nation? A role is assumed, but never stated.
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Dave Fitz

From: Airport Study Comment Form <noreply@airportstudy.com>
Sent: Monday, October 01, 2018 7:22 PM
To: Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Noise.airportstudy.com - comments

Name

Chin Lim

Email

limcyusa@gmail.com

Address

Redwood Shores West
Redwood City, California 94065
United States
[Map It](#)

Subject

Excessive Airplane Noise over Redwood Shores West

Your Comments

I live in Redwood Shores West under a flight path. I would like to share my experience and provide the airport with a suggestion.

Redwood Shores is right beside San Carlos airport. I get that there will be some aircraft noise. But how much is too much?

I live in an area of Redwood Shores West where I can see planes take off and when they turn east after reaching the diamond-shaped landmark, I see and hear them again. The area around my home was not surveyed in this airport study. If it had, might results have been different?

The FAA has restricted flight paths and concentrated them into a few designated ones; however, what about the unfortunate residents living under these designated flight paths?

Since starting to work from home this summer, I have noticed a regular and almost constant drone (and vibration) from airplanes flying overhead, some louder than others, and sometimes with only a couple of minutes between the planes. The noise filters through closed double-paned windows and is disruptive to peaceful living. I have to leave my house, maybe take a drive in the car or go to the mall, just so I can enjoy some peace and quiet that I am unable to get in my own home. When driving on the road or being in a public place is quieter and more peaceful than being alone in one's own home, it really says something, doesn't it?

I understand San Carlos airport has taken measures to address the noise issue, including monthly meetings with pilots and undertaking this noise study (though I disagree with the findings of the noise study). I appreciate your efforts.

However, as passenger volume increases, can you do better? Please do better!

In the spirit of Silicon Valley, can you be more innovative?

For example, can you redistribute air traffic along flight paths so that the brunt of the noise is not shouldered by an unfortunate few who get exposed to an excessive amount?

Can you redistribute flight paths so that the plane noise is more equitably distributed over a broader area, thus making it more tolerable for everyone?

October 8, 2018

Gretchen Kelly
Manager, San Mateo County Airports
620 Airport Way, Suite 10
San Carlos, CA 94070

Re: San Carlos Airport hearing on September 26, 2018.

Dear Mrs. Kelly,

At the September 26, 2018 San Carlos Airport hearing on part 150, there was a poster that showed a map of noise monitors near the airport and a table listing the various sites and the noise levels, either measured or modeled.

7 out of the 8 sites showed AEDT values that were higher, sometimes substantially higher, than the measured CNEL values. Only 1 site (site #5) had the same values for both AEDT and actual.

Such differences are puzzling. I have listed below some questions because I would like to understand why these differences exist.

- Modeled noise levels:
 - o Could you please share all the assumptions that were used to model the noise in AEDT? Assumptions include, but are not limited to the type and number of aircraft, time period (how many days) and dates (specific days, weeks, or months), time distribution of flights (day vs. night), the approach used (visual vs. instrument), flight settings (speeds, altitudes, flaps, etc.), and weather conditions (wind, humidity, temperature).
 - o Could you please explain the data source of the assumptions used in the AEDT model? Were the assumptions made based on average traffic for the whole year of 2017? Partial year? Another year?

- Actual noise levels:
 - o What does "average" mean for sites 4, 5, and 6? Were these permanent monitors? What was the time period used to determine the average? Was it one week, one month, or one year?
 - o Why was the actual noise data collection limited sometimes to 1 day, 2 day, or 3 days?
 - o What were the exact dates for the various monitoring sites and the weather conditions at that time?
 - o How many aircraft noise events were recorded for each monitoring site?
 - o Are there other noise metrics available such as Lmax or SEL?
 - o Was the number of aircraft noise events recorded on the very few days representative of typical operations at San Carlos airport?
 - o What were the parameters that determine that the recorded noise was due to aircraft? For instance, what thresholds or duration of events were used?

I want to thank you in advance for considering my questions and providing the answers.

Feel free to contact me if you have any questions or put me in contact with individuals who may have the answers.

Best regards,


Marie-Jo Fremont
1750 Guinda Street
Palo Alto, CA 94303
Mariejofremontl@gmail.com

Dave Fitz

From: Airport Study Comment Form <noreply@airportstudy.com>
Sent: Thursday, October 11, 2018 6:03 PM
To: Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Noise.airportstudy.com - comments

Name

Mark Boslet

Email

markboz@gmail.com

Address

305 Louis Lane
Redwood City, California 94063
United States
[Map It](#)

Subject

Public Comment For 14 CFR Part 150 Noise Compatibility Study

Your Comments

Dear Sirs:

Thank you for the opportunity to comment on the Part 150 Noise Compatibility Study for the San Carlos Airport. I'm an airport neighbor who lives about 1.5 miles east in a residential neighborhood of 800 condominiums and apartments. As you can imagine, my interest in the successful completion of this work is high given the excessive air traffic we get from takeoffs and landings at the airport.

I'd like to point out before commenting on the study that we experience not just frequent, but low altitude, traffic involving both large commercial and smaller recreational aircraft. We observe aircraft flying overhead as early as 5:41 a.m. and they continue sometimes to 1:26 a.m. and beyond. It is not uncommon for us to see between 50 to 70 flyovers a day at present. The consequence for our neighborhood is excessive noise and disruption. As it stands, our quality of life is greatly diminished by the unending traffic volume at the San Carlos Airport.

Therefore, in my view, it is important that the Part 150 study be as accurate as possible and reflect the true conditions in my neighborhood. Unfortunately it is quite possible the study contains serious inaccuracies. These inaccuracies have to do with its flight maps and flight map data. In my opinion, inaccuracies of this sort would deeply degrade the report's usefulness and its ability to assess traffic patterns.

I bring this to your attention because I've noticed inaccuracies in similar flight maps from San Carlos Airport. In particular I refer to a two-day aircraft noise measurement study San Carlos Airport conducted this year in my neighborhood. The finished study, submitted in May 2018, includes a flight map showing traffic over the two days and highlighting 38 incoming Pilatus PC12s (see chart in study). The map does not accurately show the flight paths of the aircraft.

The majority – if not all - flew directly over my residential neighborhood. I know this because I saw 27 of the 38 flights personally from my home and filed noise complaints on each. Each flew over my home or over the property next door. I live at 305 Louis Lane in Redwood City and the neighboring property is the Bayport Marina Plaza property at 643 Bair Island Road.

The flight map shows the aircraft flying over or near Highway 101, about 0.3 of a mile away. It is inaccurate.

This information will not surprise anyone aware of the traffic patterns in my neighborhood. The two flight paths I mentioned above – over my property at 305 Louis Lane and over the Bayport Marina Property - are the paths most flights use as they pass over my neighborhood on their way to the airport. Aircraft fly them all day long.

I mention all this because the Part 150 study appears to take its flight path information from the same radar flight track information provided by SQL. The study seems to say so on page 2-8 of the September 2017 draft. So the same inaccuracies could be part of the Part 150.

In conclusion, I'd like to say that the Part 150 study will be far more useful if it is accurate. I urge accurate flight path information to be produced and included in the study.

Best,
Mark Boslet
305 Louis Lane
Redwood City, CA 94063

Dave Fitz

From: Airport Study Comment Form <noreply@airportstudy.com>
Sent: Friday, October 12, 2018 4:26 PM
To: Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Noise.airportstudy.com - comments

Name

Mark Boslet

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markboz@gmail.com

Address

305 Louis Lane
Redwood City, California 94063
United States
[Map It](#)

Subject

14 CFR Part 150 Noise Compatibility Study Comment

Your Comments

Public Comment On 14 CFR Part 150 Noise Compatibility Study

Gretchen Kelly
Manager, San Mateo County Airports
620 Airport Way, Suite 10
San Carlos, CA 94070

Dear Gretchen:

Thank you for the opportunity to comment on the Part 150 Noise Compatibility Study for the San Carlos Airport. I'm an airport neighbor who lives about 1.5 miles east in a residential neighborhood of 800 condominiums and apartments. As you can imagine, my interest in the successful completion of this work is high given the excessive air traffic we get from takeoffs and landings at the airport.

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305 Louis Lane
Redwood City, CA 94063

Public Comment On 14 CFR Part 150 Noise Compatibility Study

OCT 15 2019

San Mateo County Airports

Gretchen Kelly
Manager, San Mateo County Airports
620 Airport Way, Suite 10
San Carlos, CA 94070

Dear Gretchen:

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Best,
Mark Boslet
305 Louis Lane
Redwood City, CA 94063



10/11/18

Dave Fitz

From: Marie-Jo Fremont <mariejofremont1@gmail.com>
Sent: Tuesday, October 16, 2018 12:13 PM
To: Dave Fitz
Subject: San Carlos airport part 150 study --questions about AEDT and Actual noise differences

Dave,

We met at the San Carlos airport hearing on September 26, 2018. You gave me your business card but I had misplaced it.

I mailed Gretchen Kelly the following letter on October 8 but now that I have found your card I decided to send you my questions directly given that you may have the answers.

Thank you for your help on this matter.

Best regards,

mjf

October 8, 2018

Gretchen Kelly
Manager, San Mateo County Airports
620 Airport Way, Suite 10
San Carlos, CA 94070

Re: San Carlos Airport hearing on September 26, 2018.

Dear Mrs. Kelly,

At the September 26, 2018 San Carlos Airport hearing on part 150, there was a poster that showed a map of noise monitors near the airport and a table listing the various sites and the noise levels, either measured or modeled.

7 out of the 8 sites showed AEDT values that were higher, sometimes substantially higher, than the measured CNEL values. Only 1 site (site #5) had the same values for both AEDT and actual.

Such differences are puzzling. I have listed below some questions because I would like to understand why these differences exist.

- Modeled noise levels:
 - Could you please share all the assumptions that were used to model the noise in AEDT? Assumptions include, but are not limited to the type and number of aircraft, time period (how many days) and dates (specific days,

weeks, or months), time distribution of flights (day vs. night), the approach used (visual vs. instrument), flight settings (speeds, altitudes, flaps, etc.), and weather conditions (wind, humidity, temperature).

- Could you please explain the data source of the assumptions used in the AEDT model? Were the assumptions made based on average traffic for the whole year of 2017? Partial year? Another year?
- Actual noise levels:
 - What does “average” mean for sites 4, 5, and 6? Were these permanent monitors? What was the time period used to determine the average? Was it one week, one month, or one year?
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 - Was the number of aircraft noise events recorded on the very few days representative of typical operations at San Carlos airport?
 - What were the parameters that determine that the recorded noise was due to aircraft? For instance, what thresholds or duration of events were used?

I want to thank you in advance for considering my questions and providing the answers.

Feel free to contact me if you have any questions or put me in contact with individuals who may have the answers.

Best regards,

Marie-Jo Fremont

1750 Guinda Street

Palo Alto, CA 94303

Mariejofremont1@gmail.com

Dave Fitz

From: Creed Raftery <craftery@gmail.com>
Sent: Sunday, October 21, 2018 9:32 PM
To: gkelly@smcgov.org
Cc: Dave Fitz
Subject: airport noise today insane!

Dear San Mateo County Where I Own A Home,

The San Carlos small-plane noise today up by Canada College and 280 Highway has been insane!! Many planes buzzing my roof and rattling the glass windows incessantly and about 100 feet overhead, with constant noise for the last 8 hours as every flight learner apparently tests the process of:

1. climbing steeply just before powering off the motor,
- 2 dive or rest for about 20 seconds,
- 3 and then loudly powering back on the motor.

Each iteration of the above power cycle must be 100 decibels, and the whole flight training program repeats over and over and over and....guess what is next!?!? The instructor has the next learner do the above cycle, yet again.

Please, get some kind of regulation (or at least install an imparital noise monitoring microphone) up by Canada College. When you add the SFO jet noise plus the above repeated Cessna jerks, it is doubly insane - the point of this email is to tell you the San Carlos airport and SM County noise is rattling glass panes, and seems to get worse and worse - help us taxpayers and property owners gain some relief for a few weeks/months (and don't defend not the private pilots from out of town who aren't paying the San Mateo County taxes!).

My friend has a Harley Davidson with basically no muffler (as a sample of the noise up by Canada College), which is half as loud as these private Cessna style airplanes - and with my face 4 feet from his muffler, it is quieter than your planes near my property.

Help us, we are drowning in the engine buzz and noise-pollution!!

SAN CARLOS AIRPORT

**14 CFR Part 150 Study
Planning Advisory Committee Members**

August 29, 2018

Attached is the revised Chapter Six, Noise Compatibility Program, for the San Carlos Airport Part 150 Study. The attached material is the topic of the upcoming Public Workshop/Hearing scheduled for **Wednesday, September 26, 2018 from 6:00 p.m. to 7:30 p.m.** at the Hiller Aviation Museum.

PART 150 STUDY

REVISED CHAPTER SIX – NOISE COMPATIBILITY PROGRAM

I have read the working papers and have no comments.

I have read the working papers and have the following comments. (Please add extra sheets if necessary.)

Please mail this response sheet by October 12, 2018 to:

**COFFMAN ASSOCIATES, INC.
237 N.W. Blue Parkway, Suite 100
Lee's Summit, Missouri 64063**

Attn: David Fitz, dfitz@coffmanassociates.com

Name:

Dimitri Vandellos

Representing:

GESC

Phone:

650-799-7356

Email:

dvandellos@gmail.com

Airport Noise Study Draft Comments/Questions

Land Use Alternatives Draft 5-4 & 5-5

In order for the County of San Mateo, the City of San Carlos, and the residents surrounding the San Carlos Airport to understand and mitigate the significant noise impacts that the San Carlos Airport imposes on the surrounding communities. I request that the Noise contour map indicate decibel ranges below the FAA Noise floor of 65 CNEL.

At the community meeting with our congressional representative Jackie Speier it was noted that the FAA guidelines for noise do not indicate actual community impacts. There are times when the concentration of overhead flights over our communities create conditions where the noise levels exceed community thresholds.

- **Could the the Noise Map contours please show CNEL levels at 60, 55, 50 45, 40 and 35 CNELS generated by Airport operations?**
- **Could the study please translate the CNEL level to Decibel equivalents in sections where noise is discussed?**
- **Could the study please provide a table that shows what 75, 70, 65, 60, 55, 50, 45, 40, and 35 CNEL's represent in decibel equivalents?**
- **Could the study please show the actual noise levels that the community experiences when aircraft fly directly overhead?**
 - For example:
 - a PC12 flying at 900 feet above a residential neighborhood produces X decibels of noise
 - The average number of overflights means that the community has X number of noise incidents above X db in a 12 hour period

This will help the communities, the city of San Carlos, and the county to determine proper noise abatement procedures moving forward.

Part 150 is not intended to substitute federally determined land uses for those determined appropriate by local authorities.

It is critically important for the County, City, and residents to have this data. The city of San Carlos and San Mateo County need to take the noise levels from the 101 freeway, local traffic, the Caltrain station, HSR, and train noise in aggregate to determine development impacts and operational changes needed by the airport, Caltrain, and HSR in order to meet residential noise standards.

The impact of noise generated from the Airport needs to be considered for any future planned land use and development by the city of San Carlos. Economic development in San Carlos in the east side of the city may need to be curtailed if the noise levels exceed community standards until the airport lowers its noise footprint.

Land Use Alternatives Draft 5-4 & 5-5

The Map shows that the section of East San Carlos & Industrial is commercial land use, however there is a residential apartment complex at that location.

- **Can the study maps be updated to show the correct residential land use in that section?**

Land Use Alternatives - Draft 5-10

The Noise study states that “as discussed in Chapter One and shown on Exhibit 1G”, the *Economic Development Plan 2016-2019* for the City of San Carlos indicates that much of the land **east of the Airport to Old County Road** is slated for industrial development.

- **The San Carlos Economic Development Plan does not contain an Exhibit 1G. What is the study referring to when it is referencing Exhibit 1G?**

There is a significant area that is residential in the east side district between Industrial Road and Old County Road.

Blanket statements stating that there will be no residential development between Industrial and Old County in the city of San Carlos are misleading. Additionally, extended stay residential developments already exist in the 65 (and higher) CNEL area and additional ones are planned East of Industrial road.

The assumption that additional housing in the east side will not be developed is a very dangerous one for the Airport Study to imply. Many city council members have expressed support for additional residential development in the east side. That housing will be necessary to meet community needs for the additional workforce in the community given the new commercial projects that are planned and are currently under construction.

If the noise levels exceed residential standards then the new development that the city of San Carlos wants to undertake will be impacted and economic growth for the city will suffer significantly because of the Airport.

- **Can the Noise Study please indicate that additional residential development is likely to occur on the east in areas that are close to the airport and determine what affect that may have in future airport operations?**

Noise Compatibility Program - DRAFT 6-8

The document states that:

“The currently adopted Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport does not include Surf Air’s PC-12 aircraft operations as Surf Air was not a tenant at the time the study was completed. This specific aircraft is louder on its approach than departure, ex- tending the future noise contours in this NCP farther to the south than what is presently shown on the future noise contours in the ALUCP.

Surf Air operations were ongoing during the Noise Study, the fact that they temporarily stopped operations should not allow this study to omit important and relevant data that shows significant community impacts.

- **Surf Air operations are currently ongoing at San Carlos Airport and they were operating when the study was measuring noise. Why is it the the study is omitting this data?**

- Surf Air Operations and all data collected by the study need to be included in all areas of this document.
 - It is arbitrary to remove data from certain sections.
 - This implies that the County and this study is trying to minimize the effects of the airport to the surrounding communities.
 - The omission of this data is extremely unfortunate and calls into question the validity of the entire study.
- **Can the study please include all noise data from all aircraft including all Surf Air operations and all noise contour maps?**
 - This data needs to be included in all sections of the document.
 - **Have any other types of Aircraft such as helicopters or other charter airlines been excluded from this study?**
 - The Airport is allowing noisy PC-12 aircraft and is now allowing a Sikorski S-76 air ambulance to operate out of SQL at all hours of the day or night with no restrictions
 - Are these additional aircraft included in the study?
 - **Has the noise from engine warmups and staging been included in the noise study?**
 - **Did the Noise study measure the increase in mid-field approaches over our community?**
 - **Is the noise data from the mid-field approaches included in the noise contour maps?**
 - **Is noise data from North/South flights to and from Palo Alto Airport included in the noise footprint to our community?**
 - **Did the study use data from plane noise as if aircraft were utilizing noise abatement procedures when performing takeoffs, landings and approaches to the Airport?**
 - **Many planes in use at the airport are 25 to 60 years of age. Did the study take into account the actual noise that these aircraft produce or did the study use charts that would show the idealized noise footprint versions of these aircraft?**
 - **Does the study include the noise contours of these older aircraft and the impacts to the surrounding communities?**
 - **Did the Study take into account the low altitudes that planes use in their approach to the airport over our residential community which would significantly increase noise?**

Data omitting Surf Air operations if wanted could be used **in an addendum** to compare against actuals **it should not be the default**. Conversely, data including known future changes to the aircraft fleet in the airport should also be included in an addendum, since this is a foreseeable known project. The new Airport hangars being proposed will include at least 8 PC-12s and up to 18 Cirrus Type aircraft. These are turboprop aircraft with significant noise impacts which would increase noise to the surrounding communities.

- **Can the additional noise from these aircraft be included in an addendum which also include a CNEL noise footprint.**
 - **If not, why not?**

- **Why would the study omit upcoming known changes to the fleet of aircraft that are being planned due to New Hangar construction but exclude actual data from noise that was generated during the study dates?**
- **Are there additional known changes in the aircraft fleet that the Airport is aware of?**
- **Are these Aircraft included in this study?**
- **Can the study please include the north/south overflights from Palo Alto Airport as an addendum and show the cumulative noise impact from these flights along with the San Carlos Airport operations?**
 - I ask because North/South flights used to use the 101 corridor, but with new management at the Tower and Airport - that corridor has been extended over our community instead of 101 further exacerbating the noise that our community is experiencing.

SQL DRAFT NEM - C21

Exhibit A understates the damage to hearing that can occur by a significant margin. A bulldozer that is **idling** (not actively bulldozing) is loud enough at 85 dB that it can cause permanent damage after only 8 hours of exposure. 100dBA is loud enough to begin causing permanent damage after just 15 minutes per day. 120db can cause immediate hearing damage. Yet the chart only shows “threshold of pain” at an astonishing 150db ignoring the significant impacts of DB levels to hearing loss and quality of life loss. This example underlines our community’s concern regarding this noise study and our view that the study’s main aim is to minimize the very real impacts on our health and safety.

- **Where is the correlation regarding Noise levels and health in this study?**
 - Noise levels directly affect health of the people experiencing that noise but this issue appears to be ignored.
 - I implore the Airport, County, FAA and City of San Carlos to start understanding the severity of this issue by reading the World Health Organization’s report **Burden of disease from environmental noise** - *Quantification of healthy life years lost in Europe*.
- **Why is this data ignoring the significant health impacts of noise levels below the FAA’s very high rating of 65 CNEL?**
 - At Jackie Speier’s Airport Town Hall meeting one of the speakers acknowledged that this metric is arbitrary, exceedingly high, and needs changing.
 - By taking an average noise level over a 24 hour period the study succeeds in minimizing the very real noise impacts to our community and seriously underplays the significant affects on health to the surrounding community.
- **Why is the San Carlos Airport a small plane airport mainly used by hobbyists and corporate execs allowed the same levels of noise as a full blown commercial airport such as SFO?**
 - **Aren’t the fleets different?**
 - **Shouldn’t the noise levels allowances be different as well?**

- **Given that the 65 CNEL FAA threshold just “barely” misses the residential community boundary, and given that the study removed Surf Air data for some of its reports I ask that the raw data on flights and aircraft measured be made available to the public.**
- **Can the County and Study please include the raw data used for flights so that we may verify the validity of the data used?**
- **Can the report please include annual average (AAD) aircraft operations data (which includes departures by stage, length, and time of day as the SFO noise study includes?)**

CFR 14 Part 150 Noise Compatibility Study Meeting Summary B-7, B-8

The summary section ignores significant input from Greater East San Carlos community representatives. We brought up the changes in the noise footprint to our community due to changes in aircraft operations. Previous Airport management staff had in place safeguards to our community that kept the peace between the airport and its neighbors.

The changes in policy by airport staff and what appears to be the outright abandonment of voluntary noise procedure followups to pilots when they do not follow the procedures has significantly increased the noise footprint to our community and significantly deteriorated the quality of life for San Carlos residents.

- **Why would the study edit out the significant feedback we provided regarding changes in the noise footprint in this study?**
 - This further undermines the validity of the study in the eyes of the residents.

Alternatives

- **Why doesn't the study include the option of shortening of the runway to exclude noisy PC-12 aircraft from being allowed to use it?**
- **Why doesn't the Study include the banning of helicopters and other noisy aircraft from the Airport?**

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PUBLIC HEARING RE: NOISE STUDY
REPORTER'S TRANSCRIPT OF PROCEEDINGS
Wednesday, September 26, 2018
SAN CARLOS, CALIFORNIA

Reported by: Tammy Moon, CSR 13184, RPR, CRR

1 SAN CARLOS, CA; WEDNESDAY, SEPTEMBER 26, 2018; 6:48 p.m.

2

3 MR. HOWARD: Good evening, ladies and
4 gentlemen. My name is Davi Howard, and I work on staff
5 with -- with Gretchen and the rest of the airport staff
6 as the airport communications specialist. And this is
7 going to start the public forum portion of our event
8 this evening. And I have a short statement I'm going to
9 read for you guys so that we can get this started.

10 San Mateo County has prepared an airport noise
11 compatibility study program for the San Carlos Airport
12 based on the requirements and guidelines of Title 14 of
13 the Code of Federal Regulations, Part 150. The Noise
14 Compatibility Program proposes noise abatement, land use
15 management, and program management measures for the
16 areas surrounding the airport.

17 This public hearing is intended to give the
18 public the opportunity to present oral or written
19 testimony in favor of, in opposition to, or neutral
20 towards the Airport Noise Compatibility Program. The
21 public forum is not a forum for debate of the issues.

22 A written record will be made of all comments
23 presented at the hearing. Responses to all comments
24 will be prepared and included with the complete
25 documentation of the final Noise Compatibility Program.

1 Each person submitting a "request to speak
2 form" will be allowed three minutes for oral comments
3 related to the Noise Compatibility Program. Additional
4 written comments will be accepted no later than the
5 close of normal business hours on October 12, 2018.
6 Gretchen Kelly, Manager, San Mateo County Airports, 620
7 Airport Way, Suite Ten, San Carlos, California, 94070.

8 Comments may also be submitted through the
9 project website. And we have that website number right
10 here. So those of you who filled out that form, we have
11 them here, and we will call each name and let you come
12 up one by one.

13 DAVE FITZ: So if you have speaker forms,
14 please hand them to Kory, and we'll get started.

15 MR. HOWARD: We'll have Mr. Ben Fuller.

16 MR. FULLER: Hello. My name is Ben Fuller.
17 I'm the president of the Greater East San Carlos
18 Neighborhood Association. I will talk about the good
19 and the bad and the ugly since we have organized this.

20 The good is we're all here. We have been
21 working with Gretchen and Davi and Rochelle and Chris
22 and all the folks who have been trying to understand
23 what's been going on. It's been happening for a couple
24 years that we have had helicopters and airplanes that we
25 never used to have in San Carlos coming over our

1 neighborhood. And originally we were told nothing has
2 changed. But now we agree something has changed.

3 And I'm seeing a lot of folks in Redwood
4 Shores, and we're going to have our president in the
5 greater San Carlos neighborhood come in shortly and make
6 a speech.

7 The point is it's great there's a study. And
8 it's great David is here, and we have been talking with
9 him. What I think everyone will agree is that study

10 produced absolutely nothing. All it is is a
11 justification for these people to continue doing exactly
12 what they're doing, and zero change.

13 It's great that everybody's here. But we all
14 know that 65 CNEL is a meaningless thing. It's used by
15 the FAA to justify all this airport noise, but there's
16 been no change.

17 Now one of the things I have been told through
18 all of our research that we have been looking at this
19 very closely for two years is that San Carlos does not
20 have what's called an FAA tower.

21 So we've got incredibly overworked airport
22 flight control staff who, they work very long shifts.
23 There's only a few of them. They do their best. But
24 the reality is that the pilots are completely breaking
25 every rule. And all this talk about the pilots really

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1 care, the pilots don't care. They're flying -- they're
2 doing over flights of our home that are not what they're
3 supposed to be doing. They're making left turns when
4 they're not supposed to be. Everybody is having
5 airplanes directly over their homes.

6 And voluntary noise abatement is an abject and
7 complete farce. It does not work. And so as much as I
8 enjoy these folks who did this study, and I think
9 they're very good people. We have talked with them.
10 They're very nice guys. There's nothing wrong with
11 these guys. Right there. We applaud your efforts.

12 There's just no impact. It's a total complete
13 waste of time. So what I'm going to suggest is that the
14 people from Redwood Shores please come and talk to the
15 Greater San Carlos Neighborhood Association. We're
16 going to be very serious about continuing this fight.
17 This is a complete failure in terms of -- of any benefit
18 that this community is going to get from this study, as
19 much as I love the people involved. Thank you.

20 MR. HOWARD: Thank you, Ben. And now Ms. Yin.

21 MS. YIN: I thought that was a wonderful
22 speech. And I have to rely on notes, unfortunately.

23 But I echo everything you say. I agree absolutely. I
24 disagree with the noise study. I don't think it shows
25 anything at all.

1 So I'm coming from a different perspective,
2 from Redwood Shores. And I would like to share with you
3 my experience and kind of provide the airport with what
4 I think may be a practical solution, because I know you
5 can't stop the flights.

6 So Redwood Shores is right besides San Carlos.
7 I get that. There will be some aircraft noise. But how
8 much is too much? The FAA has restricted flight paths
9 and concentrated them into a few designated ones.
10 However, what about the unfortunate residents who live
11 under these designated flight paths?

12 Where I live, I can hear the planes taking off.
13 I can see them taking off, and then they do a U-turn
14 around the diamond shaped landmark. And then they come
15 right back over me again, and I hear them two times
16 longer than perhaps someone else somewhere else. And I
17 don't see any airport study has addressed where I live.
18 I don't see that there was a noise monitor where I live
19 to document the doubling of noise that I experience.

20 So anyway, so back to -- to my experience. So
21 since starting to work from home this summer, I have
22 noticed a regular, almost constant drone and vibration
23 from airplanes flying overhead; some louder than others,
24 and sometimes with only a couple of minutes between the
25 planes.

1 Due to the airport noise, I am unable to stay
2 in the garden for long. And when I'm indoors, I'm
3 unable to keep the windows open with resulting poor air
4 quality. Even with all the dual-pane windows closed,
5 the airplane noise and vibration still manages to filter
6 through.

7 I used to find the airplane charming. And now
8 I hate them, because they're disrupting my quiet and
9 peaceful life. I have reached the point where I have to
10 leave my house, maybe take a drive in the car or go to
11 the mall, just so I can enjoy some peace and quiet that
12 I am unable to get in my own home.

13 Since this experience began, I no longer play
14 the stereo in the car just so I can soak up the silence
15 there for once. When driving on the road or being in a
16 public place is quieter and more peaceful than being
17 alone in one's own home, it really says something,
18 doesn't it?

19 I understand that San Carlos Airport has also
20 taken measures to address the noise issue, including the
21 monthly meeting with pilots. And this study is one such
22 example. I don't really like the results.

23 I appreciate your efforts, and I think you guys
24 are a wonderful bunch. However, as the volume
25 increases, can you do better? Please do better.

1 In the spirit of Silicon Valley, can you be
2 more innovative? For example, can you redistribute air
3 traffic along flight paths so that the brunt of the
4 noise is not shouldered by unfortunate few but more
5 equitably distributed over a broader area so that it is
6 not excessive for any particular neighborhood, thus
7 making it more tolerable to everyone? Thank you.

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8 MR. HOWARD: Ellen Miller.

9 MS. MILLER: I don't need a mike.

10 MR. HOWARD: We need the mike so the court
11 reporter can hear you.

12 MS. MILLER: There used to be a phone number
13 that we could call to report planes that were too loud,
14 too low, etc. Is there still a phone number?

11

15 MR. HOWARD: Yes, ma'am.

16 MS. MILLER: Would you please give it to us?

17 MR. HOWARD: Yes.

18 (Brief pause.)

19 MR. HOWARD: Mari-Jo Fremont.

20 MS. FREMONT: So my name is Mari-Jo Fremont,
21 and I live in Palo Alto. I have experience with noise.
22 I live in Palo Alto. I have experienced some noise of
23 the circular planes aircraft near my home multiple times
24 a day for many months until recently. Near my house,
25 the planes flew at 1600 feet on their mid peninsula

1 arrival routes to the San Carlos Airport. They are very
2 noisy, and I hear them from inside the home with all my
3 windows closed.

4 So I have two requests. Number one request is
5 stop Surf Air from using the San Carlos Airport. Surf
6 Air is a commercial operation who has scheduled flights;
7 is the startup who still has expansion plans. Their tag
8 lines on their website is "now serving 11 destinations
9 in California and Nevada with many more to come."

10 Surf Air is not general aviation. Therefore,
11 they should use commercial airports. And if they want
12 to provide a premium experience, they can use the
13 Atlantic Aviation Center in San Jose, for instance.

14 My number two request until Surf Air stops,
15 then find a best solution that has the smallest noise
16 impact over residential areas. From a noise
17 perspective, the approach over the mid peninsula is the
18 worst, because the plane's flying at very low altitudes
19 over many miles of residential areas many times a day.
20 They could fly over the bay. They could fly over
21 industrial areas. They can fly over freeways. But they
22 shouldn't fly at low altitudes over miles and miles of
23 residential neighborhoods.

24 You can model multiple approaches. You can
25 evaluate the cumulative noise impact on the residents.

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1 You can use multiple metrics to estimate the noise
2 impact. You can compare and share the results with the
3 public. You can then run experiments to measure the
4 actual noise against the expecting noise. It can be
5 done. So please do it.

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6 And for the record, I oppose the results of
7 this 150 study, because it's faulty. The 65 CNEL metric
8 does not represent the human impact of aircraft noise.

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9 MR. HOWARD: John Zolck.

10 MR. ZOLCK: John Zolck from Redwood Shores.

11 Thank you for the time. I think it's fitting that we're
12 here in a museum, because I think that's the message
13 that San Carlos' airport should become a bit of the
14 past.

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15 I'd also like to volunteer the rooftop of my
16 house for a noise collection point, because I do not
17 believe that it's within the sound measurement levels.
18 I don't have anything else to add, except for the fact
19 that the noise has been continually increasing over the
20 last ten years, and the flight paths have changed.

18

21 Thank you.

22 MR. HOWARD: Just as a reminder, you have three
23 minutes. You have all been well within that timeframe.
24 And as a -- another aside, that all these testimonies
25 are going to be part of our public record that's going

1 to the FAA as part of the Noise study.

2 Dimitri Vandellos.

3 MR. VANDELLOS: Hi. Dimitris Vandellos,
4 president of the Greater East San Carlos Association.

5 We've been working -- trying to work with the airport
6 staff and county to try to get the noise issues under
7 control. From our perspective, it's mixed results.

8 I do agree with the other folks who have
9 mentioned that 65 CNEL was just arbitrary. And one of
10 the biggest issues that I have, or concerns that I have,
11 is that when we brought up complaints, oftentimes we're
12 told, hey, if it's noise, you kind of need to go to
13 local authorities. So that would mean we would have to
14 go to the police to talk about noise enforcement, which
15 is a problem.

16 However, I'm thinking that given that in San
17 Carlos there are like 50, 55, 60-decibel noise limits
18 within neighborhoods, that that could be an approach to
19 use. And -- for interested folks that might be a way to
20 work with the local communities to talk about
21 enforcement of noise and not just have it handled by the
22 airport. So -- that's highly problematic.

23 And these noise contours averaging I think is a
24 real problem, because that's not what we experienced as
25 residents. We hear the full sound, so averaging it is

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1 very advantageous from the FAA noise study's
2 perspective, but not to the community. And by the
3 community, I mean everyone who is affected, because
4 people are affected. All different ones.

5 One of -- one of our residents informed me
6 that Surf Air -- and this is a question I have in the
7 study. That Surf Air, the impacts of Surf Air in the
8 winds were not included in the study. Is that correct?

9 DAVE FITZ: We're not answering questions. We
10 will respond in writing to all your questions.

11 MR. VANDELLOS: Okay. So I'm really concerned
12 about that. That that's -- that isn't something that
13 would be acceptable to us. Because if certain things
14 were omitted from the study, then that would be highly
15 problematic.

16 And finally, I think we need greater
17 transparency in the reporting of the noise complaints
18 and what actually is done about them. And are they
19 going to the FAA or not. So that's -- that's a big
20 problem.

21 We -- as a neighborhood group, we're trying to
22 work with the airport to solve these problems. And I'm
23 hoping that we can work with the airport to solve the
24 problems. You know, but we will have to see how things
25 progress. So I just recently called Davi, actually,

1 about helicopters' pattern work and flying over our
2 community at low altitudes.

3 And one thing I think is really important for
4 everyone to realize is noise isn't -- it's not just the
5 impact of the noise. It's the impact of our health. I
6 recently came back from vacation where I just wasn't
7 hearing the planes every few seconds taking off,
8 landing, flying over the top of my house. And I
9 couldn't believe how much better I was sleeping. How
10 much more calm I was.

11 And the second I got home, there was a
12 helicopter taking off, flying over the house at 500 feet
13 or lower. And I don't understand why we don't -- why we
14 can't have fines when these folks are doing things that
15 are unsafe.

16 And -- and we need to think about the impact on
17 our health, how noise impacts health, not just take it
18 away. I think that's very important.

19 Some residents of the community had mentioned
20 how the World Health Organization has brought up the
21 fact on the incredible impact it has on our ability to
22 live our lives and how it shortens our health and mental
23 well being. So it's a critical critical issue. I'm
24 glad we're doing this study, but I feel this study is
25 significantly tilted in favor of the airport and that as

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1 opposed to the impacts of the community. Thanks.

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2 MR. HOWARD: Jennifer.

3 JENNIFER: I hadn't expected to speak tonight,
4 but I think I should at least -- I wanted to bring up a
5 couple things that I have already heard that I think are
6 valid concerns.

7 First is that Surf Air's using the
8 commercial -- the San Jose Airport. And it makes no
9 sense. It's a commercial venture. It really needs to
10 go out of San Jose Airport or out of Oakland. It has
11 been heaven without them flying over the past month.
12 And they -- we really need to figure out a way, even if
13 we do it together.

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14 Folks, we need to figure out a way to get Surf
15 Air out of here. We really need to work together on
16 this. They shouldn't be here. It's not right.

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17 The other thing is if this continues with these
18 commercial flights coming out, it's not just going to be
19 Surf Air who allows this. It's going to be Surf Air and
20 other things coming through here. We really need to be
21 thinking together. They're not going to go through TSA.
22 They passed a lot of things here to get these planes in,
23 and it doesn't make any sense.

24 The other thing is if they continue down this
25 path, maybe we need to be working together to close this

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1 airport somehow. The reason I'm saying that is because
2 think about it. When the FAA is showing us stuff,
3 they're showing us San Francisco flights, Oakland
4 flights, San Jose flights all interspersed with general
5 aviation. How can that possibly be safe?

6 We need to be asking the right questions here.
7 Should this airport be closed? Should it? Maybe.
8 We're in -- you know, we're metroplex where the -- there
9 are a lot of planes in the area. We're putting general
10 aviation together. Maybe we're not asking the right
11 questions here.

12 And the other thing is I am from Sunnyvale. So
13 there was a shifting of airplanes. With that bayside
14 approach everyone talks about, the shifting of the
15 airplane noise to another community. And that's not
16 right. Plain and simple. If the lead -- airport noise
17 or airplane noise from the peninsula, but it shifts it
18 over to us.

19 A community that has no jurisdiction or control
20 over this airport and is, by the way, not represented in
21 any way in the planning advisory committee. So they're
22 basically shifting it over to us. This is not right.
23 We need to be working together to fix this problem.
24 This isn't solving anything. So thank you very much,
25 folks. I appreciate it.

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1 MR. HOWARD: Scott Highton.

2 MR. HIGHTON: Thank you. My name is Scott. I
3 live right across the freeway here. I live as close to
4 the airport as anyone. The FAA actually used my yard as
5 one of their recording points for their data collection.

6 I hear the airport. I hear the train station.
7 I hear the kids and their parents playing across the
8 street. I hear construction downtown. I hear noise.
9 Everything.

10 It's kind of what I bought into when I moved
11 here. My wife and I have been here for 30 plus years.
12 The airport noise, to me, right across the freeway,
13 doesn't sound that much different than it was 30 years
14 ago when we moved here.

15 When we moved here, we knew there was an
16 airport across the freeway from us. We also knew there
17 was a train station just across, the block away from us.
18 We knew that there was a park, which we loved the idea
19 of having a park right across the street from us.

20 Get out Saturday mornings 8:30 with soccer and
21 baseball games. Parents. That's noise. You don't
22 often see through that. That's part of what we bought
23 into. We love the fact that an airport is here, and
24 then it is in the most densely -- one of the most
25 densely populated air spaces around. And it's smack in

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1 the middle of our community. And that empowers us in
2 the event of an emergency.

3 If San Francisco Airport has to shut down for
4 some reason, there's an earthquake, communications are
5 out, these general aviation airports, San Carlos, Palo
6 Alto, etc. are used for a lot of the rescue and
7 management world.

8 Fires. We don't have forest fires here, but
9 there are other issues that we would face.

10 The airport provides a huge tax revenue to our
11 city and county. And it's hard to hear that somebody --
12 that some of you, many of you, want to throw that away.
13 And I keep coming back to the thought that there's not a
14 lot of us in this room, based on the age and the amount
15 of time the airport has been here, that didn't know an
16 airport was here or a train station or the parks or
17 whatever when you moved in.

18 Now -- now you are saying, no. The airport has
19 less importance than I do. It's looked at as a
20 community basis. What's good for the entire community.
21 So keep that in mind. When you choose where you are
22 going to live, where you are going to buy your house or
23 rent your house. What's around you.

24 If you don't like the sounds of kids in the
25 morning, don't buy a house next to a park where they're

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1 playing baseball and soccer every weekend or every
2 afternoon or evening. If you don't want to hear train
3 noise, don't buy a house near the railroad tracks or
4 near the station. If you don't want to hear airplane
5 noise, don't buy a house near the airport tract.

6 Thank you.

7 UNIDENTIFIED SPEAKER: The noise has increased
8 since we bought the house.

9 MR. HIGHTON: I'm right over there.

10 MR. HOWARD: Okay. So let's stay on track
11 here, you guys. We have got Darlene.

12 MS. YAPLEE: Hi. I'm Darlene Yaplee from Palo
13 Alto. Two questions. Why is the FAA not lowering the
14 65 CNEL level to 55 as done in Europe?

15 Second of all, the FAA is doing research with
16 MIT. You can all Google that. They've come up with a
17 variety of potential metrics that are a lot better than
18 65 CNEL. And the question is when is the FAA going to
19 start using these alternative metrics?

20 Lastly, I'm opposed to the study, because one,
21 it does use 65 CNEL that is not represented the actual
22 experience on the ground.

23 And second, you have not included communities
24 that have been speaking up here. Palo Alto, Sunnyvale
25 are just examples that are directly impacted by

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arrivals.

MR. HOWARD: Next we have Carol Ford.

MS. FORD: Hi. I'm Carol Ford. I'm the president of the San Carlos Airport Pilots' Association, and I also live in Redwood Shores and have for many years. And in fact, when I first moved in, there were over 300,000 airport operations a year. And now there's about 140,000, maybe 150,000.

So actually, the noise has gone down over the years. And the main thing that I stress, because I'm also on the board of the Redwood Shores Community Association, is that it's very important for us to work together. And therefore, I have made a lot of effort to have disaster preparedness between airport and the community so that in the case of a disaster, there's a way for us to have an airlift of different -- goods and services that we might need thinking that the overpasses have gone down in -- in a big way, quote, unquote.

And we also do constant education of our pilots, both pilots who are familiar with the airport and ones who might not be familiar with the airport. So they can follow the voluntarily noise abatement procedures which have been in effect for over 20 years with really good results.

So I just wanted to put it on the record that

1 we're concerned about the community. I live in the
2 community, and we do understand the issue. Thank you.

3 MR. FULLER: You should recuse yourself -- the
4 Redwood Shores has no representation.

5 MR. HOWARD: Anybody else that wants to say
6 something?

7 MR. FULLER: Redwood Shores has -- she can't be
8 on the board.

9 UNIDENTIFIED SPEAKER: She can't be on both
10 boards. That's wrong.

11 MR. HOWARD: This is going to conclude the
12 public --

13 UNIDENTIFIED SPEAKER: We're --

14 MR. FULLER: We're putting in a protest. She
15 should not be on the pilot -- and the Redwood Shores --

16 DAVE FITZ: We'll suspend the hearing until
17 7:30 or until somebody else rolls around, if anybody
18 else wants to.

19 MR. FULLER: You are a pilot, right? Yeah.
20 Exactly. That's what I figured. All I'm saying is that
21 the Redwood Shores Neighborhood Association has a
22 conflict of interest that Carol Ford is representing the
23 neighborhood association at the same time as she's
24 representing the pilot.

25 And that's why when I asked everybody from

1 Redwood Shores who is your neighborhood association,
2 nobody knew. And then somebody said I think there might
3 be some relation between the airport neighborhood
4 association.

5 The Greater San Carlos Association does not
6 have a representative from the airport on the
7 association. This is totally inappropriate. Rochelle,
8 you know this. She should step down from that -- either
9 the pilot association or the neighborhood association.
10 She should not be on both. She's not representing her
11 community. All these people are stuck with the noise
12 are not being represented.

13 DAVE FITZ: This is not the forum for that.

14 MR. FULLER: Make sure that's on the record.

15 DAVE FITZ: Is there anyone else that would
16 like to speak tonight?

17 (Brief pause.)

18 MR. MAGGINETTI: So my name is Paul Magginetti.
19 I'm also a board member of GESC. I did take a very
20 close look at particulars. Very first thing that I

21 noticed is there are no contours that 60, 55, or 50 dB.

22 And I looked at the FAA website, and it says
23 right there in the community response to noise it has
24 everything from 50, which is a suburban residential.

25 55, which is -- 50 is quiet suburban residential. 55 is

1 suburban residential. 60 is urban residential. 65 is
2 noisy urban residential. So I don't understand why it
3 was under -- contours are not on these maps.

42

4 And in addition, night flights, when measuring
5 the CNEL have a dB penalties that need to be added when
6 there are flights between 7:00 p.m. and 10:00 p.m. and
7 an additional ten dB penalty when there are flights
8 between 10:00 p.m. and 7:00 a.m. Those are the flights
9 that wake us up at night.

43

10 So my question is were those included in the
11 CNEL calculation of average dB. And also what
12 percentage of those made up those noise events. Are we
13 being awakened by ten percent of those events or is
14 there something else?

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15 And also, in reading it in small print down
16 below, it says local authorities are supposed to be the
17 ones who decide what is too loud and what isn't. And in
18 addition, we have a wildlife refuge. And part 150
19 specifically says that it is not to be used to determine
20 the noise levels over wildlife refuge. So if -- I can
21 go on and on. But to me, this study is very flawed.

45

22 MR. HOWARD: Gina Vandellos.

23 MS. VANDELLOS: This will take 30 seconds. We
24 bought our house 25 years ago, and we knew there was an
25 airport. We knew there was a small plane.

1 MR. FULLER: Are you a pilot?

2 MS. VANDELLOS: No. We -- I'm saying that we
3 knew there was -- a small plane airport and that there
4 were very quiet little planes flying over our head
5 occasionally.

6 But all of a sudden, over the past three years,
7 it's gotten crazy loud. But my most -- one of my
8 important -- there's a lot of children in our community.
9 And I have really liked for us to address the lead in
10 the fuel.

11 UNIDENTIFIED SPEAKER: Yeah. Absolutely.
12 Yeah. Thank you.

13 MR. HOWARD: Anyone else want to talk?
14 (Brief pause.)

15 MR. HOWARD: Ladies and gentlemen, this is
16 Robert Leong.

17 MR. LEONG: Thank you very much for announcing
18 my name. This is unusual. But anyway, I thought and I
19 just need to rebut the statement that we -- because we
20 live in an area where there's an airport we should
21 expect airport noise. Regardless of whether or not the
22 noise increases, okay?

23 So I think that's a very false statement. I
24 just want to put on record that that is -- that makes no
25 sense, okay? When I first started living here, the

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1 noise level was much much lower than it is now. The
2 frequency was much less. They don't fly at night.

3 Whereas now, I come across all these flights.
4 That makes no sense, okay? And they are not -- well, we
5 allowed that to happen. I don't see why that should be
6 allowed to happen, but if that's the -- if that's the
7 law, if that's the way planes fly, and you can allow
8 them to fly any time of night, and there's no -- there's
9 no implication to the pilot, that should not be the
10 case. Okay?

11 They should mandate the flight within a certain
12 time period, okay? But, I mean, the reason I'm up here
13 to speak is really just to put on record -- to just
14 rebut the very common misperception by a lot of people
15 who think that they're well informed that just because
16 you live near the airport, we should expect airport
17 noise, okay? If you don't want, go away, okay?

18 Similarly, if you live near a railway station,
19 expect railway station noise. That's fine, okay? To a
20 certain extent. Once that noise increases, once the
21 frequency of that noise increases, there is not one who
22 lived there. When you started living there, it was not
23 like that, okay? So please be understanding, be
24 empathetic to your neighbor's logic.

25 Thank you.

1 MR. HOWARD: This is --

2 MR. GRAINGER: My name is Jerry Grainger. And
3 I am a pilot here in San Carlos Airport and have been
4 for about 40 years. I can't -- I can't tell you that
5 the noise level is higher or lower than before.

6 I know this is a lot for the operations here.
7 I know that the impact of the noise with the Surf Air
8 has had a tremendous impact of everyone that flies here.
9 I can tell you that for decades every one of the pilots
10 that do operate here subscribes to a voluntary noise
11 procedure that is taken very seriously and very
12 conscientiously.

13 And you also recognize this San Carlos Airport
14 is part of a national transportation system which is
15 just an isolated spot on the map that doesn't have
16 anything to do with anything else. And the reason this
17 has federal jurisdiction is because it is a part of
18 national and international aviation system.

19 I have heard a number of statements that have
20 been quite inaccurate this evening. As understandable,
21 aviation is a complex subject. But I have heard a lot
22 of discussion about better communication. I think
23 that's a better idea. I think communication is a better
24 idea.

25 I don't think grabbing the mike out of

49

1 somebody's hand and stomping out and refusing to talk to
2 pilots is a good idea. I want to thank you for your
3 lenience. Everybody is trying to learn more about the
4 subject. I would like to learn more about these studies
5 myself. And hope you do too.

6 MR. HOWARD: Any other questions? Anyone want
7 to talk?

8 DAVE FITZ: If you would like to fill out a
9 form -- the reason for the form is so that we have your
10 name for the record.

11 UNIDENTIFIED SPEAKER: When do we get the
12 questions answered?

13 DAVE FITZ: That will be part of the final
14 document. We'll have the transcript, and then we'll
15 break down each comment and respond.

16 I guess with that, we'll conclude the public
17 hearing. We'll be around if you have any additional
18 questions for a little bit. But we have to get out of
19 here, because they'll want us out by eight o'clock. But
20 I'm happy to answer any questions.

21 (The matter concluded, 7:29 p.m.)
22
23
24
25

1 REPORTER'S CERTIFICATE

2
3
4 I, TAMMY MOON, CSR No. 13184, Certified
5 Shorthand Reporter, certify:

6 That the foregoing proceedings were
7 stenographically reported by me at the time and place
8 therein set forth and were thereafter transcribed;

9 That the foregoing is a true and correct
10 transcript of my shorthand notes so taken.

11 I further certify that I am not a relative or
12 employee of any attorney or any of the parties nor
13 financially interested in the action.

14 I declare under penalty of perjury under the
15 laws of California that the foregoing is true and
16 correct.

17 Dated this 7th day of October, 2018.

18
19 

20
21 Tammy Moon, CSR NO. 13184

14 CFR Part 150 Noise Compatibility Study



PUBLIC HEARING COMMENT FORM

Meeting: Public Hearing Date: September 26, 2018 Time: 6:00 - 7:30 p.m.

Place: Hiller Aviation Museum

Please Print Neatly

601 Skyway Road, San Carlos, CA 94070

What are the touch-and-go practice rules?
Morning start time ordinances?
Allowed to fly close to housing?

50

What is the process to file a complaint

51

Why are there no representatives from
Sunnyvale or Cupertino on the committee
that is where the noise is shifted

52

CNEL does not reflect noise impact
to residents. Use additional metrics
to reflect true impact

53

dB-C contours should be used for land
use planning

54

Please make comments by October 12, 2018 to:
COFFMAN ASSOCIATES, INC.
237 N.W. Blue Parkway, Suite 100
Lee's Summit, MO 64063

Comments can also be submitted
on the project website: sancarlosnoise.airportstudy.com

14 CFR Part 150 Noise Compatibility Study



PUBLIC HEARING COMMENT FORM

Meeting: Public Hearing Date: September 26, 2018 Time: 6:00 - 7:30 p.m.

Place: Hiller Aviation Museum

Please Print Neatly

601 Skyway Road, San Carlos, CA 94070

I would like to see the San Carlos
airport closed. This is a waste of
tax payers money.

55

any expenses to close would be offset
by the sell of the land and the taxes
on property.

Thank you
John Zolck
510 415 7125

Please make comments by October 12, 2018 to:
COFFMAN ASSOCIATES, INC.
237 N.W. Blue Parkway, Suite 100
Lee's Summit, MO 64063

Comments can also be submitted
on the project website: sancarlosnoise.airportstudy.com

Comments to Noise Compatibility Program Chapter Six

14CFR Part 150

- Page 6.1, Objective: Specifically what is the role of the airport in serving the community, state and nation? A role is assumed, but never stated. 56
- Page 6.2, Noise Abatement Element: The statement that there are no noise-sensitive land use impacts within the 65 CNEL contours is arbitrary and irrelevant. The 65dB level applies to a noisy urban residential area. Why are no contours presented at 50, 55 and 60dB, Quiet Suburban Residential, Suburban Residential and Urban Residential respectively. See https://www.faa.gov/regulations_policies/policy_guidance/noise/community/. 57

As stated in the Airport Desk Reference, 1f “The responsibility for determining the acceptable and permissible land uses ... rests with the local authorities ...” Part 150 is not intended to substitute federally determined land uses for those determined appropriate by local authorities. Furthermore, there is an adjacent wildlife refuge. ADR part 2b states that “The responsible FAA officials should not use Part 150 guidelines to determine aviation noise impacts on wildlife.” In these contexts, I would like to know why lower CNEL contours were not mapped? 58

- Contour maps 6.3 to 6.8: Were the appropriate 5dB and 10 dB penalties applied for aircraft operations between 7:00 to 10:00PM and 10:00PM to 7:00AM respectively as required by the ADR? These are required to calculate CNEL. If not, why not. If so what percentage of the data do these events represent? 59
- Land use element 3, page 6.8: Why was the Surf Air data omitted? Surf Air was a tenant during the study. What other data has been omitted from this study and why? Projections to 2022 without this data imply no such noisy aircraft will be allowed in the future. Is this the intention? If not, there is no reason to delete data. 60
- Program Management Element page 6.8: The complaint handling system sends copies of letters to the pilot, ATCT, San Mateo County Deputy Director of Public Works and the San Carlos Airport Pilots’ Association. Why is this information not shared with the public? Why is it not trended to determine the efficacy of the voluntary San Carlos Noise Abatement Procedures? 61
- Residual Noise Impacts, page 6.10: Table 6A shows a conspicuous lack of data. Would this be true if the Surf Air data had not been removed? Appendix F is missing from the mailed package as are any contours at 55 and 50dB. Why is that? 62
- Page 6.11 Table 6B: No costs are directed to the users. They are the root cause of the noise, yet bear no cost or consequences for the noise they create. Why is that? Without consequences, nothing will change and the voluntary San Carlos Noise Abatement Procedures is doomed to failure. 63
- Page 6.13 Table 6C: The tiny budget allowed for Noise Compatibility Program Measures is a joke. The cost is entirely subsidized by the taxpayer with no incentive for pilots to comply with the voluntary San Carlos Noise Abatement Procedures. 64

Dave Fitz

From: Airport Study Comment Form <noreply@airportstudy.com>
Sent: Monday, September 24, 2018 1:50 AM
To: Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Noise.airportstudy.com - comments

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Linda

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[Map It](#)

Subject

Input on Noise From Airport

Your Comments

Unfortunately, I cannot attend the hearing on the 26th. However, I would like to comment on the situation.

I have lived in Redwood Shores, near Steinberger Slough, for over 6 years. I did recognize when I bought the property that I was near an airport, but the noise didn't bother me until the beginning of 2018.

Ever since the beginning of this year, the noise has been significantly louder and more bothersome. Nothing has changed on my side: My house is the same, my windows are the same (usually closed, because I have air conditioning), my habits haven't changed--I have worked from home since I moved here in 2012. Yet the noise is much worse over the last 7-9 months.

I've spoken to the airport people. They asked me to write down the exact time I heard loud aircraft overhead. I did that for about 2 weeks, but it happened frequently enough that I had a long list. I sent this to them and never heard anything back. I know other people have complained about the noise as well.

My guess is one or more of several things have happened:

1. There are more aircraft landing/taking off, or a different mix of aircraft than previously.
2. The flight pattern has changed so that aircraft are flying over my house at a lower altitude.
3. Pilots are not following prescribed procedures and are "buzzing" over us rather than taking off/landing in a more controlled manner.
4. Something else I'm not aware of?

I want to be clear that I understand the airport was here before me, and I am not against it per se, but I do think the noise needs to be reasonable. Again, from 2012 to early 2018, this was NOT a problem. Sometimes these planes are so loud, I think they are going to come right down over my head. Please figure out what's different and bring back the peacefulness we had in Redwood Shores before this year.

Thank you for your help.

Linda

Dave Fitz

From: Airport Study Comment Form <noreply@airportstudy.com>
Sent: Wednesday, September 26, 2018 5:36 PM
To: Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Noise.airportstudy.com - comments

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Paul Magginietti

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[Map It](#)

Subject

Comments to Noise Compatibility Program Chapter Six 14CFR Part 150

Your Comments

Comments to Noise Compatibility Program Chapter Six 14CFR Part 150

- Page 6.1, Objective: Specifically what is the role of the airport in serving the community, state and nation? A role is assumed, but never stated. 68
- Page 6.2, Noise Abatement Element: The statement that there are no noise-sensitive land use impacts within the 65 CNEL contours is arbitrary and irrelevant. The 65dB level applies to a noisy urban residential area. Why are no contours presented at 50, 55 and 60dB, Quiet Suburban Residential, Suburban Residential and Urban Residential respectively. See https://www.faa.gov/regulations_policies/policy_guidance/noise/community/.
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- Page 6.13 Table 6C: The tiny budget allowed for Noise Compatibility Program Measures is a joke. The cost is entirely subsidized by the taxpayer with no incentive for pilots to comply with the voluntary San Carlos Noise Abatement Procedures. 75

Dave Fitz

From: Airport Study Comment Form <noreply@airportstudy.com>
Sent: Monday, October 01, 2018 7:22 PM
To: Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Noise.airportstudy.com - comments

Name

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Redwood City, California 94065
United States
[Map It](#)

Subject

Excessive Airplane Noise over Redwood Shores West

Your Comments

I live in Redwood Shores West under a flight path. I would like to share my experience and provide the airport with a suggestion.

Redwood Shores is right beside San Carlos airport. I get that there will be some aircraft noise. But how much is too much?

I live in an area of Redwood Shores West where I can see planes take off and when they turn east after reaching the diamond-shaped landmark, I see and hear them again. The area around my home was not surveyed in this airport study. If it had, might results have been different?

76

The FAA has restricted flight paths and concentrated them into a few designated ones; however, what about the unfortunate residents living under these designated flight paths?

77

Since starting to work from home this summer, I have noticed a regular and almost constant drone (and vibration) from airplanes flying overhead, some louder than others, and sometimes with only a couple of minutes between the planes. The noise filters through closed double-paned windows and is disruptive to peaceful living. I have to leave my house, maybe take a drive in the car or go to the mall, just so I can enjoy some peace and quiet that I am unable to get in my own home. When driving on the road or being in a public place is quieter and more peaceful than being alone in one's own home, it really says something, doesn't it?

78

I understand San Carlos airport has taken measures to address the noise issue, including monthly meetings with pilots and undertaking this noise study (though I disagree with the findings of the noise study). I appreciate your efforts.

79

However, as passenger volume increases, can you do better? Please do better!

In the spirit of Silicon Valley, can you be more innovative?

For example, can you redistribute air traffic along flight paths so that the brunt of the noise is not shouldered by an unfortunate few who get exposed to an excessive amount?

80

Can you redistribute flight paths so that the plane noise is more equitably distributed over a broader area, thus making it more tolerable for everyone?

October 8, 2018

Gretchen Kelly
Manager, San Mateo County Airports
620 Airport Way, Suite 10
San Carlos, CA 94070

Re: San Carlos Airport hearing on September 26, 2018.

Dear Mrs. Kelly,

At the September 26, 2018 San Carlos Airport hearing on part 150, there was a poster that showed a map of noise monitors near the airport and a table listing the various sites and the noise levels, either measured or modeled.

7 out of the 8 sites showed AEDT values that were higher, sometimes substantially higher, than the measured CNEL values. Only 1 site (site #5) had the same values for both AEDT and actual.

81

Such differences are puzzling. I have listed below some questions because I would like to understand why these differences exist.

- Modeled noise levels:
 - o Could you please share all the assumptions that were used to model the noise in AEDT? Assumptions include, but are not limited to the type and number of aircraft, time period (how many days) and dates (specific days, weeks, or months), time distribution of flights (day vs. night), the approach used (visual vs. instrument), flight settings (speeds, altitudes, flaps, etc.), and weather conditions (wind, humidity, temperature).
 - o Could you please explain the data source of the assumptions used in the AEDT model? Were the assumptions made based on average traffic for the whole year of 2017? Partial year? Another year?

82

83

- Actual noise levels:
 - o What does "average" mean for sites 4, 5, and 6? Were these permanent monitors? What was the time period used to determine the average? Was it one week, one month, or one year? 84
 - o Why was the actual noise data collection limited sometimes to 1 day, 2 day, or 3 days? 85
 - o What were the exact dates for the various monitoring sites and the weather conditions at that time? 86
 - o How many aircraft noise events were recorded for each monitoring site? 87
 - o Are there other noise metrics available such as Lmax or SEL? 88
 - o Was the number of aircraft noise events recorded on the very few days representative of typical operations at San Carlos airport? 89
 - o What were the parameters that determine that the recorded noise was due to aircraft? For instance, what thresholds or duration of events were used? 90

I want to thank you in advance for considering my questions and providing the answers.

Feel free to contact me if you have any questions or put me in contact with individuals who may have the answers.

Best regards,


Marie-Jo Fremont
1750 Guinda Street
Palo Alto, CA 94303
Mariejofremontl@gmail.com

Dave Fitz

From: Airport Study Comment Form <noreply@airportstudy.com>
Sent: Thursday, October 11, 2018 6:03 PM
To: Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Noise.airportstudy.com - comments

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[Map It](#)

Subject

Public Comment For 14 CFR Part 150 Noise Compatibility Study

Your Comments

Dear Sirs:

Thank you for the opportunity to comment on the Part 150 Noise Compatibility Study for the San Carlos Airport. I'm an airport neighbor who lives about 1.5 miles east in a residential neighborhood of 800 condominiums and apartments. As you can imagine, my interest in the successful completion of this work is high given the excessive air traffic we get from takeoffs and landings at the airport.

I'd like to point out before commenting on the study that we experience not just frequent, but low altitude, traffic involving both large commercial and smaller recreational aircraft. We observe aircraft flying overhead as early as 5:41 a.m. and they continue sometimes to 1:26 a.m. and beyond. It is not uncommon for us to see between 50 to 70 flyovers a day at present. The consequence for our neighborhood is excessive noise and disruption. As it stands, our quality of life is greatly diminished by the unending traffic volume at the San Carlos Airport.

Therefore, in my view, it is important that the Part 150 study be as accurate as possible and reflect the true conditions in my neighborhood. Unfortunately it is quite possible the study contains serious inaccuracies. These inaccuracies have to do with its flight maps and flight map data. In my opinion, inaccuracies of this sort would deeply degrade the report's usefulness and its ability to assess traffic patterns. 91

I bring this to your attention because I've noticed inaccuracies in similar flight maps from San Carlos Airport. In particular I refer to a two-day aircraft noise measurement study San Carlos Airport conducted this year in my neighborhood. The finished study, submitted in May 2018, includes a flight map showing traffic over the two days and highlighting 38 incoming Pilatus PC12s (see chart in study). The map does not accurately show the flight paths of the aircraft. 92

The majority – if not all - flew directly over my residential neighborhood. I know this because I saw 27 of the 38 flights personally from my home and filed noise complaints on each. Each flew over my home or over the property next door. I live at 305 Louis Lane in Redwood City and the neighboring property is the Bayport Marina Plaza property at 643 Bair Island Road. 93

The flight map shows the aircraft flying over or near Highway 101, about 0.3 of a mile away. It is inaccurate.

This information will not surprise anyone aware of the traffic patterns in my neighborhood. The two flight paths I mentioned above – over my property at 305 Louis Land and over the Bayport Marina Property - are the paths most flights use as they pass over my neighborhood on their way to the airport. Aircraft fly them all day long.

I mention all this because the Part 150 study appears to take its flight path information from the same radar flight track information provided by SQL. The study seems to say so on page 2-8 of the September 2017 draft. So the same inaccuracies could be part of the Part 150. 94

In conclusion, I'd like to say that the Part 150 study will be far more useful if it is accurate. I urge accurate flight path information to be produced and included in the study.

Best,
Mark Boslet
305 Louis Lane
Redwood City, CA 94063

Dave Fitz

From: Airport Study Comment Form <noreply@airportstudy.com>
Sent: Friday, October 12, 2018 4:26 PM
To: Dave Fitz; Kory Lewis; gkelly@smcgov.org; Jim Harris
Subject: San Carlos Noise.airportstudy.com - comments

Name

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Subject

14 CFR Part 150 Noise Compatibility Study Comment

Your Comments

Public Comment On 14 CFR Part 150 Noise Compatibility Study

Gretchen Kelly
Manager, San Mateo County Airports
620 Airport Way, Suite 10
San Carlos, CA 94070

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95

Best,
Mark Boslet
305 Louis Lane
Redwood City, CA 94063

Public Comment On 14 CFR Part 150 Noise Compatibility Study

EX-100
OCT 15 2019

San Mateo County Airports

Gretchen Kelly
Manager, San Mateo County Airports
620 Airport Way, Suite 10
San Carlos, CA 94070

Dear Gretchen:

Thank you for the opportunity to comment on the Part 150 Noise Compatibility Study for the San Carlos Airport. I'm an airport neighbor who lives about 1.5 miles east in a residential neighborhood of 800 condominiums and apartments. As you can imagine, my interest in the successful completion of this work is high given the excessive air traffic we get from takeoffs and landings at the airport.

I'd like to point out before commenting on the study that we experience not just frequent, but low altitude, traffic involving both large commercial and smaller recreational aircraft. We observe aircraft flying overhead as early as 5:41 a.m. and they continue sometimes to 1:26 a.m. and beyond. It is not uncommon for us to see between 50 to 70 flyovers a day at present. The consequence for our neighborhood is excessive noise and disruption. As it stands, our quality of life is greatly diminished by the unending traffic volume at the San Carlos Airport.

Therefore, in my view, it is important that the Part 150 study be as accurate as possible and reflect the true conditions in my neighborhood. Unfortunately it is quite possible the study contains serious inaccuracies. These inaccuracies have to do with its flight maps and flight map data. In my opinion, inaccuracies of this sort would deeply degrade the report's usefulness and its ability to assess traffic patterns.

91

I bring this to your attention because I've noticed inaccuracies in similar flight maps from San Carlos Airport. In particular I refer to a two-day aircraft noise measurement study San Carlos Airport conducted this year in my neighborhood. The finished study, submitted in May 2018, includes a flight map showing traffic over the two days and highlighting 38 incoming Pilatus PC-12s (see chart in study). The map does not accurately show the flight paths of the aircraft.

92

The majority – if not all - flew directly over my residential neighborhood. I know this because I saw 27 of the 38 flights personally from my home and filed noise complaints on each. Each flew over my home or over the property next door. I live at 305 Louis Lane in Redwood City and the neighboring property is the Bayport Marina Plaza property at 643 Bair Island Road.

93

The flight map shows the aircraft flying over or near Highway 101, about 0.3 of a mile away. It is inaccurate.

This information will not surprise anyone aware of the traffic patterns in my neighborhood. The two flight paths I mentioned above – over my property at 305 Louis Land and over the Bayport Marina Property - are the paths most flights use as they pass over my neighborhood on their way to the airport. Aircraft fly them all day long.

I mention all this because the Part 150 study appears to take its flight path information from the same radar flight track information provided by SQL. The study seems to say so on page 2-8 of the September 2017 draft. So the same inaccuracies could be part of the Part 150.

94

In conclusion, I'd like to say that the Part 150 study will be far more useful if it is accurate. I urge accurate flight path information to be produced and included in the study.

95

Best,
Mark Boslet
305 Louis Lane
Redwood City, CA 94063



10/11/18

Dave Fitz

From: Creed Raftery <craftery@gmail.com>
Sent: Sunday, October 21, 2018 9:32 PM
To: gkelly@smcgov.org
Cc: Dave Fitz
Subject: airport noise today insane!

Dear San Mateo County Where I Own A Home,

The San Carlos small-plane noise today up by Canada College and 280 Highway has been insane!! Many planes buzzing my roof and rattling the glass windows incessantly and about 100 feet overhead, with constant noise for the last 8 hours as every flight learner apparently tests the process of:

1. climbing steeply just before powering off the motor,
- 2 dive or rest for about 20 seconds,
- 3 and then loudly powering back on the motor.

Each iteration of the above power cycle must be 100 decibels, and the whole flight training program repeats over and over and over and....guess what is next!?!? The instructor has the next learner do the above cycle, yet again.

Please, get some kind of regulation (or at least install an imparital noise monitoring microphone) up by Canada College. When you add the SFO jet noise plus the above repeated Cessna jerks, it is doubly insane - the point of this email is to tell you the San Carlos airport and SM County noise is rattling glass panes, and seems to get worse and worse - help us taxpayers and property owners gain some relief for a few weeks/months (and don't defend not the private pilots from out of town who aren't paying the San Mateo County taxes!).

My friend has a Harley Davidson with basically no muffler (as a sample of the noise up by Canada College), which is half as loud as these private Cessna style airplanes - and with my face 4 feet from his muffler, it is quieter than your planes near my property.

Help us, we are drowning in the engine buzz and noise-pollution!!

96

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98

Airport Noise Study Draft Comments/Questions

Land Use Alternatives Draft 5-4 & 5-5

In order for the County of San Mateo, the City of San Carlos, and the residents surrounding the San Carlos Airport to understand and mitigate the significant noise impacts that the San Carlos Airport imposes on the surrounding communities. I request that the Noise contour map indicate decibel ranges below the FAA Noise floor of 65 CNEL.

99

At the community meeting with our congressional representative Jackie Speier it was noted that the FAA guidelines for noise do not indicate actual community impacts. There are times when the concentration of overhead flights over our communities create conditions where the noise levels exceed community thresholds.

100

• **Could the the Noise Map contours please show CNEL levels at 60, 55, 50 45, 40 and 35 CNELS generated by Airport operations?**

101

• **Could the study please translate the CNEL level to Decibel equivalents in sections where noise is discussed?**

102

• **Could the study please provide a table that shows what 75, 70, 65, 60, 55, 50, 45, 40, and 35 CNEL's represent in decibel equivalents?**

103

• **Could the study please show the actual noise levels that the community experiences when aircraft fly directly overhead?**

• For example:

- a PC12 flying at 900 feet above a residential neighborhood produces X decibels of noise
- The average number of overflights means that the community has X number of noise incidents above X db in a 12 hour period

104

This will help the communities, the city of San Carlos, and the county to determine proper noise abatement procedures moving forward.

Part 150 is not intended to substitute federally determined land uses for those determined appropriate by local authorities.

It is critically important for the County, City, and residents to have this data. The city of San Carlos and San Mateo County need to take the noise levels from the 101 freeway, local traffic, the Caltrain station, HSR, and train noise in aggregate to determine development impacts and operational changes needed by the airport, Caltrain, and HSR in order to meet residential noise standards.

105

The impact of noise generated from the Airport needs to be considered for any future planned land use and development by the city of San Carlos. Economic development in San Carlos in the east side of the city may need to be curtailed if the noise levels exceed community standards until the airport lowers its noise footprint.

Land Use Alternatives Draft 5-4 & 5-5

The Map shows that the section of East San Carlos & Industrial is commercial land use, however there is a residential apartment complex at that location.

106

• **Can the study maps be updated to show the correct residential land use in that section?**

Land Use Alternatives - Draft 5-10

The Noise study states that “as discussed in Chapter One and shown on Exhibit 1G”, the *Economic Development Plan 2016-2019* for the City of San Carlos indicates that much of the land east of the Airport to Old County Road is slated for industrial development.

107

- **The San Carlos Economic Development Plan does not contain an Exhibit 1G. What is the study referring to when it is referencing Exhibit 1G?**

There is a significant area that is residential in the east side district between Industrial Road and Old County Road.

Blanket statements stating that there will be no residential development between Industrial and Old County in the city of San Carlos are misleading. Additionally, extended stay residential developments already exist in the 65 (and higher) CNEL area and additional ones are planned East of Industrial road.

The assumption that additional housing in the east side will not be developed is a very dangerous one for the Airport Study to imply. Many city council members have expressed support for additional residential development in the east side. That housing will be necessary to meet community needs for the additional workforce in the community given the new commercial projects that are planned and are currently under construction.

108

If the noise levels exceed residential standards then the new development that the city of San Carlos wants to undertake will be impacted and economic growth for the city will suffer significantly because of the Airport.

- **Can the Noise Study please indicate that additional residential development is likely to occur on the east in areas that are close to the airport and determine what affect that may have in future airport operations?**

109

Noise Compatibility Program - DRAFT 6-8

The document states that:

“The currently adopted Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport does not include Surf Air’s PC-12 aircraft operations as Surf Air was not a tenant at the time the study was completed. This specific aircraft is louder on its approach than departure, ex- tending the future noise contours in this NCP farther to the south than what is presently shown on the future noise contours in the ALUCP.

110

Surf Air operations were ongoing during the Noise Study, the fact that they temporarily stopped operations should not allow this study to omit important and relevant data that shows significant community impacts.

- **Surf Air operations are currently ongoing at San Carlos Airport and they were operating when the study was measuring noise. Why is it the the study is omitting this data?**

111

- Surf Air Operations and all data collected by the study need to be included in all areas of this document.
 - It is arbitrary to remove data from certain sections.
 - This implies that the County and this study is trying to minimize the effects of the airport to the surrounding communities.
 - The omission of this data is extremely unfortunate and calls into question the validity of the entire study.
- 111**
- **Can the study please include all noise data from all aircraft including all Surf Air operations and all noise contour maps?**
 - This data needs to be included in all sections of the document.
- 112**
- **Have any other types of Aircraft such as helicopters or other charter airlines been excluded from this study?**
 - The Airport is allowing noisy PC-12 aircraft and is now allowing a Sikorski S-76 air ambulance to operate out of SQL at all hours of the day or night with no restrictions
 - Are these additional aircraft included in the study?
- 113**
- **Has the noise from engine warmups and staging been included in the noise study?**
- 114**
- **Did the Noise study measure the increase in mid-field approaches over our community?**
- 115**
- **Is the noise data from the mid-field approaches included in the noise contour maps?**
- 116**
- **Is noise data from North/South flights to and from Palo Alto Airport included in the noise footprint to our community?**
- 117**
- **Did the study use data from plane noise as if aircraft were utilizing noise abatement procedures when performing takeoffs, landings and approaches to the Airport?**
- 118**
- **Many planes in use at the airport are 25 to 60 years of age. Did the study take into account the actual noise that these aircraft produce or did the study use charts that would show the idealized noise footprint versions of these aircraft?**
- 119**
- **Does the study include the noise contours of these older aircraft and the impacts to the surrounding communities?**
- 120**
- **Did the Study take into account the low altitudes that planes use in their approach to the airport over our residential community which would significantly increase noise?**
- 121**
- Data omitting Surf Air operations if wanted could be used **in an addendum** to compare against actuals **it should not be the default**. Conversely, data including known future changes to the aircraft fleet in the airport should also be included in an addendum, since this is a foreseeable known project. The new Airport hangars being proposed will include at least 8 PC-12s and up to 18 Cirrus Type aircraft. These are turboprop aircraft with significant noise impacts which would increase noise to the surrounding communities.
- 122**
- **Can the additional noise from these aircraft be included in an addendum which also include a CNEL noise footprint.**
 - If not, why not?
- 123**

- **Why would the study omit upcoming known changes to the fleet of aircraft that are being planned due to New Hangar construction but exclude actual data from noise that was generated during the study dates?** 124
- **Are there additional known changes in the aircraft fleet that the Airport is aware of?** 125
- **Are these Aircraft included in this study?**
- **Can the study please include the north/south overflights from Palo Alto Airport as an addendum and show the cumulative noise impact from these flights along with the San Carlos Airport operations?** 126
 - I ask because North/South flights used to use the 101 corridor, but with new management at the Tower and Airport - that corridor has been extended over our community instead of 101 further exacerbating the noise that our community is experiencing.

SQL DRAFT NEM - C21

Exhibit A understates the damage to hearing that can occur by a significant margin. A bulldozer that is **idling** (not actively bulldozing) is loud enough at 85 dB that it can cause permanent damage after only 8 hours of exposure. 100dBA is loud enough to begin causing permanent damage after just 15 minutes per day. 120db can cause immediate hearing damage. Yet the chart only shows “threshold of pain” at an astonishing 150db ignoring the significant impacts of DB levels to hearing loss and quality of life loss. This example underlines our community’s concern regarding this noise study and our view that the study’s main aim is to minimize the very real impacts on our health and safety.

127

- **Where is the correlation regarding Noise levels and health in this study?**
 - Noise levels directly affect health of the people experiencing that noise but this issue appears to be ignored.
 - I implore the Airport, County, FAA and City of San Carlos to start understanding the severity of this issue by reading the World Health Organization’s report **Burden of disease from environmental noise** - *Quantification of healthy life years lost in Europe*.
- 128

- **Why is this data ignoring the significant health impacts of noise levels below the FAA’s very high rating of 65 CNEL?**
 - At Jackie Speier’s Airport Town Hall meeting one of the speakers acknowledged that this metric is arbitrary, exceedingly high, and needs changing.
 - By taking an average noise level over a 24 hour period the study succeeds in minimizing the very real noise impacts to our community and seriously underplays the significant affects on health to the surrounding community.
- 129

- **Why is the San Carlos Airport a small plane airport mainly used by hobbyists and corporate execs allowed the same levels of noise as a full blown commercial airport such as SFO?**
 - **Aren’t the fleets different?**
 - **Shouldn’t the noise levels allowances be different as well?**
- 130

- **Given that the 65 CNEL FAA threshold just “barely” misses the residential community boundary, and given that the study removed Surf Air data for some of its reports I ask that the raw data on flights and aircraft measured be made available to the public.** 131
- **Can the County and Study please include the raw data used for flights so that we may verify the validity of the data used?** 132
- **Can the report please include annual average (AAD) aircraft operations data (which includes departures by stage, length, and time of day as the SFO noise study includes)?** 133

CFR 14 Part 150 Noise Compatibility Study Meeting Summary B-7, B-8

The summary section ignores significant input from Greater East San Carlos community representatives. We brought up the changes in the noise footprint to our community due to changes in aircraft operations. Previous Airport management staff had in place safeguards to our community that kept the peace between the airport and its neighbors.

134

The changes in policy by airport staff and what appears to be the outright abandonment of voluntary noise procedure followups to pilots when they do not follow the procedures has significantly increased the noise footprint to our community and significantly deteriorated the quality of life for San Carlos residents.

- **Why would the study edit out the significant feedback we provided regarding changes in the noise footprint in this study?** 135
 - This further undermines the validity of the study in the eyes of the residents.

Alternatives

- **Why doesn't the study include the option of shortening of the runway to exclude noisy PC-12 aircraft from being allowed to use it?** 136
- **Why doesn't the Study include the banning of helicopters and other noisy aircraft from the Airport?** 137

Comment Summary with Responses

VERBAL COMMENTS GIVEN DURING THE PUBLIC HEARING

Comment 1. What I think everyone will agree is that study produced absolutely nothing. All it is a justification for these people to continue doing exactly what they're doing, and zero change.

Response: Comment noted.

Comment 2. But we all know that 65 CNEL is a meaningless thing. It's used by the FAA to justify all this airport noise, but there's been no change.

Response: Comment noted.

Comment 3. Now one of the things I have been told through all of our research that we have been looking at this very closely for two years is that San Carlos does not have what's called an FAA tower.

Response: The San Carlos Airport Traffic Control Tower is operated under contract by Serco Inc. and not the Federal Aviation Administration.

Comment 4. So we've got incredibly overworked airport flight control staff who, they work very long shifts. There's only a few of them. They do their best. But the reality is that the pilots are completely breaking every rule. And all this talk about the pilots really care, the pilots don't care. They're flying -- they're doing overflights of our home that are not what they're supposed to be doing. They're making left turns when they're not supposed to be. Everybody is having airplanes directly over their homes.

Response: Comment noted.

Comment 5. And voluntary noise abatement is an abject and complete farce. It does not work. And so as much as I enjoy these folks who did this study, and I think they're very good people. We have talked with them. They're very nice guys. There's nothing wrong with these guys. Right there. We applaud your efforts. There's just no impact. It's a total, complete waste of time.

Response: Comment noted.

Comment 6. This is a complete failure in terms of -- of any benefit that this community is going to get from this study, as much as I love the people involved.

Response: Comment noted.

Comment 7. I disagree with the noise study. I don't think it shows anything at all.

Response: Comment noted.

Comment 8. Where I live, I can hear the planes taking off. I can see them taking off, and then they do a U-turn around the diamond shaped landmark. And then they come right back over me again, and I hear them two times longer than perhaps someone else somewhere else. And I don't see any airport

study has addressed where I live. I don't see that there was a noise monitor where I live to document the doubling of noise that I experience.

Response: Comment noted. Aircraft operating to, from, and in the traffic pattern north of the airport were included in the noise analysis (please see Exhibits 2D, 2E, and 2F in the San Carlos Airport Noise Exposure Maps document). Two noise monitors (Sites 3 and 7) were also located in this area (please see Exhibit 2K in the San Carlos Airport Noise Exposure Maps document). Noise measured at Site 3 was 44.1 CNEL and Site 7 was 50.5 CNEL. The Aviation Environmental Design Tool (AEDT) noise analysis predicted 50.1 CNEL for Site 3 and 56.1 for Site 7.

Comment 9. I understand that San Carlos Airport has also taken measures to address the noise issue, including the monthly meeting with pilots. And this study is one such example. I don't really like the results. I appreciate your efforts, and I think you guys are a wonderful bunch. However, as the volume increases, can you do better? Please do better.

Response: Comment noted.

Comment 10. In the spirit of Silicon Valley, can you be more innovative? For example, can you redistribute air traffic along flight paths so that the brunt of the noise is not shouldered by an unfortunate few but more equitably distributed over a broader area so that it is not excessive for any particular neighborhood, thus making it more tolerable to everyone?

Response: Comment noted. Shifting aircraft noise from one group to another group is not an accepted practice for the Federal Aviation Administration for noise mitigation.

Comment 11. There used to be a phone number that we could call to report planes that were too loud, too low, etc. Is there still a phone number?

Response: The San Mateo County Airports noise complaint hotline phone number is 844-266-6266.

Comment 12. So I have two requests. Number one request is stop Surf Air from using the San Carlos Airport. Surf Air is a commercial operation who has scheduled flights; is the startup who still has expansion plans. Their tag line on their website is "now serving 11 destinations in California and Nevada with many more to come." Surf Air is not general aviation. Therefore, they should use commercial airports.

Response: Comment noted. Surf Air operates aircraft with less than 10 seats and therefore may operate commercial flights at airports such as San Carlos Airport based upon FAA regulations for this type of aircraft.

Comment 13. My number two request until Surf Air stops, then find a best solution that has the smallest noise impact over residential areas.

Response: San Mateo County airport staff has worked with the Federal Aviation Administration to develop an approach that keeps the aircraft over the bay longer (referred to as the Bayside Approach). The Bayside Approach was used on average of 73.8% percent of the time until Surf Air suspended service. This resulted in 2,880 arrivals being diverted over San Francisco Bay.

Comment 14. You can model multiple approaches. You can evaluate the cumulative noise impact on the residents.

Response: Multiple approaches were modeled as part of the 14 CFR Part 150 Noise Compatibility Study (please see Chapter Two on the San Carlos Airport Noise Exposure Maps document) and a cumulative noise metric (Community Noise Equivalent Level - CNEL) was used to determine noise impacts over residents.

Comment 15. You can use multiple metrics to estimate the noise impact. You can compare and share the results with the public. You can then run experiments to measure the actual noise against the expected noise. It can be done. So please do it.

Response: While the AEDT has the capability to calculate several noise metrics, Title 14 of the Code of Federal Regulations Part 150 guidelines (Section 150.9(b) and Section A150.101(a)) restrict us to the DNL (CNEL is the approved metric for California) noise metric in the State of California.

Comment 16. I oppose the results of this 150 study, because it's faulty. The 65 CNEL metric does not represent the human impact of aircraft noise.

Response: Comment noted. The 65 CNEL is required per 14 CFR Part 150, Sec. A150.101, Noise contours and land usages. For additional information regarding the human response to noise, please see the resources in Appendix C related to the measurement of and human response to sound.

Comment 17. I think it's fitting that we're here in a museum, because I think that's the message that San Carlos' airport should become a bit of the past.

Response: Comment noted.

Comment 18. I don't have anything else to add, except for the fact that the noise has been continually increasing over the last ten years, and the flight paths have changed.

Response: In the last ten years, operations have declined from 151,812 in 2007 to 104,106 (a 31 percent decrease). A change in airport traffic control tower (ATCT) staff resulted in changes to established approach and departure instructions to pilots. San Mateo County Aviation Department staff have been working with ATCT staff to resolve these issues.

Comment 19. We've been working -- trying to work with the airport staff and county to try to get the noise issues under control. From our perspective, it's mixed results.

Response: Comment noted.

Comment 20. I do agree with the other folks who have mentioned that 65 CNEL was just arbitrary. And one of the biggest issues that I have, or concerns that I have, is that when we brought up complaints, oftentimes we're told, hey, if it's noise, you kind of need to go to local authorities. So that would mean we would have to go to the police to talk about noise enforcement.

Response: Comment noted. The San Mateo County Aviation Department has an established noise complaint system. Complaints can be logged at: <https://www.planenoise.com/sanmateo/tY5Ru4wa/> or via phone at 844-266-6266.

Comment 21. However, I'm thinking that given that in San Carlos there are like 50, 55, 60-decibel noise limits within neighborhoods, that that could be an approach to use. And, for interested folks, that might be a way to work with the local communities to talk about enforcement of noise and not just have it handled by the airport.

Response: The federal government is the regulator of the nation's aviation system. Congress has assigned administrative and regulatory authority to the FAA. Therefore, establishing 50, 55, or 60 decibel noise limits from aircraft operating to/from San Carlos Airport would have to be approved by the FAA. For San Carlos Airport to limit noise, restrictions would have to be put into place limiting the number of operations and/or different types of aircraft. Chapter Five of the 14 CFR Part 150 Noise Compatibility Study for San Carlos Airport provides an analysis of the viability of implementing restrictions. This analysis determined that FAA disapproval of airport restrictions is likely because there are no noise-sensitive land uses within the 2022 65 CNEL noise exposure contours.

Comment 22. And these noise contours averaging I think is a real problem, because that's not what we experienced as residents. We hear the full sound, so averaging it is very advantageous from the FAA noise study's perspective, but not to the community.

Response: Comment noted. The use of cumulative noise metrics such as CNEL has been found to scientifically correlate well with human annoyance and are used by the FAA, the Federal Highway Administration, Environmental Protection Agency, Department of Defense, and Department of Housing and Urban Development to determine noise impacts (please see Appendix C of the 14 CFR Part 150 Noise Compatibility Study for San Carlos Airport for a detailed discussion on noise).

Comment 23. One of our residents informed me that Surf Air -- and this is a question I have in the study -- that Surf Air, the impacts of Surf Air in the winds were not included in the study. Is that correct?

Response: Surf Air operates the Pilatus PC-12 aircraft. Pilatus PC-12 aircraft operations are included in the development of the noise exposure contours for this study (Please see Table 2C in Chapter Two of the San Carlos Airport 14 CFR Part 150 Noise Exposure Maps document). Wind is a primary determinate of runway use. Runway use assumptions for this analysis are included on Table 2E in Chapter Two of the San Carlos Airport 14 CFR Part 150 Noise Exposure Maps document.

Comment 24. I think we need greater transparency in the reporting of the noise complaints and what actually is done about them. And are they going to the FAA or not.

Response: Comment noted. Each noise complaint is investigated to correlate the complaint to an aircraft operation. When a deviation from the Voluntary Noise Abatement Procedures is identified, County will contact the aircraft owner to provide an explanation of the VNAPs and a copy of the procedures. When requested, data is provided to the FAA.

Comment 25. And one thing I think is really important for everyone to realize is noise isn't -- it's not just the impact of the noise. It's the impact on our health. I recently came back from vacation where I

just wasn't hearing the planes every few seconds taking off, landing, flying over the top of my house. And I couldn't believe how much better I was sleeping. How much more calm I was.

Response: Comment noted.

Comment 26. The second I got home, there was a helicopter taking off, flying over the house at 500 feet or lower. And I don't understand why we don't -- why we can't have fines when these folks are doing things that are unsafe.

Response: Please note that this study is solely focused on aircraft noise. Unsafe aircraft operations should be reported to FAA Flight standards.

Comment 27. Some residents of the community had mentioned how the World Health Organization has brought up the fact on the incredible impact it has on our ability to live our lives and how it shortens our health and mental well-being. So it's a critical issue. I'm glad we're doing this study, but I feel this study is significantly tilted in favor of the airport and that as opposed to the impacts of the community.

Response: 14 CFR Part 150 guidelines provides the basis for how aircraft noise is calculated, assessed, presented, and mitigated. Recent research and findings from the World Health Organization on aircraft noise exposure has not been incorporated into 14 CFR Part 150 and therefore can not be used to determine noise impacts for this study.

Comment 28. First is that Surf Air's using the commercial -- the San Jose Airport. And it makes no sense. It's a commercial venture. It really needs to go out of San Jose Airport or out of Oakland.

Response: Please see response to Comment 12.

Comment 29. Folks, we need to figure out a way to get Surf Air out of here. We really need to work together on this. They shouldn't be here. It's not right.

Response: Comment noted.

Comment 30. The other thing is if they continue down this path, maybe we need to be working together to close this airport somehow. The reason I'm saying that is because think about it. When the FAA is showing us stuff, they're showing us San Francisco flights, Oakland flights, San Jose flights all interspersed with general aviation. How can that possibly be safe?

Response: Comment noted. Surf Air flies the Pilatus PC-12 aircraft. The PC-12 is a single engine turboprop aircraft with nine seats. These aircraft are commonly operated at general aviation airports like San Carlos Airport.

Comment 31. We need to be asking the right questions here. Should this airport be closed? Should it? Maybe. We're in -- you know, we're metroplex where the -- there are a lot of planes in the area. We're putting general aviation together. Maybe we're not asking the right questions here.

Response: Comment noted.

Comment 32. I am from Sunnyvale. So there was a shifting of airplanes. With that Bayside Approach everyone talks about, the shifting of the airplane noise to another community. And that's not right. Plain and simple. If the lead -- airport noise or airplane noise from the peninsula, but it shifts it over to us.

Response: Sunnyvale is located approximately 12 miles southeast of San Carlos Airport. Airspace and flight procedure changes 12 miles from the airport are not controlled by the San Mateo County Aviation Department and are outside the scope of the airport noise compatibility study.

Comment 33. A community that has no jurisdiction or control over this airport and is, by the way, not represented in any way in the planning advisory committee. So they're basically shifting it over to us. This is not right. We need to be working together to fix this problem. This isn't solving anything.

Response: See response to Comment 32.

Comment 34. It's kind of what I bought into when I moved here. My wife and I have been here for 30 plus years. The airport noise, to me, right across the freeway, doesn't sound that much different than it was 30 years ago when we moved here. When we moved here, we knew there was an airport across the freeway from us.

Response: Comment noted.

Comment 35. The airport provides a huge tax revenue to our city and county. And it's hard to hear that somebody -- that some of you, many of you, want to throw that away. And I keep coming back to the thought that there's not a lot of us in this room, based on the age and the amount of time the airport has been here, that didn't know an airport was here or a train station or the parks or whatever when you moved in.

Response: Comment noted.

Comment 36. Why is the FAA not lowering the 65 CNEL level to 55 as done in Europe?

Response: The Noise Compatibility Study for San Carlos Airport has been developed based upon the most recent version of 14 CFR Part 150 guidelines. Requests for changes to these guidelines is outside the scope of this study and should be directed to the FAA.

Comment 37. The FAA is doing research with MIT. You can all Google that. They've come up with a variety of potential metrics that are a lot better than 65 CNEL. And the question is when is the FAA going to start using these alternative metrics?

Response: Please see response to Comment 36.

Comment 38. I'm opposed to the study, because one, it does use 65 CNEL that is not representing the actual experience on the ground.

Response: Please see response to Comments 16, 22, and 36.

Comment 39. You have not included communities that have been speaking up here. Palo Alto, Sunnyvale are just examples that are directly impacted by arrivals.

Response: Palo Alto is located approximately seven miles southeast of San Carlos Airport. Airspace and flight procedure changes seven miles from the airport are not controlled by the San Mateo County Aviation Department and are outside the scope of the airport noise compatibility study. Also, please see response to Comment 32.

Comment 40. We also do constant education of our pilots, both pilots who are familiar with the airport and ones who might not be familiar with the airport. So they can follow the voluntarily noise abatement procedures which have been in effect for over 20 years with really good results.

Response: Comment noted.

Comment 41. So I just wanted to put it on the record that we're concerned about the community. I live in the community, and we do understand the issue.

Response: Comment noted.

Comment 42. Very first thing that I noticed is there are no contours that 60, 55, or 50 dB. And I looked at the FAA website, and it says right there in the community response to noise it has everything from 50, which is a suburban residential. 55, which is -- 50 is quiet suburban residential. 55 is suburban residential. 60 is urban residential. 65 is noisy urban residential. So I don't understand why it was under - - contours are not on these maps.

Response: Please see response to Comment 16. It should be noted that the 60 CNEL noise exposure contour has been mapped and is included in Appendix F for local agencies that recognize the 60 CNEL as Conditionally Acceptable.

Comment 43. And in addition, night flights, when measuring the CNEL, have a dB penalties that need to be added when there are flights between 7:00 p.m. and 10:00 p.m. and an additional ten dB penalty when there are flights between 10:00 p.m. and 7:00 a.m. Those are the flights that wake us up at night. So my question is, were those included in the CNEL calculation of average dB. And also what percentage of those made up those noise events. Are we being awakened by ten percent of those events or is there something else?

Response: Time-of-day assumptions are included in Table 2D in Chapter Two of the 14 CFR Part 150 Noise Compatibility Study for San Carlos Airport.

Comment 44. And also, in reading it in small print down below, it says local authorities are supposed to be the ones who decide what is too loud and what isn't. And in addition, we have a wildlife refuge. And Part 150 specifically says that it is not to be used to determine the noise levels over wildlife refuge. So if -- I can go on and on. But to me, this study is very flawed.

Response: Please see response to Comment 16.

Comment 45. I'm saying that we knew there was -- a small plane airport and that there were very quiet little planes flying over our head occasionally. But all of a sudden, over the past three years, it's gotten crazy loud. But my most -- one of my important -- there's a lot of children in our community. And I would have really liked for us to address the lead in the fuel.

Response: Please see response to Comment 18. This study is solely dedicated to aircraft noise and associated impacts. Potential issues related to lead in fuel is outside the scope of this study.

Comment 46. I thought and I just need to rebut the statement that we -- because we live in an area where there's an airport, we should expect airport noise. Regardless of whether or not the noise increases, okay? So I think that's a very false statement.

Response: Comment noted.

Comment 47. I come across all these flights. That makes no sense, okay? And they are not -- well, we allowed that to happen. I don't see why that should be allowed to happen, but if that's the -- if that's the law, if that's the way planes fly, and you can allow them to fly any time of night, and there's no -- there's no implication to the pilot, that should not be the case.

Response: Comment noted. Also, please see response to Comment 21 for a discussion of airport restrictions.

Comment 48. They should mandate the flight within a certain time period, okay? But, I mean, the reason I'm up here to speak is really just to put on record -- to just rebut the very common misperception by a lot of people who think that they're well-informed that just because you live near the airport, we should expect airport noise, okay?

Response: Mandating flight times is referred to as an operating restriction. FAA disapproval of operating restrictions is likely because there are no noise-sensitive impacts within the 65 CNEL contour. Comment noted.

Comment 49. I don't think grabbing the mic out of somebody's hand and stomping out and refusing to talk to pilots is a good idea.

Response: Comment noted.

WRITTEN COMMENTS GIVEN DURING THE PUBLIC HEARING AND DURING THE OFFICIAL COMMENT PERIOD AFTER THE PUBLIC HEARING

Comment 50. What are the touch-and go practice rules? Morning start time ordinances? Allowed to fly close to housing?

Response: The San Mateo County Aviation Department requests that touch-and-go training operations be done only when the ATCT is open and requests that air traffic pattern operations not start until after 10:00 a.m. on weekends and holiday mornings. The ATCT hours are from 7:00 a.m. to 9:00 p.m. Aircraft are to fly at traffic pattern altitude or as directed by the ATCT if they are not on approach to or departing from the runway. The designated traffic pattern altitude is 800 feet above ground level (AGL).

Comment 51. What is the process to file a complaint?

Response: Please see response to Comment 20.

Comment 52. Why are there no representatives from Sunnyvale or Cupertino on the committee? That is where the noise is shifted.

Response: Sunnyvale is located approximately 12 miles southeast and Cupertino is 17 miles southeast of San Carlos Airport. Airspace and flight procedure changes 12 and 17 miles from the airport are not controlled by the San Mateo County Aviation Department are outside the scope of the airport noise compatibility study.

Comment 53. CNEL does not reflect noise impact to residents. Use additional metrics to reflect true impact.

Response: Please see response to Comments 16, 22, and 36.

Comment 54. dB-C contours should be used for land use planning.

Response: The dB-C noise metric is weighted to lower frequencies, some of which cannot be heard by the human ear. The CNEL noise metric is based upon the dBA which is weighted to the frequencies humans can hear. Also, please see response to Comments 16, 22, 35, and 36.

Comment 55. I would like to see the San Carlos Airport closed. This is a waste of taxpayers' money. Any expenses to close would be offset by the sell of the land and the taxes on the airport.

Response: Comment noted.

Comment 56. Page 6.1, Objective: Specifically, what is the role of the airport in serving the community, state, and nation? A role is assumed, but never stated.

Response: The following text was added to clarify San Carlos Airport's role in the community, state, and nation. "The objective of the noise compatibility planning process is to improve the compatibility between aircraft operations and noise-sensitive land uses in the area, while allowing the Airport to continue to serve its role in the aviation transportation network in the community, state, and nation."

Comment 57. Page 6.2, Noise Abatement Element: The statement that there are no noise-sensitive land use impacts within the 65 CNEL contours is arbitrary and irrelevant. The 65dB level applies to a noisy urban residential area. Why are no contours presented at 50, 55 and 60dB, Quiet Suburban Residential, Suburban Residential and Urban Residential respectively. See https://www.faa.gov/regulations_policies/policy_guidance/noise/community/

Response: Please see response to Comments 16 and 42.

Comment 58. As stated in the Airport Desk Reference, 1f, "The responsibility for determining the acceptable and permissible land uses ... rests with the local authorities." Part 150 is not intended to substitute federally determined land uses for those determined appropriate by local authorities. Furthermore, there is an adjacent wildlife refuge. ADR part 2b states that, "The responsible FAA officials should not use Part 150 guidelines to determine aviation noise impacts on wildlife." In these contexts, I would like to know why lower CNEL contours were not mapped?

Response: Please see response to Comment 43.

Comment 59. Contour maps 6.3 to 6.8: Were the appropriate 5dB and 10 dB penalties applied for aircraft operations between 7:00 to 10:00PM and 10:00PM to 7:00AM respectively as required by the ADR? These are required to calculate CNEL. If not, why not? If so, what percentage of the data do these events represent?

Response: Yes. Please see response to Comment 43.

Comment 60. Land use element 3, page 6.8: Why was the Surf Air data omitted? Surf Air was a tenant during the study. What other data has been omitted from this study and why? Projections to 2022 without this data imply no such noisy aircraft will be allowed in the future. Is this the intention? If not, there is no reason to delete data.

Response: The aircraft Surf Air operates, the Pilatus PC-12, is included in the 2022 noise exposure contours. All noise contour development assumptions are outlined in Chapter Two of the 14 CFR Part 150 Noise Exposure Maps document for San Carlos.

The Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport is prepared by the San Mateo County Airport Land Use Commission (ALUC) and was adopted in October 2015. The recommendation contained in this 14 CFR Part 150 Noise Compatibility Program is to amend the noise exposure contours contained in San Mateo County ALUC's plan with noise exposure contours that include Surf Air's PC-12 activity.

Comment 61. Program Management Element page 6.8: The complaint handling system sends copies of letters to the pilot, ATCT, San Mateo County Deputy Director of Public Works and the San Carlos Airport Pilots' Association. Why is this information not shared with the public? Why is it not trended to determine the efficacy of the voluntary San Carlos Noise Abatement Procedures?

Response: Please see response to Comment 24.

Comment 62. Residual Noise Impacts, page 6.10: Table 6A shows a conspicuous lack of data. Would this be true if the Surf Air data had not been removed? Appendix F is missing from the mailed package as are any contours at 55 and 50dB. Why is that?

Response: Table 6A is correct. The 2017 and 2022 noise exposure contours do not extend over noise-sensitive land uses (residential dwellings or noise-sensitive institutions).

Comment 63. Page 6.11 Table 6B: No costs are directed to the users. They are the root cause of the noise, yet bear no cost or consequences for the noise they create. Why is that? Without consequences, nothing will change and the voluntary San Carlos Noise Abatement Procedures is doomed to failure.

Response: The County's Airports are an Enterprise Fund and their operations are supported by revenues generated from hangar and tiedown rentals, transient parking use fees, landing fees for charter operators, business fees and aircraft fuel sales derived from San Carlos and Half Moon Bay Airports. Therefore, cost associated with the program are directed to the airport users. The text in table 6B will be amended to clarify the County Airport's funding.

Comment 64. Page 6.13 Table 6C: The tiny budget allowed for Noise Compatibility Program Measures is a joke. The cost is entirely subsidized by the taxpayer with no incentive for pilots to comply with the voluntary San Carlos Noise Abatement Procedures.

Response: Comment noted. Please see response to Comment 63.

Comment 65. I have lived in Redwood Shores, near Steinberger Slough, for over 6 years. I did recognize when I bought the property that I was near an airport, but the noise didn't bother me until the beginning of 2018. Ever since the beginning of this year, the noise has been significantly louder and more bothersome. Nothing has changed on my side: My house is the same, my windows are the same (usually closed, because I have air conditioning), my habits haven't changed--I have worked from home since I moved here in 2012. Yet the noise is much worse over the last 7-9 months.

Response: Please see response to Comment 18.

Comment 66. I've spoken to the airport people. They asked me to write down the exact time I heard loud aircraft overhead. I did that for about 2 weeks, but it happened frequently enough that I had a long list. I sent this to them and never heard anything back. I know other people have complained about the noise as well.

Response: Complaints received are automatically associated with aircraft and their associated radar tracks. If the County identifies a radar track which deviates from the Voluntary Noise Abatement Procedures (VNAPs), County researches the track to determine if the deviation was the result of an ATCT instruction, weather, VFR vs IFR operation, etc. In the absence of these examples, the County contacts the aircraft owner/operator and provides them with a copy of the apparent deviation and a copy of the VNAPs.

Comment 67. My guess is one or more of several things have happened:

1. There are more aircraft landing/taking off, or a different mix of aircraft than previously.

2. The flight pattern has changed so that aircraft are flying over my house at a lower altitude.
3. Pilots are not following prescribed procedures and are "buzzing" over us rather than taking off/landing in a more controlled manner.
4. Something else I'm not aware of?

Response: Please see response to Comment 18.

Comment 68. Page 6.1, Objective: Specifically, what is the role of the airport in serving the community, state and nation? A role is assumed, but never stated.

Response: Please see response to Comment 56.

Comment 69. Page 6.2, Noise Abatement Element: The statement that there are no noise-sensitive land use impacts within the 65 CNEL contours is arbitrary and irrelevant. The 65dB level applies to a noisy urban residential area. Why are no contours presented at 50, 55 and 60dB, Quiet Suburban Residential, Suburban Residential and Urban Residential respectively. See https://www.faa.gov/regulations_policies/policy_guidance/noise/community/.

Response: Please see response to Comments 16 and 42.

Comment 70. As stated in the Airport Desk Reference, 1f "The responsibility for determining the acceptable and permissible land uses rests with the local authorities . . ." Part 150 is not intended to substitute federally determined land uses for those determined appropriate by local authorities. Furthermore, there is an adjacent wildlife refuge. ADR part 2b states that "The responsible FAA officials should not use Part 150 guidelines to determine aviation noise impacts on wildlife." In these contexts, I would like to know why lower CNEL contours were not mapped?

Response: Please see response to Comment 42.

Comment 71. Contour maps 6.3 to 6.8: Were the appropriate 5dB and 10 dB penalties applied for aircraft operations between 7:00 to 10:00PM and 10:00PM to 7:00AM respectively as required by the ADR? These are required to calculate CNEL. If not, why not. If so what percentage of the data do these events represent?

Response: Please see response to Comment 43.

Comment 72. Land use element 3, page 6.8: Why was the Surf Air data omitted? Surf Air was a tenant during the study. What other data has been omitted from this study and why? Projections to 2022 without this data imply no such noisy aircraft will be allowed in the future. Is this the intention? If not, there is no reason to delete data.

Response: Please see response to Comment 60.

Comment 73. Program Management Element page 6.8: The complaint handling system sends copies of letters to the pilot, ATCT, San Mateo County Deputy Director of Public Works and the San Carlos Airport Pilots' Association. Why is this information not shared with the public? Why is it not trended to determine the efficacy of the voluntary San Carlos Noise Abatement Procedures?

Response: Please see response to Comment 24.

Comment 74. Residual Noise Impacts, page 6.10: Table 6A shows a conspicuous lack of data. Would this be true if the Surf Air data had not been removed? Appendix F is missing from the mailed package as are any contours at 55 and 50dB. Why is that?

Response: Please see response to Comment 62.

Comment 75. Page 6.11 Table 6B: No costs are directed to the users. They are the root cause of the noise, yet bear no cost or consequences for the noise they create. Why is that? Without consequences, nothing will change and the voluntary San Carlos Noise Abatement Procedures is doomed to failure.

Response: Please see response to Comment 63.

Comment 76. Page 6.13 Table 6C: The tiny budget allowed for Noise Compatibility Program Measures is a joke. The cost is entirely subsidized by the taxpayer with no incentive for pilots to comply with the voluntary San Carlos Noise Abatement Procedures.

Response: Comment noted. Please see response to Comment 63.

Comment 77. I live in an area of Redwood Shores West where I can see planes take off and when they turn east after reaching the diamond shaped landmark, I see and hear them again. The area around my home was not surveyed in this airport study. If it had, might results have been different?

Response: Please see response to Comment 8.

Comment 78. The FAA has restricted flight paths and concentrated them into a few designated ones; however, what about the unfortunate residents living under these designated flight paths?

Response: The San Mateo County Aviation Department is not aware if the FAA has restricted flight paths or concentrated flight paths over a few designated routes into and out of San Carlos Airport.

Comment 79. Since starting to work from home this summer, I have noticed a regular and almost constant drone (and vibration) from airplanes flying overhead, some louder than others, and sometimes with only a couple of minutes between the planes. The noise filters through closed double-paned windows and is disruptive to peaceful living. I have to leave my house, maybe take a drive in the car or go to the mall, just so I can enjoy some peace and quiet that I am unable to get in my own home. When driving on the road or being in a public place is quieter and more peaceful than being alone in one's own home, it really says something, doesn't it?

Response: Comment noted.

Comment 80. I understand San Carlos airport has taken measures to address the noise issue, including monthly meetings with pilots and undertaking this noise study (though I disagree with the findings of the noise study). I appreciate your efforts. However, as passenger volume increases, can you do better? Please do better!

Response: Comment noted.

Comment 80. In the spirit of Silicon Valley, can you be more innovative? For example, can you redistribute air traffic along flight paths so that the brunt of the noise is not shouldered by an unfortunate few who get exposed to an excessive amount? Can you redistribute flight paths so that the plane noise is more equitably distributed over a broader area, thus making it more tolerable for everyone?

Response: Comment noted. Shifting aircraft noise from one group to another group is not an accepted practice for the Federal Aviation Administration for noise mitigation.

Comment 81. 7 out of the 8 sites showed AEDT values that were higher, sometimes substantially higher, than the measured CNEL values. Only 1 site (site #5) had the same values for both AEDT and actual. Such differences are puzzling. I have listed below some questions because I would like to understand why these differences exist.

Response: Field measurements are more representative of weather events, and the AEDT is more representative of the overall climate. General aviation airport activity fluctuates and aircraft traffic patterns vary from day to day. This variability is caused by runway use, airport traffic control tower instructions, pilot technique, aircraft performance, temperature, humidity, and wind conditions. It is not uncommon for field noise measurement values taken for two or three days to not line up because these variables can cause daily noise levels to change. The AEDT uses average annual information and enables us to better understand the noise climate in the vicinity of the airport.

Comment 82. Could you please share all the assumptions that were used to model the noise in AEDT? Assumptions include, but are not limited to the type and number of aircraft, time period (how many days) and dates (specific days, weeks, or months), time distribution of flights (day vs. night), the approach used (visual vs. instrument), flight settings (speeds, altitudes, flaps, etc.), and weather conditions (wind, humidity, temperature).

Response: All assumptions used to develop the noise exposure contours for San Carlos Airport can be found in Chapter Two, Aviation Noise of the Noise Exposure Maps document. This document can be found online at: <http://sancarlosnoise.airportstudy.com/>

Comment 83. Could you please explain the data source of the assumptions used in the AEDT model? Were the assumptions made based on average traffic for the whole year of 2017? Partial year? Another year?

Response: Please see response to Comment 82.

Comment 84. What does "average" mean for sites 4, 5, and 6? Were these permanent monitors? What was the time period used to determine the average? Was it one week, one month, or one year?

Response: For comparison to the AEDT CNEL values, noise measurement values for each 24-hour period were logarithmically averaged. For example, Site 5 measured 43.8CNEL for day 1 and 47.4 CNEL for day 2. The two-day average is 45.9 CNEL.

Comment 85. Why was the actual noise data collection limited sometimes to 1 day, 2 days, or 3 days?

Response: Budget limits the number of days and locations that can be measured. It should be noted that field noise measurements are not required for a 14 CFR Part 150 Noise Compatibility Study. Field noise measurements are a useful test of the annual average assumptions, and the San Mateo County Aviation Department elected to spend the extra money to acquire this data.

Comment 86. What were the exact dates for the various monitoring sites and the weather conditions at that time?

Response: A complete description of the measurement sites, weather conditions, measurement procedures, and results for San Carlos Airport measurement program can be found in Chapter Two, Aviation Noise of the Noise Exposure Maps document. This document can be found online at: <http://sancarlosnoise.airportstudy.com/>

Comment 87. How many aircraft noise events were recorded for each monitoring site?

Response: Please see response to Comment 88.

Comment 88. Are there other noise metrics available such as Lmax or SEL?

Response: Lmax and SEL data is provided in Table 2K in Chapter Two, Aviation Noise of the Noise Exposure Maps document. This document can be found online at: <http://sancarlosnoise.airportstudy.com/>

Comment 89. Was the number of aircraft noise events recorded on the very few days representative of typical operations at San Carlos airport?

Response: The number of aircraft noise events measured ranged from 273 near the runway end to 26 at a residence near Santa Clara Way and Branson Drive northwest of the airport. Also, please see response to Comment 86.

Comment 90. What were the parameters that determine that the recorded noise was due to aircraft? For instance, what thresholds or duration of events were used?

Response: A minimum threshold of approximately 5 to 10 dB greater than the ambient level was established for the noise measurements. This excluded any noise event below the threshold. Additionally, a minimum event duration of five seconds was set to ensure that brief events (door slam, dog barking, etc.) were not recorded. These two thresholds limit the single noise events logged by the noise monitor. The Larson Davis Model 831 sound level meters are equipped to make a digital recording of an event that exceeds the programmed thresholds. This feature aids the user in identifying aviation-related events when calculating noise exposure for the location. A 15-second sound file is saved within the instrument's memory and is downloaded during routine site visits. This 15-second sound file can then be used to identify the source of the noise event. Also, please see response to Comment 86.

Comment 91. Therefore, in my view, it is important that the Part 150 study be as accurate as possible and reflect the true conditions in my neighborhood. Unfortunately, it is quite possible the study contains serious inaccuracies. These inaccuracies have to do with its flight maps and flight map data. In my opinion, inaccuracies of this sort would deeply degrade the report's usefulness and its ability to assess traffic patterns.

Response: Comment noted.

Comment 92. I bring this to your attention because I've noticed inaccuracies in similar flight maps from San Carlos Airport. In particular I refer to a two-day aircraft noise measurement study San Carlos Airport conducted this year in my neighborhood. The finished study, submitted in May 2018, includes a flight map showing traffic over the two days and highlighting 38 incoming Pilatus PC12s (see chart in study). The map does not accurately show the flight paths of the aircraft.

Response: The information referenced in this comment is provided through Vector Airport Systems. Vector Airport Systems states that the radar information, supplied by Harris Corporation and used at San Carlos Airport, is the most accurate, reliable, and complete tracking data available on the commercial market.

Comment 93. The majority - if not all - flew directly over my residential neighborhood. I know this because I saw 27 of the 38 flights personally from my home and filed noise complaints on each. Each flew over my home or over the property next door. I live at 305 Louis Lane in Redwood City and the neighboring property is the Bayport Marina Plaza property at 643 Bair Island Road. The flight map shows the aircraft flying over or near Highway 101, about 0.3 of a mile away. It is inaccurate.

Response: See response to Comment 92. The PC-12 flight tracks for the noise monitoring period were re-evaluated and determined to be 0.3 to 0.4 miles west of the measurement site during the measurement period.

Comment 94. I mention all this because the Part 150 study appears to take its flight path information from the same radar flight track information provided by SQL. The study seems to say so on page 2-8 of the September 2017 draft. So the same inaccuracies could be part of the Part 150.

Response: See response to comment 92. The same source was used for the Part 150 study and the noise measurements conducted in April 2018.

Comment 95. In conclusion, I'd like to say that the Part 150 study will be far more useful if it is accurate. I urge accurate flight path information to be produced and included in the study.

Response: See response to Comment 92.

Comment 96. The San Carlos small-plane noise today up by Canada College and 280 Highway has been insane!! Many planes buzzing my roof and rattling the glass windows incessantly and about 100 feet overhead, with constant noise for the last 8 hours as every flight learner apparently tests the process of: 1. climbing steeply just before powering off the motor, 2. dive or rest for about 20 seconds, 3. and then loudly powering back on the motor. Each iteration of the above power cycle must be 100 decibels, and the whole flight training program repeats over and over and over and guess what is next!?!? The instructor has the next learner do the above cycle, yet again.

Response: Comment noted.

Comment 97. Please, get some kind of regulation (or at least install an impartial noise monitoring microphone) up by Canada College. When you add the SFO jet noise plus the above repeated Cessna

jerks, it is doubly insane - the point of this email is to tell you the San Carlos airport and SM County noise is rattling glass panes, and seems to get worse and worse - help us taxpayers and property owners gain some relief for a few weeks/months (and don't defend the private pilots from out of town who aren't paying the San Mateo County taxes!).

Response: The application of new regulations and mitigation programs is assessed in Chapter Five of the 14 CFR Part 150 Noise Compatibility Program document for San Carlos Airport. A field noise measurement program was done as part of this study and can be found in Chapter Two of the 14 CFR Part 150 Noise Exposure document. These documents can be found online at: <http://sancarlosnoise.airportstudy.com/> Requests for additional field measurements can be submitted to the San Mateo County Aviation Department.

Comment 98. My friend has a Harley Davidson with basically no muffler (as a sample of the noise up by Canada College), which is half as loud as these private Cessna style airplanes - and with my face 4 feet from his muffler, it is quieter than your planes near my property.

Response: Comment noted.

Comment 99. Land Use Alternatives Draft 5-4 & 5-5

In order for the County of San Mateo, the City of San Carlos, and the residents surrounding the San Carlos Airport to understand and mitigate the significant noise impacts that the San Carlos Airport imposes on the surrounding communities. I request that the Noise contour map indicate decibel ranges below the FAA Noise floor of 65 CNEL.

Response: Please see responses to Comments 16 and 42.

Comment 100. At the community meeting with our congressional representative Jackie Speier it was noted that the FAA guidelines for noise do not indicate actual community impacts. There are times when the concentration of overhead flights over our communities create conditions where the noise levels exceed community thresholds.

Response: Comment noted.

Comment 101. Could the the Noise Map contours please show CNEL levels at 60, 55, 50 45, 40 and 35 CNELS generated by Airport operations?

Response: Please see responses to Comments 16 and 42.

Comment 102. Could the study please translate the CNEL level to Decibel equivalents in sections where noise is discussed?

Response: CNEL is based upon the decibel and may also be expressed as "dB CNEL." CNEL is a cumulative noise description and cannot be presented as decibels only. As outlined in Appendix C – Resource Library of the San Carlos Airport Noise Exposure Maps, cumulative noise metrics are considered a summary description of the "noise climate" of an area. The CNEL noise values represent the accumulated noise energy from passing aircraft in the same way that a precipitation gauge accumulates rain from storms. At the end of a 24-hour period, a rain gauge indicates the total rainfall received for that day, although the rain fell only during brief, sometimes intense, showers. Over a year, total

precipitation is summarized in inches. Similarly, aircraft events occurring during a 24-hour period can be summed based on the sound exposure levels (dB SEL), adding a 10-decibel factor for nighttime noise, and an additional 4.77 dB factor for evening events. Similar to the climate of a location, the CNEL metric defines the noise environment of the area.

Comment 103. Could the study please provide a table that shows what 75, 70, 65, 60, 55, 50, 45, 40, and 35 CNEL's represent in decibel equivalents?

Response: Please see responses to Comments 16 and 42.

Comment 104. Could the study please show the actual noise levels that the community experiences when aircraft fly directly overhead?

For example:

-A PC12 flying at 900 feet above a residential neighborhood produces X decibels of noise -The average number of overflights means that the community has X number of noise incidents above X db in a 12 hour period

Response: Pages 2-29 through 2-36 of Chapter Two of the San Carlos Airport Noise Exposure Maps document provide a summary of the noise measurements conducted as part of the Part 150 process. For example, Table 2K provides information regarding single event noise levels associated with aircraft events during the noise measurement period and notes the number of events at each site that are above 60, 70, 80, 90, and 100 dB. Additionally, PC-12 operations during the noise measurement period were correlated with flight tracks from the San Carlos Airport flight track monitoring system. This information is presented on Exhibit 2M and the report concludes that the AEDT generally over-predicts noise for the PC-12 when compared to the measured values.

Comment 105. Part 150 is not intended to substitute federally determined land uses for those determined appropriate by local authorities. It is critically important for the County, City, and residents to have this data. The city of San Carlos and San Mateo County need to take the noise levels from the 101 freeway, local traffic, the Caltrain station, HSR, and train noise in aggregate to determine development impacts and operational changes needed by the airport, Caltrain, and HSR in order to meet residential noise standards.

The impact of noise generated from the Airport needs to be considered for any future planned land use and development by the city of San Carlos. Economic development in San Carlos in the east side of the city may need to be curtailed if the noise levels exceed community standards until the airport lowers its noise footprint.

Response: The San Mateo County ALUC has adopted the 60 CNEL as the threshold of significance for land use planning purposes in the Comprehensive Airport Land Use Plan for the Environs of San Carlos Airport (adopted in October 2015). The City of San Carlos 2030 General Plan, Figure 9-1, conditionally accepts residential, recreational activities, schools, libraries, places of worship, and meeting halls between 60 CNEL and 70 CNEL. Office buildings, businesses, and commercial uses are acceptable up to 65 CNEL and conditional acceptable up to 80 CNEL. The 60 CNEL has been included in the Noise Exposure Maps document in Appendix F to support both the ALUC, City of San Carlos, and other area community planning efforts.

Comment 106. Land Use Alternatives Draft 5-4 & 5-5. The Map shows that the section of East San Carlos & Industrial is commercial land use, however there is a residential apartment complex at that location. Can the study maps be updated to show the correct residential land use in that section?

Response: The mapping shown on Exhibit 5A reflects the designations from the City of San Carlos General Plan. It should be noted that in some cases, a community's general plan may not reflect the existing land use. Changes to the general plan must be approved by the governing body. No change made.

Comment 107. Land Use Alternatives - Draft 5-10, The Noise study states that “as discussed in Chapter One and shown on Exhibit 1G”, the Economic Development Plan 2016-2019 for the City of San Carlos indicates that much of the land east of the Airport to Old County Road is slated for industrial development. The San Carlos Economic Development Plan does not contain an Exhibit 1G. What is the study referring to when it is referencing Exhibit 1G?

Response: Exhibit 1G may be found on page 1-22 of the San Carlos Airport Noise Exposure Maps document available at <http://sancarlosnoise.airportstudy.com/>. Exhibit 1G identifies the East Side Industrial Area as outlined in the City of San Carlos Economic Development Plan 2016-2019.

Comment 108. There is a significant area that is residential in the east side district between Industrial Road and Old County Road. Blanket statements stating that there will be no residential development between Industrial and Old County in the city of San Carlos are misleading. Additionally, extended stay residential developments already exist in the 65 (and higher) CNEL area and additional ones are planned East of Industrial road.

The assumption that additional housing in the east side will not be developed is a very dangerous one for the Airport Study to imply. Many city council members have expressed support for additional residential development in the east side. That housing will be necessary to meet community needs for the additional workforce in the community given the new commercial projects that are planned and are currently under construction.

If the noise levels exceed residential standards then the new development that the city of San Carlos wants to undertake will be impacted and economic growth for the city will suffer significantly because of the Airport.

Response: Text has been revised as follows to clarify the anticipated land uses in the East Side Industrial Area as outlined in the City of San Carlos' Economic Development Plan:

“The City of San Carlos Economic Development Plan 2016-2019 identifies the East Side Industrial Area, located between Old County Road and Highway 101, excluding the existing residential uses, as the City's major business and commercial district. The plan notes that this area has, “developed an identity as a regional home improvement destination and various stakeholders are interested in seeing more industrial arts businesses locate on the East Side. Industrial arts businesses tend to be small craft-type businesses producing small, often high-end, products, such as furniture, clothing, and food and beverage products.” For additional information regarding the City of San Carlos Economic Development Plan 2016-2019, refer to Chapter One and Exhibit 1G found in the San Carlos Airport Noise Exposure Maps Document. The General Plan Land Use Map also indicates that the areas around the Airport are only planned for compatible uses in the future.”

The land use alternatives chapter relies on the adopted general plan and zoning information available from the communities within the study area. Although community leaders may have expressed support for development that is different from what is outlined in the adopted general plan and zoning, amendment to these documents would be necessary prior to implementation. The San Carlos Airport Noise Compatibility Plan includes a measure to encourage the City of San Carlos to add the 2022 noise exposure contours developed during the Part 150 study to aid decision-makers when considering potential general plan map revisions.

Comment 109. Can the Noise Study please indicate that additional residential development is likely to occur on the east in areas that are close to the airport and determine what affect that may have in future airport operations?

Response: See response to Comment 108.

Comment 110. Noise Compatibility Program - DRAFT 6-8, The document states that: “The currently adopted Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport does not include Surf Air’s PC-12 aircraft operations as Surf Air was not a tenant at the time the study was completed. This specific aircraft is louder on its approach than departure, extending the future noise contours in this NCP farther to the south than what is presently shown on the future noise contours in the ALUCP.

Surf Air operations were ongoing during the Noise Study, the fact that they temporarily stopped operations should not allow this study to omit important and relevant data that shows significant community impacts.

Response: Please see response to Comment 60.

Comment 111. Surf Air operations are currently ongoing at San Carlos Airport and they were operating when the study was measuring noise. Why is it the study is omitting this data?

- Surf Air Operations and all data collected by the study need to be included in all areas of this document.
- It is arbitrary to remove data from certain sections.
- This implies that the County and this study is trying to minimize the effects of the airport to the surrounding communities.
- The omission of this data is extremely unfortunate and calls into question the validity of the entire study.

Response: Please see response to Comment 60.

Comment 112. Can the study please include all noise data from all aircraft including all Surf Air operations and all noise contour maps? This data needs to be included in all sections of the document.

Response: Please see response to Comment 60.

Comment 113. Have any other types of Aircraft such as helicopters or other charter airlines been excluded from this study? The Airport is allowing noisy PC-12 aircraft and is now allowing a Sikorski S-76

air ambulance to operate out of SQL at all hours of the day or night with no restrictions. Are these additional aircraft included in the study?

Response: FAA's Enhanced Traffic Management System Counts and the San Carlos Airport Traffic Control Tower reports were used to determine the aircraft type and frequency of operations for this study. This information is summarized in Chapter Two of the 14 CFR Part 150 Noise Exposure Maps document for San Carlos Airport. Also please see response to Comment 60.

Comment 114. Has the noise from engine warmups and staging been included in the noise study?

Response: Pre-flight run-up noise modeling is not an option within the AEDT. As illustrated on Exhibit 2A of the San Carlos Airport Noise Exposure Maps document, departure spool-up noise, as indicated by the wider portion of the contour near the departure end of the runway (left end of the black rectangle on the exhibit) is a dominant influence in the shape of the contours. Pre-flight run-ups, which would occur in this same area prior to departure, are conducted at lower thrust levels and, therefore, would have minimal influence on the shape of the contours.

Comment 115. Did the Noise study measure the increase in mid-field approaches over our community?

Response: As shown on Exhibit 2D of the San Carlos Airport Noise Exposure Maps document, mid-field approaches to San Carlos Airport are included as flight tracks 30F, 30G, 30H, 12E, and 12F. Increases in activity associated with forecast growth in operations at the airport are reflected in the 2022 noise exposure contours. Information regarding acoustical measurements is discussed on pages 2-25 through 2-32 of Chapter Two of the 14 CFR Part 150 Noise Exposure Maps for San Carlos Airport. Information collected at Site 6, shown on Exhibit 2K of the previously referenced document, was included in the study. This site is closest to the path of mid-field approaches by fixed-wing aircraft. It is important to note that, for the purposes of the Part 150 study, determinations of impact are made using the FAA-approved noise modeling software, the Airport Environmental Design Tool (AEDT). The cumulative results for the noise measurements are provided for reference only and are not intended to make a determination of impact.

Comment 116. Is the noise data from the mid-field approaches included in the noise contour maps?

Response: See response to Comment 115.

Comment 117. Is noise data from North/South flights to and from Palo Alto Airport included in the noise footprint to our community?

Response: The goal of the San Carlos Airport Noise Compatibility Planning Study is to identify and reduce the impact of aircraft noise and encourage land use compatibility in the area immediately surrounding the San Carlos Airport. The San Carlos Airport Part 150 Study does not evaluate aircraft operations at other area airports.

Comment 118. Did the study use data from plane noise as if aircraft were utilizing noise abatement procedures when performing takeoffs, landings and approaches to the Airport?

Response: Information regarding the flight track assumptions may be found on pages 2-8 through 2-17 of the San Carlos Airport Noise Exposure Maps document. As discussed, the flight track

assumptions are based on information from the airport's radar flight track system and include flight tracks which represent the airport's noise abatement procedures. Additionally, the radar flight track information is the same source as used in the Plane Noise system for San Carlos Airport.

Comment 119. Many planes in use at the airport are 25 to 60 years of age. Did the study take into account the actual noise that these aircraft produce or did the study use charts that would show the idealized noise footprint versions of these aircraft?

Response: The FAA's AEDT does not allow the user to specify the age of aircraft when calculating noise exposure contours.

The fleet mix, as discussed on pages 2-5 through 2-7 of Chapter Two of the San Carlos Airport Noise Exposure Maps document, is based on San Carlos Airport Traffic Control Tower (ATCT) reports from April 2016 through March 2017. The selected AEDT designators shown in Table 2C of Chapter Two reflect the predominant aircraft types operating at San Carlos Airport.

Additionally, as discussed in Chapter One, since 1977, the FAA has required the reduction of aircraft noise with the regulations adopted under 14 CFR Parts 36 and 91. Part 36 prohibits the escalation of noise levels from small, piston-driven aircraft, civil turbojet, and transport aircraft. Part 36 also requires new aircraft types to be markedly quieter than earlier models by limiting the noise emissions allowed by newly certified aircraft. To achieve this, Part 36 has four stages of certification, each with a progressively more stringent noise threshold. The 1977 Amendment to Part 36 introduced three-stage classifications to provide terminology that differentiates between the original and revised standards. Amendments in 2005 created the fourth stage of certification. Stage 4 noise limits are defined as a cumulative perceived noise level (EPNdB) less than those for Stage 3. Additionally, FAA published a Final Rule on November 3, 2017 creating Stage 5 noise standards. Stage 5 noise standards apply to new airplane type designs with a maximum certificated takeoff weight of 121,254 pounds or more submitted on or after December 31, 2017 or with a maximum certificated takeoff weight of less than 121,254 pounds on or after December 21, 2020. As noted in the Final Rule, the change sets a lower noise limit for these aircraft and does not affect either the operation of the current U.S. fleet or new type designs submitted before the applicable compliance date for Stage 5. All fixed-wing civilian aircraft used in the modeling for San Carlos Airport meet or exceed Stage 3 noise levels.

Comment 120. Does the study include the noise contours of these older aircraft and the impacts to the surrounding communities?

Response: See response to Comment 119.

Comment 121. Did the Study take into account the low altitudes that planes use in their approach to the airport over our residential community which would significantly increase noise?

Response: Yes, altitude is taken into account in the noise analysis. The flight profiles used to develop the noise exposure contours reflect the published traffic pattern.

Comment 122. Data omitting Surf Air operations if wanted could be used in an addendum to compare against actuals it should not be the default. Conversely, data including known future changes to the aircraft fleet in the airport should also be included in an addendum, since this is a foreseeable known project. The new Airport hangars being proposed will include at least 8 PC-12s and up to 18 Cirrus Type

aircraft. These are turboprop aircraft with significant noise impacts which would increase noise to the surrounding communities.

Response: FAA-approved aircraft operations forecasts and fleet mix are used to develop the 2022 future noise exposure contours. This information is documented in Table 2C in Chapter Two of the 14 CFR Part 150 Noise Exposure Maps document for San Carlos Airport and includes forecast increases in turboprop aircraft. Also, please see response to Comments 60 and 113.

Comment 123. Can the additional noise from these aircraft be included in an addendum which also include a CNEL noise footprint. If not, why not?

Response: Please see responses to Comments 60, 113, and 122.

Comment 124. Why would the study omit upcoming known changes to the fleet of aircraft that are being planned due to New Hangar construction but exclude actual data from noise that was generated during the study dates?

Response: Please see responses to Comments 60, 113, and 122.

Comment 125. Are there additional known changes in the aircraft fleet that the Airport is aware of? Are these Aircraft included in this study?

*Response: Forecast changes to the aircraft fleet mix for San Carlos Airport are documented in **Table 2C** in Chapter Two of the 14 CFR Part 150 Noise Exposure Maps document for San Carlos Airport.*

Comment 126. Can the study please include the north/south overflights from Palo Alto Airport as an addendum and show the cumulative noise impact from these flights along with the San Carlos Airport operations? I ask because North/South flights used to use the 101 corridor, but with new management at the Tower and Airport - that corridor has been extended over our community instead of 101 further exacerbating the noise that our community is experiencing.

Response: It is unclear if the "Tower and Airport" management referenced in this comment is at San Carlos Airport or Palo Alto Airport. If San Carlos Airport, airport management is not aware of any recommendations by the tower to route north/south traffic over the areas west of Highway 101. If Palo Alto Airport, see response to Comment 117.

Comment 127. SQL DRAFT NEM - C21, Exhibit A understates the damage to hearing that can occur by a significant margin. A bulldozer that is idling (not actively bulldozing) is loud enough at 85 dB that it can cause permanent damage after only 8 hours of exposure. 100dBA is loud enough to begin causing permanent damage after just 15 minutes per day. 120db can cause immediate hearing damage. Yet the chart only shows "threshold of pain" at an astonishing 150db ignoring the significant impacts of DB levels to hearing loss and quality of life loss. This example underlines our community's concern regarding this noise study and our view that the study's main aim is to minimize the very real impacts on our health and safety.

Response: The goal of this 14 CFR Part 150 Noise Compatibility Study is to identify and reduce the impact of aircraft noise and encourage land use compatibility in the area surrounding the airport. This study's aim is not to minimize noise impacts on the community's health and safety. It should be noted

that Exhibit A in Appendix C of the 14 CFR Part 150 Noise Exposure Maps document for San Carlos Airport compares the decibel scale with relative sound energy and human perception of loudness for various noise sources. This graphic does not illustrate noise levels as it relates to damage to hearing.

Comment 128. Where is the correlation regarding Noise levels and health in this study? Noise levels directly affect health of the people experiencing that noise but this issue appears to be ignored. I implore the Airport, County, FAA and City of San Carlos to start understanding the severity of this issue by reading the World Health Organization's report Burden of disease from environmental noise - Quantification of healthy life years lost in Europe.

Response: See response to Comment 27.

Comment 129. Why is this data ignoring the significant health impacts of noise levels below the FAA's very high rating of 65 CNEL? At Jackie Speier's Airport Town Hall meeting one of the speakers acknowledged that this metric is arbitrary, exceedingly high, and needs changing. By taking an average noise level over a 24-hour period the study succeeds in minimizing the very real noise impacts to our community and seriously underplays the significant affects on health to the surrounding community.

Response: Please see responses to Comments 16 and 42.

Comment 130. Why is the San Carlos Airport a small plane airport mainly used by hobbyists and corporate execs allowed the same levels of noise as a full blown commercial airport such as SFO? Aren't the fleets different? Shouldn't the noise levels allowances be different as well?

Response: Please see responses to Comments 16 and 42.

Comment 131. Given that the 65 CNEL FAA threshold just "barely" misses the residential community boundary, and given that the study removed Surf Air data for some of its reports I ask that the raw data on flights and aircraft measured be made available to the public.

Response: Please see response to Comment 60.

Comment 132. Can the County and Study please include the raw data used for flights so that we may verify the validity of the data used?

Response: As discussed in Chapter Two of the San Carlos Airport Noise Exposure Maps, information regarding operations was retrieved from FAA's Enhanced Traffic Management System Counts, now available at <https://aspm.faa.gov/opsnet/sys/Airport.asp>. Sources for the remaining modeling inputs are also described in the Chapter Two.

Comment 133. Can the report please include annual average (AAD) aircraft operations data (which includes departures by stage, length, and time of day as the SFO noise study includes)?

Response: Information related to the preparation of the noise contours is included in the Noise Exposure Maps document which was accepted by the FAA on April 23, 2019.

Comment 134. CFR 14 Part 150 Noise Compatibility Study Meeting Summary B-7, B-8 The summary section ignores significant input from Greater East San Carlos community representatives. We brought

up the changes in the noise footprint to our community due to changes in aircraft operations. Previous Airport management staff had in place safeguards to our community that kept the peace between the airport and its neighbors. The changes in policy by airport staff and what appears to be the outright abandonment of voluntary noise procedure followups to pilots when they do not follow the procedures has significantly increased the noise footprint to our community and significantly deteriorated the quality of life for San Carlos residents.

Response: The meeting summaries are intended to provide an overview of the topics discussed and do not include all details of meetings. As outlined in the San Carlos Airport Noise Exposure Maps document, the noise modeling reflects the operating conditions at the airport in the existing condition (2017) and forecast changes in the five-year condition (2022). Input from airport users and the communities surrounding the airport was incorporated into the document to ensure that the noise contours were developed with the best available information.

As discussed in Chapter Six of the San Carlos Airport Noise Compatibility Program document, San Carlos Airport is committed to following up with pilots regarding adherence to the voluntary noise abatement procedures when complaints are submitted. Currently, airport staff uses the Airport's radar system to verify procedure compliance, then checks the ATCT audio records to determine if the pilot was instructed to deviate from the procedure. If the pilot was instructed to deviate from the procedure by the ATCT, no further action is taken. If the pilot was not instructed to deviate from the procedure, Airport staff prepares a letter documenting the findings. The letter includes a description of the event, map of the radar flight track showing the deviation, and a copy of the Airport's voluntary noise abatement procedures.

Comment 135. Why would the study edit out the significant feedback we provided regarding changes in the noise footprint in this study? This further undermines the validity of the study in the eyes of the residents.

Response: See response to Comment 134.

Comment 136. Why doesn't the study include the option of shortening of the runway to exclude noisy PC-12 aircraft from being allowed to use it?

Response: Shortening the runway for the purposes of excluding an aircraft is considered an access restriction. Access and operating restrictions are discussed under Airport Regulations in Chapter Four of the 14 CFR Part 150 Noise Compatibility Program for San Carlos Airport. FAA would likely disapprove any type of access or operating restriction because the existing and future forecast 65 CNEL noise exposure contour does not impact noise-sensitive land uses.

Comment 137. Why doesn't the Study include the banning of helicopters and other noisy aircraft from the Airport?

Response: Restrictions on aircraft based upon the amount of noise it generates are discussed under Airport Regulations in Chapter Four of the 14 CFR Part 150 Noise Compatibility Program for San Carlos Airport. FAA would likely disapprove any type of access or operating restriction because the existing and future forecast 65 CNEL noise exposure contours do not impact noise-sensitive land uses.



Appendix C

Resource Library



TABLE OF CONTENTS

FEDERAL AVIATION NOISE REGULATIONS	
FEDERAL REGULATIONS	C-1
Part 150 Noise Compatibility Studies	C-2
14 CFR Part 36 Federal Aircraft Noise Regulations	C-4
14 CFR Part 91 Federal Aircraft Noise Regulations	C-4
14 CFR Part 161 Regulation of Airport Noise and Access Restrictions	C-4
NOISE AND LAND USE COMPATIBILITY GUIDELINES	C-7
LAND USE COMPATIBILITY GUIDELINES	C-8
Federal Land Use Compatibility Guidelines	C-8
Selected State Land Use Compatibility Guidelines	C-11
TRENDS IN LAND USE COMPATIBILITY GUIDELINES	C-14
AMBIENT NOISE LEVELS	C-16
CONCLUSIONS	C-17
THE MEASUREMENT AND ANALYSIS OF SOUND	C-19
NOISE - UNWANTED SOUND	C-19
MEASUREMENT OF SOUND	C-19
LOUDNESS	C-19
FREQUENCY WEIGHTING	C-22
TIME VARIATION OF SOUND LEVEL	C-22
KEY DESCRIPTORS OF SOUND	C-22
HELPFUL RULES OF THUMB	C-26
EFFECTS OF NOISE EXPOSURE	C-27
HEALTH EFFECTS	C-27
ANNOYANCE	C-28
SLEEP DISTURBANCE	C-29
CHILDREN AND SCHOOLS	C-29
VIBRATION	C-30
GLOSSARY OF NOISE COMPATIBILITY TERMS	C-31



FEDERAL AVIATION NOISE REGULATIONS

In the early days of commercial aviation, communities close to an airport were not greatly affected by the occasional propeller aircraft overflight. However, in the late 1960s and early 1970s, the problem of aircraft noise became increasingly apparent with the beginning of the jet age. The Deregulation Act of 1978 intensified the issue of airport noise as the act allowed for a more competitive environment between air carriers and the routes that they served. The increased competition brought better and more affordable services, an increase in demand, and an increase in jet noise.

As air travel expanded, residents living in close proximity to the nation's airports became increasingly concerned. Citizens began to form activist groups and take action against local policy makers and airport operators. With the increasing concerns, complaints and environmental awareness, the airport noise issue became a serious problem between the airports, airlines, and the residents living close to the nation's airports.

“As air travel expanded, residents living in close proximity to the nation’s airports became increasingly concerned.”

From a national perspective, federal agencies began studying aircraft noise and developing planning guidelines. In 1970 the National Environmental Policy Act of 1969 (NEPA) was the first federal legislation requiring airport operators to study and analyze aircraft noise impacts before undertaking major development or improvement projects. For airport operators to gain approval for major projects, they had to develop an Environmental Assessment (EA) or Environmental Impact Statement (EIS) that outlined the potential noise impacts of any proposed project on residents surrounding the airport.

After NEPA was passed, the Department of Transportation (DOT) and the Federal Aviation Administration (FAA) adopted the Aviation Noise Abatement Policy (ANAP) in 1976. The ANAP clearly identified aircraft noise responsibilities for the FAA, air carriers, airport operators, and local jurisdictions.

The importance of airport noise impacts was first recognized at a national level in the Aviation Safety and Noise Abatement Act of 1979. This act required the FAA to adopt regulations establishing a single system of measuring aircraft noise and determining the exposure of individuals to noise in the vicinity of airports.

FEDERAL REGULATIONS

Reduction of aircraft noise impacts is a complex issue with several parties sharing in the responsibility: the federal government, state and local governments, planning agencies, the airport proprietor, airport users, airport manufacturers, and local residents. The purpose of this





technical information paper is to provide a summary of the aviation noise regulations and responsibilities at the federal level.

Aviation plays a vital role in interstate commerce. Recognizing this, the federal government has assumed the role of coordinator and regulator of the nation's aviation system. Congress has assigned administrative and regulatory authority to the Federal Aviation Administration (FAA) whose responsibilities include:

- The regulation of air commerce in order to promote its development, safety, and to fulfill the requirements of national defense.
- The promotion, encouragement, and development of civil aeronautics.
- The control of the use of navigable airspace and the regulation of civil and military aircraft operations to promote the safety and efficiency of both.
- The development and operation of a common system of air traffic control and navigation for both military and civil aircraft.

The FAA also administers a program of federal grants-in-aid for the development of airport master plans, the acquisition of land, and for planning, design, and construction of eligible airport improvements. In addition, Congress passed legislation and the FAA established regulations governing the preparation of noise compatibility programs. Laws and regulations were also implemented that required the conversion of the commercial aircraft fleet to quieter aircraft. The following sections summarize these regulations found in Title 14 of the Code of Federal Regulations (14 CFR).

Part 150 Noise Compatibility Studies

The Aviation Safety and Noise Abatement Act of 1979 (United States Code, Title 49, Sections 47501-47510), signed into law on February 18, 1980, was enacted, "...to provide and carry out noise compatibility programs, to provide assistance to assure continued safety in aviation,

and for other purposes." The FAA was vested with the authority to implement and administer the Act.

14 CFR Part 150 (Part 150), the administrative rule promulgated to implement the Act, sets requirements for airport operators who choose to undertake an airport noise compatibility study with federal funding assistance. Part 150 provides for the development of two final documents: the Noise Exposure Maps and the Noise Compatibility Program.

Noise Exposure Maps. The Noise Exposure Maps (NEM) document describes existing and future noise conditions at the airport. It can

"Reduction of aircraft noise impacts is a complex issue with several parties sharing in the responsibility"

be thought of as a baseline analysis defining the scope of the noise situation at the airport and including maps of noise exposure for the current year,

five-year, and long-range forecasts. The noise contours are depicted on various land use maps to reveal areas of non-compatible land use. Included in the document is detailed supporting information which explains the methods used to develop the maps.

Part 150 requires the use of standard methodologies and metrics for analyzing and describing noise. It also establishes guidelines for the identification of land uses which are incompatible with different noise levels. Airport proprietors are required to update noise exposure maps when changes in the operation of the airport would create any new, substantial non-compatible use. This is defined as an increase in the yearly day-night average sound level (DNL) or community noise equivalent level in California (CNEL) of 1.5 decibels over non-compatible land uses.

A limited degree of legal protection can be afforded to the airport proprietor through preparation of noise exposure maps. Section 47506 of the recodified Aviation Safety and Noise Abatement Act of 1979 (ASNA) provides that:

A person acquiring an interest in property...in an area surrounding an airport for which a noise exposure map has been submitted... and having actual or constructive knowledge of the existence of the map may recover damages for noise attributable to the airport only if, in addition to any other elements for recovery of damages, the person shows that:

- (1) after acquiring the interest, there was a significant
 - (A) change in the type or frequency of aircraft operations at the airport;
 - (B) change in the airport layout;
 - (C) change in flight patterns; or
 - (D) increase in nighttime operations; and
- (2) the damages resulted from the change or increase.

ASNA provides that “constructive knowledge” shall be attributed to any person if a copy of the noise exposure map was provided at the time of property acquisition, or if notice of the existence of the noise exposure map was published three times in a newspaper of general circulation in the area. In addition, Part 150 defines “significant increase” as an increase of 1.5 DNL or CNEL (See Part 150, Section 150.21 (d), (f), and (g); and Airport Environmental Handbook, Order 5050.4B, 9(n).) For purposes of this provision, FAA officials consider the term “area surrounding an airport” to mean an area within the 65 DNL contour.

Acceptance of the noise exposure maps by the FAA is required before it will approve a noise compatibility program for the airport.

Noise Compatibility Program.

A Noise Compatibility Program (NCP) includes provisions for the abatement of aircraft noise through aircraft operating procedures, air traffic control procedures, airport regulations, or airport facility modifications. It also includes provisions for land use compatibility planning and may include actions to mitigate the impact of noise on noncompatible land uses. The program must contain provisions for updates and periodic revisions.

Part 150 establishes procedures and criteria for FAA evaluation of noise compatibility programs. Among these, two criteria are of particular importance: the airport proprietor may take no action that imposes an undue burden on interstate or foreign commerce, nor may the proprietor unjustly discriminate between different categories of airport users.

With an approved noise compatibility program, an airport proprietor becomes eligible for funding through the Federal Airport Improvement Program (AIP) to implement the eligible items of the program.

In 1998, the FAA established a policy for Part 150 approval and funding of noise mitigation measures which stated that the FAA will not approve measures in Noise Compatibility Programs that propose corrective noise mitigation actions for new, non-compatible development, which is allowed to occur in the vicinity of airports after October 1, 1998, the effective date of the policy. Therefore, corrective noise mitigation measures for non-compatible development

that occurs after October 1, 1998 is not eligible for AIP funding under the noise set-aside regardless of previous FAA approvals under Part 150. This policy increased the incentives for airport operators to discourage the development of new non-compatible land uses around airports, and to assure the most cost-effective use of federal funds spent on noise mitigation measures.

In December 2003, the Vision 100-Century of Aviation Reauthorization Act was signed into law. In addition to authorizing FAA programs, Section 189 of Vision 100 amended 49 U.S.C. section 47504(b) by adding new subsection (b)(4). This subsection prohibited FAA from approving NCP measures in Fiscal Years 2004 through 2007 that require the expenditure of AIP funds to mitigate noise of less than 65 DNL or CNEL. Additionally, the legislation precludes FAA approval of recommended NCP measures to mitigate noise outside DNL or CNEL 65 dB if the measures require AIP



“Part 150 establishes guidelines for the identification of land uses which are incompatible with different noise levels.”

funds unless the local land use planning authority with responsibility for planning in the area surrounding the airport has adopted alternative land use compatibility guidelines.

Additionally, as noted in FAA Order 5190.6B Airport Compliance Manual, FAA encourages a balanced approach to address noise problems and has discouraged unreasonable airport use restrictions. It is FAA policy that airport use restrictions should be considered only as a measure of last resort when other mitigation measures are inadequate to satisfactorily address a noise problem and a restriction is the only remaining option that could provide noise relief. This policy furthers the federal interest in maintaining the efficiency and capacity of the national air transportation system and, in particular, the FAA's responsibility to ensure that federally funded airports maintain reasonable public access in compliance with applicable law.

14 CFR Part 36 Federal Aircraft Noise Regulations

The FAA has required reduction of aircraft noise at the source through certification, modification of engines, or replacement of aircraft. Part 36 prohibits the further escalation of noise levels of subsonic civil turbojet and transport category aircraft and also requires new airplane types to be markedly quieter than earlier

models. Subsequent amendments have extended the noise standards to include large and small, propeller-driven airplanes and supersonic transport aircraft.

Part 36 has four stages of certification. Stage 4 is the most recent amendment, having been adopted in July, 2005 and applies to aircraft designs submitted for review after January 1, 2006. Stage 3 applies to aircraft certificated since November 5, 1975; Stage 2 applies to aircraft certificated between December 1, 1969 and November 5, 1975; and Stage 1 includes all previously certificated aircraft.

Stage 4 certification standards for jet aircraft set the noise standard 10 decibels below the Stage 3 standards. These standards apply to all jet aircraft, regardless of weight. Aircraft weight restrictions are addressed in 14 CFR Part 91. The 10 dB reduction for Stage 4 aircraft is the cumulative total of noise reductions for three of the measurement points (approach, flyover, lateral). The standard requires that aircraft noise is reduced at two of the three measurement points. It is estimated that nearly all currently produced aircraft will be able to meet these requirements and therefore

minimal benefits are expected for those communities surrounding airports. There is no planned phase-out of Stage 2 aircraft weighing less than 75,000 pounds or Stage 3 aircraft in this amendment.

14 CFR Part 91 Federal Aircraft Noise Regulations

Part 91, Subpart I, commonly known as the "Fleet Noise Rule," mandated a compliance schedule under which Stage 1 aircraft were to be retired or refitted with hush kits or quieter engines by January 1, 1988. A very limited number of exemptions have been granted by the U.S. Department of Transportation for foreign aircraft operating into specified international airports.

Pursuant to the Congressional mandate in the Airport Noise and Capacity Act of 1990, FAA has established amendments to Part 91 by setting December 31, 1999 as the date for discontinuing use of all Stage 2 aircraft exceeding 75,000 pounds. Stage 2 aircraft over 75,000 lbs. utilized for non-revenue flights can operate beyond the December 31, 1999 deadline for the following purposes:

- To sell, lease, or scrap the aircraft;
- To obtain modifications to meet Stage 3 standards;
- To obtain scheduled heavy maintenance or significant modifications;
- To deliver the aircraft to a lessee or return it to a lessor;
- To park or store the aircraft;
- To prepare the aircraft for any of these events; or
- To operate under an experimental airworthiness certificate.



The *FAA Modernization and Reform Act of 2012*, establishes December 31, 2015 as the phase-out date for Stage 2 aircraft weighing less than 75,000 pounds. Additional restrictions or phase-out dates have not been adopted for Stage 3 and Stage 4 aircraft.

Neither Part 36 nor Part 91 apply to military aircraft. Nevertheless, many of the advances in quiet engine technology are being used by the military as they upgrade aircraft to improve performance and fuel efficiency.

14 CFR Part 161 Regulation Of Airport Noise and Access Restrictions

Part 161 sets forth requirements for notice and approval of local restrictions on aircraft noise levels and airport access. Part 161, which was developed in response to the Airport Noise and Capacity Act of 1990, applies to local airport restrictions that would have the effect of limiting operations of Stage 2 or 3 aircraft. Restrictions regulated under Part 161 include direct limits on maximum noise levels, nighttime curfews, and special fees intended to encourage changes in airport operations to lessen noise.

In order to implement noise or access restrictions on Stage 2 aircraft, the airport operator must provide public notice of the proposal and provide at least a 45-day comment period. This includes notification of FAA and publication of the proposed restriction in the Federal Register. An analysis must be prepared describing the proposal, alternatives to the proposal, and the costs and benefits of each.

Noise or access restrictions on Stage 3 aircraft can be implemented only after receiving FAA approval. Before granting approval, the FAA must find that the six conditions specified in the statute, and listed below, are met.

- (1) The restriction is reasonable, non-arbitrary, and non-discriminatory
- (2) The restriction does not create an undue burden on interstate commerce.
- (3) The proposed restriction maintains safe and efficient use of the navigable airspace.
- (4) The proposed restriction does not conflict with any existing federal statute or regulation.
- (5) The applicant has provided adequate opportunity for public comment on the proposed restriction.
- (6) The proposed restriction does not create an undue burden on the national aviation system.

In its application for FAA review and approval of the restriction, the airport operator must include an environmental assessment of the proposal and a complete analysis addressing the six conditions. Within 30 days of the receipt of the application, the FAA must determine whether the application is complete. After a complete application has been filed, the FAA publishes a notice of the proposal in the Federal Register. FAA must approve or disapprove the restriction within 180 days of receipt of the completed application.

Very few Part 161 studies have been undertaken since the enactment of ANCA. **Table 1A** (on the following page) summarizes the studies that have been done to date. Currently, only one Part 161 Study, in Naples, Florida, has been deemed complete by FAA. However, FAA has also ruled that the restriction is a violation of grant assurances Naples signed when accepting federal funds.

Airport operators that implement noise and access restrictions in violation of Part 161 are subject to termination of eligibility for airport grant funds and authority to impose and collect passenger facility charges.



TABLE 1A**SUMMARY OF PART 161 STUDIES**

AIRPORT	YEAR STARTED	YEAR ENDED	COST	PROPOSAL, STATUS
Kahului Airport Kahului, Maui, Hawaii	1991	1994	\$50,000 (est.)	Proposed nighttime prohibition of Stage 2 aircraft pursuant to court stipulation. Cost benefit and statewide impact analysis found to be deficient by FAA. Airport never submitted a complete Part 161 study. Suspended consideration of restriction.
Minneapolis-St. Paul International Airport Minneapolis, Minnesota	1992	1992	N.A.	Proposed nighttime prohibition of Stage 2 aircraft. Cost-benefit analysis was deficient. Never submitted complete Part 161 study. Suspended consideration of restriction and entered into negotiations with carriers for voluntary cooperation.
San Jose International Airport San Jose, California	1994	1997	Phase 1 - \$400,000 Phase 2 - \$5 to \$10 million	Study undertaken as part of legal settlement agreement. Studied a Stage 2 restriction. Suspended study after Phase 1 report showed costs to airlines at San Jose greater than benefits in San Jose. Never undertook Phase 2, system wide analysis. Never submitted study for FAA review.
Pease International Tradeport Portsmouth, New Hampshire	1995	N.A..	N.A.	Have not yet submitted Part 161 Study for FAA review.
San Francisco International Airport San Francisco, California	1998	1999	\$200,000	Proposed extension of nighttime curfew on Stage 2 aircraft over 75,000 pounds. Started study in May 1998. Submitted to FAA in early 1999 and subsequently withdrawn.
Naples Municipal Airport Naples, Florida	1999	2003	Estimated cost of \$1.0 to \$1.5 million for consulting and legal fees due to litigation	Enactment of a total on Stage 2 general aviation jet aircraft under 75,000 pounds. The airport began enforcing the restriction on March 1, 2002.
Bob Hope Airport Burbank, California	2000	2009	Phase 1 - \$2 to \$4 million (est.) Phase 2 - \$1.8 million	FAA denied application stating that other remedies are available that are feasible and cost-effective.
Van Nuys Airport Van Nuys, California	2003	2010	\$5 million	Scheduled phase out of noisier aircraft.
Los Angeles International Airport Los Angeles, California	2005	2014	N.A.	FAA denied application because it does not meet the six statutory conditions.

N.A. - Not available.

Sources: Telephone interviews with Federal Aviation Administration officials and staffs of various airports.



NOISE AND LAND USE COMPATIBILITY GUIDELINES

In communities with an airport, noise is a critical factor in the land use planning process. With advancements made in aircraft technology, significant strides have been made in the reduction of noise at its source; however, aviation noise cannot be entirely eliminated. Local, state, and federal agencies, in recognition of this fact, have developed guidelines and regulations to address noise within the land use planning process.

The fundamental variability in the way individuals react to noise makes it impossible to accurately predict how any one individual will respond to a given noise level. However, when considering the community as a whole, trends emerge which relate noise to annoyance. Reasonable evaluations of the average impacts of aircraft noise on a community can be made.

According to scientific research, noise response is most strongly correlated with noise as measured with cumulative noise metrics. In the United States, the most widely

used cumulative noise metric is the day-night noise level (DNL). The DNL accumulates the total noise occurring over a 24-hour period, with a 10 decibel penalty applied to noise occurring between 10:00 p.m. and 7:00 a.m. DNL correlates well with average community response to noise.

In California, the CNEL (community noise equivalent level) metric is used instead of the DNL metric.

“Since the 1960s, land use compatibility guidelines based on airport noise levels have been proposed by federal agencies.”

The two metrics are very similar. While DNL accumulates the total noise occurring during a 24-hour period, with a 10 decibel penalty applied to noise occurring between 10:00 p.m. and 7:00 a.m., the CNEL also adds a 4.77 decibel penalty for noise occurring between 7:00 p.m. and 10:00 p.m. Based on adjacent comparison of the two metrics, there is little difference between the two metrics in practice. Calculations of CNEL and DNL from the same data generally yield values with less than a 0.7 decibel difference (Caltrans 1983, p. 37).

Since the early 1970s, several studies have been conducted to estimate the percent of the population that is, on average, likely to be highly annoyed by aircraft noise. These studies have found that at 65 DNL, the percentage of population highly annoyed ranges from 12 to 26 percent (Miedema and Oudshoorn 2002). Using this information, the DNL or CNEL metric can be a useful planning tool for determining land use compatibility.



LAND USE COMPATIBILITY GUIDELINES

Since the 1960s, land use compatibility guidelines based on airport noise levels have been proposed by federal agencies. This section provides an overview of guidelines from Federal Aviation Administration (FAA) Department of Defense (DOD), Housing and Urban Development (HUD), Veterans Administration (VA) and the Environmental Protection Agency (EPA).

Federal Land Use Compatibility Guidelines

FAA-DOD Guidelines

In 1964, the Federal Aviation Administration (FAA) and the U.S. Department of Defense (DOD) published similar documents setting forth guidelines to assist land use planners in areas subjected to aircraft noise from

TABLE 1

CHART FOR ESTIMATING RESPONSE OF COMMUNITIES EXPOSED TO AIRCRAFT NOISE 1964 FAA-DOD GUIDELINES

NOISE LEVEL	ZONE	DESCRIPTION OF EXPECTED RESPONSE
Less than 65 DNL	1	No complaints would be expected. The noise may, however, interfere occasionally with certain activities of the residents
65 to 80 DNL	2	Individuals may complain, perhaps vigorously. Concerted group action is possible.
Greater than 80 DNL	3	Individual reactions would likely include repeated, vigorous complaints. Concerted group action might be expected.

Source: U.S. DOD 1964. Cited in Kryter 1984, p. 616

nearby airports. These guidelines, presented in **Table 1**, establish three zones and the expected responses to aircraft noise from residents of each zone. In Zone 1, areas exposed to noise below 65 DNL, essentially no complaints would be expected although noise could be an occasional annoyance. In Zone 2, areas exposed to noise between 65 and 80 DNL, individuals may complain, perhaps vigorously. In Zone 3, areas in excess of 80 DNL, vigorous complaints would be likely and concerted group action could be expected.

HUD Guidelines

The U.S. Department of Housing and Urban Development (HUD) first published noise assessment requirements in 1971 for evaluating the acceptability of sites for housing assistance. These requirements contained standards for exterior noise levels along with policies for approving HUD-supported or assisted housing projects in high noise areas. In general, the requirements established three zones: an acceptable zone where all projects could be approved, a normally unacceptable zone where mitigation measures would be required and where each project would have to be individually evaluated for approval or denial, and an unacceptable zone in which projects would not, as a rule, be approved.

In 1979, HUD issued revised regulations which kept the same basic standards, but adopted new descriptor systems which were considered advanced over the old system. **Table 2** summarizes the revised HUD requirements.



TABLE 2

**SITE EXPOSURE TO AIRCRAFT NOISE
1979 HUD REQUIREMENTS**

ACCEPTABLE CATEGORY	DAY-NIGHT AVERAGE SOUND LEVEL	SPECIAL APPROVALS AND REQUIREMENTS
Acceptable	Not exceeding 65 dB	None
Normally Unacceptable	Above 65 dB but not exceeding 75 dB	Special approvals, environmental review, attenuation
Unacceptable	Above 75 dB	Special approvals, environmental review, attenuation

Source: U.S. HUD 1979

Veterans Administration Guidelines

The Veterans Administration has established policies and procedures for the appraisal and approval of VA loans relative to residential properties located near major civilian airports and military air bases. The agency’s regulations, contained within M26-2, Change 15, state that “the VA must recognize the possible unsuitability for residential

use of certain properties and the probable adverse effect on livability and/or value of homes in the vicinity of major airports and air bases. Such adverse effects may be due to a variety of factors including noise intensity.” **Table 3** contains the VA’s noise zones and associated development requirements and limitations.

EPA Guidelines

The U.S. Environmental Protection Agency published a document in

1974 suggesting maximum noise exposure levels to protect public health with an adequate margin of safety. These are shown on the following page in **Table 4**. They note that the risk of hearing loss may become a concern with exposure to noise above 74 DNL. Interference with outdoor activities may become a problem with noise levels above 55 DNL. Interference with indoor residential activities may become a problem with interior noise levels above 45 DNL. If we assume that standard construction attenuates noise by about 20 decibels, with doors and windows closed, this corresponds to an exterior noise level of 65 DNL.

Federal Interagency Committee on Urban Noise

In 1979, the Federal Interagency Committee on Urban Noise (FICUN), including representatives of the Environmental Protection Agency, the Department of Transportation, the Housing and

TABLE 3

**VETERANS ADMINISTRATION NOISE GUIDELINES
NOVEMBER 23, 1992**

NOISE ZONE	CNR (COMPOSITE NOISE RATING)	NEF (NOISE EXPOSURE FORECASTS)	DNL (DAY/NIGHT NOISE RATIO)
1	Under 100	Under 30	Under 65
2	100-115	30-40	65-75
3	Over 115	Over 40	Over 75

Specific Limitations:

1. Proposed or existing properties located in zone 1 are generally acceptable as security for VA-guaranteed loans.
2. Proposed construction to be located in zone 2 will be accepted provided:
 - a. Sound attenuation features are built into the dwelling to bring the interior DNL of the living unit to 45 decibels or below.
 - b. There is evidence of market acceptance of the subdivision.
 - c. The veteran-purchaser signs a statement which indicates his/her awareness that 1) the property being purchased is located in an area adjacent to an airport, and 2) the aircraft noise may affect normal livability, value, and marketability of the property.
3. Proposed subdivisions located in zone 3 are not generally acceptable. The only exception is a situation in which VA has previously approved a subdivision in zone 3. In such cases, VA will continue to process loan applications provided the requirements in the above subparagraphs 20 are met.
4. Existing dwellings in zones 2 and 3 are not to be rejected because of airport influence if there is evidence of acceptance by a fully informed veteran.

TABLE 4

SUMMARY OF NOISE LEVELS IDENTIFIED AS REQUISITE TO PROTECT PUBLIC HEALTH AND WELFARE WITH AN ADEQUATE MARGIN OF SAFETY - 1974 EPA GUIDELINES

EFFECT	LEVEL	AREA
Hearing Loss	75 DNL and above	All areas
Outdoor activity interference and annoyance	55 DNL and above	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis of use.
	59 DNL and above	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	45 DNL and above	Indoor residential areas
	49 DNL and above	Other areas with human activities such as schools, etc.

Note: All Leq values from EPA document were converted by FAA to DNL for ease of comparison. (DNL=Leq(24) + 4 dB).
 Source: U.S. EPA 1974. Cited in FAA 1977a, p. 26.

Urban Development Department, the Department of Defense, and the Veterans Administration, was established to coordinate various federal programs relating to the promotion of noise-compatible development. In 1980, the Committee published

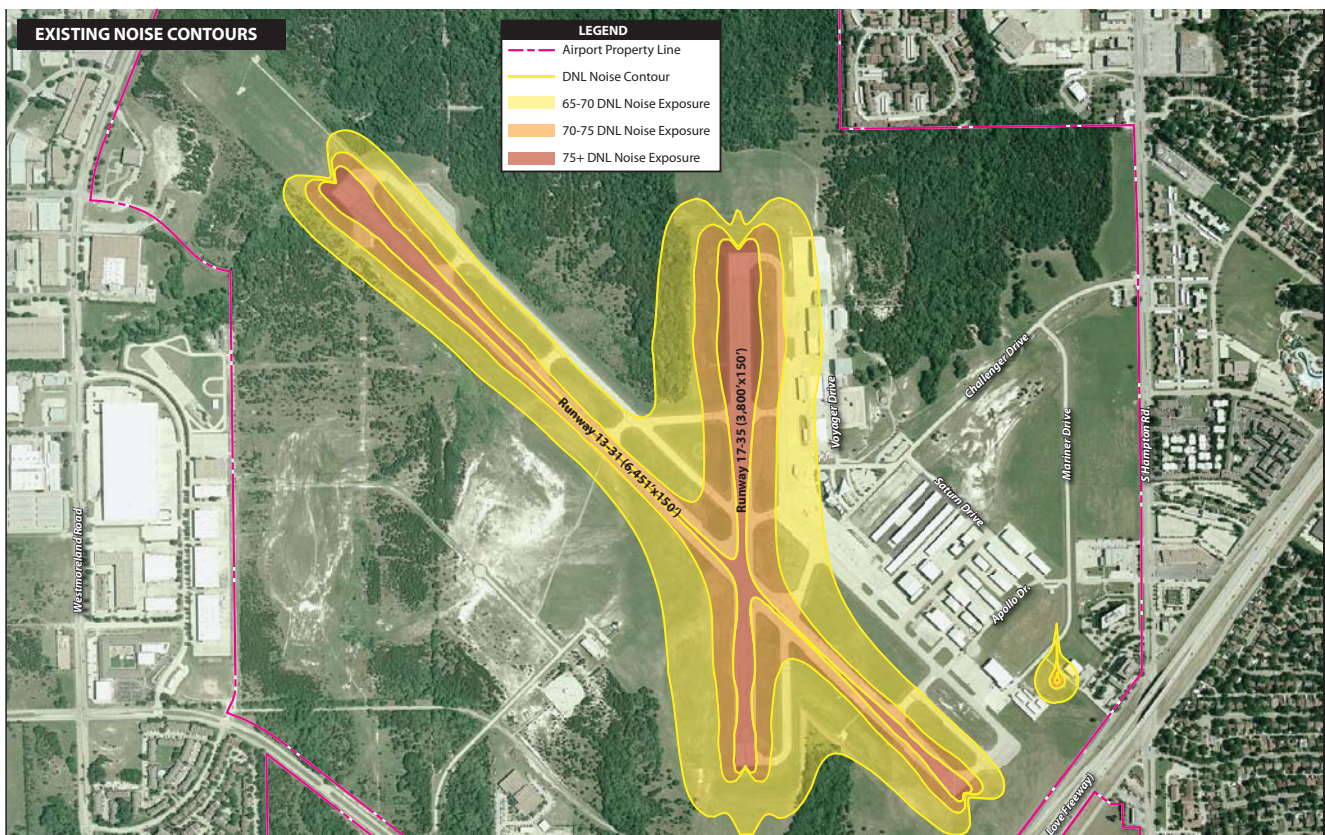
a report which contained detailed land use compatibility guidelines for varying DNL noise levels (FICUN 1980). The work of the Interagency Committee was very important as it brought together for the first time all federal agencies with a direct

involvement in noise compatibility issues and forged a general consensus on land use compatibility for noise analysis on federal projects.

The Interagency guidelines describe the 65 DNL contour as the threshold of significant impact for residential land uses and a variety of noise-sensitive institutions (such as hospitals, nursing homes, schools, cultural activities, auditoriums, and outdoor music shells). Within the 55 to 65 DNL contour range, the guidelines note that cost and feasibility factors were considered in defining residential development and several of the institutions as compatible. In other words, the guidelines are not based solely on the effects of noise. They also consider the cost and feasibility of noise control.

14 CFR Part 150 Guidelines

The FAA adopted a revised and simplified version of the FICUN



guidelines when it promulgated Title 14, Part 150 of the Code of Federal Regulations in the early 1980s. (The Interim Rule was adopted on January 19, 1981. The final rule was adopted on December 13, 1984, published in the Federal Register on December 18, and became effective on January 18, 1985.) Among the changes made by FAA include the use of a coarser land use classification system and the deletion of any reference to any potential for noise impacts below the 65 DNL level.

The determination of the compatibility of various land uses with various noise levels, however, is very similar to the FICUN determinations.

Exhibit A (on the following page) lists the Part 150 land use compatibility guidelines. These are only guidelines. Part 150 explicitly states that determinations of noise compatibility and regulation of land uses are purely local responsibilities.

Selected State Land Use Compatibility Guidelines

State of Oregon

The State of Oregon's Airport Planning Rule (APR) establishes a series of local government requirements and rules which pertain to aviation facility planning. These requirements are intended to promote land use compatibility around airports as well as promote a convenient and economic system of airports in the state. To assist local governments and airports in meeting the requirements of the APR, the Oregon Department of Aviation published the Airport Land Use Compatibility Guidebook in January 2003.



The Oregon guidelines contained within the guidebook, as they relate to land use compatibility around airports, are based on administrative regulations of the Department of Environmental Quality, adopted by the Oregon Environmental Quality Commission in 1979 (Oregon Administrative Rules, Chapter 340, Division 35, Section 45). Although the FAA regards the 65 DNL contours and above as significant, the State of Oregon considers the 55 and 60 DNL contours as significant. The state recognizes that, in some instances, land use controls and restrictions that apply to the 65 DNL may be appropriate for applications to areas impacted by noise levels above 55 DNL. For example, a rural area exposed to 55 to 65 DNL noise levels may be more affected by these levels than an urban area. This is because there is typically a higher level of background noise associated with an urban area (Oregon 2003). Air carrier airports are required to do studies defining the airport impact boundary, corresponding to the 55 DNL contour. Where any noise-sensitive property occurs within the noise impact boundary, the airport must develop a noise abatement program.

An Oregon airport noise abatement program may include many different recommendations for promoting land use compatibility. These include changes in land use planning, zoning, and building codes within the 55 DNL contour. In addition, disclosure of potential noise impacts may be required and purchase of land for non-noise sensitive public uses may be permitted within the 55 DNL contour.

Within the 65 DNL contour, purchase assurance, voluntary relocation, soundproofing, and purchase of land is permitted.

State of California

California law sets the standard for the acceptable level of aircraft noise for persons residing near airports at 65 CNEL (California Code of Regulations, Title 21, Division 2.5, Chapter 6). The 65 CNEL criterion was chosen for urban residential areas where houses are of typical construction with windows partially open. Four types of land uses are defined as incompatible with noise above 65 CNEL: residences, schools, hospitals and convalescent homes, and places of worship. These land uses are regarded as compatible if they have been insulated to assure an

Part 150 explicitly states that determinations of noise compatibility and regulation of land uses are purely local responsibilities.



14 CFR PART 150 NOISE COMPATIBILITY GUIDELINES

LAND USE	Yearly Day-Night Average Sound Level (DNL) in Decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
RESIDENTIAL						
Residential, other than mobile homes and transient lodgings	Y	N ¹	N ¹	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N ¹	N ¹	N ¹	N	N
PUBLIC USE						
Schools	Y	N ¹	N ¹	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Government services	Y	Y	25	30	N	N
Transportation	Y	Y	Y ²	Y ³	Y ⁴	Y ⁴
Parking	Y	Y	Y ²	Y ³	Y ⁴	N
COMMERCIAL USE						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail-building materials, hardware and farm equipment	Y	Y	Y ²	Y ³	Y ⁴	N
Retail trade-general	Y	Y	25	30	N	N
Utilities	Y	Y	Y ²	Y ³	Y ⁴	N
Communication	Y	Y	25	30	N	N
MANUFACTURING AND PRODUCTION						
Manufacturing, general	Y	Y	Y ²	Y ³	Y ⁴	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y ⁶	Y ⁷	Y ⁸	Y ⁸	Y ⁸
Livestock farming and breeding	Y	Y ⁶	Y ⁷	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
RECREATIONAL						
Outdoor sports arenas and spectator sports	Y	Y ⁵	Y ⁵	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts, and camps	Y	Y	Y	N	N	N
Golf courses, riding stables, and water recreation	Y	Y	25	30	N	N

The designations contained in this table do not constitute a federal determination that any use of land covered by the program is acceptable under federal, state, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally-determined land uses for those determined to be appropriate by local authorities in response to locally-determined needs and values in achieving noise compatible land uses.

See other side for notes and key to table.

interior sound level, from aircraft noise, of 45 CNEL. They are also to be considered compatible if an avigation easement over the property has been obtained by the airport operator.

California noise insulation standards apply to new hotels, motels, apartment buildings, and other dwellings, not including detached single-family homes. They require that "interior noise levels attributable to outdoor sources shall not exceed 45 decibels (based on the DNL or CNEL metric) in any habitable room." In addition, any of these residential structures proposed within a 60 CNEL noise contour requires an acoustical analysis to show that the proposed design will meet the allowable interior noise level standard. (California Code of Regulations, Title 24, Part 2, Appendix Chapter 35.)

In the California Airport Land Use Planning Handbook (Caltrans 2002), land use compatibility guidelines are suggested for use in the preparation of comprehensive airport land use plans. The guidelines suggest that no new residential uses should be permitted within the 65 CNEL noise contour. In quiet communities, it is recommended that the 60 CNEL should be used as the maximum permissible noise level for residential uses. At rural airports, it is noted that 55 CNEL may be suitable for use as a maximum permissible noise level for residential uses.

These guidelines are similar to those proposed in earlier editions of the Airport Land Use Planning Handbook. However, the 2002 handbook provides much more definitive guidance for compatible land use planning around airports.

State of Florida

In 1990, the State of Florida passed legislation which created the Airport Safety and Land Use Compatibility Study Commission. The charge to this commission was to assure that airports in Florida will have the capacity to accommodate future growth without jeopardizing public health, safety, and welfare. One of the Commissions' recommendations was to require the Florida Department of Transportation (FDOT) to establish guidelines regarding compatible land use around airports. In 1994, FDOT responded to this recommendation by publishing a guidance document entitled Airport Compatible Land Use Guidance for Florida Communities.

As part of this document's conclusions, it was recommended that all commercial service airports, or airports with significant numbers of general aviation operations, establish a noise compatibility planning program in accordance with the provisions of Part 150. All communities within the airport environs should participate in the preparation of this program. It was requested that each local government prohibit new residential development and other noise-sensitive uses for areas within the 65 DNL contour. Where practical, new residential development should be limited in areas down to the 55 DNL contour.



State of Wisconsin

Wisconsin State Law 114.136 was established to give local governments the authority to regulate land uses within three miles of the airport boundary. These land use controls supercede any other applicable zoning limits by other jurisdictions that may apply to the area surrounding the airport. To assist airports with the development of land use controls, the Wisconsin Department of Transportation (WisDOT) published a document titled Land Use Planning Around Airports in Wisconsin in 2001. Various land use tools such as avigation easements, noise overlay zones, height and hazard zoning, and subdivision regulations are presented within the land use planning guide. WisDOT has recognized that the types of airport compatible land uses depend on the location and size of the airport as well as the type and volume of aircraft using the facility. The 65 DNL contour should be used as a starting point for land use regulations, but lesser contours should be considered if deemed necessary.

The 1985 Wisconsin Act 136 takes State Law 114.136 one step further by requiring counties and municipalities to depict airport locations and areas affected by aircraft operations on official maps. The law also requires the zoning authority to notify the airport owner of any



proposed zoning changes within the airport environs.

State of Washington

In 1996, Washington State Senate Bill 6442 was passed. This bill requires that every city, town, and county, having a general aviation airport in its jurisdiction, discourage the siting of land uses that are incompatible with airport operations. Policies protecting airport facilities must be implemented within the comprehensive plan and development regulations. Formal consultation with the aviation community is required and all plans must be filed with the Washington State Department of Transportation Aviation Division (WADOT). To assist jurisdictions with establishing appropriate land use planning tools and regulations, WADOT published a revised Airports and Compatible Land Use document in February 1999. Within this planning document, jurisdictions are encouraged to work with airports to ensure that airport noise is factored into land use decisions for the protection of the health, safety, and welfare of its residents.

TRENDS IN LAND USE COMPATIBILITY GUIDELINES

In recent years, citizen activists, anti-noise groups, and environmental

organizations have become concerned that the current methods of assessing aircraft noise are not sufficient. Among the concerns is that 65 DNL does not adequately represent the true threshold of significant noise impact. It has been argued that the impact threshold should be lowered to 60 or even 55 DNL, especially in areas of quiet background noise and in areas impacted by large increases in noise (ANR, V. 4, N. 12, p. 91; V. 5, No. 3, p. 21; V. 5, N. 11, p. 82). The purpose of this section is to provide a time line of events which, taken together, indicate a distinct movement toward the consideration of airport noise impacts below the 65 DNL level.

1992

In the 1992 session of Congress, a bill was introduced to lower the threshold for non-compatible land uses from 65 to 55 DNL (ANR, V. 4, N. 11, p. 83). The bill, however, was not passed. In 1995, a bill (HR 1971) was introduced in the House of Representatives to require the Department of Transportation to develop a plan to reduce the number

of people residing within the 60 DNL contours around airports by 75 percent by January 1, 2001 (ANR, V. 7, N. 13, p. 101). This bill was not passed either. Nevertheless, these developments indicate concerns about aircraft noise below 65 DNL are coalescing into specific proposals to address the situation.

Also in 1992, an important arbitration proceeding between Raleigh-Durham International Airport and airport neighbors was concluded. Residents residing between the 55 and 65 DNL contours were awarded compensation for noise damages. This was apparently the first time damages had been awarded beyond the 65 DNL contour at any domestic airport (ANR V. 4, No. 14, p. 107). While, strictly speaking, this case sets no legal precedent, it provides further evidence that a change in the definition of the threshold of significant noise impact may be gathering momentum.

After the arbitration was concluded, the Raleigh-Durham Airport Authority developed a model noise ordinance that would require new housing between the 55 and 60 DNL



contours to be sound-insulated to achieve an outdoor-to-indoor noise level reduction of 30 dB. Between the 60 and 65 DNL contours, a 35 dB reduction would be required. The model ordinance was proposed for use by local governments exercising land use control. (See ANR, V. 6, N. 3, p. 17.)

In August 1992, the Federal Interagency Committee on Noise (FICON 1992) issued its final report. FICON included representatives of the Departments of Transportation, Defense, Justice, Veterans Affairs, Housing and Urban Development; the Environmental Protection Agency; and the Council on Environmental Quality. FICON was formed to review federal policies for the assessment of aircraft noise in environmental studies. The Committee advocated the continued use of the DNL metric as the principal means of assessing long-term aircraft noise exposure. It further reinforced the designation of 65 DNL as the threshold of significant impact on non-compatible land use. FICON recognized, however, the potential for noise impacts down to the 60 DNL level, providing guidance for analyzing noise between 60 and 65 DNL in reports prepared under the National Environmental Policy Act (NEPA). This includes environmental assessments and environmental impact statements. (It does not include 14 CFR Part 150 studies.) FICON offered this explanation for this action (FICON 1992, p. 3-5).

There are a number of reasons for moving in this direction at this time. First, the Schultz Curve (See Exhibit A in Coffman Resource Library Effects of Noise Exposure) recognizes that some people will be highly annoyed at relatively low levels of



noise. This is further evidenced from numerous public response forums that some people living in areas exposed to DNL values less than 65 dB believe they are substantially impacted (U.S. EPA 1991). Secondly, the FICON Technical Subgroup has shown clearly that large changes in levels of noise exposure (on the order of 3 dB or more) below DNL 65 dB can be perceived by people as a degradation of their noise environment. Finally, there now exist computational techniques that allow for cost-effective calculation of noise exposure and impact data in the range below DNL 65 dB.

The specific FICON recommendation was as follows (FICON 1992, p. 3-5):

If screening analysis shows that noise-sensitive areas will be at or above DNL 65 dB and will have an increase of DNL 1.5 dB or more, further analysis should be conducted of noise-sensitive areas between DNL 60-65 dB having an increase of DNL 3 dB or more due to the proposed airport noise exposure.

FICON further recommended that if any noise-sensitive areas between

60 and 65 DNL are projected to have an increase of 3 DNL or more as a result of the proposed airport noise exposure, mitigation actions should be included for those areas (FICON 1992, p. 3-7). The FICON recommendations represent the first uniform guidelines issued by the federal government for the consideration of aircraft noise impacts below the 65 DNL level. At this time, these remain recommendations and are not official policy.

1995

The Federal Transit Administration (FTA) released a guidance document entitled Transit Noise and Vibration Impact Assessment. Within this document, FTA cites the EPA recommendation of 55 DNL to develop their curve of impact. Further, FTA states that they use the FAA criteria of 65 DNL to define their curve of severe impact.

1996

The American National Standards Institute (ANSI) recommends 55 DNL as the criterion level for housing and similar noise-sensitive

land uses within their report ANSI Quantities and Procedures for Description and Measurement of Environmental Sounds - Part 3: Short-Term Measurements with an Observer Present.

The International Organization for Economic Cooperation and Development suggests the following environmentally sustainable transport noise levels: 55 DNL in urban areas and 50 DNL in rural areas.

1998

Within the Federal Railroad Administration's (FRA) High-Speed Ground Transportation Noise and Vibration Impact Assessment, the same criteria used by the FTA is used to assess impacts of new, high-speed trains.

In this same year, the Surface Transportation Board (STB) utilizes 55 DNL as a threshold of impact within the Draft Environmental Impact Statement for the proposed Conrail acquisition by Norfolk Southern Railway Company.

The World Bank Group (WBG) set noise limits for general industrial

projects to ensure that projects they fund, such as iron and steel manufacturing and thermal power plants, do not negatively impact noise-sensitive development. The WBG set their threshold of impact at 55 DNL.

1999

The Federal Energy Regulatory Commission adopts a revision to their regulations (Part 157) which states "the noise attributable to any new compressor stations, compression added to an existing station, or any modification, upgrade, or update of an existing station, must not exceed a day-night level (L_{dn}) of 55 dBA at any pre-existing noise-sensitive area."

The World Health Organization's Guidelines for Community Noise recommends a "criteria of annoyance" daytime threshold of 55 DNL and nighttime threshold of 50 DNL for residential areas.

2003

FAA announced the establishment of the Center of Excellence for Aircraft Noise Mitigation. This research

center is a partnership between academia, the aviation industry, and the federal government. The Center will focus on studying what level of noise is considered significant, revisions to noise metrics and alternative aircraft operating procedures that may reduce noise exposure.

2008

The FAA has indicated that a change to address noise outside DNL 65 will be essential to meet both the capacity goals of the Next Generation Air Transportation System and furthering the development of additional noise stringencies in the international arena. FAA identified the following NextGen targets:

- Maintain current target of 4% annual reduction in number of people exposed to DNL 65 or more near-term (compared with 2000 to 2002), and achieve commensurate or greater reduction of the number of people exposed to DNL 55–65.
- Achieve greater reductions mid- and long-term, first bringing DNL 65 primarily within airport boundary, and later DNL 55 primarily within airport boundary.



AMBIENT NOISE LEVELS

Consideration has also been given to the effects of ambient noise levels and how they relate to annoyance. The U.S. Environmental Protection Agency (EPA) has provided guidelines to address the question of background noise and its relationship to aircraft noise. The EPA has determined that complaints can be expected when the intruding DNL exceeds the background DNL by more than 5 decibels (U.S. EPA 1974). The California Department

of Transportation (Caltrans 2000, pp. 7-24-7-25) notes that the level of background (ambient) noise should be used in determining the suitable aircraft noise contour of significance. Specifically, adjustments have been made in areas with quiet background noise levels of 50 to 55 CNEL. In those cases, aircraft CNEL contours are prepared down to 55 or 60 CNEL, and land use compatibility criteria are adjusted to apply to those areas. The State of Oregon Department of Aviation (Oregon 2003) also requires the preparation of noise contours down to the 55 DNL level. This noise contour is used to establish the noise impact boundary for air carrier airports within the state.

The Federal Interagency Committee on Noise (FICON 1992, p. 2-6) examined the question of background noise and its relationship to perceptions of aircraft noise. It reviewed the research in this field, concluding that there was a basis for believing that, in addition to the magnitude of aircraft noise, the difference between background noise and aircraft noise was in some way related to human perceptions of noise disturbance. It noted, however, that there was insufficient scientific data to provide authoritative guidance on the consideration of these effects. FICON advocated further research in this area.

CONCLUSIONS

This document has presented information on land use compatibility guidelines with respect to noise. It is intended to serve as a



reference for the development of policy guidelines for 14 CFR, Part 150 Noise Compatibility Studies.

There is a strong and long-lasting consensus among various government agencies that 65 DNL represents an appropriate threshold for defining significant impacts on non-compatible land use. Nonetheless, both research and empirical evidence suggest that noise at levels below 65 DNL is often a concern. Increased concern about these lower levels of

noise has been registered in public forums across the country. Official responses by public agencies indicate at least a partial acknowledgment of these concerns. Indeed, according to many agencies and organizations as well as in the states of Oregon, Florida, Wisconsin, and California, airport noise analysis and compatibility planning below the 65 DNL level is strongly advised or required.

In urbanized areas with relatively high background noise levels, 65 DNL continues to be a reasonable threshold

for defining airport noise impacts. In suburban and rural locations, lower noise thresholds deserve consideration. Given emerging national trends and the experience at many airports, it can be important to assess aircraft noise below 65 DNL, especially in areas with significant amounts of undeveloped land where land use compatibility planning is still possible. Future planning in undeveloped areas around airports should recognize that the definition of critical noise thresholds is undergoing transition. In setting a prudent course for future land use near airports, planners and policy-makers should try to anticipate these changes.

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AIRPORT COOPERATIVE RESEARCH PROGRAM, Report 27, Enhancing Airport Land Use Compatibility, Volume 1: Land Use Fundamentals and Implementation Resources, 2010

AIRPORT COOPERATIVE RESEARCH PROGRAM, Synthesis 16, Compilation of Noise Programs in Areas Outside DNL 65, 2009



THE MEASUREMENT AND ANALYSIS OF SOUND

Sound is energy — energy that conveys information to the listener. Although measuring this energy is a straight-forward technical exercise, describing sound energy in ways that are meaningful to people is complex. This TIP explains some of the basic principles of sound measurement and analysis.

NOISE - UNWANTED SOUND

Noise is often defined as unwanted sound. For example, rock-and-roll on the stereo of the resident of apartment 3A is music to her ears, but it is intolerable racket to the next door neighbor in 3B. One might think that the louder the sound, the more likely it is to be considered noise. This is not necessarily true. In our example, the resident of apartment 3A is surely exposed to higher sound levels than her neighbor in 3B, yet she considers the sound as pleasant while the neighbor considers it “noise.” While it is possible to measure the sound level objectively, characterizing it as “noise” is a subjective judgement.

The characterization of a sound as “noise” depends on many factors, including the information content of the sound, the familiarity of the sound, a person’s control over the sound, and a person’s activity at the time the sound is heard.

MEASUREMENT OF SOUND

A person’s ability to hear a sound depends on its character as compared with all other sounds in the environment. Three characteristics of sound to which people respond are subject to objective measurement: magnitude or loudness; the frequency spectrum; and the time variation of the sound.

LOUDNESS

The unit used to measure the magnitude of sound is the decibel. Decibels are used to measure loudness in the same way that “inches” and “degrees” are used to measure length and temperature. Unlike the linear length and temperature scales, the decibel

scale is logarithmic. By definition, a sound which has ten times the mean square sound pressure of the reference sound is 10 decibels (dB) greater than the reference sound. A sound which has 100 times (10×10 or 10^2) the mean square sound pressure of the reference sound is 20 dB greater (10×2).

The logarithmic scale is convenient because the mean square sound pressures of normal interest extend over a range of 11 trillion to one.



This huge number (a “1” followed by 14 zeros or 10¹⁴) is much more conveniently represented on the logarithmic scale as 140 dB (10 × 14).

The use of the logarithmic decibel scale requires different arithmetic than we use with linear scales. For example, if two equally loud but independent noise sources operate simultaneously, the measured mean square sound pressure from both sources will be twice as great as either source operating alone. When expressed on the decibel scale, however, the sound pressure level from the combined sources is only 3 dB higher than the level produced by either source alone. Furthermore, if we have two sounds of different magnitude from independent sources, then the level of the sum will never be more than 3 dB above the level produced by the greater source alone.

This equation describes the mathematics of sound level summation:

$$S_t = 10 \log \sum 10^{S_i/10}$$

where S_t is the total sound level, in decibels, and S_i is the sound level of the individual sources.

A simpler process of summation is also available and often used where a level of accuracy of less than one decibel is not required. **Table I** lists additive factors applicable to the difference between the sound levels of two sources.

The noise values to be added should be arrayed from lowest to highest. The additive factor derived from the difference between the lowest and next highest noise level should be added to the higher level. An example is shown to the right.

TABLE 1

ADDITIVE FACTORS FOR SUMMATION OF TWO SOUND TYPES

DIFFERENCE IN SOUND LEVEL (DB)	ADD TO LARGER LEVEL (DB)	DIFFERENCE IN SOUND LEVEL (DB)	ADD TO LARGER LEVEL (DB)
0	3.0	8	0.6
1	2.5	9	0.5
2	2.1	10	0.4
3	1.8	12	0.3
4	1.5	14	0.2
5	1.2	16	0.1
6	1.0	> 16	0
7	0.8		

SOURCE: HUD 1985, p. 51.

Logarithmic math also produces interesting results when averaging sound levels. As the following example shows, the loudest sound levels are the dominant influence in the averaging process. In the example, two sound levels of equal duration are averaged. One is 100 dB; the other 50 dB. The result is not 75 as it would be with linear math but 97 dB. This is because 100 dB contains 100,000 times the sound energy as 50 dB.

Another interesting attribute of sound is the human perception of loudness. Scientists researching human hearing have determined that most people perceive a 10 dB increase in sound energy over a given frequency range as, roughly, a doubling of the loudness. Recalling

the logarithmic nature of the decibel scale, this means that most people perceive a ten-fold increase in sound energy as a two-fold increase in loudness (Kryter 1984, p. 188). Furthermore, when comparing sounds over the same frequency range, most people cannot distinguish between sounds varying by less than two or three decibels.

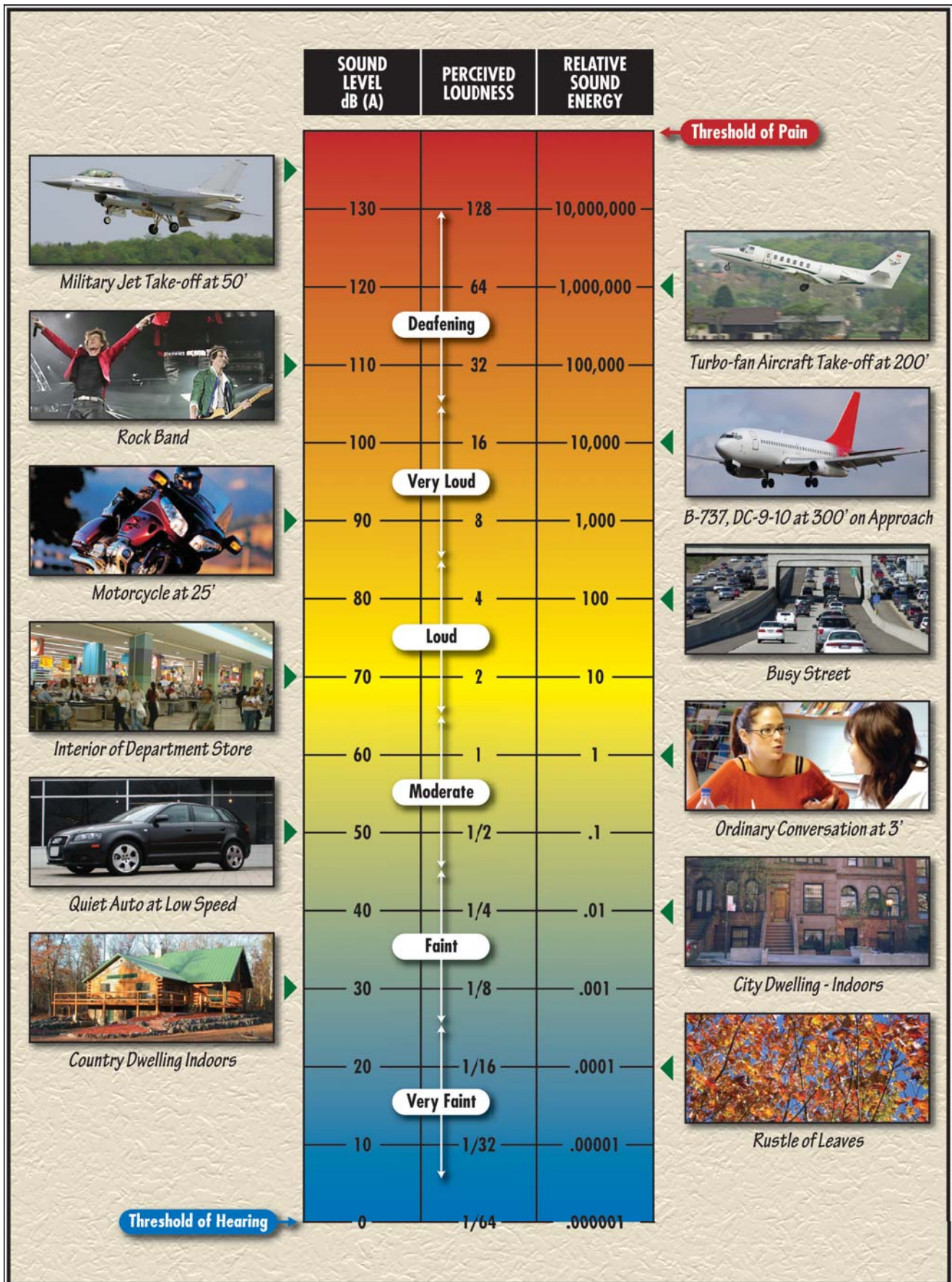
Exhibit A presents examples of various noise sources at different noise levels, comparing the decibel scale with the relative sound energy and the human perception of loudness. In the exhibit, 60 dB is taken as the reference or “normal” sound level. A sound of 70 dB, involving ten times the sound energy, is perceived as twice as loud. A sound of 80 dB contains 100 times the sound energy

EXAMPLE OF SOUND LEVEL SUMMATION

59.0 dB }
 60.0 dB } Add 2.5 to 60 = 62.5
 66.5 dB }
 Add 1.5 to 66.5 = 68

59 dB + 60 dB = 66.5 dB = 68 dB

EXHIBIT A





and is perceived as four times as loud as 60 dB. Similarly, a sound of 50 dB contains ten times less sound energy than 60 dB and is perceived as half as loud.

FREQUENCY WEIGHTING

Two sounds with the same sound pressure level may “sound” quite different (e.g., a rumble versus a hiss) because of differing distributions of sound energy in the audible frequency range. The distribution of sound energy as a function of frequency is known as the “frequency spectrum.” The spectrum is important to the measurement of sound because the human ear is more sensitive to sounds at some frequencies than others. People hear best in the frequency range of 1,000 to 5,000 cycles per second (Hertz) than at very much lower or higher frequencies. If the magnitude of a sound is to be measured so that it is proportional to its perception by a human, it is necessary to weight more heavily that part of the sound energy spectrum humans hear most easily.

Over the years, many different sound measurement scales have been developed, including the A-weighted scale (and also the B, C, D, and E-weighted scales). A-weighting, developed in the 1930s, is the most commonly used scale for approximating the frequency spectrum to which humans are sensitive. Because of its universality, it was adopted by the U.S. Environmental Protection Agency and other government agencies for the description of sound in the environment.

The zero value on the A-weighted scale is the reference pressure of 20 micro-newtons per square meter (or micro-pascals). This value approximates the smallest sound pressure that can be detected by a human. The average sound level of a whisper at a distance of 1 meter is 40 dB; the sound level of a normal voice at 1 meter is 57 dB; a shout at 1 meter is 85 dB; and the threshold of pain is 130 dB.

TIME VARIATION OF SOUND LEVEL

Generally, the magnitude of sound in the environment varies randomly

over time. Of course, there are many exceptions. For example, the sound of a waterfall is steady with time, as is the sound of a room air conditioner or the sound inside a car or airplane cruising at a constant speed. But, in most places, the loudness of outdoor sound is constantly changing because it is influenced by sounds from many sources.

While the continuous variation of sound levels can be measured, recorded, and presented, comparisons of sounds at different times or at different places is very difficult without some way of reducing the time variation. One way of doing this is to calculate the value of a steady-state sound which contains the same amount of sound energy as the time-varying sound under consideration. This value is known as the Equivalent Sound Level (L_{eq}). An important advantage of the L_{eq} metric is that it correlates well with the effects of noise on humans. On the basis of research, scientists have formulated the “equal energy rule.” It is the total sound energy perceived by a human that accounts for the effects of the sound on the person. In other words, a very loud noise lasting a short time will have the same effect as a quieter noise lasting a longer time if the total energy of both sound events (the L_{eq} value) is the same.

KEY DESCRIPTORS OF SOUND

Four descriptors or metrics are useful for quantifying sound. All are based on the logarithmic decibel (dB) scale and incorporate A-weighting to account for the frequency response of the ear.

Sound Level

The sound level (L) in decibels is the quantity read on an ordinary sound level meter. It fluctuates with time following the fluctuations in magnitude of the sound. Its maximum value (L_{max}) is one of the descriptors often used to characterize the sound of an airplane overflight. However, L_{max} only gives the maximum magnitude of a sound — it does not convey any information about the duration of the sound. Clearly, if two sounds have the same maximum sound level, the sound which lasts longer will cause more interference with human activity.

Sound Exposure Level

Both loudness and duration are included in the Sound Exposure Level (SEL), which adds up all sound occurring in a stated time period or during a specific event, integrating the total sound over a one-second duration. The SEL is the quantity that best describes the total noise from an aircraft overflight. Based on numerous sound measurements, the SEL from a typical aircraft overflight is usually four to seven decibels higher than the L_{max} for the event.

Exhibit B shows graphs of two different sound events. In the top half of the graph, we see that the two events have the same L_{max} , but the second event lasts longer than the first. It is clear from the graph that the area under the noise curve is greater for the second event than the first. This means that the second event contains more total sound energy than the first, even though the peak levels for each event are the same. In the bottom half of the graph, the SELs for each event are compared. The SELs are computed by mathematically compressing

the total sound energy into a one-second period. The SEL for the second event is greater than the SEL for the first. Again, this simply means that the total sound energy for the second event is greater than for the first.

Equivalent Sound Level

The L_{eq} is simply the logarithm of the average value of the sound exposure during a stated time period. It is typically used for durations of one hour, eight hours, or 24 hours. In airport noise compatibility studies, use of the L_{eq} term applies to 24-hour periods unless otherwise noted. It

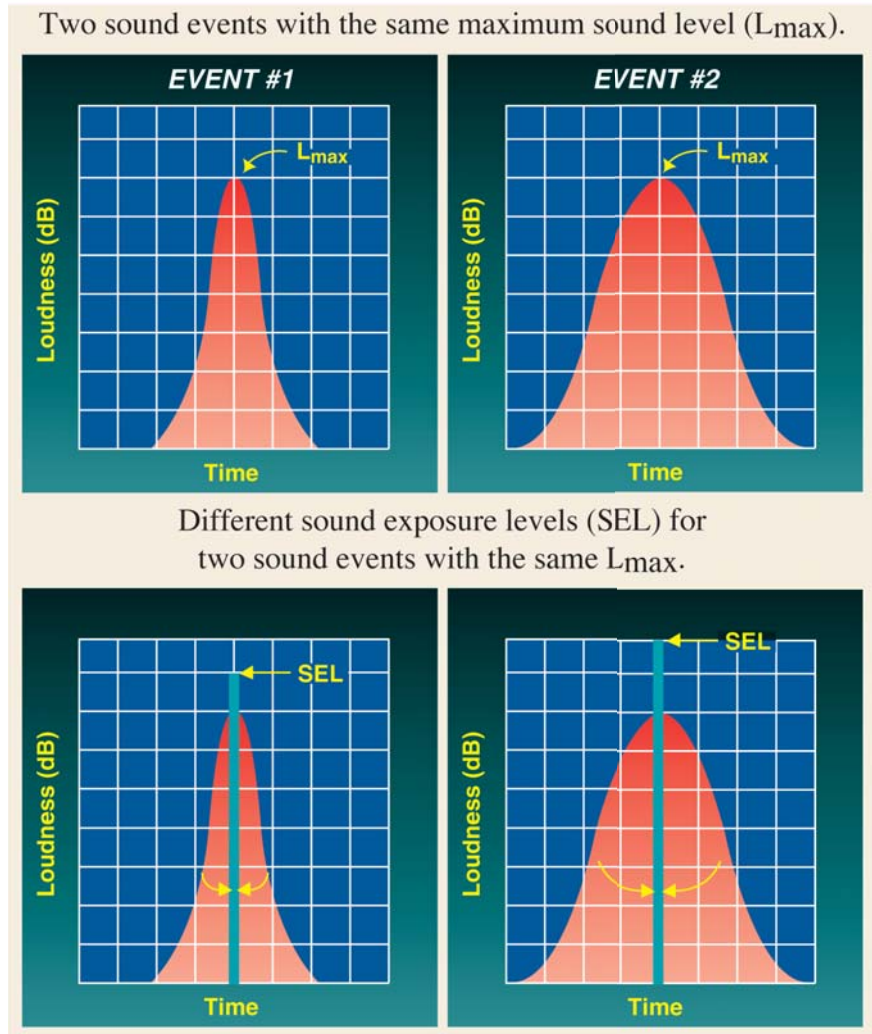
is often used to describe sounds with respect to their potential for interfering with human activity.

Cumulative Noise Metrics

L_{eq} can be weighted to account for increased annoyance attributed to noise during the evening and nighttime when ambient noise levels are lower. Two weighted noise metrics commonly used for airports are the day-night sound level (DNL) and the community noise equivalent level (CNEL) which is used in the State of California. Both metrics are calculated using similar methodology, DNL is calculated by

EXHIBIT B

COMPARISON OF L_{max} AND SEL



summing the sound exposure during daytime hours plus 10 times the sound exposure occurring during nighttime hours (2200-0700). The sum is averaged by dividing by the number of seconds during a 24 day. CNEL includes an additional evening penalty of 4.77 dB for sound events occurring between 1900 and 2200.

Exhibit C shows how the sound occurring during a 24-hour period is weighted and averaged by the DNL or CNEL metrics. In the examples, the sound occurring during the period, including aircraft noise and background sound, yields a DNL or CNEL value of 71. As a practical matter, this is a reasonably close estimate of the aircraft noise alone because, in this example, the background noise is low enough to contribute only a little to the overall DNL or CNEL value during the period of observation.

Where the basic element of sound measurement is L_{eq} , DNL is calculated from:

$$L_{dn} = 10 \log_{10} \left(\frac{1}{24} \left(\sum_{d=1}^{15} 10^{[Leq(d)]/10} + \sum_{n=1}^9 10^{[Leq(n)+10]/10} \right) \right)$$

where DNL is represented mathematically as L_{dn} , and $L_{eq}(d)$ and $L_{eq}(n)$ are the daytime and nighttime hour values combined. This expression is convenient where L_{eq} values for only a few hours are available and the values for the remainder of the day can be predicted from a knowledge of day/night variation in levels. The hourly L_{eq} values are summed for the 15 hours from 0700 to 2200 and added to the sum of hourly L_{eq} figures for the 9 nighttime hours with a 10 dB penalty added to the nighttime L_{eq} s.

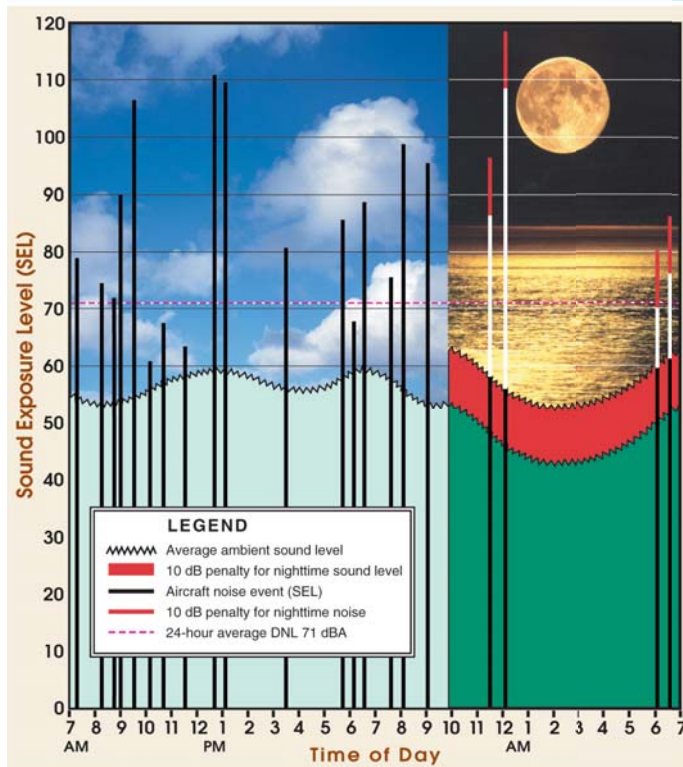
Use of the cumulative metric to describe aircraft noise is required for all airport noise studies developed under the regulations of 14 CFR Part 150. In addition, DNL and CNEL is preferred by all federal agencies as the appropriate single measure of cumulative sound exposure. These agencies include the FAA, the Federal Highway Administration,

Environmental Protection Agency, Department of Defense, and Department of Housing and Urban Development.

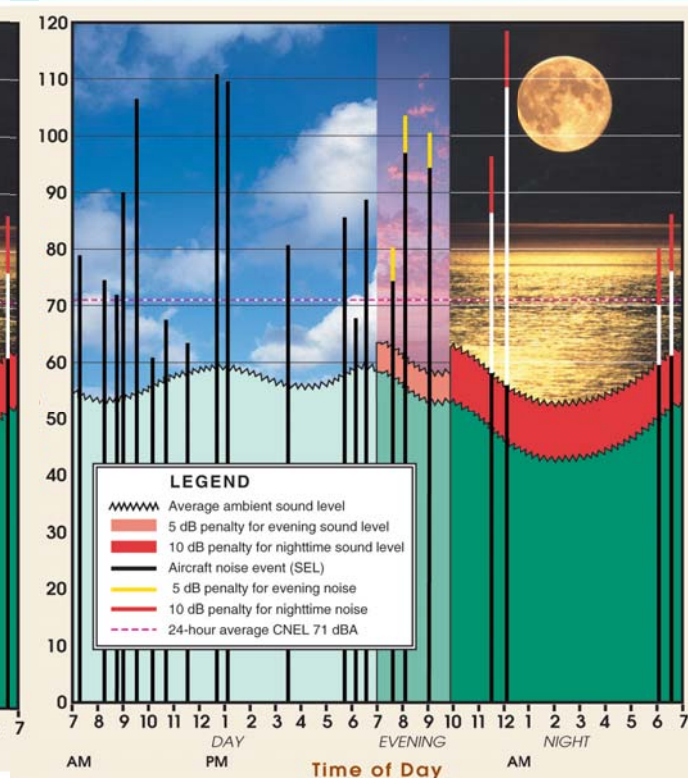
One might think of these metrics as a summary description of the "noise climate" of an area. DNL and CNEL accumulate the noise energy from passing aircraft in the same way that

EXHIBIT C

TYPICAL NOISE PATTERN AND DNL SUMMATION



TYPICAL NOISE PATTERN AND CNEL SUMMATION



Another way of computing DNL is described in this equation:

$$L_{dn} = 10 \log \frac{1}{86400} \left(\int_{\text{day}} 10^{LA/10_{dt}} + \int_{\text{night}} 10^{LA+10_{dt}} \right)$$

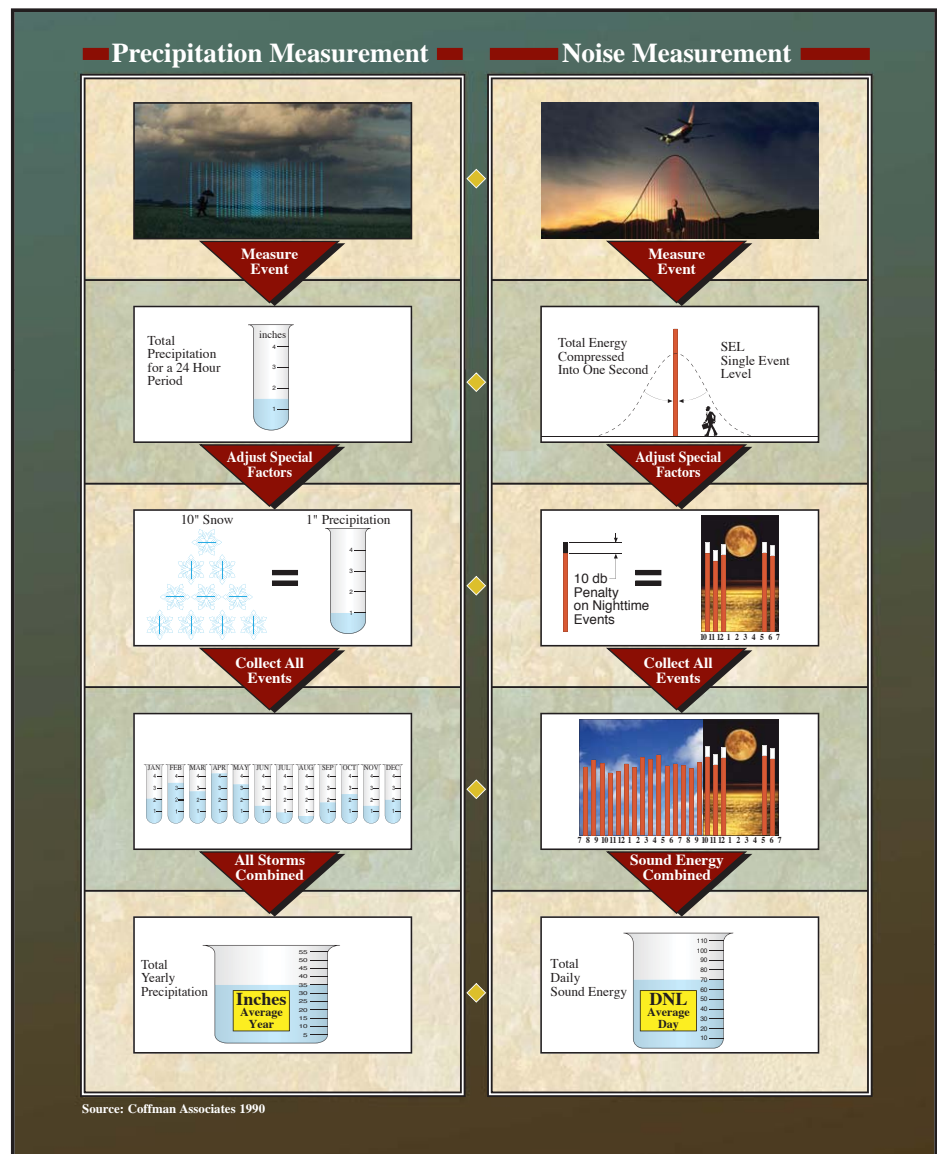
where LA is the time-varying, A-weighted sound level, measured with equipment meeting the requirements for sound level meters (as specified in a standard such as ANSI S1.4-1971), and dt is the duration of time in seconds. The averaging constant of 86,400 is the number of seconds in a day. The integrals are taken over the daytime (0700 - 2200) and the nighttime (2200 - 0700) periods, respectively. If the sound level is sampled at a rate of once per second rather than measured continuously, the equation still applies if the samples replace LA and the integrals are changed to summations.

the receiver, diminishing as it passes. The total noise occurring during the event is accumulated and described as a SEL. Over a 24-hour period, the SELs can be summed, adding a special 10-decibel factor for nighttime noise, yielding a DNL value and an additional 4.77 dB for CNEL evening events. The DNL or CNEL developed over a long period of time, for example one year, defines the noise environment of the area, allowing us to make predictions about the average response of people living in areas exposed to various DNL or CNEL levels.

a precipitation gauge accumulates rain from passing storms. This analogy is presented in **Exhibit D**. Rain usually starts as a light sprinkle, building in intensity as the squall line passes over, then diminishing as the squall moves on. At the end of a 24-hour period, a rain gauge indicates the total rainfall received for that day, although the rain fell only during brief, sometimes intense, showers. Over a year, total precipitation is summarized in inches. When snow falls, it is converted to its equivalent measure as water. Although the total volume of precipitation during the year may be billions or trillions of gallons of water, its volume is expressed in inches because it provides for easier summation and description. We have learned how to use total annual precipitation to describe the climate of an area and make predictions about the environment.

Aircraft noise is similar to precipitation. The noise level from a single overflight begins quietly and builds in intensity as the aircraft draws closer. The sound of the aircraft is loudest as it passes over

EXHIBIT D



HELPFUL RULES-OF-THUMB

Despite the complex mathematics involved in noise analysis, several simple rules-of-thumb can help in understanding the noise evaluation process.

- When sound events are averaged, the loud events dominate the calculation.
- A 10 decibel change in noise is equal to a tenfold change in sound energy. For example, the noise from ten aircraft is ten decibels louder than the noise from one aircraft of the same type, operated in the same way.
- Most people perceive an increase of 10 decibels as a relative doubling of the sound level.
- The DNL metric assumes one nighttime operation (between 10:00 p.m. and 7:00 a.m.) is equal in impact to ten daytime operations by the same aircraft.
- A doubling of aircraft operations results in a three decibel noise increase if done by the same aircraft operated in the same way.
- The CNEL metric assumes one evening operation (7:00 p.m. to 10:00 p.m.) is equal in impact to 4.77 daytime operations by the same aircraft and one nighttime operation (10:00 p.m. to 7:00 a.m.) is equal in impact to ten daytime operations by the same aircraft

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EFFECTS OF NOISE EXPOSURE

Understanding the effects of noise on people and the physical environment is essential to guiding decisions regarding airport land use compatibility. As noise-related regulations have evolved since the 1970s, so too has the research concerning the effects of noise exposure. Two publications, the Environmental Protection Agency's *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (1974) and the Federal Aviation Administration's *Aviation Noise Effects*, Report No. FAA-EE-85-2 (1985) each provide a comprehensive summary of the effects of noise exposure. Since these documents were published additional research has been conducted on the subject. The Airport Cooperative Research Program (ACRP) has continued to monitor research on noise exposure and published *Effects of Aircraft Noise: Research Update on Selected Topics* in 2008. ACRP's document is intended to update and complement previous publications, primarily focusing on the latest research efforts and conclusions. The following sections summarize recent findings regarding

the effects of aircraft noise in the following study areas: health, annoyance, sleep disturbance, children and schools, property values, and vibration.

HEALTH EFFECTS

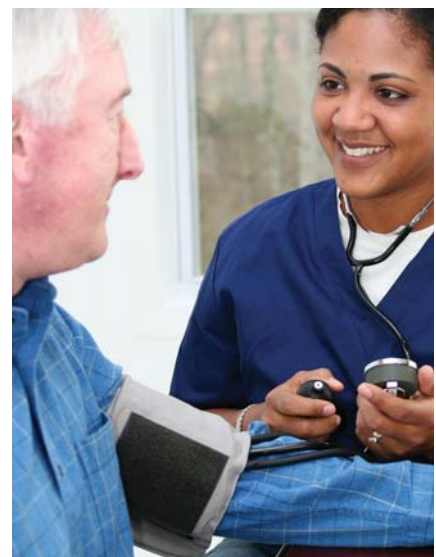
Hearing Impairment

Hearing loss is the primary health concern related to noise exposure. The EPA's 1974 study found that exposure to noise of 70 L_{eq} or more on a continuous basis, over an extended period of time, at the human ear's most damage-sensitive frequency, may result in a very small but permanent loss of hearing. FAA's *Aviation Noise Effects* cites three studies which examine hearing loss among people living near airports concluding that under normal circumstances, people in the community near an airport are at no risk of suffering hearing damage from airport noise. More recent research indicates that occupational noise exposure experienced at a person's place of employment or recreation noise exposure such as noise exposure such as a personal

music device, concerts or motorcycles may be greater risk factors for hearing loss. Because aviation and typical community noise levels near airports are not comparable to the occupational or recreational noise exposures associated with hearing loss, hearing impairment resulting from community aviation noise has not been identified as a community health concern.

Cardiovascular

The study of the effect of noise on cardiovascular conditions has resulted



in contradictory conclusions. According to the proceedings of a 2000 World Health Organization task force convened to study the effects of noise on health, a weak association between long-term environmental noise exposure and hypertension was suggested, but no dose-response relationship could be established. The task force concluded that cardiovascular effects may be associated with long-term exposure; however, the associations are weak. The group also suggested that effect of noise is somewhat stronger for ischemic heart disease than for hypertension. In contrast, based on a review of cross-sectional studies comparing areas near an airport with areas having lower ambient noise conditions, no differences in systolic and diastolic blood pressure have been found; therefore aircraft noise levels were not a factor affecting hypertension in the subject areas.

Hospitals and Care Facilities

FAA's *Effects of Aircraft Noise* notes that specific research regarding

aviation noise and hospitals and care facilities is not available. Although most airport noise and land-use compatibility guidelines include health facilities such as hospitals, convalescent homes, and long term care centers as noise-sensitive uses, there are no studies which identify health effects associated with aviation noise. In comparison, several studies have identified internal medical facility noises as a health risk factor.

Children

The health effects of noise on children has also been widely studied over the past 30 years. Much of the published study results indicate that neither psychiatric disorders nor environmental factors showed any relationship to noise; however, other physical characteristics such as heart rate and muscle tension demonstrate a relationship to noise. Additional studies have considered relationships between noise exposure during pregnancy and low birth weights. The results of these studies indicate no correlation between noise exposure during pregnancy and birth weight

(Wu et al. 1996; Passchier-Vermeer and Passchier 2000). Additionally, occupational and recreational noise exposure showed no effect on infant birth weights.

ANNOYANCE

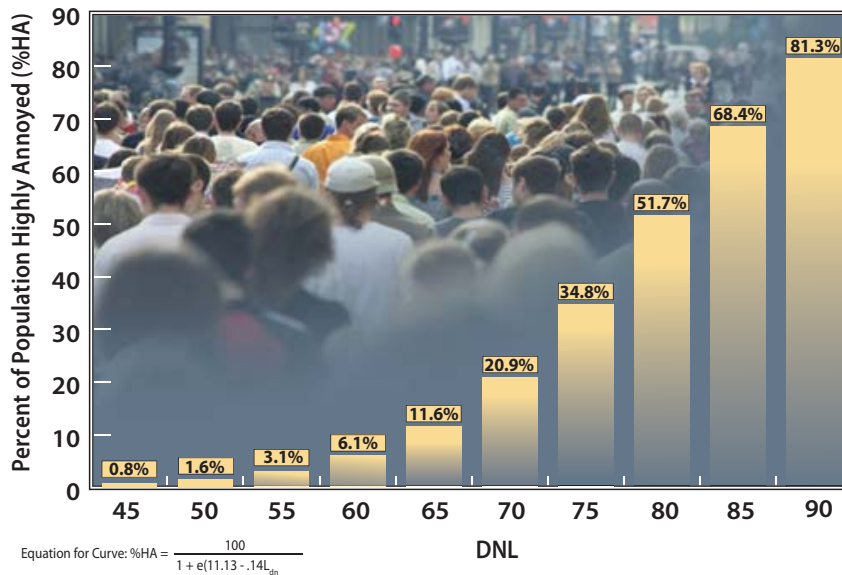
The relationship between annoyance and noise exposure is the foundation of many land use compatibility guidelines using the cumulative DNL and CNEL noise metrics. The work of T. J. Shultz published in 1978 reviewed data from social surveys concerning the noise of aircraft, street and expressway traffic, and railroads. Survey responses to noise ratings were translated to Day-Night Average Noise Level (DNL) and has become the most widely accepted interpretation of transportation noise-induced annoyance.

Further research indicates that annoyance increases along an S-shaped or logistic curve as cumulative noise exposure increases. Developed by Fiengold et al., the noise curve is based on data derived from studies of transportation noise. The research shows the relationship between DNL levels and the percentage of people highly annoyed. Known as the "updated Shultz curve", and illustrated in **Exhibit A** on the next page it represents the best available source of data for the noise dosage-response relationship and was adopted by Federal Interagency Committee on Noise (FICON) in 1992 for use by federal agencies in aircraft noise related environmental impact analyses. In 2006 it was also adopted as part of the American National Standards Institute (ANSI) standard on community responses to environmental noises.



EXHIBIT A

Percent Highly Annoyed at Selected Noise Levels



SLEEP DISTURBANCE

The British Civil Aviation Authority conducted a study to examine the relationship between nighttime aircraft noise and sleep disturbance near four airports – Heathrow, Gatwick, Stansted and Manchester (Ollerhead, 1992). A total of 400 subjects were monitored for a total of 5,742 subject-nights. Nightly awakenings were found to be very common as part of natural sleep patterns. The research found that for noise events below 90 SEL, as measured outdoors, there was likely to be no measurable increase in rates of sleep disturbance. Where noise levels ranged from 90 to 100 SEL, a very small rate of increase in disturbance was detected. Overall, rates of sleep disturbance were found to be more closely correlated with sleep stage than with periods of peak aircraft activity. The research concludes that sleep is more likely to be disrupted, from any cause, during light stages of sleep rather than heavy stages.

As outlined in FAA's *Effects of Aircraft Noise*, later studies by Horne

et al. (1994) document a landmark in-home field study that demonstrated dose-response curves based on laboratory data greatly overestimated the actual awakening rates for aircraft noise events. Additionally, in 1995, Fidell found that SELs of individual noise intrusions were much more closely associated with awakenings than long-term noise exposures. These findings do not resemble those of laboratory studies of noise-induced sleep interference, but agree with the results of other field studies.



Fidell concludes that the relationship observed between noise metrics and behavioral awakening responses suggest instead that noise induced awakening may be usefully viewed as an event-detection process. Put another way, an awakening can be viewed as the outcome of a de facto decision that a change of sufficient import has occurred in the short-term noise environment to warrant a decision to awaken. Additionally, *Effects of Aircraft Noise* states that research may not yet have sufficient specificity to estimate the population awakened for a specific airport environment or the difference in population awakened for a given change in an airport environment.

CHILDREN AND SCHOOLS

FICAN published the *Position on Research into Effects of Aircraft Noise on Classroom Learning* in 2000 which states that the effects of noise on classroom learning for children suggests that aircraft levels may interfere with multiple aspects of a child's classroom learning experience including memory, speech acquisition, language, motivation and reading. The position paper indicates that



the findings confirm conclusions from earlier studies which indicate a decline in reading performance when exterior noise levels are at an Leq of 65 dB or higher.

Between 2001-2003, a three year study sponsored by the European Commission titled *Road Traffic and Aircraft Noise Exposure and Children's Cognition and Health* studied nearly 3,000 children in schools located near busy roads and airports. The study evaluated the effects of chronic noise exposure on children's reading development. The study suggests that long-term noise exposure can delay a child's reading age up to two months. Additionally, the study found that persistent noise exposure increases the level of annoyance in children. While the effect found to be significant, researchers felt it was small in magnitude and that the long-term effects remain unclear.

The Acoustical Society of America, in 2003, published *Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools*. The guidelines recommend that new classrooms be built with a maximum permissible background-sound level for "typical" classrooms of 35 dBA, with

a maximum reverberation time of 0.6 to 0.7 second (depending on room volume). The guidelines are voluntary and are intended to improve the overall learning environment of classrooms.

VIBRATION

Structural vibration from low-frequency noise may also be of concern for airport neighbors. While vibration contributes to annoyance reported by residents near airports, particularly when accompanied by high audible sound levels, it rarely carries enough energy to damage structures constructed in conformance with standard building codes. Although this topic has been studied, there is no accepted methodology for describing the effects of low frequency noise and the effects on communities near airports. FAA and NASA, through the Partner/Center of Excellence, continue to study the effects of low frequency noise and released a report in 2007. As with previous studies on the topic, experts in this field have failed to reach a consensus on the effects.

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GLOSSARY OF NOISE COMPATIBILITY TERMS

A-WEIGHTED SOUND LEVEL - A sound pressure level, often noted as dBA, which has been frequency filtered or weighted to quantitatively reduce the effect of the low frequency noise. It was designed to approximate the response of the human ear to sound.

AMBIENT NOISE - The totality of noise in a given place and time — usually a composite of sounds from varying sources at varying distance; no particular sound is dominant.

APPROACH LIGHT SYSTEM (ALS) - An airport lighting facility which provides visual guidance to landing aircraft by radiating light beams in a directional pattern by which the pilot aligns the aircraft with the extended centerline of the runway on the final approach for landing.

ATTENUATION - Acoustical phenomenon whereby a reduction in sound energy is experienced between the noise source and receiver. This energy loss can be attributed to atmospheric conditions, terrain, vegetation, and man-made and natural features.

AZIMUTH - Horizontal direction expressed as the angular distance between true north and the direction of a fixed point (as the observer's heading).

BASE LEG - A flight path at right angles to the landing runway off its approach end. The base leg normally extends from the downwind leg to the intersection of the extended runway centerline. See "traffic pattern."

CFR - Code of Federal Regulation (i.e. 14 CFR Part 150)

CNEL - The 24-hour average sound level, in A-weighted decibels, obtained after the addition of 4.77 decibels to sound levels between 7 p.m. and 10 p.m. and 10 decibels to sound levels between 10 p.m. and 7 a.m., as averaged over a span of one year. In California, it is the required metric for determining the cumulative exposure of individuals to aircraft noise. Also see "L_{eq}" and "DNL".

COMMUNITY NOISE EQUIVALENT LEVEL - See CNEL

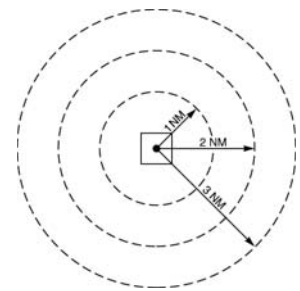
CROSSWIND LEG - A flight path at right angles to the landing runway off its upwind end. See "traffic pattern."

DAY-NIGHT AVERAGE SOUND LEVEL - See DNL.

DECIBEL (dB) - The physical unit commonly used to describe noise levels. The decibel represents a relative measure or ratio to a reference power. This reference value is a sound pressure of 20 micropascals which can be referred to as 1 decibel or the weakest sound that can be heard by a person with very good hearing in an extremely quiet room.

DISPLACED THRESHOLD - A threshold that is located at a point on the runway other than the designated beginning of the runway.

DISTANCE MEASURING EQUIPMENT (DME) - Equipment (airborne and ground) used to measure, in nautical miles, the slant range distance of an aircraft from the DME navigational aid.



DNL - The 24-hour average sound level, in A-weighted decibels, obtained after the addition of ten decibels to sound levels for the periods between 10 p.m. and 7 a.m. as averaged over a span of one year. It is the FAA standard metric for determining the cumulative exposure of individuals to noise. Also see "L_{eq}".

DOWNWIND LEG - A flight path parallel to the landing runway in the direction opposite to landing. The downwind leg normally extends between the crosswind leg and the base leg. Also see "traffic pattern."

DURATION - Length of time, in seconds, a noise event such as an aircraft flyover is experienced. (May refer to the length of time a noise event exceeds a specified dB threshold level.)

EASEMENT - The legal right of one party to use a portion of the total rights in real estate owned by another party. This may

include the right of passage over, on, or below the property; certain air rights above the property, including view rights; and the rights to any specified form of development or activity, as well as any other legal rights in the property that may be specified in the easement document.

EQUIVALENT SOUND LEVEL - See L_{eq} .

FINAL APPROACH - A flight path in the direction of landing along the extended runway centerline. The final approach normally extends from the base leg to the runway. See "traffic pattern."

FIXED BASE OPERATOR (FBO) - A provider of services to users of an airport. Such services include, but are not limited to, hangaring, fueling, flight training, repair and maintenance.

GLIDE SLOPE (GS) - Provides vertical guidance for aircraft during approach and landing. The glide slope consists of the following:

1. Electronic components emitting signals which provide vertical guidance by reference to airborne instruments during instrument approaches such as ILS, or
2. Visual ground aids, such as VASI, which provide vertical guidance for VFR approach or for the visual portion of an instrument approach and landing.

GLOBAL POSITIONING SYSTEM - See "GPS."

GPS - GLOBAL POSITIONING SYSTEM - A system of 24 satellites used as reference points to enable navigators equipped with GPS receivers to determine their latitude, longitude, and altitude. The accuracy of the system can be further refined by using a ground receiver at a known location to calculate the error in the satellite range data. This is known as Differential GPS (DGPS).

GROUND EFFECT - The attenuation attributed to absorption or reflection of noise by man-made or natural features on the ground surface.

HOURLY NOISE LEVEL (HNL) - A noise summation metric which considers primarily those single events which exceed a specified threshold or duration during one hour.

INSTRUMENT APPROACH - A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing, or to a point from which a landing may be made visually.

INSTRUMENT FLIGHT RULES (IFR) - Rules governing the procedures for conducting instrument flight. Also a term used by pilots and controllers to indicate type of flight plan.

INSTRUMENT LANDING SYSTEM (ILS) - A precision instrument approach system which normally consists of the following electronic components and visual aids:

1. Localizer.
2. Glide Slope.
3. Outer Marker.
4. Middle Marker.
5. Approach Lights.

LAAS - Local Area Augmentation System, ground-based antennas whose precisely known locations are used to correct the satellite signals and provide greater positional accuracy as well as integrity of service to aircraft in the air. Represents the next generation of airspace management and aircraft guidance through the National Airspace System using GPS technologies.

L_{dn} - (See DNL). L_{dn} used in place of DNL in mathematical equations only.

L_{eq} - Equivalent Sound Level. The steady A-weighted sound level over any specified period (not necessarily 24 hours) that has the same acoustic energy as the fluctuating noise during that period (with no consideration of a nighttime weighting.) It is a measure of cumulative acoustical energy. Because the time interval may vary, it should be specified by a subscript (such as $L_{eq, 8}$) for an 8-hour exposure to workplace noise) or be clearly understood.

LOCALIZER - The component of an ILS which provides course guidance to the runway.

L_{max} - Maximum Sound Level, the maximum sound level (dB) during a particular noise event.

LOUDNESS - The attribute of auditory sensation in terms of which sounds may be ordered on a scale extending from soft to loud.

MISSED APPROACH COURSE (MAC) - The flight route to be followed if, after an instrument approach, a landing is not effected, and occurring normally:

1. When the aircraft has descended to the decision height and has not established visual contact, or
2. When directed by air traffic control to pull up or to go around again.

NOISE CONTOUR - A continuous line on a map of the airport vicinity connecting all points of the same noise exposure level.

NONDIRECTIONAL BEACON (NDB) - A beacon transmitting nondirectional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine his bearing to and from the radio beacon and home on or track to or from the station. When the radio beacon is installed in

conjunction with the Instrument Landing System marker, it is normally called a Compass Locator.

NONPRECISION APPROACH - A standard instrument approach procedure providing runway alignment but no glide slope or descent information.

PRECISION APPROACH - A standard instrument approach procedure providing runway alignment and glide slope or descent information.

PRECISION APPROACH PATH INDICATOR (PAPI) - A lighting system providing visual approach slope guidance to aircraft during a landing approach. It is similar to a VASI but provides a sharper transition between the colored indicator lights.

PROFILE - The physical position of the aircraft during landings or takeoffs in terms of altitude in feet above the runway and distance from the runway end.

PROPAGATION - Sound propagation refers to the spreading or radiating of sound energy from the noise source. Propagation characteristics of sound normally involve a reduction in sound energy with an increased distance from source. Sound propagation is affected by atmospheric conditions, terrain, and man-made and natural objects.

RESIDUAL NOISE - is ambient noise without specific noise. The residual noise is the noise remaining at a point under certain conditions when the noise from the specific source is suppressed.

RUNWAY END IDENTIFIER LIGHTS (REIL) - Two synchronized flashing lights, one on each side of the runway threshold, which provide rapid and positive identification of the approach end of a particular runway.

RUNWAY USE PROGRAM - A noise abatement runway selection plan designed to enhance noise abatement efforts with regard to airport communities for arriving and departing aircraft. These plans are developed into runway use programs and apply to all turbojet aircraft 12,500 pounds or heavier. Turbojet aircraft less than 12,500 pounds are included only if the airport proprietor determines that the aircraft creates a noise problem. Runway use programs are coordinated with FAA offices as outlined in Order 1050.11. Safety criteria used in these programs are developed by the Office of Flight Operations. Runway use programs are administered by the Air Traffic Service as "Formal" or "Informal" programs.

RUNWAY USE PROGRAM (FORMAL) - An approved noise abatement program which is defined and acknowledged in a Letter of Understanding between FAA - Flight Standards, FAA - Air Traffic Service, the airport proprietor, and the users. Once established, participation in the program is mandatory for aircraft operators and pilots as provided for in Part 150, Section 91.87.

RUNWAY USE PROGRAM (INFORMAL) - An approved noise abatement program which does not require a Letter of Understanding and participation in the program is voluntary for aircraft operators/pilots.

SEL - Sound Exposure Level. SEL expressed in dB, is a measure of the effect of duration and magnitude for a single-event measured in A-weighted sound level above a specified threshold which is at least 10 dB below the maximum value. In typical aircraft noise model calculations, SEL is used in computing aircraft acoustical contribution to the Equivalent Sound Level (L_{eq}), the Day-Night Sound Level (DNL), and the Community Noise Equivalent Level (CNEL).

SINGLE EVENT - An occurrence of audible noise usually above a specified minimum noise level caused by an intrusive source such as an aircraft overflight, passing train, or ship's horn.

SLANT-RANGE DISTANCE - The straight line distance between an aircraft and a point on the ground.

SOUND EXPOSURE LEVEL - See SEL.

SOUND LEVEL METER - An instrument, which is used for the measurement of sound level, with standard frequency weighting and standard exponentially weighted time averaging.

SPL - Sound Pressure Level, measure of the sound pressure of a given noise source relative to a standard reference value (typically the quietest sound that a young person with good hearing can detect).

TACTICAL AIR NAVIGATION (TACAN) - An ultra-high frequency electronic air navigation system which provides suitably-equipped aircraft a continuous indication of bearing and distance to the TACAN station.

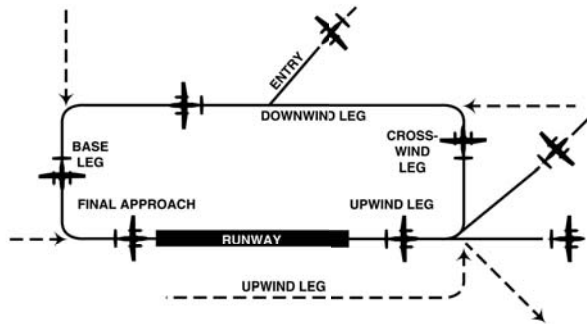
TERMINAL RADAR SERVICE AREA (TRSA) - Airspace surrounding designated airports wherein ATC provides radar vectoring, sequencing, and separation on a full-time basis for all IFR and participating VFR aircraft. Service provided in a TRSA is called Stage III Service.

THRESHOLD - Decibel level below which single event information is not printed out on the noise monitoring equipment tapes. The noise levels below the threshold are, however, considered in the accumulation of hourly and daily noise levels.

TIME ABOVE (TA) - The 24-hour TA noise metric provides the duration in minutes for which aircraft-related noise exceeds specified A-weighted sound levels. It is expressed in minutes per 24-hour period.

TOUCHDOWN ZONE LIGHTING (TDZ) - Two rows of transverse light bars located symmetrically about the runway centerline normally at 100 foot intervals. The basic system extends 3,000 feet along the runway.

TRAFFIC PATTERN - The traffic flow that is prescribed for aircraft landing at or taking off from an airport. The components of a typical traffic pattern are the upwind leg, crosswind leg, downwind leg, base leg, and final approach.



UNICOM - A nongovernment communication facility which may provide airport information at certain airports. Locations and frequencies of UNICOM's are shown on aeronautical charts and publications.

UPWIND LEG - A flight path parallel to the landing runway in the direction of landing. See "traffic pattern."

VECTOR - A heading issued to an aircraft to provide navigational guidance by radar.

VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE STATION (VOR) - A ground-based electric navigation aid transmitting very high frequency navigation signals, 360 degrees in azimuth, oriented from magnetic north. Used as the basis for navigation in the national airspace system. The VOR periodically identifies itself by Morse Code and may have an additional voice identification feature.

VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE STATION/TACTICAL AIR NAVIGATION (VORTAC) - A navigation aid providing VOR azimuth, TACAN azimuth, and TACAN distance-measuring equipment (DME) at one site.

VICTOR AIRWAY - A control area or portion thereof established in the form of a corridor, the centerline of which is defined by radio navigational aids.

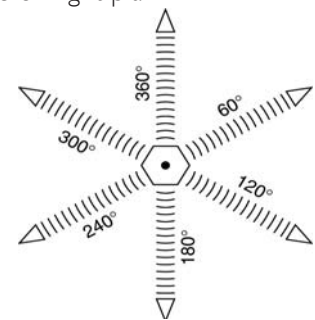
VISUAL APPROACH - An approach wherein an aircraft on an IFR flight plan, operating in VFR conditions under the control of an air traffic control facility and having an air traffic control authorization, may proceed to the airport of destination in VFR conditions.

VISUAL APPROACH SLOPE INDICATOR (VASI) - An airport lighting facility providing vertical visual approach slope guidance to aircraft during approach to landing by radiating a directional pattern of high intensity red and white focused light beams which indicate to the pilot that he is on path if he sees red/white, above path if white/white, and below path if red/red. Some airports serving large aircraft have three-bar VASI's which provide two visual guide paths to the same runway.

VISUAL FLIGHT RULES (VFR) - Rules that govern the procedures for conducting flight under visual conditions. The term VFR is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, it is used by pilots and controllers to indicate type of flight plan.

VOR - See "Very High Frequency Omnidirectional Range Station."

VORTAC - See "Very High Frequency Omnidirectional Range Station/Tactical Air Navigation."



WAAS - Wide Area Augmentation System, ground-based antennas whose precisely known locations are used to correct the satellite signals and provide greater positional accuracy as well as integrity of service to aircraft in the air. Given the current difficulties with WAAS, LAAS now has higher priority for implementation at U.S. airports.

YEARLY DAY-NIGHT AVERAGE SOUND LEVEL - See DNL.



Appendix D

Noise Compatibility Program Checklist

**14 CFR PART 150
NOISE COMPATIBILITY PROGRAM CHECKLIST**

AIRPORT NAME: *San Carlos Airport*

REVIEWER: _____

Program Requirement	Yes/No/NA	Page No. Other Reference
I. SUBMITTING AND IDENTIFYING THE NCP:		
A. Submission is properly identified:		
1. 14 C.F.R. Part 150 NCP?	Yes	Cover
2. NEM and NCP together?	No	
3. Program revision? (To what extent has it been revised?)	No	
B. Airport and Airport Sponsor's name are identified?	Yes	Page i
C. NCP is transmitted by airport sponsor's cover letter?	Yes	Attached
II. CONSULTATION (including public participation: [150.23])		
A. Documentation includes narrative of public participation and consultation process?	Yes	Introduction, pp 2-3; Appendix B: Coordination, Consultation, and Public Involvement
B. Identification of consulted parties:		
1. all parties in 150.23(c) consulted?	Yes	Introduction, pp 2-3; Appendix A: Planning Advisory Committee; Appendix B: Coordination, Consultation, and Public Involvement
2. public and planning agencies identified?	Yes	Appendix A: Planning Advisory Committee; Appendix B: Coordination, Consultation, and Public Involvement
3. agencies in 2, above, correspond to those affected by the NEM noise contours?	Yes	Appendix A: Planning Advisory Committee
C. Satisfies 150.23(d) requirements?		
1. documentation shows active and direct participation of parties in B, above?	Yes	Appendix B: Coordination, Consultation, and Public Involvement
2. active and direct participation of general public and opportunity to submit their views, data, and comments on the formulation and adequacy of the NCP?	Yes	Appendix B: Coordination, Consultation, and Public Involvement
3. participation was prior to and during development of NCP and prior to submittal to FAA?	Yes	Appendix B: Coordination, Consultation, and Public Involvement
4. indicates adequate opportunity afforded to all consulted parties to submit views, data, etc.?	Yes	Appendix B: Coordination, Consultation, and Public Involvement

**14 CFR PART 150
NOISE COMPATIBILITY PROGRAM CHECKLIST**

AIRPORT NAME: San Carlos Airport

REVIEWER: _____

Program Requirement	Yes/No/NA	Page No. Other Reference
D. Evidence is included there was notice and opportunity for a public hearing on the final NCP?	Yes	Appendix B: Coordination, Consultation, and Public Involvement Pages B-106 and B-107
E. Documentation of comments: 1. includes summary of public hearing comments, if hearing was held?	Yes	Appendix B: Coordination, Consultation, and Public Involvement, Pages B-123 through B-128
2. includes copy of all written material submitted to operator?	Yes	Appendix B: Coordination, Consultation, and Public Involvement Pages B-136 through B-160
3. includes operator's responses/disposition of written and verbal comments?	Yes	Appendix B: Coordination, Consultation, and Public Involvement Pages B-161 through B-224
F. Is there written evidence from the appropriate office within the FAA that the sponsor received informal agreement to carry out proposed flight procedures?	NA	NA
III. NOISE EXPOSURE MAPS:[150.23, B150.3, 150.35(f)] (This section of the checklist is not a substitute for the Noise Exposure Map Checklist. It deals with maps in the context of the Noise Compatibility Program submission.)		
A. Inclusion of NEMs and supporting documentation: 1. Map documentation either included or incorporated by reference?	Yes	NEMs submitted separately and accepted on April 23, 2019
2. Maps previously found in compliance by FAA?	Yes	NEMs accepted on April 23, 2019
3. FAA's compliance determination still valid? (a) Existing condition NEM represents conditions at the airport at the time of submittal of the NCP for FAA approval? (b) Forecast condition NEM represents conditions at the airport at least 5 years into the future from the date of submittal of the NCP to the FAA for approval? (c) Sponsor letter confirming elements (a) and (b), above, if date of submission is either different than the year of submittal of the previously approved NEMs or over 12 months from the data shown on the face of the NEM? (d) If (a) through (c) cannot be validated, the NEMs must be redone and resubmitted as per 150.21.	No	The current year NEM contours, labeled 2017, are based upon San Carlos Airport Traffic Control Tower (ATCT) reports from April 2016 through March 2017 from the ATCT. This equates to a total of 105,413 annual operations for 2017. A review of the latest 12 months available (December 2017 through November 2018) from the ATCT is 95,116. This calculates to be a 9.7 percent decrease in operations.

NEMs submitted separately and accepted on April 23, 2019.
Cover letter.

**14 CFR PART 150
NOISE COMPATIBILITY PROGRAM CHECKLIST**

AIRPORT NAME: *San Carlos Airport*

REVIEWER: _____

Program Requirement	Yes/No/NA	Page No. Other Reference
4. Does 180-day period have to wait for map compliance finding?	No	NEMs accepted on April 23, 2019
B. Revised NEMs submitted with program: (Review using NEM checklist if map revisions included in NCP submittal. Report the applicable findings in the spaces below after a full review using the NEM checklist and narrative.)		
1. Revised NEMs included with program?	No	NEMs submitted separately and accepted on April 23, 2019
2. Has airport sponsor requested in writing that FAA make a determination on the NEMs, showing NCP measures in place, when NCP approval is made?	NA	
C. If program analysis uses noise modeling:		
1. INM, HNM, or FAA-approved equivalent?	NA	
2. Monitoring in accordance with A150.5?	No	Noise measurements were not conducted as part of the NCP analysis
D. One existing condition and one forecast-year map clearly identified as the official NEMs?	Yes	NEMs submitted separately and accepted on April 23, 2019
IV. CONSIDERATION OF ALTERNATIVES: [B150.7, 150.23(e)(2)]		
A. At a minimum, were the alternatives below considered, or if they were rejected was the reason for the rejection reasonable and based on accurate technical information and local circumstances?		
1. Land acquisition and interests therein, including air rights, easements, and development rights?	Yes	Chapter 5, pp 5-17, 5-19 to 6-21
2. Barriers, acoustical shielding, public building soundproofing	Yes	Chapter 4, pp 4-14 to 4-17; Chapter 5, pp 5-18 to 5-19
3. Preferential runway system	Yes	Chapter 4, pp 4-6 to 4-9
4. Voluntary flight procedures	Yes	Chapter 4, p 4-12
5. Restrictions described in B150.7 (taking into account Part 161 requirements)	Yes	Chapter 4, pp 4-24 to 4-32
6. Other actions with beneficial impact not listed in the regulation	Yes	Chapter 4, pp 4-32 to 4-33
7. Other FAA recommendations (see D, below)	No	

**14 CFR PART 150
NOISE COMPATIBILITY PROGRAM CHECKLIST**

AIRPORT NAME: San Carlos Airport

REVIEWER: _____

Program Requirement	Yes/No/NA	Page No. Other Reference
B. Responsible implementing authority identified for each considered alternative?	Yes	Chapter 6, pp 6-2 to 6-11; Table 6B
C. Analysis of alternative measures:	Yes	Chapter 4, pp 4-1 to 4-33; Chapter 5, pp 5-1 to 5-21
1. Measures clearly described?	Yes	Chapter 4, pp 4-1 to 4-33; Chapter 5, pp 5-1 to 5-21
2. Measures adequately analyzed?	Yes	Chapter 4, pp 4-1 to 4-33; Chapter 5, pp 5-1 to 5-21
3. Adequate reasoning for rejecting alternatives?	Yes	Chapter 4, pp 4-1 to 4-33; Chapter 5, pp 5-1 to 5-21
D. Other actions recommended by the FAA: As the FAA staff person familiar with the local airport circumstances, determine whether other actions should be added? (<i>List separately, or on back, actions and describe discussions with airport sponsor to have them included prior to the start of the 180-day cycle. New measures recommended by the airport sponsor must meet applicable public participation and consultation with officials before they can be submitted to the FAA for action. See E., below.</i>)	No	
V. ALTERNATIVES RECOMMENDED FOR IMPLEMENTATION: [150.23(e), B150.7(c), 150.35(b), B150.5]	Yes	
A. Document clearly indicates:		
1. Alternatives that are recommended for implementation?		Chapter 6, pp 6-2 to 6-11; Table 6B
2. Final recommendations are airport sponsor's, not those of consultant or third party?	Yes	Cover letter
B. Do all program recommendations:		
1. Relate directly or indirectly to reduction of noise and noncompatible land uses? (<i>Note: All program recommendations, regardless of whether previously approved by the FAA in an earlier Part 150 study, must demonstrate a noise benefit if the airport sponsor wants FAA to consider the measure for approval in a program update. See E., below.</i>)	Yes	Chapter 6, pp 6-2 to 6-11. No specific noise abatement measures recommended for FAA approval under 14 CFR Part 150
2. Contain description of each measure's relative contribution to overall effectiveness of program?	Yes	Chapter 6, pp 6-2 to 6-11 Table 6B
3. Noise/land use benefits quantified to extent possible to be quantified? (<i>Note: some program management measures cannot be readily quantified and should be described in other terms to show their implementation contributes to overall effectiveness of the program.</i>)	Yes	Chapter 6, pp 6-2 to 6-11

**14 CFR PART 150
NOISE COMPATIBILITY PROGRAM CHECKLIST**

AIRPORT NAME: *San Carlos Airport*

REVIEWER: _____

Program Requirement	Yes/No/NA	Page No. Other Reference
4. Does each alternative include actual/anticipated effect on reducing noise exposure within noncompatible area shown on NEM?	Yes	Chapter 6, pp 6-2 to 6-11
5. Effects based on relevant and reasonable expressed assumptions?	Yes	Chapter 6, pp 6-2 to 6-11
6. Does the document have adequate supporting data that the measure contributes to noise/land use compatibility?	Yes	Chapter 6, pp 6-2 to 6-11
C. Analysis appears to support program standards set forth in 150.35(b) and B150.5?	Yes	Chapter 6, pp 6-2 to 6-11
D. When use restrictions are recommended for approval by the FAA:		
1. Does (or could) the restriction affect Stage 2 or Stage 3 aircraft operations (regardless of whether they presently operate at the airport)? (If the restriction affects Stage 2 helicopters, Part 161 also applies.)	NA	No use restrictions recommended
2. If the answer to D.1 is yes, has the airport sponsor completed the Part 161 process and received FAA Part 161 approval for a restriction affecting Stage 3 aircraft? Is the FAA's approval documented? For restrictions affecting only Stage 2 aircraft, has the airport sponsor successfully completed the Stage 2 analysis and consultation process required by Part 161 and met the regulatory requirements, and is there evidence by letter from FAA stating this fact?	NA	No use restrictions recommended
3. Are non-restrictive alternatives with potentially significant noise/compatible land use benefits thoroughly analyzed so that appropriate comparisons and conclusions among all alternatives can be made?	Yes	Chapter 4, pp 4-1 to 4-33; Chapter 5, pp 5-1 to 5-21
4. Did the FAA regional or ADO reviewer coordinate the use restriction with APP-400 prior to making determination on start of 180-days?	NA	No use restrictions recommended
E. Do the following also meet Part 150 analytical standards:		
1. Recommendations that continue existing practices and that are submitted for FAA re-approval? (Note: An airport sponsor does not have to request FAA re-approval if noise compatibility measures are in place from previously approved Part 150 studies. If the airport has implemented the measures as approved in the previous NCP, the measures may be reported and modeled as baseline conditions at the airport.)	No	
2. New recommendations or changes proposed at end of the Part 150 process?	NA	
F. Documentation indicates how recommendations may change previously adopted noise compatibility plans, programs, or measures?	NA	

**14 CFR PART 150
NOISE COMPATIBILITY PROGRAM CHECKLIST**

AIRPORT NAME: *San Carlos Airport*

REVIEWER: _____

Program Requirement	Yes/No/NA	Page No. Other Reference
G. Documentation also:		
1. Identifies agencies that are responsible for implementing each recommendation?	Yes	Chapter 6, pp 6-2 to 6-11; Table 6B
2. Indicates whether those agencies have agreed to implement?	Yes	Chapter 6, pp 6-2 to 6-11; Table 6B
3. Indicates essential government actions necessary to implement recommendations?	Yes	Chapter 6, pp 6-2 to 6-11; Table 6B
H. Timeframe:		
1. Includes agreed-upon schedule to implement alternatives?	Yes	Chapter 6, pp 6-2 to 6-11; Table 6B
2. Indicates period covered by the program?	Yes	Chapter 6, pp 6-2 to 6-11; Table 6B
I. Funding/Costs		
1. Includes costs to implement alternatives?	Yes	Chapter 6, pp 6-2 to 6-11; Table 6B
2. Includes anticipated funding sources?	Yes	Chapter 6, pp 6-2 to 6-11; Table 6B
VI. PROGRAM REVISION [150.23(e)(9)] Supporting documentation includes provision for revision? (Note: Revision should occur when it is likely a change has taken place at the airport that will cause a significant increase or decrease in the DNL noise contour of 1.5 dB or greater over noncompatible land uses. See §150.21(d))	Yes	Chapter 6, p 6-9



Appendix E

FAA Consultation



U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
San Francisco Airports District Office

1000 Marina Boulevard, Suite 220
Brisbane, CA 94005-1835

May 1, 2019

Gretchen Kelly
Manager
San Mateo County Airports Division
620 Airports Drive, Suite 110
San Carlos, CA 94070-2714

Subject: San Carlos Airport – Acceptance of Noise Exposure Maps

Dear Ms. Kelly:

This letter is to notify you that the Federal Aviation Administration (FAA) has evaluated and accepted the Noise Exposure Maps and supporting documentation dated May 2018 for the San Carlos Airport. In accordance with Section 103(a)(1) of the Aviation Safety and Noise Abatement Act of 1979 (the Act), as amended, we have determined that:

- 1) The 2017 Community Noise Equivalent Level (CNEL) noise contours and supporting documentation meet the requirements for the current Noise Exposure Map as of the date of submission as set forth in Title 14 Code of Federal Regulations (CFR) Part 150, *Airport Noise Compatibility Planning*, Section 150.21, and are accordingly accepted under this Part.
- 2) The projected 2022 aircraft operations, the 2022 (Future) CNEL and supporting documentation are accepted as the description of the future conditions as forth in Part 150, and are accordingly accepted under this Part.

FAA's acceptance of the Noise Exposure Maps on April 23, 2019 is limited to the determination that the maps were developed in accordance with the procedures contained in Appendix A of Part 150. Such acceptance does not constitute approval of your data, information, or plans.

The FAA will publish a notice in the Federal Register announcing the acceptance of the Noise Exposure Maps for San Carlos Airport. The FAA's acceptance of these Noise Exposure Maps under Part 150 in no way approves or endorses a Noise Compatibility Program, potential related federal funding of projects identified in such a program, or any related operating restrictions at the subject airport.

Should any questions arise concerning the precise relationship of specific properties to Noise Exposure Contours depicted on the Noise Exposure Maps, you should note that the FAA will not be involved in any way in the determination of relative locations of specific properties with regard to the depicted noise contours, or in interpreting the maps to resolve questions concerning, for example, which properties should be covered by the provision of Section 107 of the Act. These functions are inseparable from the ultimate land use control and planning responsibilities of local government. These local responsibilities are not changed in any way under Part 150 or

through FAA's acceptance of your Noise Exposure Maps. Therefore, the responsibility for the detailed overlaying of noise contours onto the maps depicting properties on the surface rests exclusively with you the airport operator, or those public agencies and planning agencies with which consultation is required under Section 103 of the Act. The FAA relies on the certification by you under 150.21 of 14 CFR Part 150, that the statutorily required consultation has been accomplished.

Your notice of this determination, and the availability of the Noise Exposure Maps, which when published at least three (3) times in a newspaper of general circulation in the county where the affected properties are located, will satisfy the requirements of Section 107 of the Act. A sample publication announcement has been enclosed for your use.

Your attention is called to the requirements of Section 150.21(d) of Part 150, involving the prompt preparation and submission of revision to these maps, if any actual or proposed change in the operation of the subject airport might create any substantial, new non-compatible land use in any areas depicted on the maps.

Thank you for your continued interest in Noise Compatibility Planning.

Sincerely,



Laurie Suttmeier
Manager, Airports District Office

Enclosure

**SAMPLE
NOISE EXPOSURE MAP ACCEPTANCE
PUBLIC ANNOUNCEMENT IN LOCAL NEWSPAPER
TO BE PUBLISHED THREE TIMES**

Pursuant to Section 107(a) & (b) (Title 49 United States Code, Section 47506) of the Airport Safety and Noise Abatement Act of 1979, as amended, notice is hereby given that on April 23, 2019, the Federal Aviation Administration has completed its evaluation of, and has formally accepted the Noise Exposure Maps for San Carlos Airport, located in San Mateo County, California that were prepared pursuant to Title 14 Code of Federal Regulations Part 150 (14 CFR Part 150). These maps and supporting documentation are available for public review at the Manager's Office, San Mateo County Airports Division, San Carlos Airport, 620 Airport Drive, Suite 10, San Carlos, CA 94070-2714.



U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Airports Division

San Francisco Airports District Office
1000 Marina Boulevard, Suite 220
Brisbane, CA 94005-1835

August 1, 2017

Ms. Gretchen Kelly
Airport Manager
San Mateo County Airports
620 Airport Drive, Suite 10
San Carlos, CA 94070-2714

Dear Ms. Kelly,

RE: Federal Aviation Administration Determination of Aviation Activity Forecast;
San Carlos Airport (SQL)

The San Francisco Airports District Office (ADO) has completed the review of the *Forecast of Aviation Demand Section of the Airport Layout Plan Narrative Report* outlining the aviation demand forecasts received June 9, 2017 for the San Carlos Airport (SQL).

The ADO review determination is as follows:

- Concur with the aviation activity forecast methodology. The forecast assumptions presented are considered reasonable.
- Concur with the total forecasted aircraft operations and based aircraft presented in *Exhibit F – Forecast Summary*.
- The comparison of SQL aviation forecasts with the FAA Terminal Area Forecasts (TAF) differs by less than 15 percent (%) in the 10-year forecast period. The ADO finds the subject growth rates acceptable from a planning standpoint.
- The FAA concurs with the selection of the Critical Aircraft as the B-II aircraft because it represents the most demanding aircraft with more than 500 operations, using the similar characteristics provision discussed in Paragraph 1.3 in Advisory Circular 150/5000-17, *Critical Aircraft and Regular Use Determination*.

Accordingly, FAA Approval is issued, dated August 1, 2017, for the *Exhibit F – Forecast Summary*. The aviation activity forecast provides adequate justification for near-term airport planning and development and may be used as basis for near-term National Environmental Protection Act (NEPA) environmental coordination.

If you have any questions, please contact me at (650) 827-7627.

Kind regards,

A handwritten signature in black ink, appearing to read "Neil B. K.", with a long horizontal flourish extending to the right.

Neil Kumar
Airport Planner/PFC Specialist

Cc Camille Garibaldi, FAA Environmental Protection Specialist



U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
San Francisco Airports District Office

1000 Marina Blvd., Suite 220
Brisbane, CA 94005-1835

August 7, 2017

Ms. Gretchen Kelly
Airport Manager
San Mateo County Airports
620 Airport Drive, Suite 10
San Carlos, CA 94005

Subject: Aviation Activity Forecast Approval for 49 Code of Federal Regulations Part 150 –
Airport Noise Compatibility Planning Study for San Carlos Airport

Dear Ms. Kelly:

My letter of August 1, 2017 notified the County of San Mateo (County) that the Federal Aviation Administration (FAA) had completed its review *Forecast of Aviation Demand Section of the Airport Layout Plan Narrative Report* (Aviation Activity Forecast) received on June 9, 2017. The FAA concurred with the methodology utilized; the resultant total forecast aircraft operations and based aircraft presented in Exhibit F – Forecast Summary; the estimated aviation growth rate; and the Critical Aircraft from the Aviation Activity Forecast. The FAA approved the Aviation Activity Forecast for airport planning and development use. Thus, the Aviation Activity Forecast is also approved for use in completing the 49 Code of Federal Regulation Part 150 - Airport Noise Compatibility Planning Study (Part 150 Study) for the San Carlos Airport.

Your attention to this matter is appreciated. If you have any questions regarding the Aviation Activity Forecast approval, I am available at (650) 827-7627. If you have questions regarding the Part 150 Study, please contact Camille Garibaldi at (650) 827-7613 or by email at Camille.Garibaldi@faa.gov.

Sincerely,

Neil Kumar
Airport Planner/PFC Specialist

cc:

James Harris, Coffman Associates



Appendix F

Supplemental Noise Contours

APPENDIX F

SUPPLEMENTAL NOISE CONTOURS

This appendix includes information specific to the 60 CNEL noise exposure contour. For additional information regarding noise exposure at San Carlos Airport, refer to Chapter Two – Aviation Noise and Chapter Three – Noise Impacts.

While the FAA considers 65 CNEL as the threshold of significant impact on noise-sensitive uses, information regarding the 60 CNEL noise contour is included in this appendix to maintain consistency with other locally adopted land use planning documents, including the *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport* (ALUCP) and the General Plans for the cities of San Carlos and San Mateo, and San Mateo County. Although discussed in this document, it is noted that under the current FAA Airport Improvement Program, mitigation efforts outside the 65 CNEL noise contour, while potentially eligible for federal funding, receive a lower priority for funding than those projects within the 65 CNEL noise contour.

AEDT OUTPUT

Using the methodology and assumptions outlined in Chapter Two, 60 CNEL noise contours modeled for the 2017 and 2022 scenarios are shown on **Exhibits F1** and **F2**. For comparative purposes, the contour area for each range and timeframe is presented in **Table F1**. Additionally, **Table F1** presents the total acres for each contour that extends off airport property. The 2022 noise contours are slightly larger due to the forecast operations increase. As discussed in Chapter Two – Aviation Noise, departure spool-up noise is the loudest component of aircraft operations; therefore, as shown on the exhibits, the contours are widest from southwest to northeast near the Runway 30 end, resulting from a majority (99%) of aircraft departing on Runway 30 to the northwest. The width of the contours near the Runway 12 end is influenced by helicopter activity. Two helipads, one on either side of the runway centerline, are near the Runway 12 end. To the northwest, the contour elongates, which is indicative of departure noise as an aircraft gains altitude after leaving the ground. The narrower extension of the contours to the southeast is a result of arrival noise. The outer reaches of the 60 CNEL contour begin to follow the dominant flight pattern of aircraft turning to the east and pilots waiting to turn until passing the diamond-shaped waterway.

TABLE F1
Comparative Areas of Noise Exposure
San Carlos Airport

	Area (Acres)	
	2017	2022
60-65 CNEL	326.2	333.9
65-70 CNEL	115.6	118.1
70-75 CNEL	50.1	50.5
75+ CNEL	39.2	39.5
Total	531.1	542.0

Notes:

1. Acreages represent only those areas between the stated contour ranges.

Source: Coffman Associates' analysis

As indicated in **Table F2**, the total area of the 2017 noise contours located off airport property is 376.1 acres. Of this total, 294.1 acres are within the 60-65 CNEL noise contour range.

TABLE F2
Contour Area Extending Off Existing Airport Property
San Carlos Airport

	Area (Acres)	
	2017	2022
60-65 CNEL	294.1	302.7
65-70 CNEL	60.5	62.3
70-75 CNEL	17.5	17.8
75+ CNEL	4.0	4.0
Total	376.1	386.8

Notes:

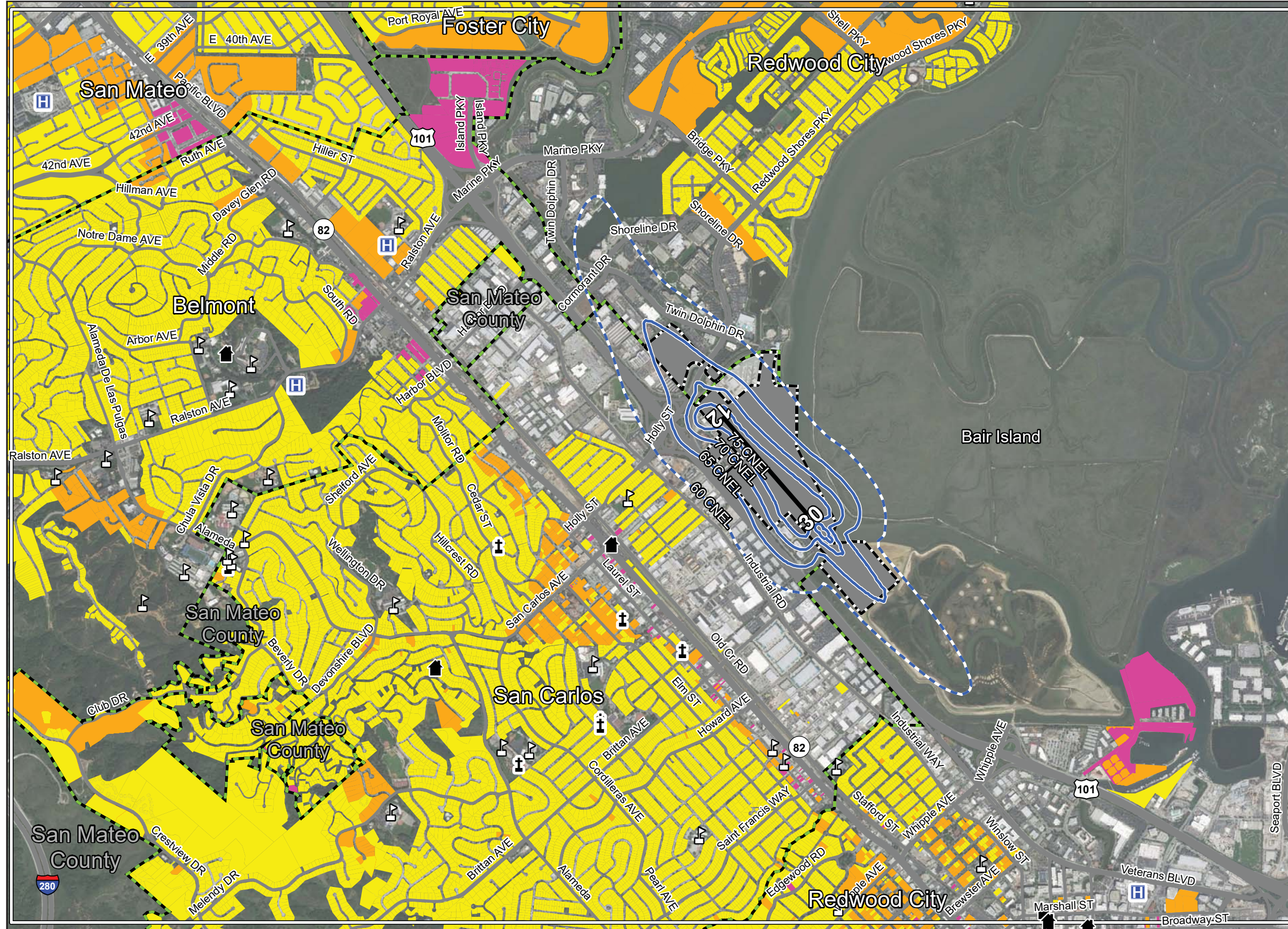
1. Acreages represent only those areas between the stated contour ranges.

Source: Coffman Associates' analysis

LAND USES AND POPULATION EXPOSED TO 2017 NOISE

Table F3 summarizes the acreages of each existing land use type, based on the information provided in Chapter One, encompassed by the noise contours. As indicated in the table, the largest non-Airport portion of land (183.4 acres) within the 60-65 CNEL contour range is developed with land uses classified as commercial, industrial, transportation, utilities, and right-of-way. Additionally, open space/recreation/preservation (78.8 acres) and water (25.6 acres) comprise a significant portion of the land within the 60-65 CNEL contour range. Smaller portions of the land within the 60-65 CNEL contour range are classified as undeveloped (5.3 acres) and public (1.0 acres). There are no non-compatible land uses within the 60-65 CNEL noise contour.

Information regarding land uses within the 65 CNEL and greater noise contours can be found in Chapter Three – Noise Impacts.



LEGEND

- Runway
- Detailed Study Area
- Jurisdictional Boundary
- Airport Property Boundary
- Highways
- Roads

Noise Sensitive Facilities

- School
- Hospital
- Place of Worship
- Historic Properties¹

Noise Sensitive Land Uses²

- Single Family Residential
- Multi-Family Residential
- Mixed Use

2017 Noise Contours

- 65, 70, 75 CNEL
- 60 CNEL³

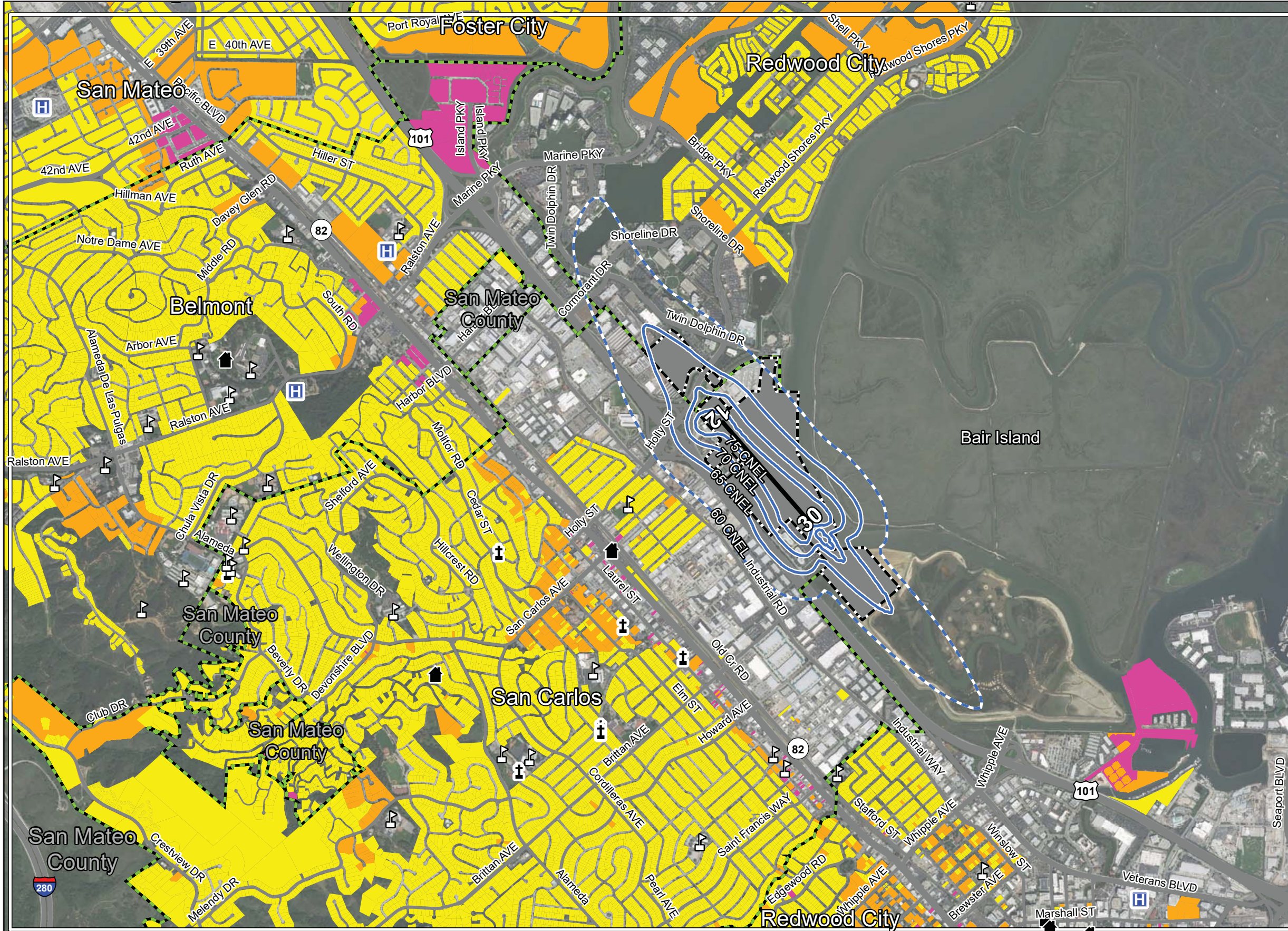
¹National Park Service.
²San Mateo County, Foster City, City of San Mateo, City of Belmont, Redwood City, City of San Carlos.
³Mapping the 60 CNEL is not a federal requirement.

Source: ESRI Basemap Imagery (2014)

N

0 1,000 2,000 4,000

1 inch = 2,000 feet



LEGEND

- Runway
- Detailed Study Area
- Jurisdictional Boundary
- Airport Property Boundary
- Highways
- Roads

Noise Sensitive Facilities

- School
- Hospital
- Place of Worship
- Historic Properties¹

Noise Sensitive Land Uses²

- Single Family Residential
- Multi-Family Residential
- Mixed Use

2022 Noise Contours

- 65, 70, 75 CNEL
- 60 CNEL³

¹National Park Service.

²San Mateo County, Foster City, City of San Mateo, City of Belmont, Redwood City, City of San Carlos.

³Mapping the 60 CNEL is not a federal requirement.

Source: ESRI Basemap Imagery (2014)

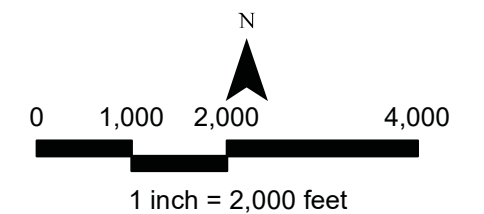


TABLE F3
Land Uses Exposed to 2017 Aircraft Noise above 60 CNEL
San Carlos Airport

	Area (Acres)			
	60-65 CNEL	65-70 CNEL	70-75 CNEL	75+ CNEL
Compatible Land Uses				
Airport Property	32.1	55.1	32.6	35.2
Commercial, Industrial, Transportation, Utilities, Right-of-way	183.4	42.4	12.4	3.9
Public	1.0	0.0	0.0	0.0
Open Space/Recreation/Preservation	78.8	5.7	0.0	0.0
Water	25.6	10.9	4.6	0.1
Undeveloped ¹	5.3	1.5	0.5	0.0
Noise-Sensitive Land Uses				
Single Family Residential	0.0	0.0	0.0	0.0
Multi-Family Residential	0.0	0.0	0.0	0.0
Public Buildings	0.0	0.0	0.0	0.0
Public Institutions	0.0	0.0	0.0	0.0
Historic Properties	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0

Source: Coffman Associates' analysis

¹ Undeveloped land consists of portions of multiple parcels.

LAND USES AND POPULATION EXPOSED TO 2022 NOISE

Table F4 summarizes the acreages of each existing land use type, based on the information provided in Chapter One, encompassed by the noise contours. Similar to the 2017 noise exposure contours, the largest non-Airport portion of land (185.7 acres) within the 60-65 CNEL contour range is developed with land uses classified as commercial, industrial, transportation, utilities, and right-of-way. Open space/recreation/preservation and water continue to comprise a significant portion of the land within the 60-65 CNEL contour range, with 84.7 acres and 24.0 acres, respectively. Undeveloped (7.4 acres) and public (1.1 acres) make up the remaining portions of land within the 60-65 CNEL contour range. There are no non-compatible land uses within the 60-65 CNEL noise contour.

Information regarding land uses within the 65 CNEL and greater noise contours can be found in Chapter Three – Noise Impacts.

TABLE F4
Land Uses Exposed to 2022 Aircraft Noise above 60 CNEL
San Carlos Airport

	Area (Acres)			
	60-65 CNEL	65-70 CNEL	70-75 CNEL	75+ CNEL
Compatible Land Uses				
Airport Property	31.2	55.8	32.7	35.5
Commercial, Industrial, Transportation, Utilities, Right-of-way	185.5	43.3	12.6	3.9
Public	1.1	0.0	0.0	0.0
Open Space/Recreation/Preservation	84.7	6.3	0.0	0.0
Water	24.0	11.1	4.7	0.1
Undeveloped ¹	7.4	1.6	0.5	0.0
Noise-Sensitive Land Uses				
Single Family Residential	0.0	0.0	0.0	0.0
Multi-Family Residential	0.0	0.0	0.0	0.0
Public Buildings	0.0	0.0	0.0	0.0
Public Institutions	0.0	0.0	0.0	0.0
Historic Properties	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0

Source: Coffman Associates' analysis

¹ Undeveloped land consists of portions of multiple parcels.

GROWTH RISK ANALYSIS

For the 2022 scenario, consideration is given to the potential for noise-sensitive land uses to be developed on the land encompassed by the noise exposure contours. This is done by evaluating the locally adopted zoning and general plan designations, as presented in Chapter One, for those undeveloped parcels encompassed by the noise contours to determine if noise-sensitive land uses could be developed on these areas, given the current zoning or future land use plan designations, which typically specify the preferred density, or number of dwelling units per acre, for each classification.

The area surrounding San Carlos Airport is largely developed and, as a result, there are very few undeveloped parcels. Based on a review of the existing land use mapping presented in Chapter One, the three undeveloped parcels within the noise contours were eliminated from consideration due to site constraints, such as size (for example, one parcel is less than 0.2 acres) or location within a riparian corridor. Both these parcels are located northwest of the Airport near Holly Street. The third parcel is located on the west side of Highway 101, and a hotel development is presently under construction on the site.

Based on this overview, there is limited risk for development of noise-sensitive land uses within the San Carlos Airport 60 CNEL noise exposure contours.



Appendix G

Noise Compatibility Program Implementation Summary

Appendix G
IMPLEMENTATION SUMMARY

Noise Compatibility Study
San Carlos Airport

This appendix includes the Noise Compatibility Program Implementation Summary to be completed annually.

**San Carlos Airport
Part 150 Noise Compatibility Study
Implementation Summary**

Year: _____

Status Key: C = Complete, P = In Progress, N = No Action Taken

Measure	Status (C/P/N)	Remarks
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LAND USE ELEMENT

1. Encourage the cities of San Carlos and Redwood City to add the 2022 noise exposure contours to the general plan maps.		
2. Encourage Redwood City to incorporate project review guidelines into their development review process.		
3. Encourage the San Mateo County Airport Land Use Commission to incorporate 2022 noise exposure contours into San Carlos Airport ALUCP until an updated 20-year forecast can be implemented.		

PROGRAM MANAGEMENT ELEMENT

1. Continue use of the Airport's noise complaint handling system.		
2. Update Noise Exposure Maps and Noise Compatibility Program		
3. Monitor implementation of the Part 150 Noise Compatibility Program.		

**San Carlos Airport
Part 150 Noise Compatibility Study
Implementation Summary**

Year: _____

Status Key: C = Complete, P = In Progress, N = No Action Taken

Measure	Status (C/P/N)	Remarks
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LOCAL NOISE COMPATIBILITY MEASURES NOT SUBMITTED FOR 14 CFR PART 150 REVIEW

1. Continue to distribute voluntary Noise Abatement Procedure brochures and maintain on-airport noise abatement signage.		
2. Continue to coordinate with the FAA regarding voluntary noise abatement procedures, including the Bayside Visual Approach.		
3. Hold meetings as necessary with pilots and students to discuss safety and noise abatement issues at the Airport.		
4. Establish a real estate agent outreach program to educate real estate agents and potential homebuyers about San Carlos Airport operations and its presence in the community.		
5. Continue Airport events to allow the public to visit the airport and learn about its operations.		
6. Revise the voluntary San Carlos Airport Noise Abatement Procedures.		



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