SECTION 14 RECOMMENDED NOISE COMPATIBILITY PROGRAM

14.1 INTRODUCTION

The County of San Diego (the County) previously sponsored the development of a Noise Compatibility Program (NCP) for CRQ under the Part 150 process that was completed in 1992. The County is committed to continue the implementation of the program elements from CRQ's previous NCP, listed in the FAA Record of Approval dated June 16, 1992, and include the following:

• OM-4 (1) Require visual departures proceeding to the coast from Runway 24 to turn to a 250-degree heading and fly through the gap between Solamar and Terramar.

A slightly modified form of the procedure was implemented following FAA's Record of Approval. The "Alpha Departure" is published on the airport's website as a voluntary noise abatement procedure (VNAP). It instructs jets to fly a 250-degree ground track at the best rate of climb until approximately ½ mile offshore. National Business Aircraft Association (NBAA) standard noise abatement departure procedures are recommended. It instructs piston aircraft to hold turns until reaching 800 feet MSL, with the "Alpha North" pattern preferred. On the downwind leg, climb to at least 1,000 feet AGL prior to initiating a turn to the desired course. This procedure is illustrated in **Figure 14-1**.

• OM-6 Conduct a test of Runway 24 arrival procedures

A slightly modified form of the procedure was implemented following FAA's Record of Approval. The following voluntary noise abatement procedures (VNAP) are published on the airport's website:

- Maintain a cruise aircraft configuration (gear and flaps retracted; RPM no higher than cruise) until as close to the airport as possible.
- Jets: Request ILS approach. Fly a slightly high approach in VMC. Delay gear and flaps transition consistent with safety.
- OM-8 Specify Runway 24 as the preferential runway

This measure was implemented subsequent to the 1992 NCP. The Airport/Facility Directory, Southwest U.S. (Published by the U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office) designates Runway 24 as the calm wind runway.

• OM-13 Discourage jet training operations

This measure was implemented subsequent to the 1992 NCP. Through voluntary compliance, this measure has been supported by the fixed base operators and other airport tenants. The Airport/Facility Directory, Southwest U.S. (published by the U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office) indicates "No jet aircraft training due to noise abatement and traffic congestion."

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• OM-14 Implement voluntary departure curfew for Stage 2 jets

A slightly modified form of this measure was implemented following FAA's Record of Approval. The following voluntary noise abatement procedure (VNAP) is published on the airport's website:

General: Voluntary procedures 2200-0700 (local)

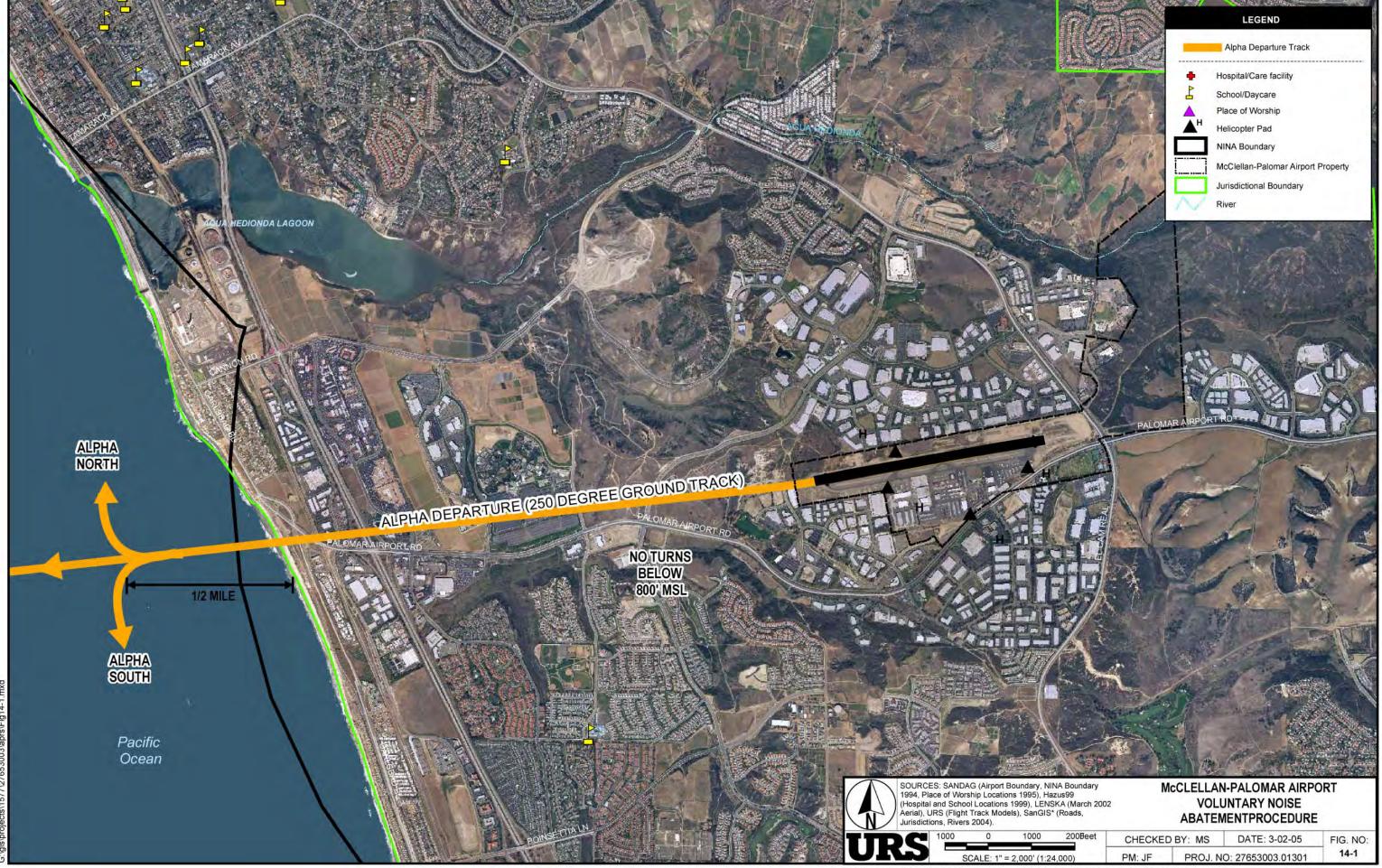
• Jet take-off and landing "Quiet Hours."

The five measures described above were approved as voluntary measures by the FAA in their Record of Approval dated June 16, 1992. In addition, the following operational measure was implemented at the airport subsequent to the 1992 NCP:

• OM-1 Raise traffic pattern altitudes and increase helicopter route altitude to 1,000 feet MSL The proposed higher Airport Traffic Pattern altitudes are listed in the Airport/Facility Directory, Southwest U.S. (published by the U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office). The listed minimum CRQ Airport Traffic Pattern altitudes are 1,003 feet MSL for helicopters, 1,503 feet MSL for small aircraft and 2,003 feet MSL for large aircraft.

Several operational, land use, and program management alternatives were evaluated by the study team for their potential effectiveness at CRQ. In accordance with Part 150 §B150.7, noise control alternatives must be considered and presented for which the airport operator has adequate implementation authority, for which the implementation authority is vested in a local governing body, and for which authority is vested in the FAA or other federal agency. For CRQ, the County of San Diego is charged with the management and operation of the airport, whereas, the City of Carlsbad is the local governing body of property directly surrounding the airport.

Section 14.2 lists measures that the County of San Diego has vested authority to implement. Section 14.3 lists measures for which the implementation authority is vested in a local governing body, i.e., the City of Carlsbad. The County of San Diego is not seeking FAA approval for measures listed in Sections 14.2 and 14.3. Section 14.4 contains measures for which the County of San Diego is seeking FAA approval under the Part 150 process.



14.2 ALTERNATIVES RECOMMENDED FOR CRQ IMPLEMENTATION

The following subsections summarize program elements for which the County of San Diego has adequate implementation authority. These measures are listed as part of the overall CRQ Noise Compatibility Program; however, the County of San Diego is not seeking FAA approval for measures listed in this section.

14.2.1 Operational Measures

OM-23 CRQ should consider joining Sound Initiative, A Coalition for Quieter Skies

Sound Initiative, a Coalition for Quieter Skies, was organized by a group of airport operators. It was introduced to airport representatives in June 2004, at the annual meeting of the American Association of Airport Executives (AAAE). Its goal is to end the use of Stage 1 and 2 aircraft weighing less than 75,000 pounds.

14.2.2 Land Use Mitigation Measures

• LUM-1 CRQ should provide the recommended NINA boundary to SanGIS in both electronic and hard copy formats.

The NINA is the area most impacted by aircraft operations to and from CRQ. The NINA should be amended to include the area northeast of the airport where significant flight operations occur. **Figure 14-2** illustrates the proposed boundary of the amended NINA.

- LUM-2 1) CRQ should provide updated NEMs to SanGIS in electronic format. 2) CRQ should notify San Diego County and the City of Carlsbad that updated NEMs are available through SanGIS, and encourage their use in updating the Noise Elements of their General Plans.
- LUM-7

 CRQ should provide updated NEMs, AIA, and NINA to SanGIS in electronic format.
 CRQ should encourage the California Board of Realtors, San Diego North County Board, and the Building Industry Association Sales and Marketing Council, North County Division to visit the SanGIS website for the most updated NEMs, AIA, and NINA.
 CRQ should work with the aforementioned organizations to develop an "Airport Fact Book" for property sales agents.
- LUM-8 CRQ should provide SDCRAA with copies of their final NEM and NCP documents.

14.2.3 Program Management Measures

- PM-2 & CRQ should hire a dedicated Noise Abatement Officer.
 PM-13
- PM-3 The Palomar Airport Advisory Committee (PAAC) should continue to act as a forum for discussion of noise abatement actions.
- PM-4 CRQ should update maps identifying the noise-sensitive areas around the airport, formatted such that they can readily be inserted into a Jeppesen Airway Manual 7-ring

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binder. They should be produced on glossy 80-pound paper, and have an overall size of 8½" in height by 11" in width, folded to 8½" in height by 5½" in width, with text and color graphics on both sides. Examples are provided in **Appendix L**.

- PM-5 CRQ should produce an airport noise information booklet to help educate the community, homeowners associations, real estate officers, media, and others. Examples are provided in **Appendix L**.
- PM-6 1) CRQ should develop an official website to disseminate VNAP and other noise related information, including a list of "frequently asked questions" and answers. The website will be developed in accordance with current County standards.
- PM-6 2) CRQ should contact web masters of aviation-related web sites and request an internet link to the CRQ web site.
- PM-7 CRQ staff should continue to coordinate with the Public Information Officer for the Department of Public Works (DPW PIO) to disseminate information to the news media that integrates all sides of the noise issues and the airport's efforts to manage them more effectively.
- PM-8 CRQ staff should continue attending and/or participating in aviation association meetings to expand awareness of VNAP and other noise-related issues.
- PM-9 CRQ should coordinate with the DPW PIO to periodically distribute VNAP press releases to aviation media.
- PM-10 CRQ should periodically provide updated VNAP information for distribution by FBOs.
- PM-18 CRQ should erect monument signs on airport property along El Camino Real and Palomar Airport Road, in accordance with the provisions of City of Carlsbad Municipal Code, Title 21 Zoning, Chapter 21.41 Sign Ordinance, to inform drivers of the existence and location of the airport.
- PM-19 CRQ should produce signs, stickers, etc. using the VNAP logo, and prominently display and utilize them as appropriate.
- PM-20 CRQ should conduct bi-annual VNAP training classes.
- PM-21 CRQ should continue to implement the recently adopt "Fly Friendly" Program.

14.3 ALTERNATIVES RECOMMENDED FOR CITY OF CARLSBAD IMPLEMENTATION

The following subsections summarize program elements for which implementation authority is vested in a local governing body, i.e., the City of Carlsbad. The County of San Diego does not have authority to implement these measures. These measures are listed as part of the overall CRQ Noise Compatibility Program; however, the County of San Diego is not seeking FAA approval for measures listed in this section.

14.3.1 Operational Measures

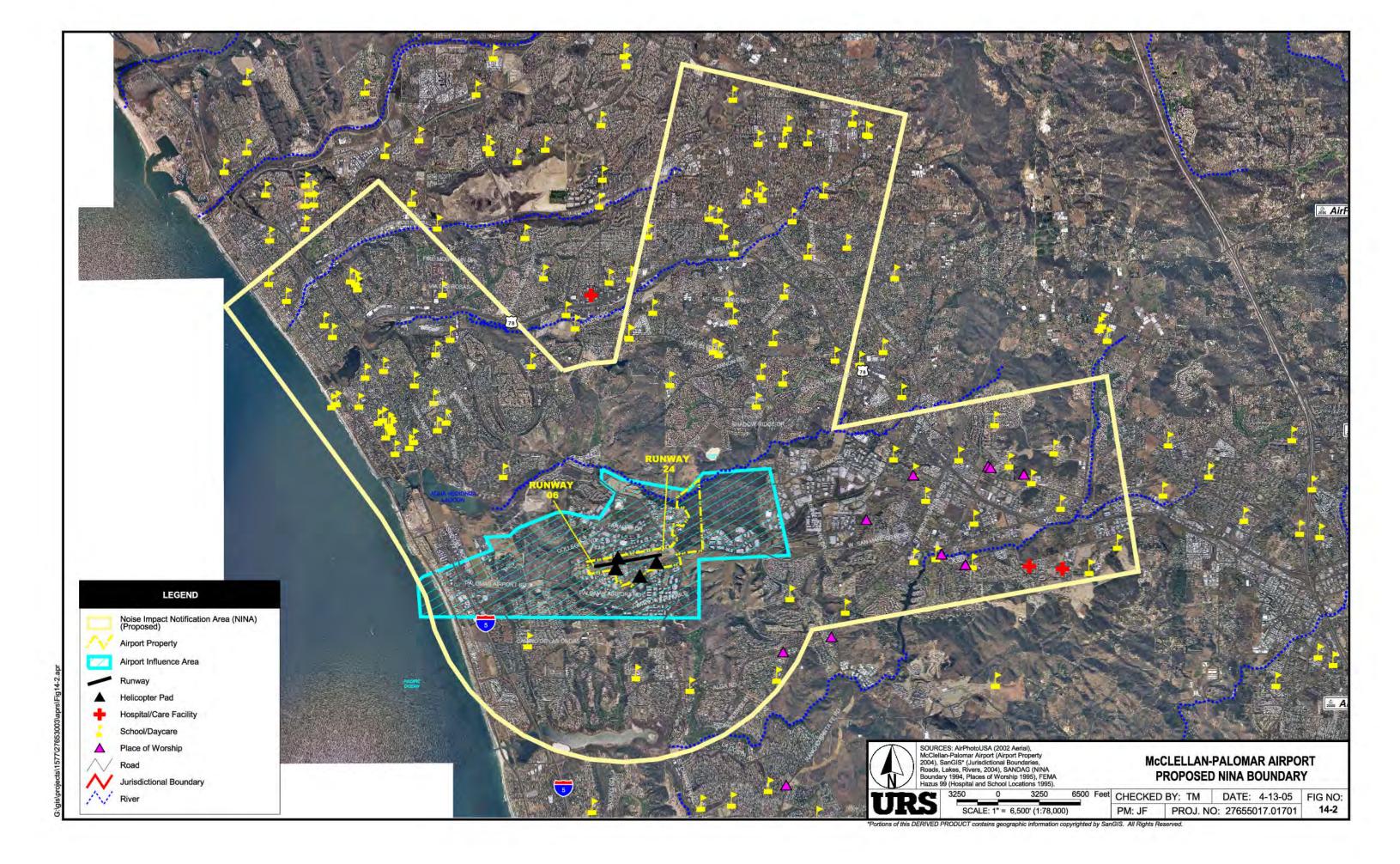
This NCP does not contain any operational measures for which authority is vested in the City of Carlsbad.

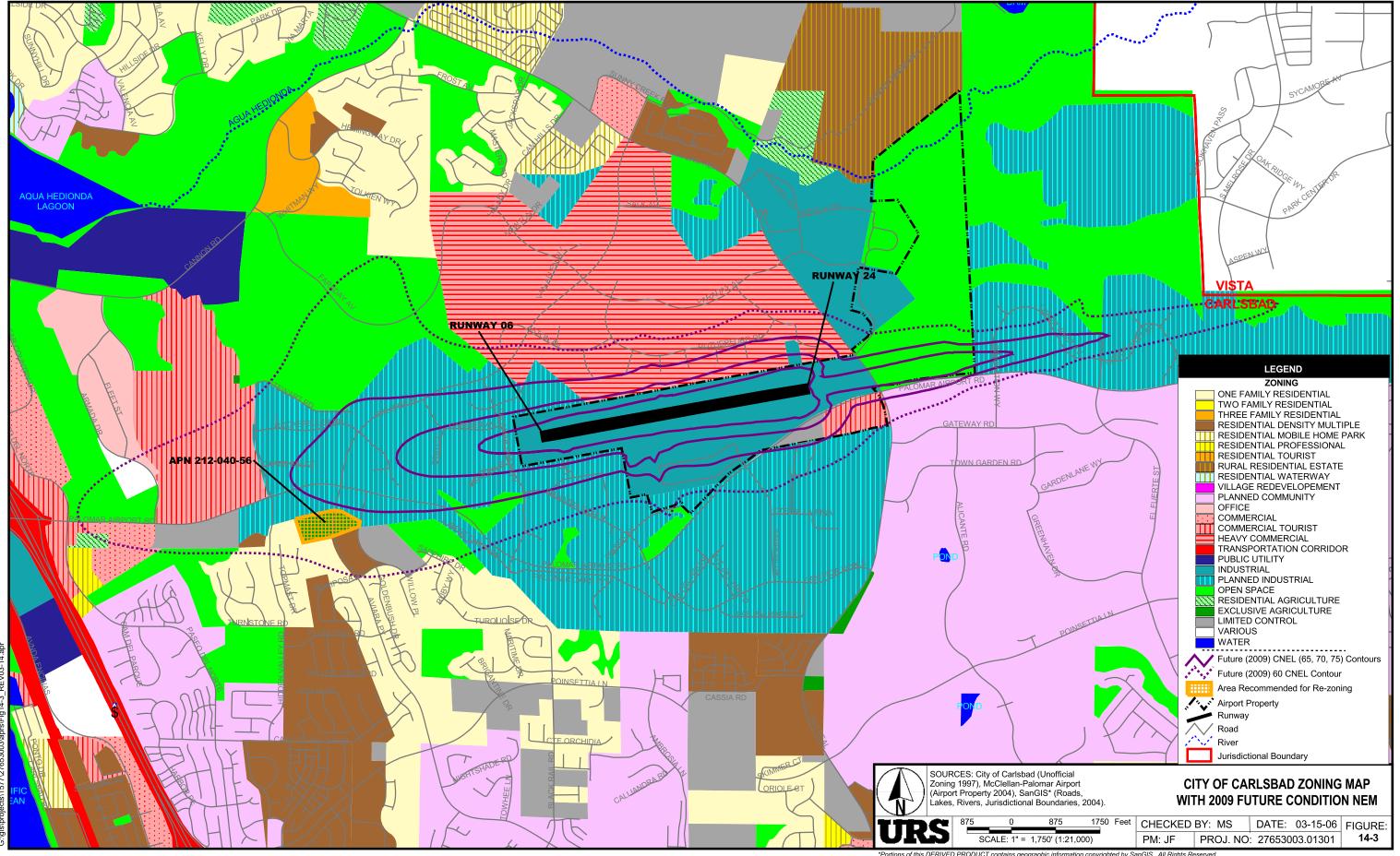
14.3.2 Land Use Mitigation Measures

- LUM-2 2) CRQ should encourage San Diego County and the City of Carlsbad to update the Noise Elements of their General Plans using the updated NEMs available from SanGIS.
- LUM-3 The City of Carlsbad should rezone the undeveloped area designated E-A (APN 212-040-56) within the 60 CNEL to "P-M Planned Industrial" zone. This area is illustrated on Figure 14-3.
- LUM-5 Real estate disclosure within the CRQ's established Airport Influence Area (AIA) should continue.

14.3.3 Program Management Measures

This NCP does not contain any program management measures for which authority is vested in the City of Carlsbad.





14.4 ALTERNATIVES RECOMMENDED FOR FAA APPROVAL

The following subsections summarize program elements for which authority is vested in the FAA. Therefore, the County of San Diego is requesting FAA approval of the following elements.

14.4.1 **Operational Measures**

When traffic volume permits, CRQ ATCT should instruct pilots to delay the left turn OM-4(2)from Runway 24 until aircraft are west of I-5.

> Departure tracks from Runway 24 are shown on Figure 14-4. It was assumed that this operational procedure would be a voluntary measure only and as such, that approximately 50 percent of aircraft currently using track 24D6 would use track 24D11 instead, when weather conditions and traffic efficiency allowed.

CRQ should work with FAA to develop a GPS/RNAV departure procedure to emulate OM-5 the "Alpha Departure" VNAP. The Airport operator will be responsible for the cost of all environmental studies associated with the new procedure.

> Development of a GPS/RNAV departure procedure is proposed to emulate the "Alpha Departure" VNAP shown on Figure 14-1. The application of this noise abatement procedure would serve to provide positive course guidance while channeling all departures using this GPS/RNAV procedure along a narrow geographically-limited departure path to the coastline.

OM-24 Amend "Quiet Hours" to include all aircraft except emergency flight operations

> It was assumed that this operational procedure would be a voluntary measure only and as such, that approximately 50 percent of aircraft currently operating during nighttime hours would operate during evening or daytime hours instead.

14.4.2 Land Use Measures

This NCP does not contain any land use measures for which authority is vested in the FAA.

14.4.3 **Program Management Measures**

- PM-1 CRQ should upgrade their GEMS software to ANOMS 8 and upgrade their computer hardware as necessary to support operations of ANOMS 8. If eligible for AIP funding, CRQ should upgrade hardware at the existing NMTs and install two additional NMTs.
- PM-15 When feasible, CRQ ATCT personnel should encourage the use of the VNAP.
- PM-16 CRQ ATCT should conduct the recommended workload study.

IMPLEMENTATION PLAN

Primary responsibility for implementation of all recommended and approved measures rests with the County of San Diego. Table 14-1 indicates the implementation responsibility and estimated cost of each recommended measure.

The County of San Diego intends to fund the implementation of grant-eligible NCP recommendations through the utilization of Federal funding through the noise set-aside of the Airport Improvement Program (AIP). However, the FAA's approval of the NCP recommendations does not constitute a commitment by the FAA to financially assist in the implementation of the program nor a determination that all measures covered under the program are eligible for grant-in-aid funding from the FAA under the Airport and Airway Improvement Act of 1982. As a result, implementation of these recommendations will progress as funding becomes available. The Vision 100 - Century of Aviation Reauthorization Act of 2003 stipulates that the Federal share is 95 percent, through Fiscal Year 2007. The County of San Diego will provide the 5 percent matching share.

Measures for which the County of San Diego has implementation authority, and which are not dependent on federal funding, have already been implemented or will be implemented as soon as possible. Measures that are dependent on FAA approval and or federal funding will be implemented following FAA approval and/or as soon as funding is made available. Measures for which the City of Carlsbad has implementation authority are outside the control of the County of San Diego. These measures will be implemented at the discretion of the City of Carlsbad.

14.6 PROGRAM UPDATE

FAR Part 150 §150.21(d) indicates that if any change in the operation of CRQ would create any "substantial, new noncompatible use" in any area depicted on the map beyond that which is forecast for the accepted 2009 Future Condition NEM, the County of San Diego shall promptly prepare and submit a revised NEM. In addition, if any change in the operation of the airport would significantly reduce noise over existing noncompatible uses that is not reflected in either the existing conditions or forecast noise exposure map on file with the FAA, the County of San Diego shall promptly prepare and submit a revised NEM. If such a revision to the NEMs becomes necessary, the NCP will be revised accordingly.

This NCP is intended to remain in effect until an update is required, as described above.

14.7 OBJECTIVE OF THE NOISE COMPATIBILITY PROGRAM

The objective of this recent noise compatibility planning process for CRQ is to improve the compatibility between aircraft operations and noise-sensitive land uses while allowing the airport to continue to serve its role in the community. The result of this planning process is a noise exposure map with program implementation, which is provided for information purposes, and a recommended NCP. recommendations contained in this NCP are those of the County of San Diego, not those of their consultant or any third party.

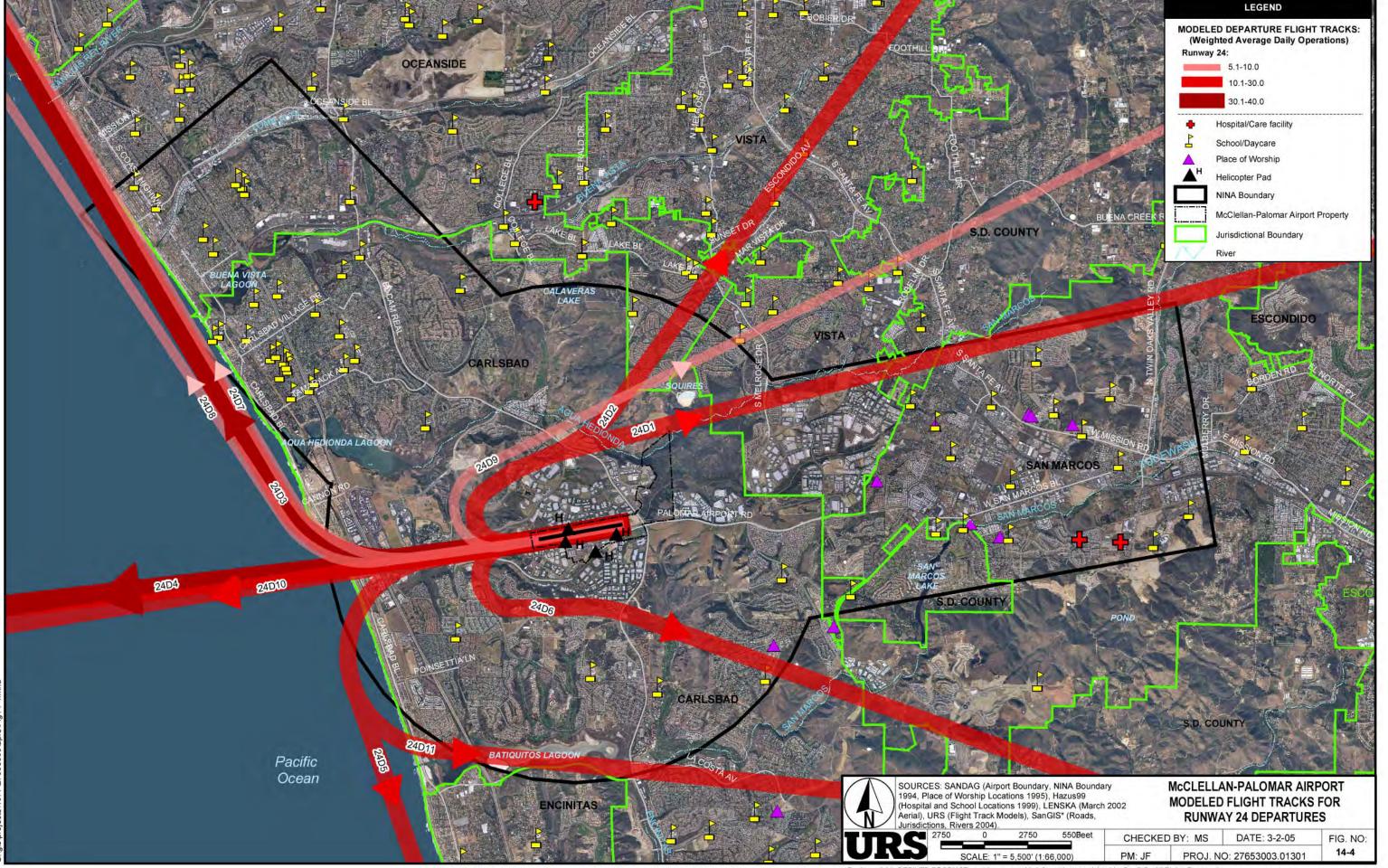


Table 14-1 Recommended Noise Compatibility Program Measures

Measure ID	Measure	Implementation Responsibility	Estimated Cost
ID	ON GOING MEASURES	Responsibility	COST
OM-1	Raise traffic pattern altitude Continue the existing published air traffic pattern altitudes. The higher Airport Traffic Pattern altitudes are listed in the Airport/Facility Directory, Southwest U.S. (published by the U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office). The listed minimum CRQ Airport Traffic Pattern altitudes are 1,003 feet MSL for helicopters, 1,503 feet MSL for small aircraft and 2,003 feet MSL for large aircraft.	CRQ (County of San Diego) and FAA ATCT	Minimal Administrative
OM-4 (1)	Require visual departures proceeding to the coast from Runway 24 to turn to a 250-degree heading and fly through the gap between Solamar and Terramar Continue the existing published "Alpha Departure" VNAP. The "Alpha Departure" is published on the airport's website as a voluntary noise abatement procedure (VNAP). It instructs jets to fly a 250-degree ground track at the best rate of climb until approximately ½ mile offshore. National Business Aircraft Association (NBAA) standard noise abatement departure procedures are recommended. It instructs piston aircraft to hold turns until reaching 800 feet MSL, with the "Alpha North" pattern preferred. On the downwind leg, climb to at least 1,000 feet AGL prior to initiating a turn to the desired course.	FAA ATCT	Minimal Administrative
OM-6	Conduct a test of Runway 24 arrival procedures Continue the existing VNAP, as published on the airport website. (1) Maintain a cruise aircraft configuration (gear and flaps retracted; RPM no higher than cruise) until as close to the airport as possible. (2) Jets: Request ILS approach. Fly a slightly high approach in VMC. Delay gear and flaps transition consistent with safety.	CRQ (County of San Diego) and FAA ATCT	Minimal Administrative

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Measure ID	Measure	Implementation	Estimated
		Responsibility	Cost
OM-8	Specify Runway 24 as the preferential runway Continue the existing designation of Runway 24 as the calm wind runway as published in the		Minimal Administrative
	Airport / Facility Directory. This measure was implemented subsequent to the 1992 NCP. The Airport/Facility Directory, Southwest U.S. (Published by the U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office) designates Runway 24 as the calm wind runway.	FAA ATCT	
	Discourage jet training operations		Minimal Administrative
	Continue the existing policy discouraging jet aircraft training due to noise abatement and traffic congestion as published in the Airport / Facility Directory.		
OM-13	This measure was implemented subsequent to the 1992 NCP. Through voluntary compliance, this measure has been supported by the fixed base operators and other airport tenants. The Airport/Facility Directory, Southwest U.S. (published by the U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office) indicates "No jet aircraft training due to noise abatement and traffic congestion."	CRQ (County of San Diego)	
	Implement voluntary departure curfew		Minimal Administrative
	Continue the existing VNAP, as published on the airport website.		
OM-14	The following voluntary noise abatement procedure (VNAP) is published on the airport's website:	CRQ (County of San Diego)	
	General: Voluntary procedures 2200-0700 (local)		
	Jet take-off and landing "Quiet Hours."		
	OPERATIONAL MEASURES		
OM-4 (2)	When traffic volume permits, instruct pilots to delay the left turn from Runway 24 until aircraft are west of I-5	FAA ATCT	Minimal Administrative
OM-5	Work with FAA to develop a GPS/RNAV departure procedure to emulate the "Alpha Departure" VNAP.	CRQ (County of San Diego) and FAA	Minimal Administrative
OM-23	Consider joining Sound Initiative, A Coalition for Quieter Skies	CRQ (County of San Diego)	Minimal Administrative



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Measure	Measure	Implementation	Estimated
ID		Responsibility	Cost
OM-24	Amend "Quiet Hours" to include all aircraft except emergency flight operations	CRQ (County of San Diego) and FAA	Minimal Administrative
	LAND USE MEASURES		
LUM-1	Provide the recommended NINA boundary to SanGIS in both electronic and hard copy formarts	CRQ (County of San Diego) and SDCRAA	Minimal Administrative
LUM-2	Provide the updated Noise Exposure Maps to SanGIS in electronic format, notify San Diego County and the City of Carlsbad that updated NEMs are available through SanGIS, and encourage their use in updating the Noise Elements of their General Plans	CRQ (County of San Diego) and the City of Carlsbad	Minimal Administrative
LUM-3	Rezone the undeveloped area designated E-A (APN 212-040-56) within the 60 CNEL to "P-M Planned Industrial" zone	City of Carlsbad	Minimal Administrative
LUM-5	Real estate disclosure within the CRQ's established Airport Influence Area (AIA) should continue.	City of Carlsbad and realtor organizations	Minimal Administrative
LUM-7	Provide the updated NEMs, AIA, and NINA to SanGIS in electronic format, encourage the California Board of Realtors, San Diego North County Board, and the Building Industry Association – Sales and Marketing Council, North County Division to visit SanGIS website for the most updated NEMs, AIA, and NINA, and work with the aforementioned organizations to develop an "Airport Fact Book" for property sales agents.	CRQ (County of San Diego) and realtor organizations	Minimal Administrative
LUM-8	Provide SDCRAA with copies of final NEM and NCP documents	CRQ (County of San Diego)	Minimal Administrative
	PROGRAM MANAGEMENT MEASUR	PES	
PM-1	Upgrade GEMS software to ANOMS8 and upgrade computer hardware as necessary to support operations of ANOMS 8. If eligible for AIP funding, hardware should be upgraded at existing NMTs and two addition NMTs should be installed at CRQ.	CRQ (County of San Diego) and FAA	\$100,000
PM-2 / -13	Hire a dedicated Noise Abatement Officer	CRQ (County of San Diego)	\$80,000 per year
PM-3	The Palomar Airport Advisory Committee (PAAC) should continue to act as a forum for discussion of noise abatement actions.	CRQ (County of San Diego)	Minimal Administrative
PM-4	Update maps identifying the noise-sensitive areas around the airport, formatted such that they can readily be inserted into a Jeppesen Airway Manual 7-ring binder.	CRQ (County of San Diego)	\$1,500 for 2,000 maps



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Measure ID	Measure	Implementation	Estimated
		Responsibility	Cost
PM-5	Produce an airport noise information booklet to help educate the community, homeowners associations, real estate officers, media and others.	CRQ (County of San Diego)	\$6,000 for 2,000 booklets
PM-6	Develop an "official" web site to disseminate VNAP and other noise-related information, including a list of "frequently asked questions" and answers. The website will be developed in accordance with current County standards. Contact web masters of aviation-related web sites and request an internet link to the CRQ web site.	CRQ (County of San Diego)	Minimal Administrative
PM-7	Continue to coordinate with the DPW PIO to disseminate information to the news media that integrates all sides of the noise issue and the airport's efforts to manage them more effectively.	CRQ (County of San Diego) and DMPR	Minimal Administrative
PM-8	Continue attending and/or participating in aviation association meetings to expand awareness of VNAP and other noise-related issues.	CRQ (County of San Diego)	Minimal Administrative
PM-9	Coordinate with the DPW PIO to periodically distribute VNAP press releases to aviation media.	CRQ (County of San Diego)	Minimal Administrative
PM-10	Periodically provide updated VNAP information for distribution by FBOs.	CRQ (County of San Diego)	Minimal Administrative
PM-15	When feasible, CRQ ATCT personnel should encourage the use of the VNAP.	FAA ATCT	Minimal Administrative
PM-16	Conduct the recommended workload study.	FAA ATCT	Minimal Administrative
PM-18	Erect monument signs on airport property along El Camino Real and Palomar Airport Road, in accordance with the provisions of City of Carlsbad Municipal Code, Title 21 Zoning, Chapter 21.41 Sign Ordinance, to inform drivers of the existence and location of the airport.	CRQ (County of San Diego)	\$5,000 per sign
PM-19	Produce signs, stickers, etc. using the VNAP logo and prominently display and utilize as appropriate	CRQ (County of San Diego)	\$1,000 per sign
PM-20	Conduct bi-annual VNAP training classes.	CRQ (County of San Diego)	Minimal Administrative
PM-21	Continue to implement the recently adopted "Fly Friendly" Program.	CRQ (County of San Diego)	Minimal Administrative



Noise contours resulting from the recommended noise compatibility program are shown superimposed over the existing land use base map on Figure 14-5. The total area within the CNEL 60+ dB noise contour, as shown on Figure 14-5, for the 2009 Future Condition Noise Exposure Map, With Program Implementation, is estimated to be 2.12 square miles. Table 14-2 compares housing units and population differences between the 2009 Future Condition NEM, Without Program Implementation (baseline) and the 2009 Noise Exposure Map, With Program Implementation.

Table 14-2 Summary of Noise Exposure Estimates

		2009 CNEL/60 dBA	
Noise Exposure	Without Program Implementation	With Program Implementation	Benefit
Population	413	350	63
Number of Housing Units	155	130	25

Note: There are no housing units within the CNEL 65 dBA contour.

The existing and future NEMs were made available for public review and comment at numerous community meetings held throughout the course of the study. During these meetings, the public was invited to share their views and opinions on the NEMs, NCP, and all aspects of the study process. Further detail on public involvement and comments regarding the revised NEM and recommended NCP is contained in Section 15 of this NCP.

