SAN DIEGO COUNTY
REGIONAL AIRPORT AUTHORITY
Airport Land Use Commission

STAFF REPORT

Item No. 6

Meeting Date: **JULY 7, 2011**

Subject:

Presentation and Request for Policy Direction on Noise Factor – San Diego International Airport - Airport Land Use Compatibility Plan

Recommendation:

Receive the report and provide policy guidance on the noise compatibility factor.

Background/Justification:

The third SDIA ALUCP Steering Committee meeting was held on April 28, 2011, focusing on the noise compatibility factor. Noise is one of four compatibility factors (along with airspace protection, safety, and overflight) that must be taken into account when developing an Airport Land Use Compatibility Plan (ALUCP). This factor is a boundary within which future land uses are defined as being compatible, conditionally compatible, or incompatible from a noise perspective.

Noise Studies at SDIA

Many different noise studies (and resulting noise contour maps) have been prepared over the years at SDIA-- each one having a specific purpose. The resulting noise contour maps sometimes differ because they represent different timeframes/horizons and activity levels to achieve the purposes of various programs, such as:

- ALUCPs
- Airport Master Plans
- Part 150 Noise Compatibility Program

The table below (Table 1) includes details on the noise studies and contour maps that have been produced for SDIA.

Table 1 – SDIA Noise Studies

Study	Study Horizon
Airport Land Use Compatibility Plans	
SDIA Comprehensive Land Use Plan (CLUP)	n/a
Draft Updated SDIA Airport Land Use Compatibility Plan (ALUCP)	20-Year Timeframe
Airport Master Plans	
2008 SDIA Airport Master Plan (AMP)	20-Year Timeframe
Final Environmental Assessment (EA) to the 2008 SDIA Airport Master Plan (AMP)	10 and 15-Year Timeframes
Final Environmental Impact Report (EIR) to the 2008 SDIA Airport Master Plan (AMP)	5 & 10-Year Timeframes
Part 150 Noise Compatibility Program	
Part 150 "Airport Noise Compatibility Planning" Study Update – Noise Exposure Maps	5-Year Timeframe

Noise Definition

Noise is generally considered the most extensive impact associated with airports because its effects are often experienced well beyond the airport boundary. Accordingly, noise is one of four compatibility factors recognized in the California Department of Transportation's (Caltrans) Airport Land Use Planning Handbook (the Handbook). One of the specific purposes cited by the California Legislature in creating the airport land use compatibility planning process was to "minimize the public's exposure to excessive noise ... within areas around public airports."

For airport noise studies, California state law requires that noise must be described using the Community Noise Equivalent Level (CNEL) metric.1 CNEL is a 24-hour, time-weighted, cumulative noise metric. It was developed by acoustical scientists to aid in predicting the potential adverse effects of noise on communities. Numerous studies undertaken over the past 40 years have found that cumulative noise metrics, such as CNEL, are well-suited to predicting the average response of communities of people to noise.

1 Title 21, California Code of Regulations, Subchapter 6, Noise Standards, Section 5012.

CNEL values are calculated by summing the total noise occurring in a 24-hour period, after adding 4.8 dB to evening noise events (between 7:00 p.m. and 10:00 p.m.) and 10 dB to nighttime noise events (between 10:00 p.m. and 7:00 a.m.). The evening and nighttime weights are added because noise in those periods is presumed to be more disturbing to people than daytime noise. In aircraft noise studies, CNEL is most often calculated for an average day during a given study year.

Noise Compatibility Factor Purpose

The primary purpose of the noise compatibility factor is to define a set of noise contours within which future land uses are defined as being compatible, conditionally compatible, or incompatible. The ultimate goal is ensuring that residents and occupants of ***new development*** in the SDIA environs are not exposed to unacceptably high aircraft noise levels.

Noise Guidance

Title 21 California Code of Regulations

Title 21 establishes the 65 dB CNEL contour as the "level of noise acceptable to a reasonable person residing in the vicinity of an airport." The following land uses are incompatible with noise above 65 dB CNEL:

- Residences (all types)
- Schools (public and private)
- Hospitals and convalescence homes
- Places of worship

The above incompatible land uses can be rendered compatible if:

- Sound-insulated to achieve indoor noise level of 45 dB CNEL or less; and
- An avigation easement is secured by airport operator.

Title 24 State Building Code

Title 24 establishes sound insulation standards for hotels, motels, dormitories, apartment houses and dwellings other than detached single-family residences. The interior noise levels from outdoor noise sources for these uses must be reduced to 45 dB CNEL or less. Also, proposed structures exposed to airport noise above 60 dB CNEL require acoustical analysis to assure compliance with an interior noise level goal of 45 dB CNEL.

Caltrans Handbook Guidance

The Handbook provides the following guidance for noise compatibility thresholds:

- 60 dB CNEL – appropriate in mild climates where windows are often open.
- 65 dB CNEL – potentially acceptable in noisy urban areas.

The Handbook also includes an extensive discussion of aircraft noise and the factors that Airport Land Use Commissions (ALUCs) should consider in establishing noise compatibility standards and criteria. The Handbook provides guidance regarding the questions that ALUCs should consider as they decide on the criteria that are appropriate for their communities. Among the considerations are the following:

1. Background noise levels in the community – aircraft noise at any given level can be more disturbing in communities with low ambient noise levels than in louder urban settings.
2. Seasonal variability in noise levels – aircraft noise during peak activity seasons can be more disturbing since many residents tend to become accustomed to the lower noise levels in the off-season.
3. Previous community experience with the noise source and community attitudes toward aircraft noise – the introduction of new noise sources can be particularly disturbing to many residents.
4. Whether the noise includes pure tones or impulse characteristics – these attributes, which are only rarely associated with aircraft activity, tend to be especially annoying to many people.[2]

The Handbook summarizes the general guidance provided by federal agencies and the state as follows:

> ...[M]ost federal and State of California regulations and policies set DNL/CNEL 65 dB as the basic limit of acceptable noise exposure for residential and other noise-sensitive land uses... [T]his standard has been set with respect to relatively noisy urban areas.[3]

Additionally, the Handbook compares three alternative noise compatibility thresholds for residential land uses. The 55 dB CNEL threshold is described as suitable for rural airports. The 60 dB CNEL threshold is described as appropriate in mild climates where windows are often open. The 65 dB CNEL threshold is noted as being potentially acceptable in noisy urban areas.

Current SDIA ALUCP Noise Policy

The current SDIA ALUCP, adopted in 1992 and amended in 1994 and 2004, contains a noise compatibility matrix which provides minimal details on noise restrictions.

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2 State of California, Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, January 2002, pp. 7-23 – 7-27.

3 State of California, Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, January 2002, p. 7-23.

Table 2 – Airport Noise/Land Use Compatibility Matrix from 2004 SDIA ALUCP

Land Use	Annual Community Noise Equivalent Level (CNEL) in Decibels					
	55-60	60-65	65-70	70-75	75-80	80-85
1. Neighborhood Parks and Playgrounds						
2. Schools, Preschools, Libraries		45	45	45	45	45
3. Residential – Single-family; Multiple Family, Mobile Homes, Residential Hotels, Retirement Homes; Intermediate Care Facilities, Hospitals, Nursing Homes		45	45	45	45	45

	COMPATIBLE – The outdoor community noise equivalent level ("CNEL") is sufficiently attenuated by conventional construction so that the indoor noise level is acceptable, and both indoor and outdoor activities associated with the land use may be carried out with essentially no interference from aircraft noise.
45	CONDITIONALLY COMPATIBLE – The outdoor CNEL level will be attenuated to the indoor noise level shown, and the outdoor noise level is acceptable for associated outdoor activities.
	INCOMPATIBLE – The CNEL is severe. Although extensive mitigation techniques could make the indoor environment acceptable for performance of activities, the outdoor environment would be intolerable for outdoor activities associated with the land use.

In addition, the current ALUCP includes the following statement regarding the compatibility of several other uses:

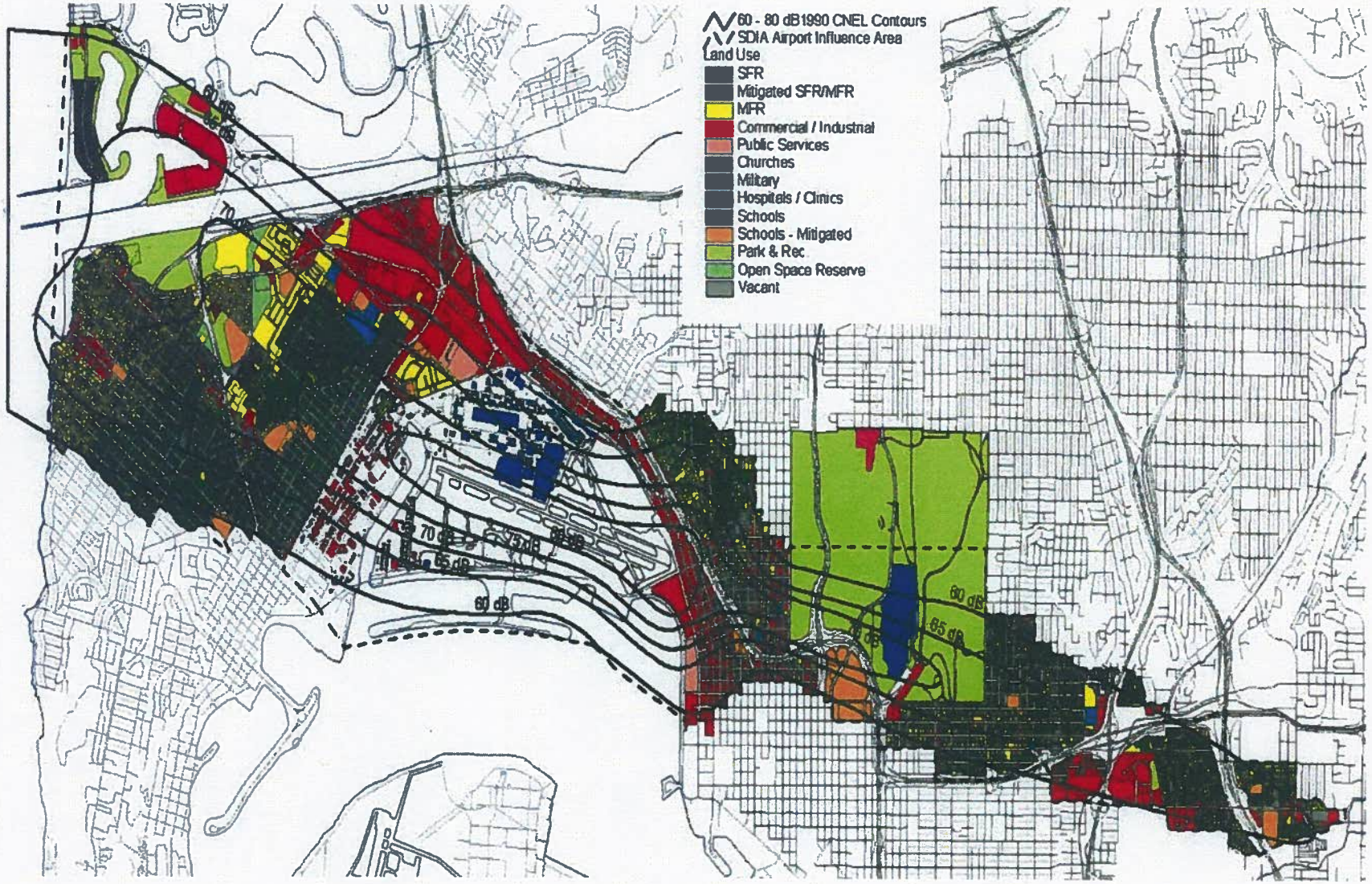
> The 70 dB CNEL noise contour defines a boundary in which the area is not suitable for numerous land uses, such as office buildings, auditoriums, churches, concert halls, and indoor arenas.

The current ALUCP also includes the following policies related to the dedication of avigation easements:

> Avigation easements for aircraft noise would be required following acoustic insulation for existing dwelling units to ensure an interior of 45 dB CNEL or less in all habitable rooms for any new residential or other noise sensitive use within the 60-65 dB CNEL contour contours.
>
> Property owners would continue to be able to build (with noise attenuation) in noise areas over 65 dB CNEL, and an avigation easement would provide verification that the structure had met the noise insulation requirements.

Exhibit 1 (next page) is the noise contour map from the current ALUCP- it represents 1990 noise contours.

Exhibit 1 – 1990 Noise Contours



Previous ATAG/SDIA Subcommittee Work

The SDIA Subcommittee of the ALUCP Technical Advisory Group (ATAG) met from 2006-2007 to consider potential policies for the updated SDIA ALUCP. At the end of 2007, work on the SDIA ALUCP was suspended so that the ATAG could focus on completion of the five urban airport ALUCPs.

The SDIA Subcommittee had numerous in-depth discussions of the issues relating to noise compatibility policies for the SDIA ALUCP, but no final recommendations to the ALUC were made. The issues discussed included the following:

- The built-out area within all of the CNEL contours offers little opportunity for new development, but some redevelopment may occur. Special infill policies may be appropriate to address the needs of this area.
- In considering the compatibility of new institutional uses within the CNEL noise contours, the presence of outdoor activities associated with those uses is important to consider.
- Because of the large amount of development within the noise contours, policies should clarify whether any expansion of existing noise-sensitive buildings is allowable. If it is to be allowed, then guidance is needed to provide some reasonable limit on the extent of the expansion.
- The high ambient noise levels east of the Airport, which can partially mask aircraft noise, should be considered in establishing noise compatibility standards for that area.
- The communities east and the west of the Airport differ greatly in character. Should different policies be established for the east side and west side communities? Should different policies be established for different areas within each of these communities based upon the character of existing neighborhoods.
- Certain activity at commercial uses can be disturbed by aircraft noise, such as the outdoor dining areas of restaurants. These uses should be considered in the noise compatibility policies.
- A requirement for the dedication of an avigation easement to the Airport Authority may be appropriate for any new development (residential, institutional commercial, industrial) within the 65 dB CNEL contour if noise attenuation is required as a condition of acceptability.

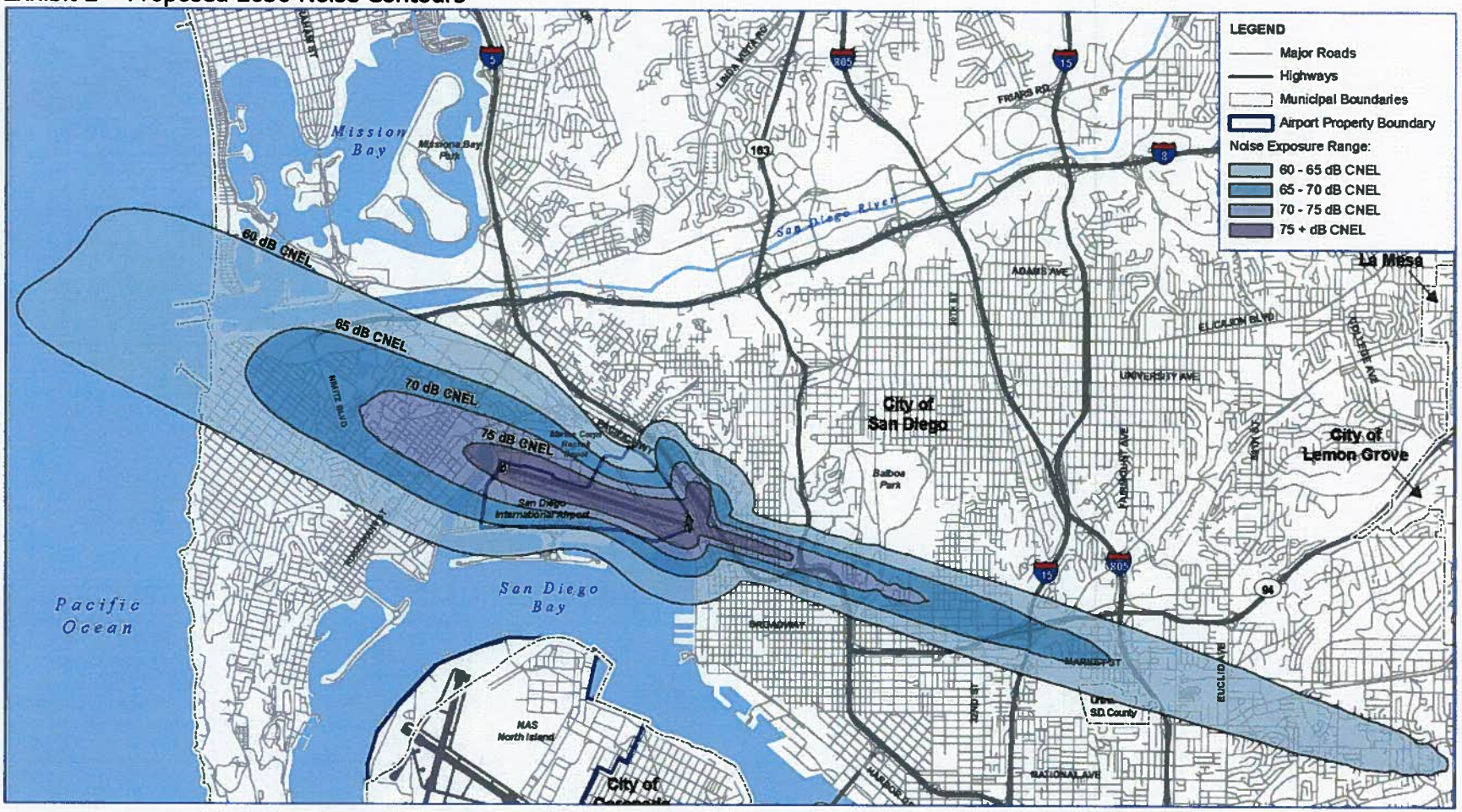
Current Technical Analysis – Noise

State law requires that ALUCPs must reflect "the anticipated growth of the airport during at least the next 20 years."[4] The update to the SDIA ALUCP is based on the most recent 20-year forecast of Airport activity, prepared for the Destination Lindbergh Study. Additionally, the updated noise analysis was prepared using the FAA's Integrated Noise Model (INM). The modeling parameters are the same as those used for updated Part 150 Noise Compatibility Program.

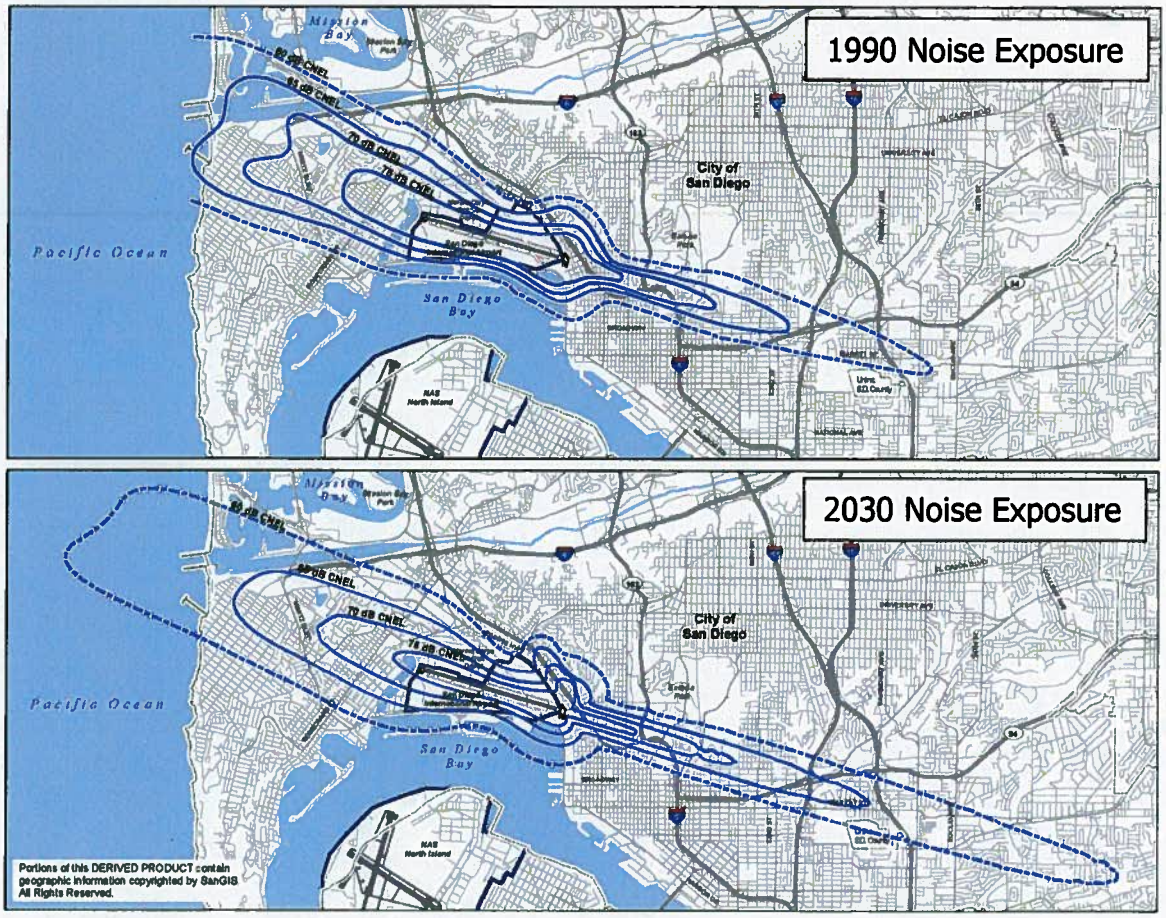
The map on the following page represents the draft noise contours for the updated ALUCP.

[4] Public Utilities Code, Section 21675(a).

Exhibit 2 – Proposed 2030 Noise Contours



The image below compares the 1990 noise contours from the current ALUCP with the updated 2030 forecast noise contours. The overall shape of each contour set is similar, but the noise levels are lower on the west side in 2030 due to substantially quieter aircraft and higher on the east side because more operations are projected in 2030.



Proposed Noise Matrix

In order to address some of the deficiencies of the current ALUCP, the updated noise matrix (Table 3) for SDIA includes a comprehensive list of uses. It takes into account the existing development pattern surrounding SDIA, balances the desire of the City of San Diego to preserve the existing neighborhoods, and ensures that future uses will be adequately sound attenuated.

Table 3 – Potential Noise Compatibility Matrix

Land Use Category *Note: Multiple categories may apply to a project*	Exterior Noise Exposure (dB *CNEL*) 60–65	65–70	70–75	75 +
Child Care Facility (>14 children)	45			
Adult Educational Facility (Vocational/Trade School, College and University) Assembly (Religious/Fraternal) Hospital Nursing/Convalescent Facility Pre-K through Grade12 School	45	45[1]	45[1]	45[1]
Residential (Single-Family, Multi-Family, Shelter/Transitional Housing)	45	45[1]	45[1, 2]	45[1, 2]
Dormitory Hotel/Motel Library Museum/Gallery Performing Arts Center Prison Theater for Live Performance		45	45	45
Cinema Commercial Services Eating and Drinking Establishment (indoor component to be attenuated) Funeral/Mortuary Services Gym/Instructional Studio Office (including Medical/Dental) Public Safety Facility (Fire/Police) Retail Sales Veterinary Clinic/Animal Kennel			50	50
Agriculture Arena Auto/Boat Repair Car Wash Cemetery (grounds only; not including indoor facilities) Gas Station Industrial/Manufacturing/Research and Development Marina Outdoor Storage/Junk Yard Parks and Recreation (Outdoor Stadium, Sports Field, Golf Course; Playground) Transportation Terminal/Vehicle Parking Utilities (Energy Generation and Distribution, Solid Waste, Wastewater, Recycling, Telecommunications) Warehouse/Storage Wholesale Retail				

	Compatible Use	
45/50		Building structure must be capable of attenuating exterior noise to the interior *CNEL* indicated by the number.
1 2	*Conditional Use*	[1] Use is required to dedicate an avigation easement to the Airport operator, per Policy 2.x.x.* [2] New residential use is permitted only if the current local agency General/Community Plan designation allows for residential use. Local agency General/Community Plan Amendments from a nonresidential designation to a designation that would allow residential use are not permitted.
	Incompatible Use	

*This refers to an ALUC policy adopted in the Urban Airport ALUCPs that is anticipated to be included in the proposed SDIA ALUCP. That policy describes the conditions under which avigation easements are required for proposed development projects.

Potential Noise Policies

The following policies have been adapted from the ALUCPs for the urban airports in San Diego County and are proposed for inclusion in the SDIA ALUCP. Changes made reflect the highly urban environment of SDIA and were made in coordination with the Steering Committee and Agency Stakeholders, including the City of San Diego, with the goal of limiting new noise sensitive uses while maintaining community character.

Evaluating Acceptable Noise Levels for New Development

The noise compatibility of proposed land use actions within the AIA of the Airport shall be evaluated in accordance with the policies set forth in this section, including the criteria listed in Table 3 and the noise contours depicted on Exhibit 2.

Measures of Noise Compatibility

The criteria in Table 3 indicate the maximum acceptable airport-related noise levels, measured in terms of CNEL, for residential and a range of nonresidential land uses. Factors considered in setting the criteria include the following:

(a) Established federal and state regulations and guidelines.

(b) The ambient noise levels in the community. Ambient noise levels influence the potential intrusiveness of aircraft noise upon a particular land use and vary greatly between rural, suburban, and urban communities. For the purposes of this Compatibility Plan, the Airport vicinity is considered an urban community.

(c) The extent to which noise would intrude upon and interrupt the activity associated with a particular use.

(d) The extent to which the activity itself generates noise.

(e) The extent of outdoor activity associated with a particular land use.

(f) The extent to which indoor uses associated with a particular land use may be made compatible with application of sound attenuation.

Acceptable Noise Levels for Specific Types of Land Use Actions

The threshold for evaluation of the compatibility of proposed land uses with the noise policies of the SDIA ALUCP is the projected 60 dB CNEL contour. All land uses located outside this noise contour are consistent with the noise compatibility policies. The compatibility of new residential and nonresidential development with noise levels generated by the Airport is indicated in Table 3.

(a) New residential development is permitted above the 70 dB CNEL contour only if the current local agency General/Community Plan designation allows for residential use. Local agency General/Community Plan amendments from a nonresidential designation to designation that would allow a residential use are not permitted.

(b) Land uses not specifically listed shall be evaluated using criteria for similarly listed uses, as determined by the ALUC.

Application of Noise Compatibility Criteria

Noise contours shall be utilized, as follows, in assessing the compatibility of a proposed use at a specific development site.

(a) A proposed land use shall comply with the noise compatibility criteria for the CNEL range within which the proposed building(s) is/are located.

(b) When a proposed building lies within multiple CNEL ranges, the noise compatibility criteria for the CNEL range within with the largest proportion of the building is located, as determined by gross floor area, shall apply to the proposed building. Where the total floor area of a proposed building is divided equally among two or more CNEL ranges, the noise compatibility criteria for the most restrictive CNEL range shall apply.

(c) Where a combination of land use types listed separately in Table 3 is proposed for a single project, each component use must comply with the applicable noise compatibility criteria listed in the table. Ancillary uses – ones that occupy less than 10% of the total floor area – are not subject to the noise compatibility criteria A new land use proposed within an existing building (e.g., tenant improvement) is not subject to the noise compatibility criteria unless it is identified as "incompatible" in Table 3.

Avigation Easement Dedication

As a condition of approval for any project identified with Footnote 1 in Table 3, the owner of the property involved shall be required to dedicate an avigation easement to the entity owning the Airport.

Coordination Efforts

ALUC staff met with the potentially affected local agencies (CCDC, City of San Diego, County of San Diego, and the Port of San Diego) on April 14, 2011 to discuss the draft noise contour map, matrix and policies. Based on comments received at that meeting, revisions were made to the matrix and policies before the draft Steering Committee report was distributed. In addition, the matrix and policies were revised following the April 28, 2011 Steering Committee meeting and the revisions were circulated to the meeting attendees for further input. Further revisions were made based upon comments received by one of the attendees regarding Title 21. The versions of the

noise policies and matrix included in this report were emailed to the Steering Committee and posted on www.san.org/alucp for further comment-- none were received.

Staff Recommendation

That the ALUC recommend moving forward with the proposed noise contour map, matrix and policies as presented in this Report.

List of Attendees Who Signed In

SDIA ALUCP Steering Committee

PLEASE WRITE LEGIBLY
April 28, 2011

Name	Affiliation	Email Address (if you want to be placed on distribution list)
John G Wotzka	Self	
Peter Nystrom	PCPB	nystrom.enterprises@cox.net
Ted Shaw	NAIOP San Diego	
Jim McCollum	SOLAR TURBINES	
JOHN HELMER	PORT	jhelmer@portofsandiego.org
Ann McCaull	Coronado	
Amanda Lee	City of San Diego	ajohnsonlee@sandiego.gov
PAUL WEBB	PENINSULA PLANNERS	~~pcpb~~ pcpb paul@cox.net
Roger Britt	Self	rabritt@cox.net

SDIA ALUCP Steering Committee

PLEASE WRITE LEGIBLY
April 28, 2011

Name	Affiliation	Email Address (if you want to be placed on distribution list)
Dave Schumacher	SANDAG	dsc@sandag.org
JOHN ZIEBARTH	AIA	john@ziebarth.com
TAIT GALLOWAY	City of S.D.	
Neil Hyytinen	Chamber of Commerce	nhyytinen@hechtselberg.com
Deanna Spehn	Sen Kehoe	

Project Timeline

The draft SDIA ALUCP and associated environmental documentation are expected to be completed for ALUC consideration in early 2013.

Fiscal Impact:

The SDIA ALUCP update program is funded through the Airport Planning FY12 operating budget.

Environmental Review:

A. This ALUC presentation is not a project that would have a significant effect on the environment as defined by the California Environmental Quality Act (CEQA), as amended. 14 Cal. Code Regs. §15378. This ALUC presentation is not a "project" subject to CEQA, Cal. Pub. Res. Code §21065.

B. This ALUC presentation is not a "development" as defined by the California Coastal Act. Cal. Pub. Res. Code §30106.

Equal Opportunity Program:

Not applicable.

Prepared by:

KEITH WILSCHETZ
DIRECTOR, AIRPORT PLANNING

JULY 7, 2011

AIRPORT LAND USE COMMISSION MEETING

CORRESPONDENCE RECEIVED FROM THE PUBLIC:

ITEM 6

PRESENTATION AND REQUEST FOR POLICY DIRECTION ON NOISE FACTOR – SAN DIEGO INTERNATIONAL AIRPORT - AIRPORT LAND USE COMPATIBILITY PLAN

ZIEBARTH ASSOCIATES

July 6, 2011

San Diego County Regional Airport Authority
Chairman Gleason and Board Members
3225 North Harbor Drive
San Diego, CA 92101

Re: Airport Land Use Commission (ALUC), July 7, 2011
Item 06—Request for Policy Direction on Noise Factor—SDIA ALUCP

Dear Mr. Gleason and Board Members:

I regret that I will be out of town on business on July 7, so that I can not make these comments in person. Having served on Rural and Urban ATAG, the SDIA ATAG subcommittee, and having participated in the SDIA Steering Committee meetings, I would like to commend the current airport staff and their consultant, Ricondo Associates for their work on the Overflight and Noise components of the SDIA ALUCP. At the beginning they stated that they were not trying to create policies that were overreaching, but rather that were practical. I think that the Overflight and Noise components reflect that. They have listened to input from the Steering Committee. When requested, they have either provided justification or they have modified the policies.

Staff and the consultant have been practical in their approach. They have recognized that they are dealing with existing ambient noises from such sources as the train and the freeway. Also, it is not practical to require land use changes such as along Grape and Hawthorne Streets or up the Columbia Street hill north of Laurel Street, which are within the 75 dB level. However, they have appropriately addressed new construction by requiring attenuation of interior noise levels and an avigation easement in the higher noise levels reflected in Table 3. They have restricted general plan/ community plan amendments from non-residential designation to a designation that would allow residential uses.

Therefore, I am pleased to recommend to the ALUC that they give staff direction to proceed with the noise policies as presented. Again I would like to commend the current staff and their consultant for their work which reflects the concept of not being overreaching but practical and justifiable. I look forward to working with them on the airspace protection and safety components.

Respectfully,

John C. Ziebarth
AIA Representative on the SDIA Steering Committee

cc: Thella F. Bowens, President/CEO
Keith Wilschetz, Director, Airport Planning
AIASD Board of Directors

ARCHITECTURE / PLANNING
2900 FOURTH AVE STE 204 SAN DIEGO, CA 92103 PHONE 619.233.6450 FAX 619.233.6449

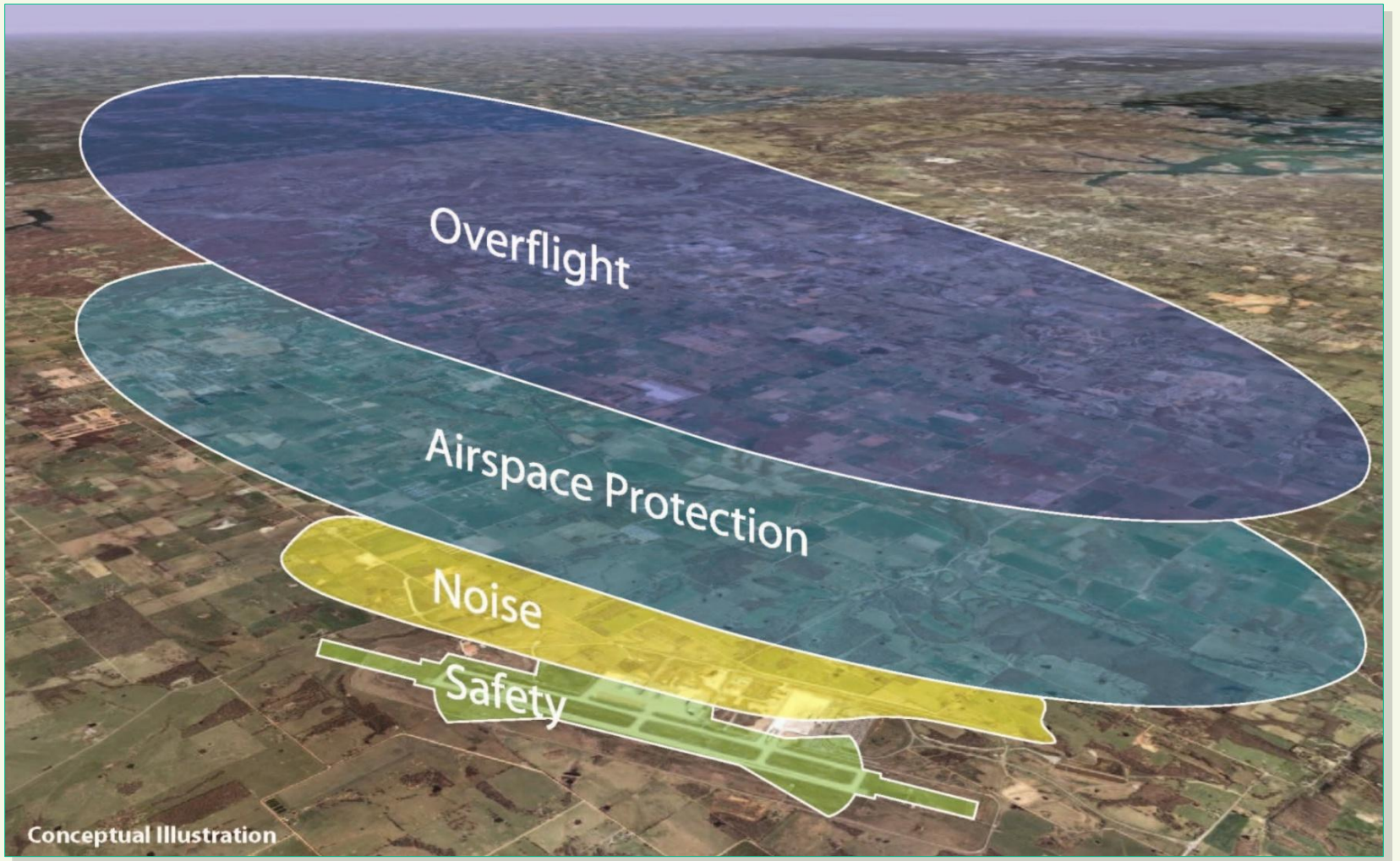
Item 6

Presentation and Request for Policy Direction on Noise Factor – San Diego International Airport - Airport Land Use Compatibility Plan

Angela Jamison, Manager, Airport Planning

July 7, 2011

Compatibility Factors



Noise Compatibility Purpose

- To ensure that the residents and occupants of ***new development*** in the SDIA environs are not exposed to unacceptably high aircraft noise levels
- To ensure that ***new development is compatible*** with the SDIA noise levels to which it is exposed

Steering Committee Meeting

- April 28, 2011- Steering Committee meeting and Open House on the noise compatibility factor held
  - Steering Committee meeting attendance = 13
  - Open House attendance = 7

Coordination Efforts

- Local agency (CCDC, City of San Diego, County of San Diego, and the Port of San Diego) meeting held on April 14, 2011
- Revisions were made to the matrix and policies based upon comments received by local agency staff and Steering Committee members

Background and Guidance

SDIA Noise Contour Maps

- Why do noise contour maps sometimes differ?
  - They represent different years and activity levels
- Why are the different noise studies and maps produced?
    - ALUCPs
    - Airport Master Plans
    - Part 150 Noise Compatibility Program

SDIA Noise Contours Inventory

Study	Study Horizon
Airport Land Use Compatibility Plans	
1992/2004 SDIA Comprehensive Land Use Plan (CLUP)	n/a
Draft Updated SDIA Airport Land Use Compatibility Plan (ALUCP)	20-Year Timeframe
Airport Master Plans	
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Part 150 Noise Compatibility Program	
Part 150 "Airport Noise Compatibility Planning" Study Update – Noise Exposure Maps	5-Year Timeframe

The CNEL Noise Metric

- State law requires the Community Noise Equivalent Level (CNEL) metric for airport noise studies
  - A 24-hour, time-weighted, cumulative noise metric
  - Calculated by summing the total noise occurring in a 24-hour period, after adding…
    - 5 dB to evening noise (between 7 pm and 10 pm)
    - 10 dB to nighttime noise (between 10 pm and 7 am)
- CNEL levels are mapped as noise contours

Purpose of Noise Laws and Policies

- Noise reduction – lessen noise produced by aircraft
- Noise abatement – shift noise from sensitive areas
- Noise mitigation – reduce adverse effects of noise
- **Land use compatibility planning -- promote compatible development and avoid noise-sensitive development in high-noise areas**

Federal Law and Regulations

- Mandate the reduction of aircraft noise
  - Reduction of noise in new aircraft designs (14 CFR Part 36)
  - Retirement of the loudest aircraft in the civilian fleet (14 CFR Part 91)
- Provides funding for airport operators to develop noise compatibility programs (14 CFR Part 150)

State Law and Regulations

- Airport Land Use Commission Statutes
- Title 21 Airport Noise Standards
- Title 24 California Building Code sound insulation standards

Title 21 Noise Standards

- 65 dB CNEL –
  - the “level of noise acceptable to a reasonable person residing in the vicinity of an airport”
- Land uses incompatible with noise above 65 dB CNEL
  - Residences (all types)
  - Schools (public and private)
  - Hospitals and convalescence homes
  - Places of worship

Title 21 Noise Standards

- Incompatible land uses are rendered compatible …
  - If sound-insulated to achieve indoor noise level of 45 dB CNEL or less; or
  - If avigation easement is secured by airport operator

Title 24 State Building Code

- Sound insulation standards established for hotels, motels, dormitories, apartment houses and dwellings other than detached single-family
  - Interior noise levels from outdoor noise sources must be reduced to 45 dB CNEL or less
  - Proposed structures exposed to airport noise above 60 dB CNEL require acoustical analysis to assure compliance with interior noise level goal (45 dB CNEL)

Caltrans Handbook Guidance

The *Handbook* provides guidance for noise compatibility thresholds:

- 60 dB CNEL – appropriate in mild climates where windows are often open.
- 65 dB CNEL – potentially acceptable in noisy urban areas.

Noise Policy – Current ALUCP

FIGURE 4
AIRPORT NOISE/LAND USE COMPATIBILITY MATRIX

LAND USE	Annual Community Noise Equivalent Level (CNEL) in Decibels					
	55-60	60-65	65-70	70-75	75-80	80-85
1. NEIGHBORHOOD PARKS, AND PLAYGROUNDS						
2. SCHOOLS, PRESCHOOLS, LIBRARIES		45	45	45	45	45
3. RESIDENTIAL-SINGLE FAMILY, MULTIPLE FAMILY, MOBILE HOMES, RESIDENTIAL HOTELS, RETIREMENT HOMES, INTERMEDIATE CARE FACILITIES, HOSPITALS, NURSING HOMES		45	45	45	45	45

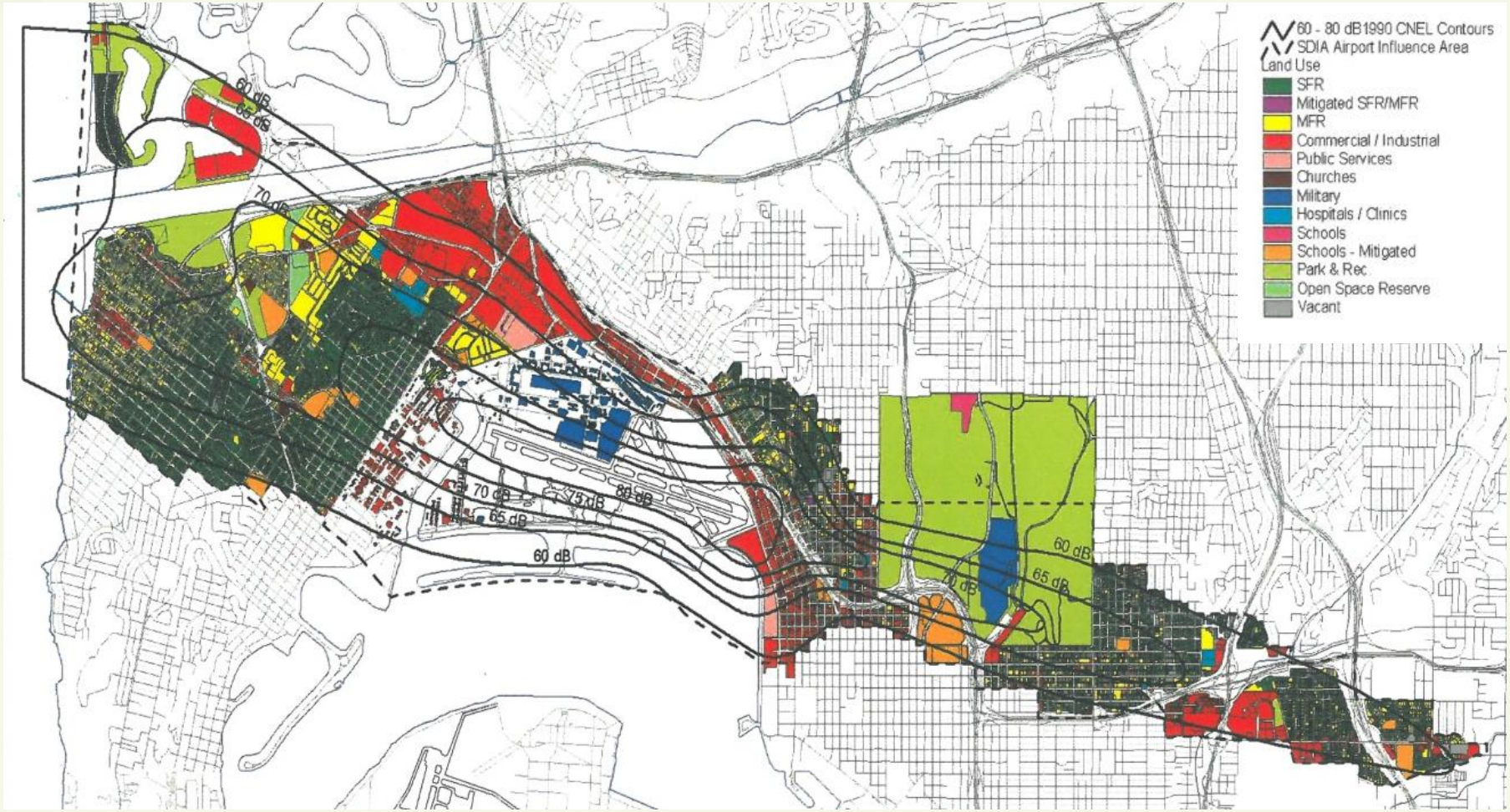
COMPATIBLE
The outdoor community noise equivalent level ("CNEL") is sufficiently attenuated by conventional construction so that the indoor noise level is acceptable, and both indoor and outdoor activities associated with the land use may be carried out with essentially no interference from aircraft noise.

45

CONDITIONALLY COMPATIBLE
The outdoor CNEL level will be attenuated to the indoor noise level shown, and the outdoor noise level is acceptable for associated outdoor activities.

INCOMPATIBLE
The CNEL is severe. Although extensive mitigation techniques could make the indoor environment acceptable for performance of activities, the outdoor environment would be intolerable for outdoor activities associated with the land use.

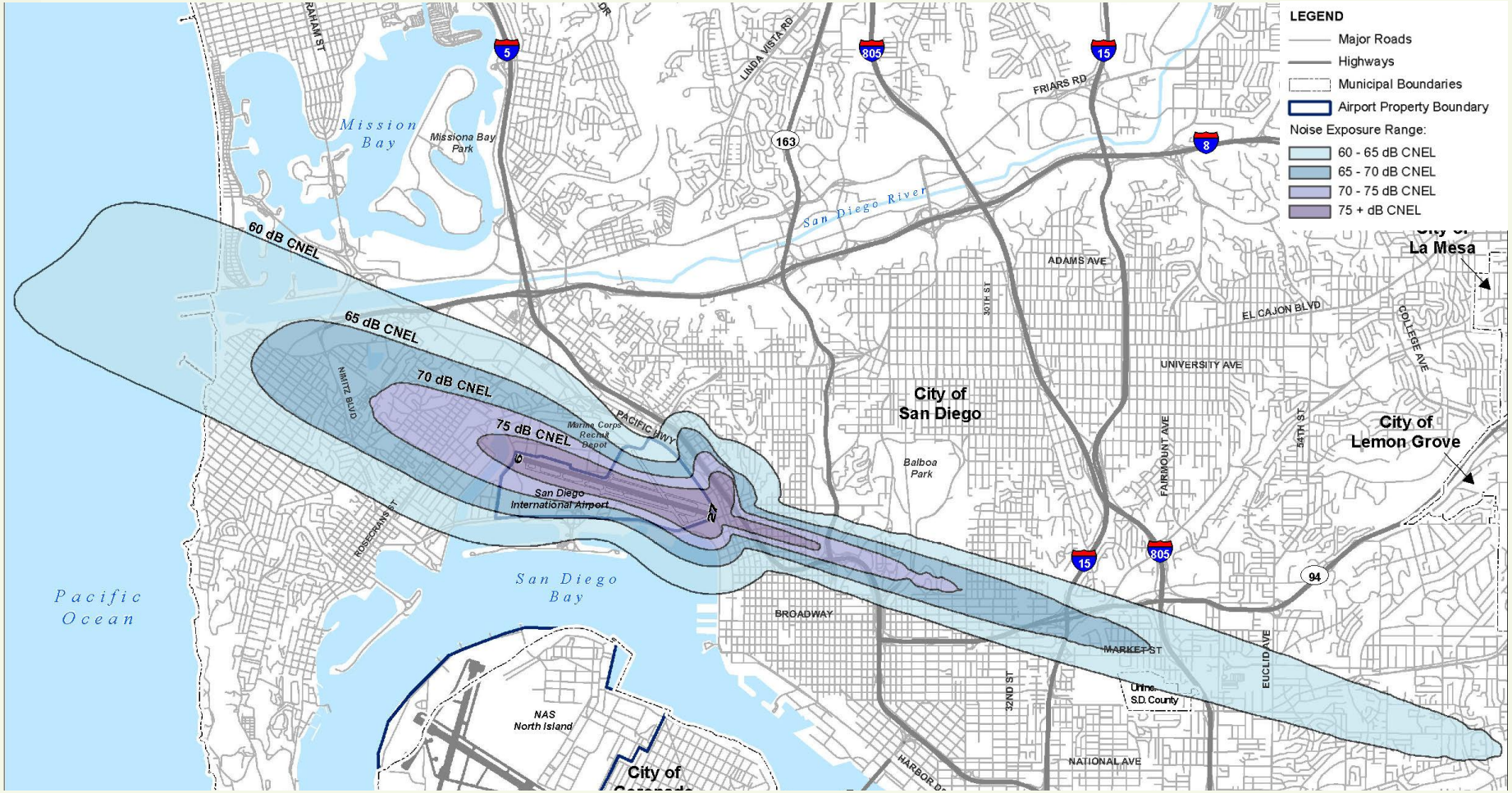
Noise Contours – Current ALUCP

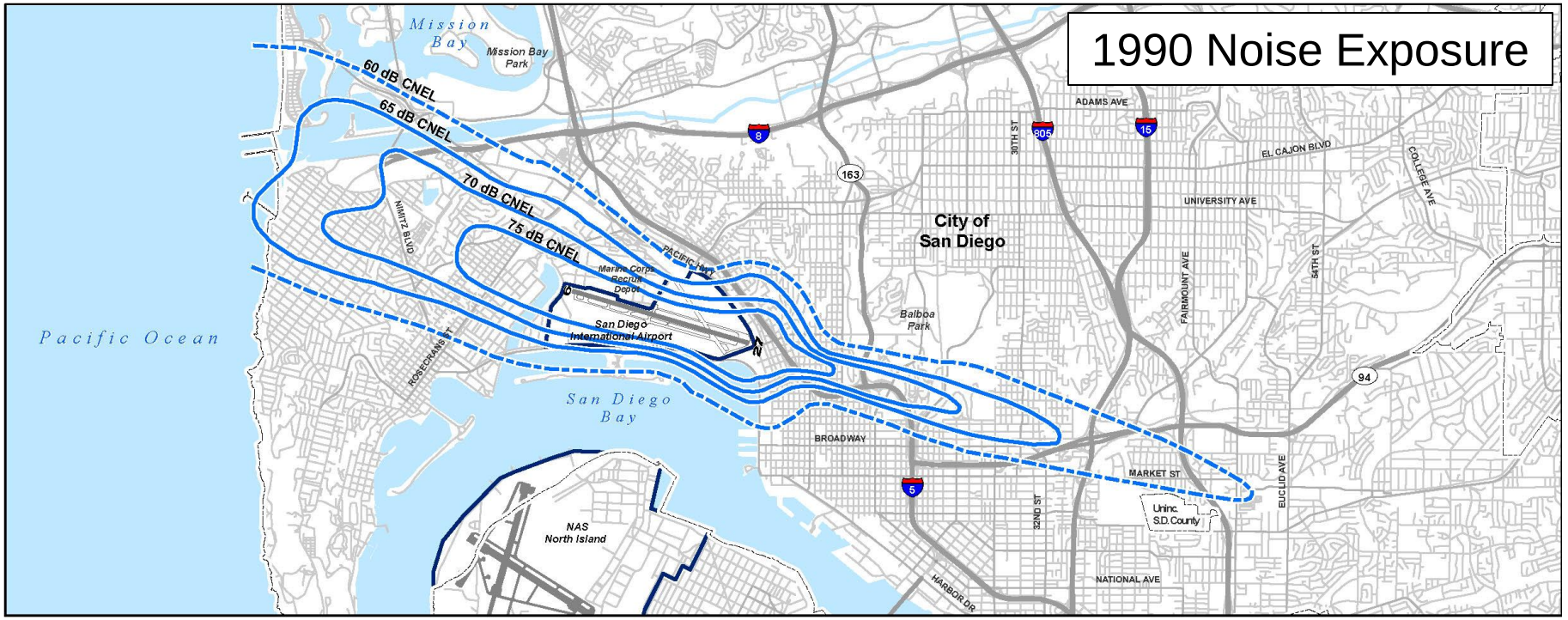


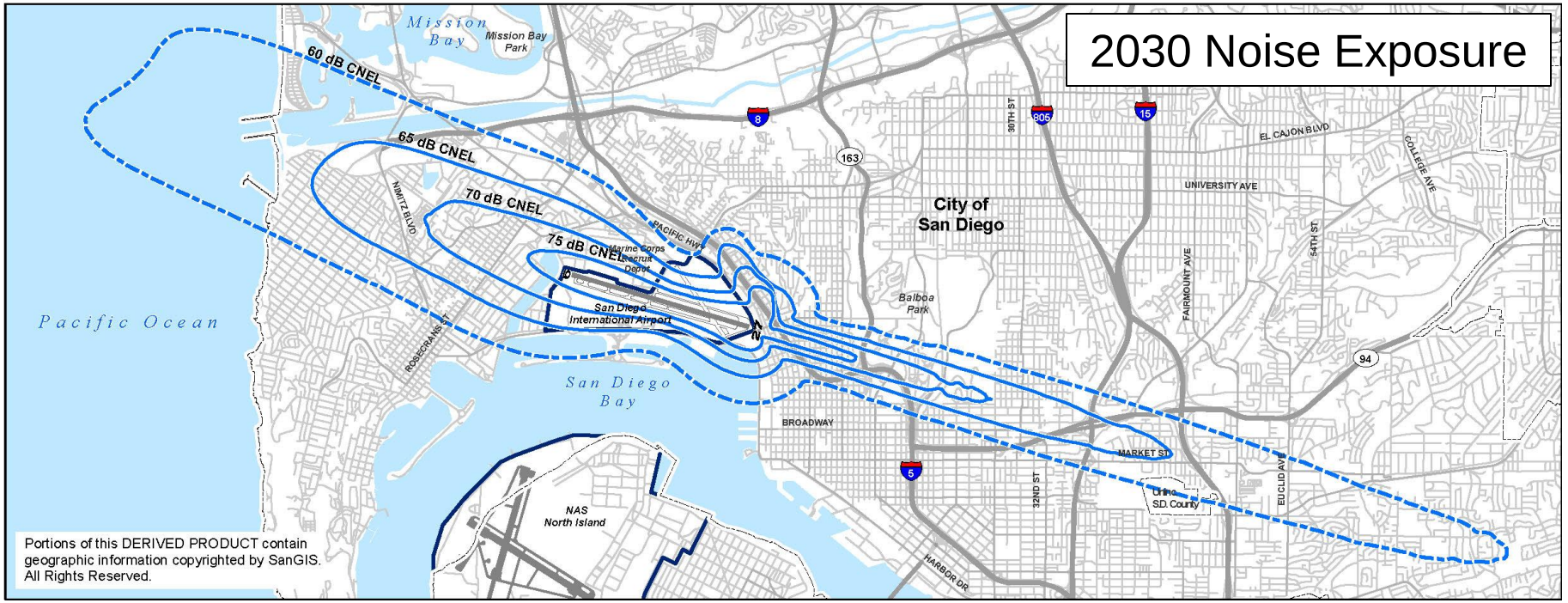
Noise Contours for Updated ALUCP

- Noise contours based on 2030 forecast activity
  - Based on most recent activity forecast
- Analysis prepared with FAA's Integrated Noise Model (INM)

2030 Noise Exposure




1990 Noise Exposure
60 dB CNEL
65 dB CNEL
70 dB CNEL
75 dB CNEL
Mission Bay
Mission Bay Park
Pacific Ocean
San Diego Bay
City of San Diego
Balboa Park
Marine Corps Recruit Depot
San Diego International Airport
NAS North Island
NIMITZ BLVD
ROSECRANS ST
PACIFIC HWY
ADAMS AVE
EL CAJON BLVD
UNIVERSITY AVE
COLLEGE AVE
30TH ST
32ND ST
54TH ST
FAIRMOUNT AVE
EUCLID AVE
BROADWAY
MARKET ST
NATIONAL AVE
HARBOR DR
Uninc. S.D. County
8
163
805
15
5
94


2030 Noise Exposure
60 dB CNEL
65 dB CNEL
70 dB CNEL
75 dB CNEL
Mission Bay
Mission Bay Park
Pacific Ocean
San Diego Bay
City of San Diego
Balboa Park
Marine Corps Recruit Depot
San Diego International Airport
NAS North Island
NIMITZ BLVD
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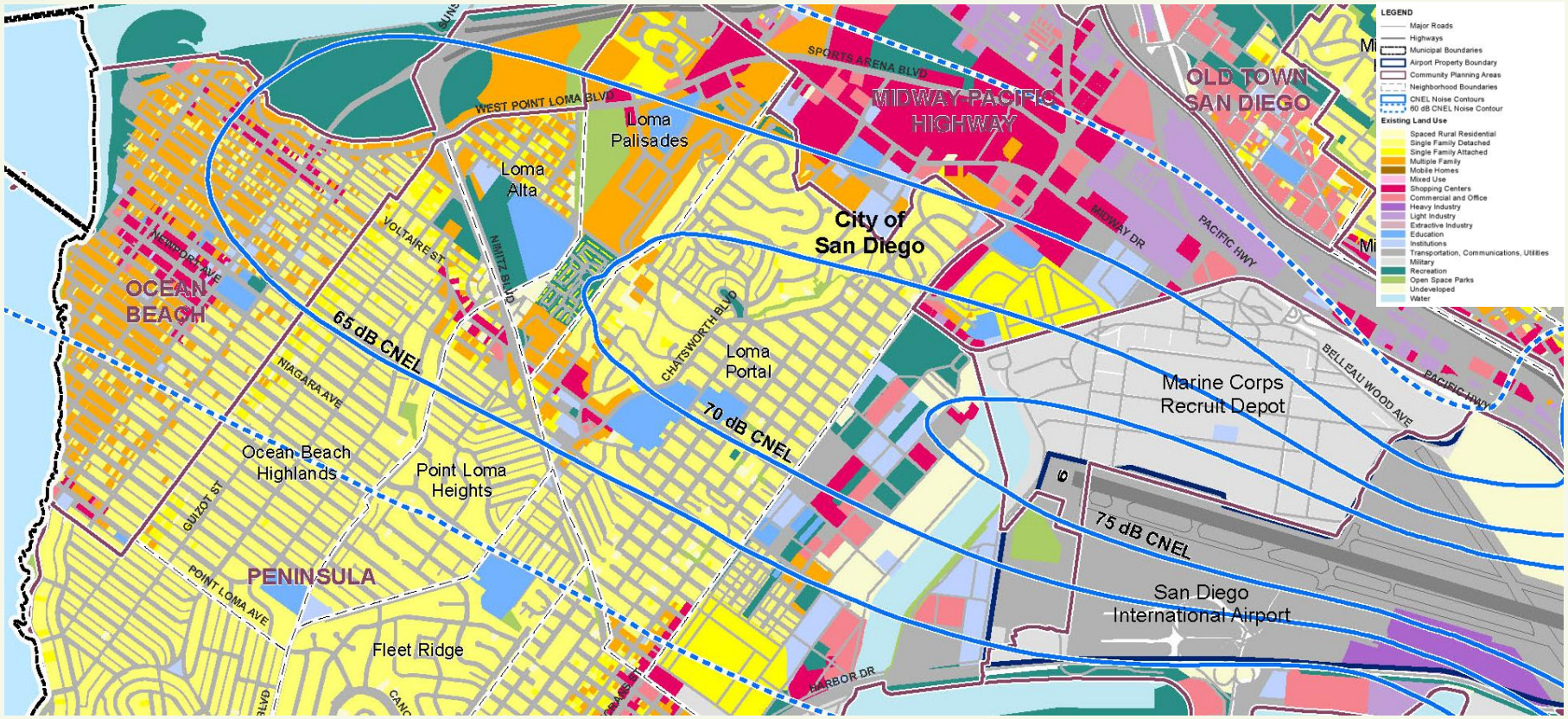
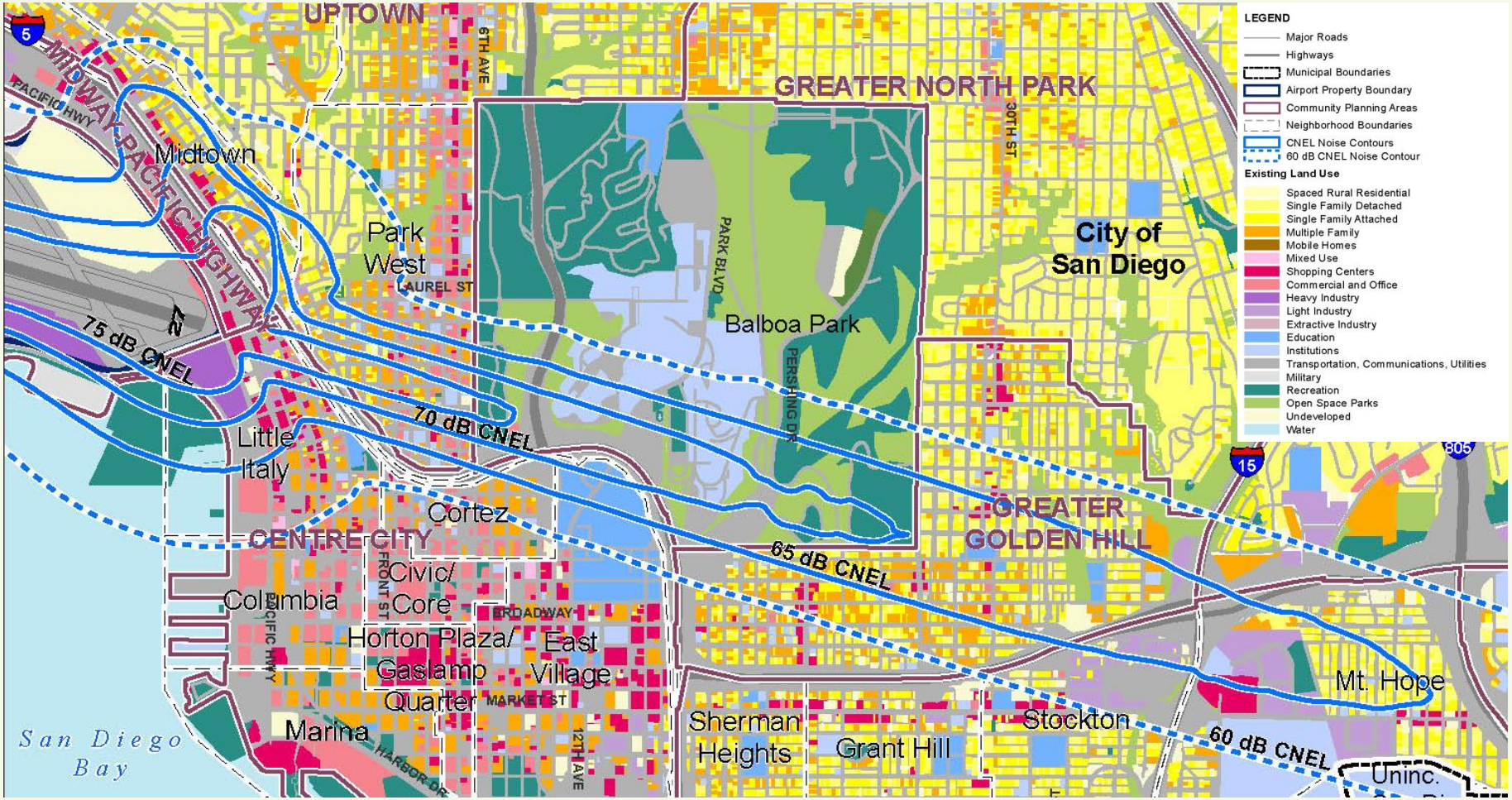
Considerations

- Area within noise contours fully built-out
- City policies aimed at neighborhood preservation
- SDCRAA is investing in neighborhoods through QHP
- Title 21 compliance requires noise compatibility

2030 Noise Exposure and Existing Land Use – West



2030 Noise Exposure and Existing Land Use – East



Draft Noise Matrix (Table 3)

Potential Noise Compatibility Criteria

Land Use Category *Note: Multiple categories may apply to a project*	Exterior Noise Exposure (dB *CNEL*) 60–65	 65–70	 70–75	 75 +
Child Care Facility (>14 children)	45			
Adult Educational Facility (Vocational/Trade School, College and University) Assembly (Religious/Fraternal) Hospital Nursing/Convalescent Facility Pre-K through Grade12 School	45	45[1]	45[1]	45[1]
Residential (Single-Family, Multi-Family, Shelter/Transitional Housing)	45	45[1]	45[1, 2]	45[1, 2]
Dormitory Hotel/Motel Library Museum/Gallery Performing Arts Center Prison Theater for Live Performance		45	45	45
Cinema Commercial Services Eating and Drinking Establishment (indoor component to be attenuated) Funeral/Mortuary Services Gym/Instructional Studio Office (including Medical/Dental) Public Safety Facility (Fire/Police) Retail Sales Veterinary Clinic/Animal Kennel			50	50

Draft Noise Matrix

Potential Noise Compatibility Criteria

Land Use Category *Note: Multiple categories may apply to a project*	Exterior Noise Exposure (dB *CNEL*) 60–65	65–70	70–75	75 +
Agriculture Arena Auto/Boat Repair Car Wash Cemetery (grounds only; not including indoor facilities) Gas Station Industrial/Manufacturing/Research and Development Marina Outdoor Storage/Junk Yard Parks and Recreation (Outdoor Stadium, Sports Field, Golf Course; Playground) Transportation Terminal/Vehicle Parking Utilities (Energy Generation and Distribution, Solid Waste, Wastewater, Recycling, Telecommunications) Warehouse/Storage Wholesale Retail				

	Compatible Use	
45/50	*Conditional Use*	Building structure must be capable of attenuating exterior noise to the interior *CNEL* indicated by the number.
1		[1] Use is required to dedicate an avigation easement to the Airport operator, per Policy 2.x.x.*
2		[2] New residential use is permitted only if the current local agency General/Community Plan designation allows for residential use. Local agency General/Community Plan Amendments from a nonresidential designation to a designation that would allow residential use are not permitted.
	Incompatible Use	

*This refers to an ALUC policy adopted in the Urban Airport ALUCPs that is anticipated to be included in the proposed SDIA ALUCP. That policy describes the conditions under which avigation easements are required for proposed development projects.

Draft Noise Compatibility Policies

Acceptable Noise Levels for Specific Types of Land Use Actions

The threshold for evaluation of the compatibility of proposed land uses with the noise policies of the SDIA ALUCP is the projected 60 dB CNEL contour. All land uses located outside this noise contour are consistent with the noise compatibility policies. The compatibility of new residential and nonresidential development with noise levels generated by the Airport is indicated in Table 3 (Noise Matrix).

- New residential development is permitted above the 70 dB CNEL contour only if the current local agency General/Community Plan designation allows for residential use. Local agency General/Community Plan amendments from a nonresidential designation to designation that would allow a residential use are not permitted.
- Land uses not specifically listed shall be evaluated using criteria for similarly listed uses, as determined by the ALUC.

Draft Noise Compatibility Policies

Application of Noise Compatibility Criteria

Noise contours shall be utilized, as follows, in assessing the compatibility of a proposed use at a specific development site.

- A proposed land use shall comply with the noise compatibility criteria for the CNEL range within which the proposed building(s) is/are located.
- When a proposed building lies within multiple CNEL ranges, the noise compatibility criteria for the CNEL range within with the largest proportion of the building is located, as determined by gross floor area, shall apply to the proposed building. Where the total floor area of a proposed building is divided equally among two or more CNEL ranges, the noise compatibility criteria for the most restrictive CNEL range shall apply.

Draft Noise Compatibility Policies

Application of Noise Compatibility Criteria (cont'd)

- Where a combination of land use types listed separately in Table 3 (Noise Matrix) is proposed for a single project, each component use must comply with the applicable noise compatibility criteria listed in the table. Ancillary uses – ones that occupy less than 10% of the total floor area – are not subject to the noise compatibility criteria A new land use proposed within an existing building (e.g., tenant improvement) is not subject to the noise compatibility criteria unless it is identified as "incompatible" in Table 3 (Noise Matrix).

Draft Noise Compatibility Policies

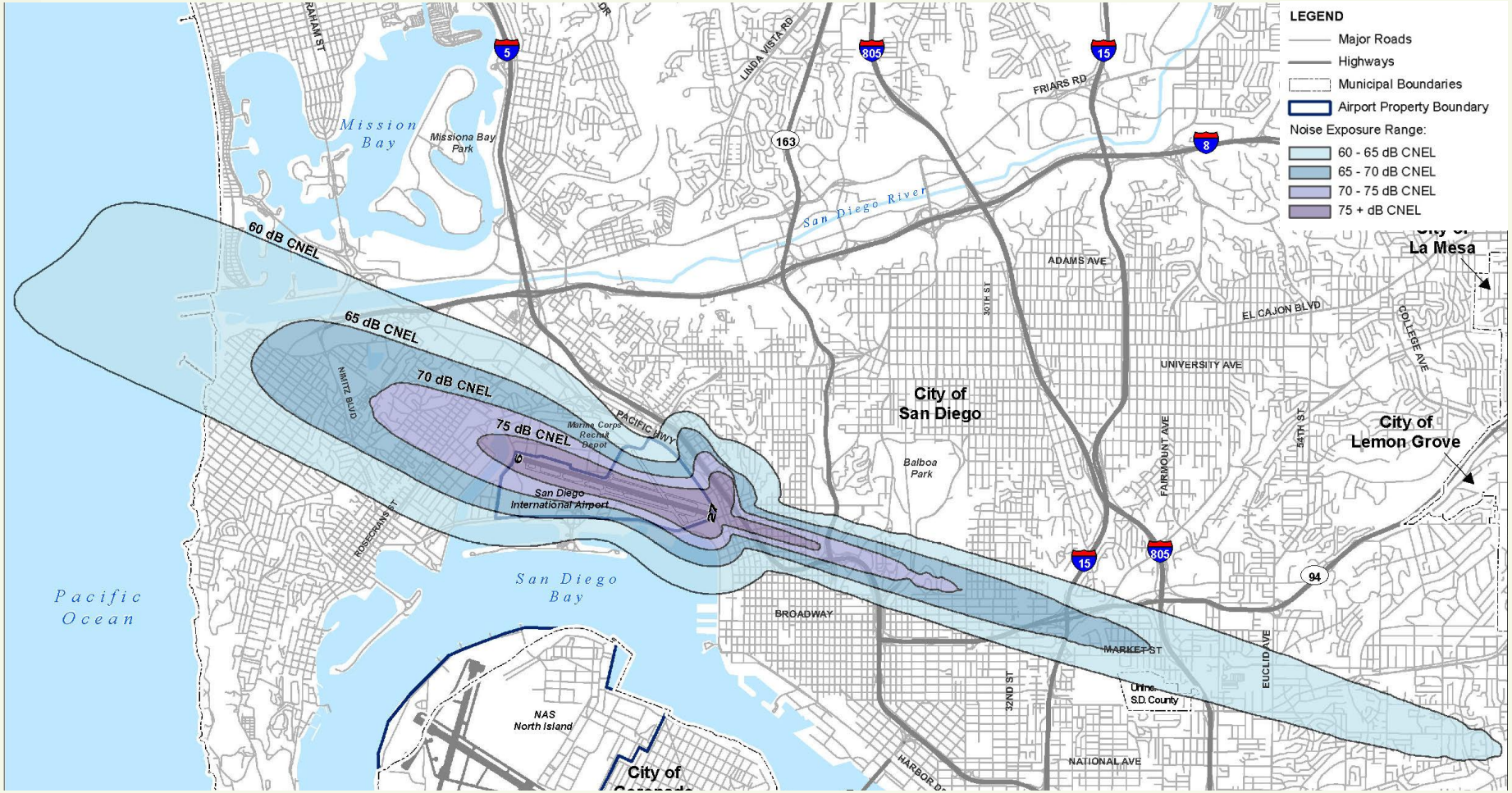
Avigation Easement Dedication

As a condition of approval for any project identified with Footnote 1 in Table 3 (Noise Matrix), the owner of the property involved shall be required to dedicate an avigation easement to the entity owning the Airport.

Staff Recommendation

That the ALUC recommend moving forward with the proposed noise contour map, matrix and policies, as presented.

2030 Noise Exposure



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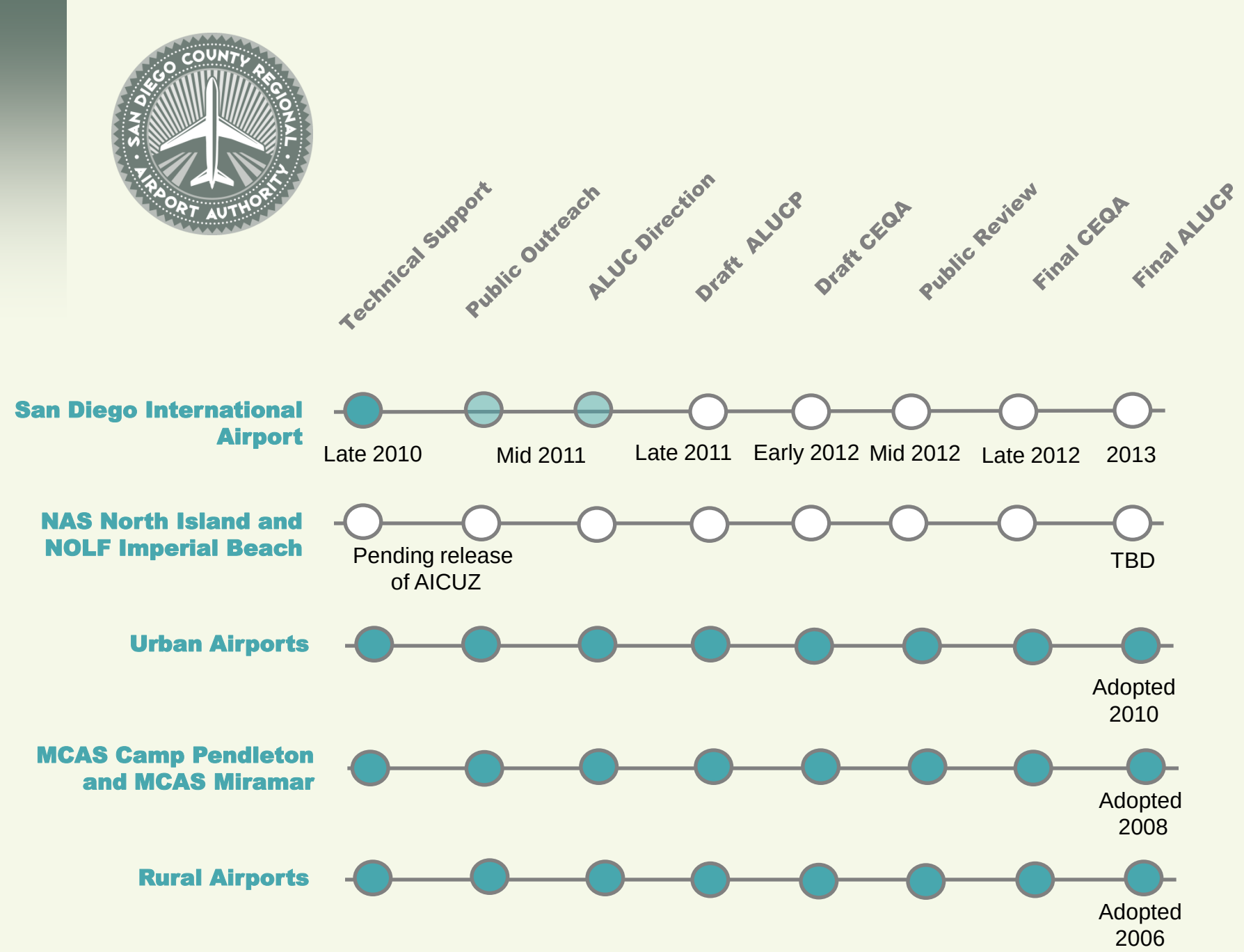
Technical Support
Public Outreach
ALUC Direction
Draft ALUCP
Draft CEQA
Public Review
Final CEQA
Final ALUCP
San Diego International Airport
Late 2010
Mid 2011
Late 2011
Early 2012
Mid 2012
Late 2012
2013
NAS North Island and NOLF Imperial Beach
Pending release of AICUZ
TBD
Urban Airports
Adopted 2010
MCAS Camp Pendleton and MCAS Miramar
Adopted 2008
Rural Airports
Adopted 2006

Next Steering Committee Meeting

- July 21, 2011- focus will be on how future land use could be impacted by safety

Questions?