Monterey Peninsula Airport

14 CFR Part 150 Noise Exposure Map Update

EXECUTIVE SUMMARY

INTRODUCTION

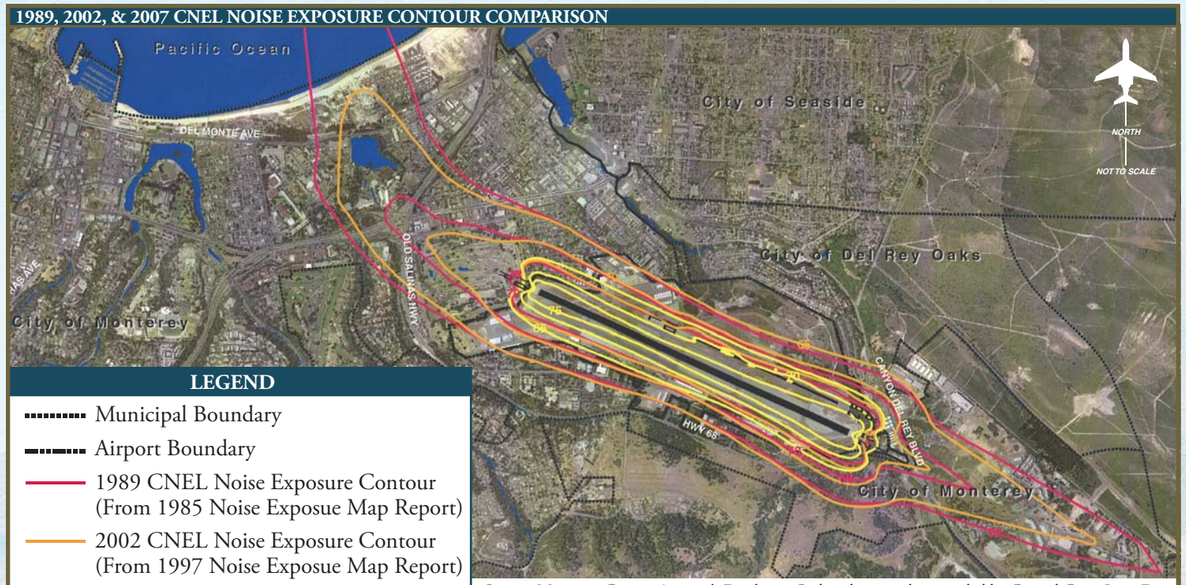
The Monterey Peninsula Airport District (MPAD) has a long history of evaluating and addressing the community's airport noise concerns. Since the original 1985 Noise Compatibility Program was completed, MPAD has:

- Extended its primary runway to allow increased use of Runway 10R for noise abatement.
- Closed crosswind Runway 6-24 and constructed Runway 10L-28R to eliminate noise impacts north and south of the airport.
- Implemented a voluntary curfew from 11:00 p.m. to 7:00 a.m., restricted touch-and-go training from 8:30 a.m. to 8:00 p.m., Monday through Friday; and between 9:00 a.m. and 6:00 p.m. on Saturday, Sunday, and holidays.
- Established a phone and internet noise complaint system; published noise abatement procedures on its website.
- Lobbied area jurisdictions for proper land use planning and overlay zoning.
- Sound-insulated over 400 homes at a cost of over $12 million.

The 2007 Noise Exposure Maps (NEM) Update marks the third noise assessment undertaken by MPAD and demonstrates the District's ongoing commitment to assess its noise emissions and make efforts to reduce its noise impacts on the community. This NEM Update is not required by state or federal law. However, in order for MPAD to be eligible for federal grant money to mitigate noise impacts, the NEM Update must be prepared under the provisions set forth in Title 14, Code of Federal Regulations (CFR) Part 150. Commonly referred to as a Part 150 study, this program outlines the process for evaluating noise impacts in communities near airports.

Noise exposure maps were last prepared for Monterey Peninsula Airport in 1997. Since that time, substantial changes in the aviation industry and economy have resulted in operational changes at the airport. As seen on the following graphic, the 1985 NEM forecasted 180,000 annual operations at Monterey Peninsula Airport by 1989. The 1997 NEM Update forecasted 152,030 annual operations by 2002. Actual operations for the 2007 NEM Update study are only 93,565. In addition, the larger Boeing 737 series, DC- 9 series, and MD 80 series aircraft

1989, 2002, & 2007 CNEL NOISE EXPOSURE CONTOUR COMPARISON



Source: Monterey County Assessor's Database. Ortho-photography provided by Central Coast Joint Data Committee, dated June and October 2003. Coffman Associates analysis.

with the proper noise abatement information in an easily accessible format can be an effective method for reducing single-event noise impacts over noise-sensitive areas around the airport. A pilot guide is being prepared depicting Monterey Peninsula Airport's noise abatement procedures, noise-sensitive areas, pilot frequencies, contact numbers, and services. This will provide pilots with an easily accessible handout of the Airport's procedures and information.

Pilot Briefings: Regular pilot briefings should also be considered to disseminate noise abatement information and public concerns. These meetings are a good way to keep in touch with airport users and remind them of the noise-sensitive environment around the airport.

Website Materials: MPAD will upload the pilot guide and Noise Exposure Map document onto the District's website to provide another avenue for pilots and the public to access information.

EXPENDITURE

Sound Insulation Program: MPAD has completed phase 11 of their residential sound insulation program. This has resulted in sound-insulating 417 residential units. MPAD accepted a grant for phase 12. We believe it is important to proceed with phase 12 and give eligible residents that have not yet participated in the sound insulation program one last opportunity to get sound insulation. This will end a successful program on a high note as well as demonstrate MPAD's desire to do what it can to be a good neighbor.

Map Noise Complaints: The recent Noise Exposure Maps Update developed a Geographic Information System (GIS) base. MPAD should consider using these GIS system files to map noise complaint locations. This will help MPAD staff monitor noise complaint trends and identify potential noise problem areas.

Reduce Overflight Impacts: The aviation industry is continuously changing and evolving as new technology becomes available. MPAD has a history of being aggressive in pursuing new technology for aviation safety and security. MPAD should continue to monitor the advancement of flight procedure technology for the purposes of reducing aircraft overflight impacts.

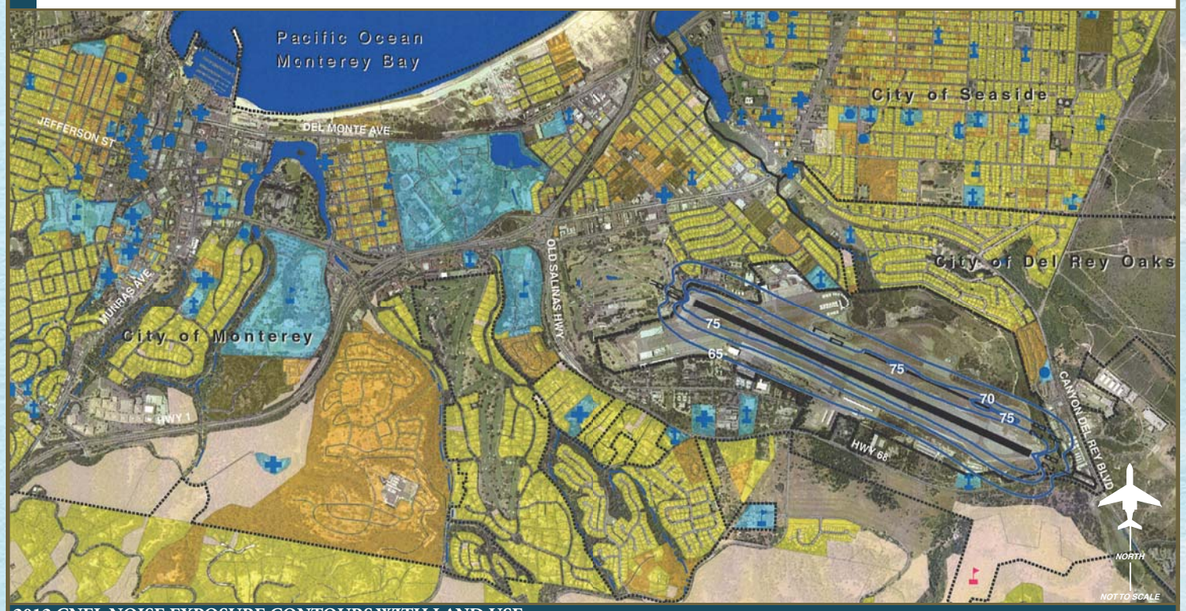
Reduce Ground Power Unit Noise: Finally, if a canopy walkway and regional jet loading bridges are considered in the future, electrical power supply sufficient to support the

2007 CNEL NOISE EXPOSURE CONTOURS WITH LAND USE

LEGEND

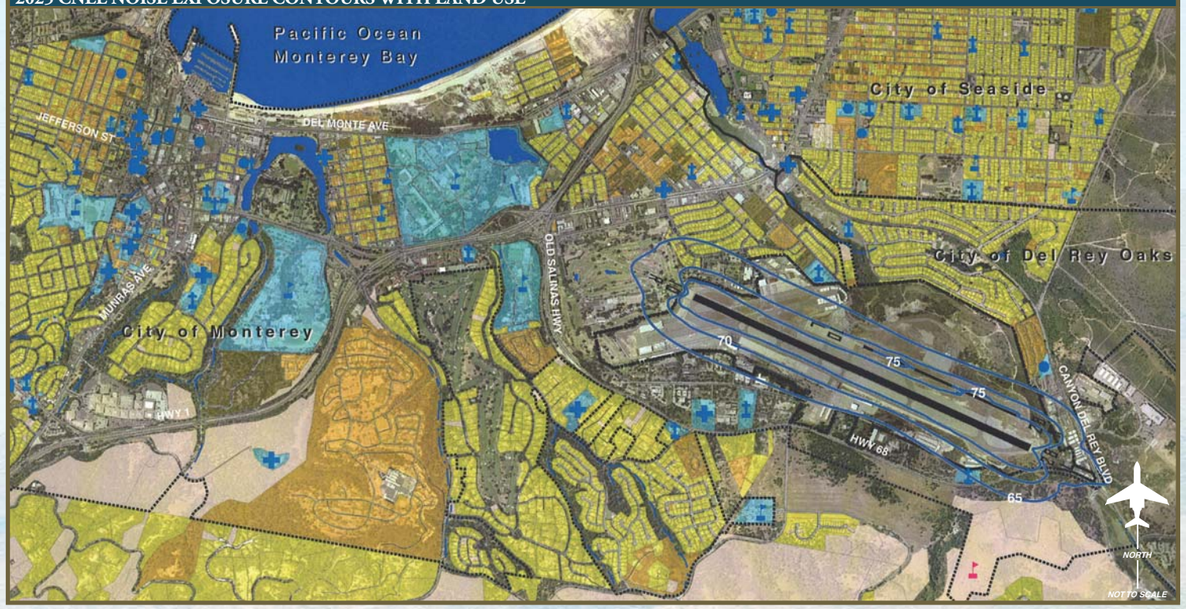
- Municipal Boundary
- Airport Boundary
- CNEL Noise Exposure Contour - Significant Effect
- Low - Density Residential
- Medium - Density Residential
- High - Density Residential
- Manufactured Housing
- Water
- Noise - Sensitive Institutions
- Place of Worship
- Medical Facility
- Schools
- Fraternal Organization
- Theaters
- Libraries, Museums, & Community Centers
- Growth Risk Areas
- Planned Schools

Source: Monterey County Assessor's Database. Ortho-photography provided by Central Coast Joint Data Committee, dated June and October 2003. Coffman Associates analysis.



2012 CNEL NOISE EXPOSURE CONTOURS WITH LAND USE

2025 CNEL NOISE EXPOSURE CONTOURS WITH LAND USE



impacted if located within the 65 CNEL noise contour. This evaluation technique was used for all three noise conditions (2007, 2012, and 2025). For future conditions, a growth risk analysis was conducted. Growth risk areas are those undeveloped areas planned or zoned for noise-sensitive land uses within the 65 CNEL noise contours. Table 1 presents the quantified noise impacts and projected growth risk impacts for the airport.

CONTOUR COMPARISON

As previously stated, the updated Noise Exposure Maps represent the third Part 150 evaluation of noise impacts at Monterey Peninsula Airport. As shown in the following exhibit, the resulting noise contours have decreased in size with each update. As previously discussed, changes in existing and forecast airport operating characteristics, national fleet mix, and model refinements have contributed to a decrease in noise exposure at the airport.

As shown in Table 1, each noise condition has impacts in the 65 to 70 CNEL contour range. Almost all these homes have been sound-insulated with assistance from the MPAD and the FAA. As shown in Table 2, all nine dwelling units impacted by the 2007 65 CNEL noise exposure contour have been sound-insulated. In the 2012 condition, the 13 dwelling units within the forecast 65

TABLE 1
Summary of Noise Impacts

	Noise Contour (CNEL)			
	65-70	70-75	75+	Total
Dwelling Units				
2007 Existing	9	0	0	9
2012 Existing	13	0	0	13
2012 Potential	79	6	0	85
TOTAL	**92**	**6**	**0**	**98**
2025 Existing	47	3	0	50
2025 Potential	177	29	0	206
TOTAL	**224**	**32**	**0**	**256**
Noise-Sensitive Institutions				
2007 Existing	1	0	0	1
2012 Existing	1	0	0	1
2025 Range Existing	1	0	0	1
Population				
2007 Existing	28	0	0	28
2012 Existing	41	0	0	41
2012 Potential	202	9	0	211
TOTAL	**243**	**9**	**0**	**252**
2025 Existing	151	9	0	160
2025 Potential	558	91	0	649
TOTAL	**709**	**100**	**0**	**809**

Source: Coffman Associates analysis

TABLE 2 Residential Sound Insulation Program Dwelling Impacts	65-70	70-75	75+	Total
2007				
Existing Dwelling Units	9	0	0	9
Dwelling Already Sound-Insulated	9	0	0	9
Difference	0	0	0	0
2012				
Existing Dwelling Units	13	0	0	13
Dwelling Already Sound-Insulated	13	0	0	13
Difference	0	0	0	0
2025				
Existing Dwelling Units	47	3	0	50
Dwelling Already Sound-Insulated	45	3	0	48
Difference	2	0	0	2

Source: Coffman Associates analysis

CNEL noise exposure contour have received sound insulation treatment as well. The 2025 65 CNEL noise contour encompasses 47 dwelling units. According to the airport's records, 45 of these units have been insulated and two are eligible, but have not participated in the program.

RECOMMENDATIONS

Based on the results of the Noise Exposure Maps Update, the following recommendations were submitted to the Monterey Peninsula Airport District Board of Directors. The recommendations can be categorized under the following headings: public outreach, education, and expenditure.

PUBLIC OUTREACH

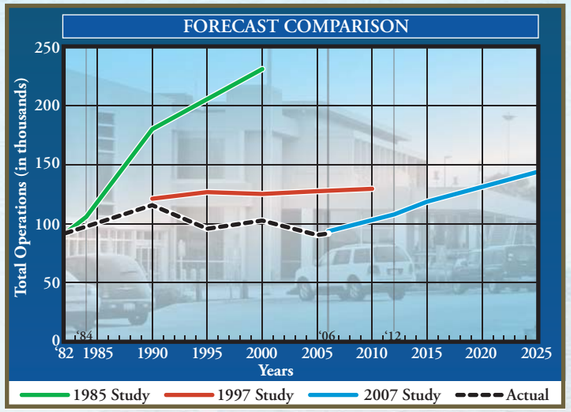
Open House Meeting: The Noise Exposure Map Update study process provided several opportunities for the public to offer comments on the draft materials and study process. One common theme during the public meetings was the poor line of communication and responsiveness to public issues. We believe that holding bi-monthly or quarterly open house meetings for members of the public, political leaders, business leaders, MPAD Board members, and aviation users will open the lines of communication between the public and MPAD. Presentations on topics such as noise complaints, noise abatement, airport improvements, and off-airport planning and development should be considered.

Noise Complaint Response During the Study: Members of the public were frustrated with what is seen as the District's lack of responsiveness to noise complaints. Staff currently documents all actions taken after a noise complaint is received. This information is provided in the District Board packets. Noise complaint information will also be available on the MPAD website removing any doubt of the District's responsiveness to noise complaints.

Overlay Zoning: In the past, MPAD has approached area jurisdictions on implementing a noise overlay zone into their land use regulations. Airport compatibility overlay zoning, also referred to as "combining 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. 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.

EDUCATION

Pilot Guide: Our experience is that pilots will generally go out of their way to be good neighbors. Providing pilots



that operated daily at Monterey Peninsula Airport were replaced by quieter regional jets and turboprops after the events on September 11, 2001. These two factors led the Federal Aviation Administration (FAA) to request MPAD to update the NEM document before additional grant monies will be provided for the ongoing residential sound insulation program.

PUBLIC INVOLVEMENT

The Noise Exposure Maps Update was sponsored by the Monterey Peninsula Airport District with technical assistance provided by the airport consulting firm of Coffman Associates, Inc. and community outreach support provided by CommuniQuest, Inc.

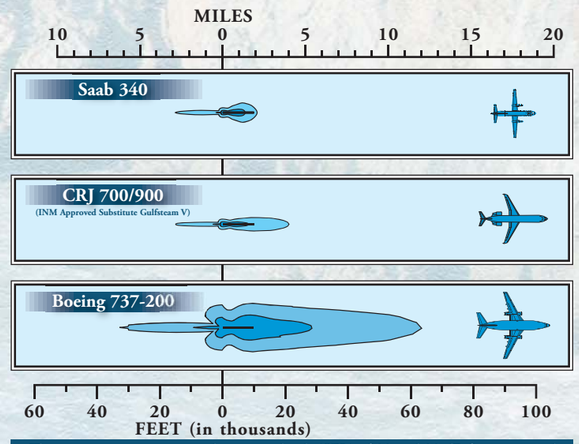
MPAD encouraged public participation throughout the study process and provided several opportunities for stakeholders and concerned residents to express their views on the study and the aircraft noise conditions at the airport. A Planning Advisory Committee (PAC) was convened to gather input from community stakeholders and to provide comments on the technical aspects of the study. The PAC included members from the following groups: local neighborhood organizations, city officials, FAA, state and regional officials, and airport users.

Residents were invited to four public information workshops to offer comments and learn about the study process and results of the analysis. Notices for each of the meetings were printed in the local newspaper and posted on the airport and project websites. Press releases were also distributed to inform local media outlets of the study's progress. All study materials were made available on the project website hosted by the consultant.

STUDY RESULTS

Three sets of noise exposure contours were developed during the Noise Exposure Maps Update: 2007 (existing condition), 2012 (five-year), and 2025 (long range). Shown on the following tables, the noise exposure contours were developed using the FAA's Integrated Noise Model (INM). Airport operating conditions such as number of operations, operation time of day, flight tracks, runway use, and aircraft type are used by the INM to develop noise exposure contours. Information from each of these categories was gathered through discussions with local officials, airport users, and the Airport Traffic Control Tower manager. The existing condition noise contours were also compared to noise measurements conducted as part of the study over a ten-day period at eight sites throughout the community.

The resulting noise contours from the study were graphically overlaid on maps provided by local planning organizations to assess the extent of the noise impacts. As stated in Part 150, the federal compatibility threshold for airport noise exposure is 65 Community Noise Equivalent Level (CNEL). Noise-sensitive land uses such as residences, places of worship, schools, and hospitals are considered



The contours represent sound exposure levels (SEL) of 80 and 90 dB for one arrival and one departure of each aircraft type. The outer contour represents 80 dB SEL. The inner contour represents 90 dB SEL. Source: Coffman Associates 2006

aircraft while parked at the gate should be incorporated into the design. This would eliminate the need for the diesel-powered ground power units (GPU) currently in use that have generated noise complaints in neighborhoods north of the airport.

SUMMARY

The resulting 2007 Noise Exposure Maps Update report was approved by the MPAD Board of Directors on August 8, 2007 and was subsequently submitted to the FAA for acceptance. These maps, after FAA acceptance, will be considered the official Noise Exposure Maps for Monterey Peninsula Airport.

Monterey Peninsula Airport District is committed to long-term noise abatement solutions for the Monterey Bay area, while simultaneously promoting the airport as an integral component of the nation's air transportation system. Questions, comments, and suggestions regarding the status of noise compatibility efforts at Monterey Peninsula Airport are welcomed. Airport staff is available for meetings with community groups or individuals to discuss concerns or interests in the airport.

GLOSSARY OF TERMS

CNEL - Community noise equivalent level. The California standard metric for determining cumulative noise exposure within a given location. Mathematically, it is the 24-hour average sound level, in A-weighted decibels, obtained after the addition of 4.77 decibels to sound events occuring between 7 p.m. and 10 p.m., and the addition of 10 decibels to sound events occuring between 10 p.m. and 7 a.m. as averaged over one year.

Decibel - The physical unit commonly used to describe noise levels. The decibel represents a relative measure or ratio to a reference power. This measure of sound pressure (energy) is logarithmic. For example, a 10-decibel increase in sound is equal to a ten-fold increase in sound energy.

14 CFR Part 150 - This refers to Part 150 of Title 14 of the Code of Federal Regulations. Part 150 describes the rules and guidelines for the preparation of airport noise compatibility studies with federal funding assistance.

Noise Contour - A continuous line connecting all points of the same noise exposure, usually depicted on a map of the airport.

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