LAX
Los Angeles World Airports

Welcome!

Los Angeles International Airport
FAR Part 150 Noise Exposure Map Report Update

Public Information Workshop #1

May 2014

Los Angeles International Airport
FAR Part 150 Noise Exposure Map Report Update

Project Overview

- **Los Angeles World Airports (LAWA) has initiated an update of the Federal Aviation Regulations (FAR) Part 150 Noise Exposure Map (NEM) report for LAX**

- **The Alta Environmental Team has been selected by LAWA to prepare the LAX Part 150 NEM report**

- **The goal is to submit updated noise exposure maps for LAX to the Federal Aviation Administration (FAA) in 2015**

- **LAWA is updating the LAX NEMs to ensure continued eligibility for sound insulation program funding**

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Project Overview

- **LAWA developed noise exposure maps for LAX in 1981 as part of an Airport Noise and Land Use Compatibility (ANCLUC) Study**

- **The FAA typically uses the airport's future year noise exposure map to determine eligibility for federal funding of noise mitigation programs (e.g., sound insulation)**

- **The FAA is currently relying on the 2015 LAX Master Plan Alternative D Community Noise Equivalent Level (CNEL) contours for funding current LAX sound insulation programs**

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Project Overview

- **The NEM report must be prepared in accordance with the guidance provided in FAR Part 150**

- **FAR Part 150 includes detailed guidance and a checklist of the items that must be included in the FAR Part 150 NEM report**

- **For example, the NEM report must include aircraft noise exposure contours for the year of submission and a future year (typically five years in the future)**

  - **The Alta Environmental Team will produce NEMs for 2015 and 2020**

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Project Overview

- **This LAX NEM report update is not an airport master plan update, FAR Part 161 Study, FAR Part 150 Noise Compatibility Program Update, and is not related to other ongoing studies**

- **The project team will develop an aircraft operations and fleet mix forecast for FAA's review and approval**

- **The project team will consider completed and ongoing planning and environmental studies to ensure noise modeling assumptions are reflective of existing conditions and anticipated conditions in 2020**

- **The 2020 NEM must be based on "reasonably foreseeable" assumptions regarding future operations at LAX**

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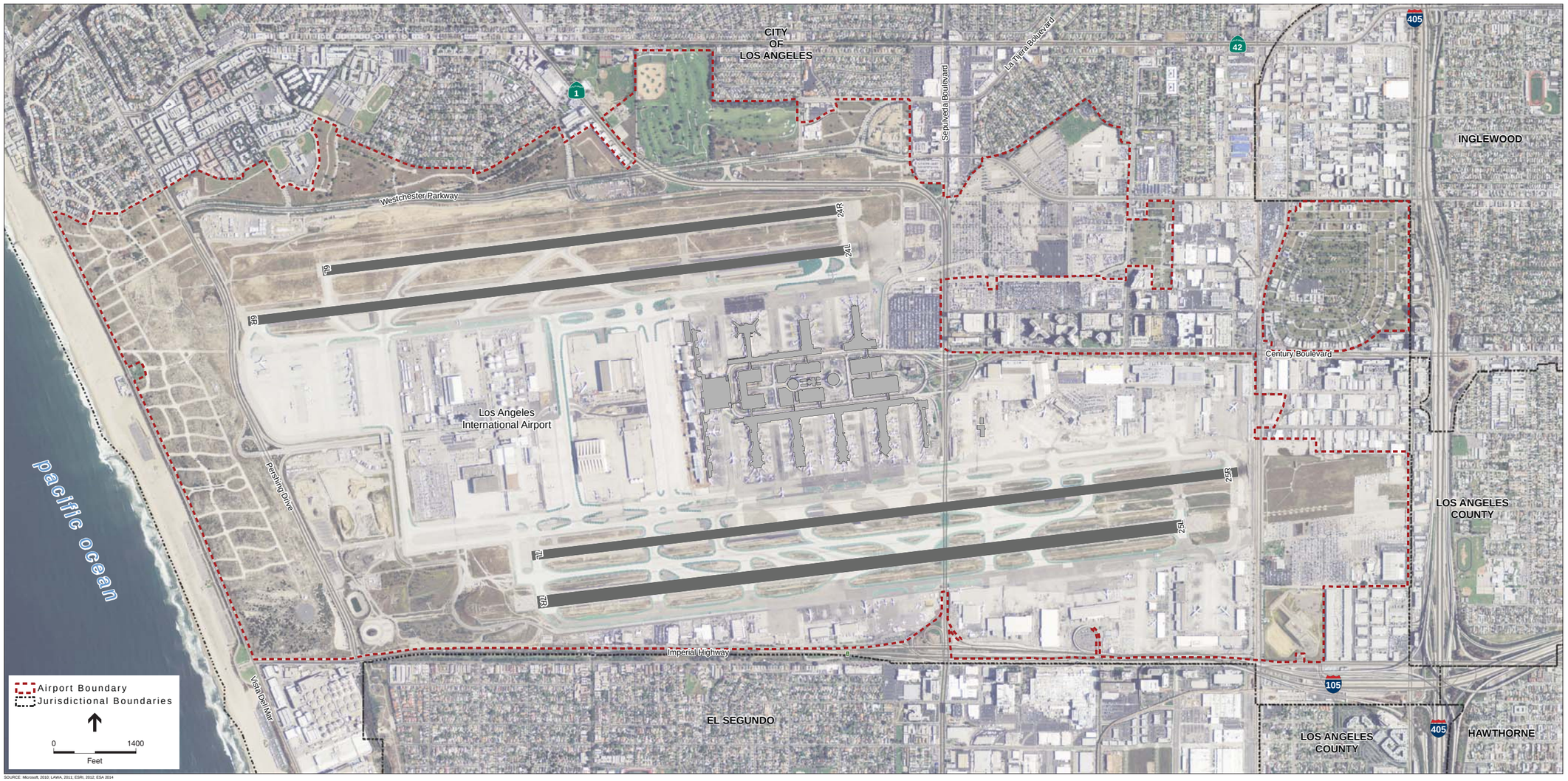
Existing Facilities



SOURCE: Microsoft, 2010; LAWA, 2011; ESRI, 2012; ESA 2014

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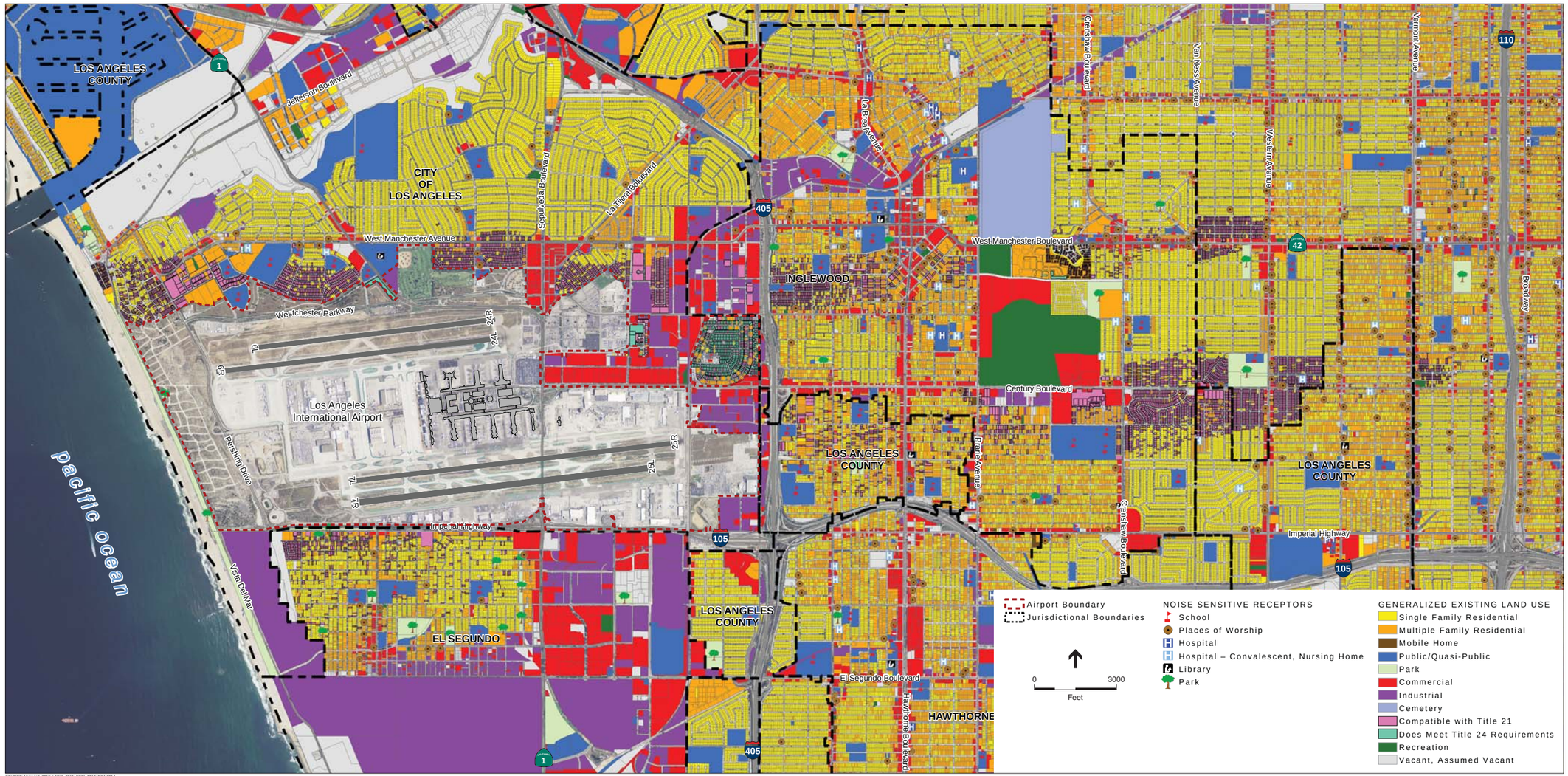
Existing Land Uses in the Study Area



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The LAX NEM Report Update Will:

- **Quantify existing and future aircraft noise exposure levels in the vicinity of LAX**
- **Provide the FAA and LAWA with a new set of NEMs to assess future noise mitigation needs**

During The LAX NEM Report Update LAWA Will Not:

- **Develop or recommend noise abatement or noise mitigation measures designed to minimize aircraft noise impacts**
- **Determine the sound insulation program boundaries**
- **Identify properties that are eligible for sound insulation**

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FAR Part 150 Terminology

Noise Exposure Contours

A noise exposure contour identifies areas of equal noise exposure around an airport. Noise exposure contours are similar to contours on topographic maps which show areas of equal elevation.

Noise Exposure Maps or NEMs

A noise exposure map is a map showing noise exposure contour lines (or footprints) which identify areas of specific noise levels around an airport. NEMs also include a graphic depiction of geographical features and land uses that surround an airport.

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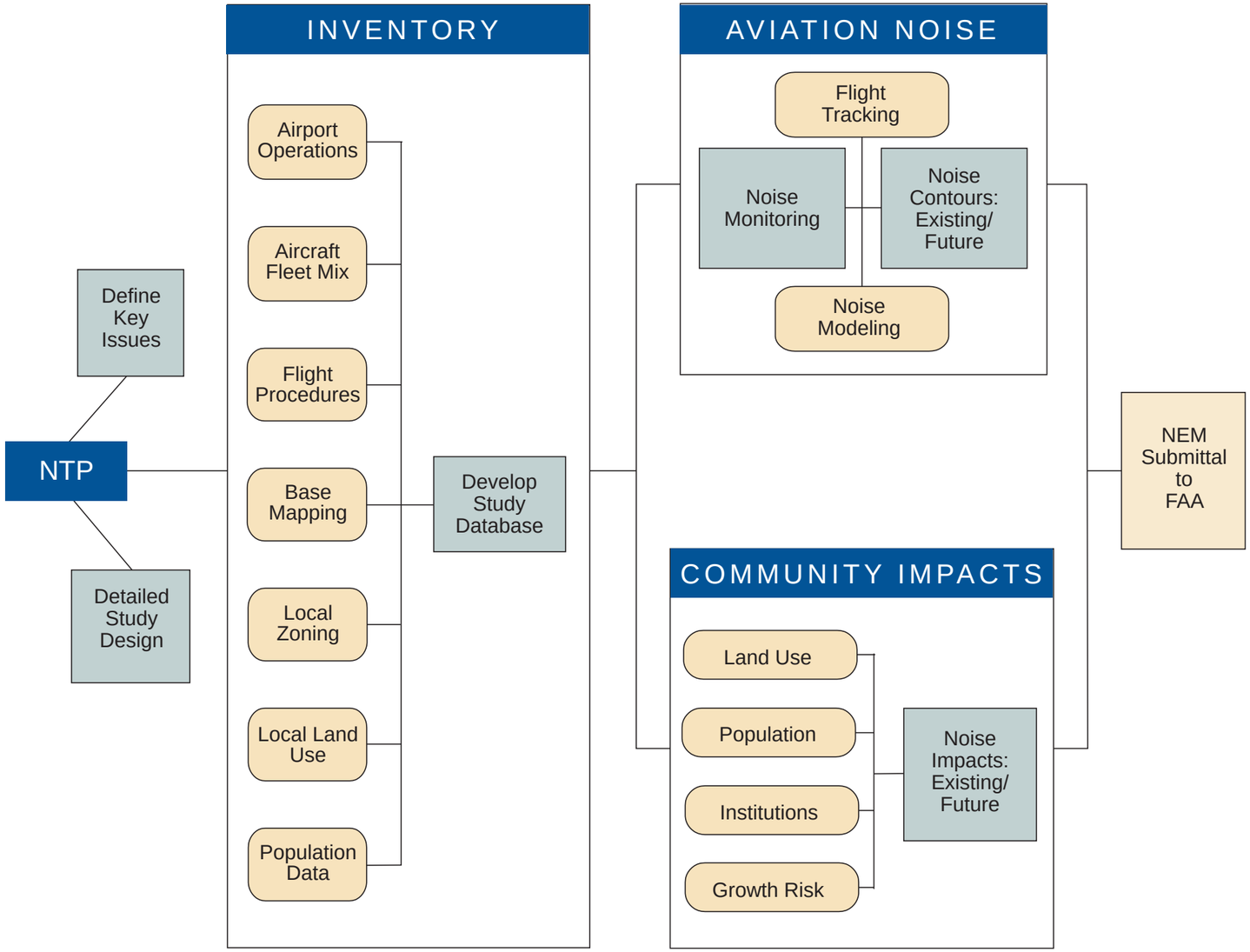
FAR Part 150 NEM Update Process



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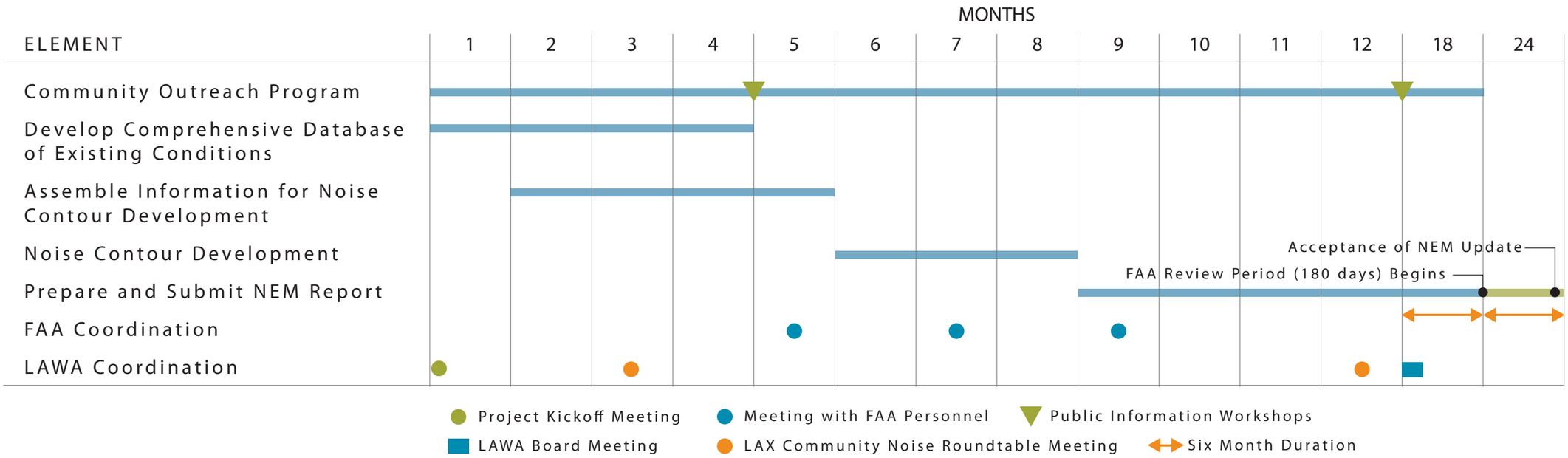
Project Schedule



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Who Can Regulate Airport Noise?

- **Federal Aviation Administration**
  - **Controls aircraft while in flight**
  - **Responsible for controlling noise at its source (i.e., aircraft engines)**
  - **Certifies aircraft and pilots**
- **Airport Proprietors/LAWA**
  - **Limited authority to adopt local restrictions**
  - **Responsible for capital improvement projects and infrastructure**
- **Local Governments and States**
  - **Promote compatible land use through zoning**
  - **Require real estate disclosure**
  - **Mandate sound-insulating building materials**

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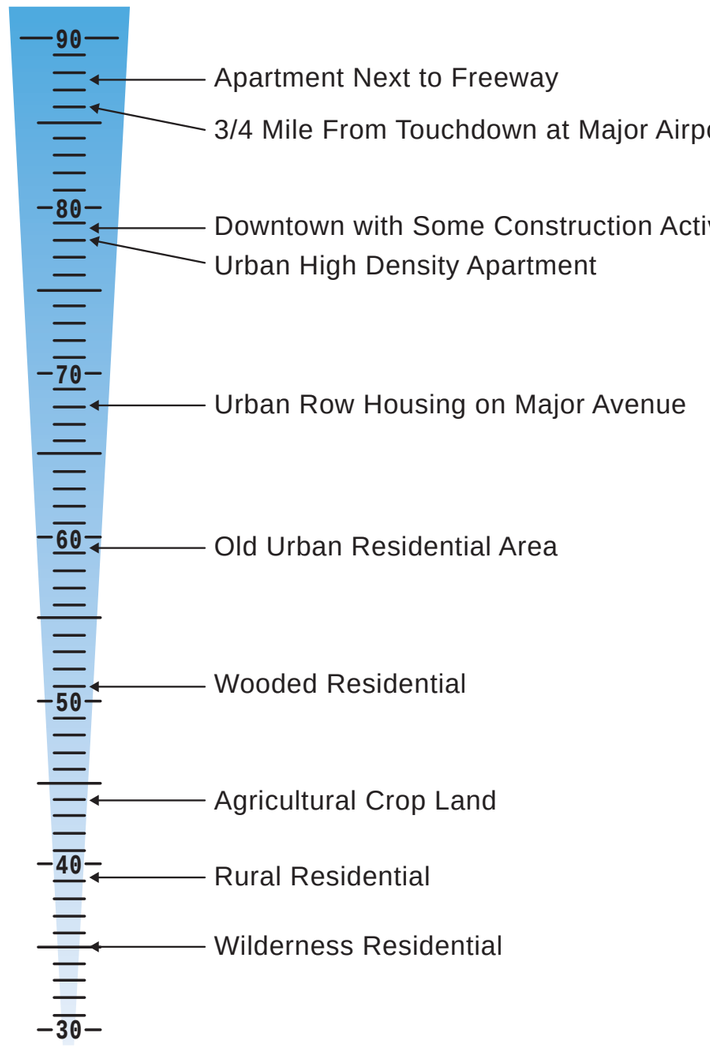
The Decibel Scale

NORMAL NUMBERS	DECIBELS	COMMON SOUNDS
100,000,000,000,000	140	Near Jet Engine
10,000,000,000,000	130	Threshold of Pain
1,000,000,000,000	120	Night Club
100,000,000,000	110	
10,000,000,000	100	Pneumatic Hammer at 6 Feet
1,000,000,000	90	
100,000,000	80	Vacuum Cleaner
10,000,000	70	
1,000,000	60	Normal Speech
100,000	50	
10,000	40	Quiet Residential neighborhood
1,000	30	
100	20	Whisper
10	10	
1	0	Threshold of Hearing
0.1	-10	
0.01	-20	

Sample CNEL Values



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Day-Night Average Sound Level (DNL) and Community Noise Equivalent Level (CNEL)

DNL	CNEL	
√	√	24-hour time-weighted energy average noise level measured in dBA
√	√	Captures the noise exposure for individual aircraft noise events during the course of a 24-hour day
	√	Noise occurring between 7 p.m. to 10 p.m. is penalized by approximately 4.8 dB - Penalty was selected to account for the sensitivity to aircraft noise and activity interference during the evening hours
√	√	Noise occurring between 10 p.m. to 7 a.m. is penalized by 10 dB - Penalty was selected to account for the higher sensitivity to aircraft noise and lower background noise levels during nighttime hours
	√	Specified in Title 21 of the California Airport Noise Regulations and required for use in the development of aircraft noise exposure contours
√	√	Specified in 14 CFR Part 150 and required for use in the development of aircraft noise exposure contours (FAA permits the use of CNEL for noise studies in California)
√	√	Demonstrates a strong relationship between increased aircraft noise and increased human annoyance

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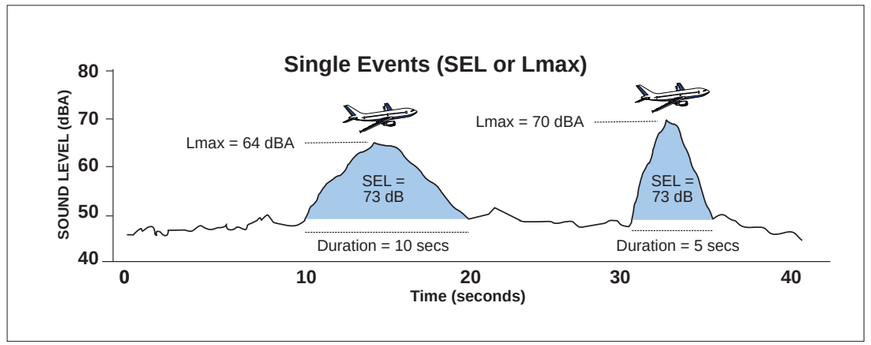
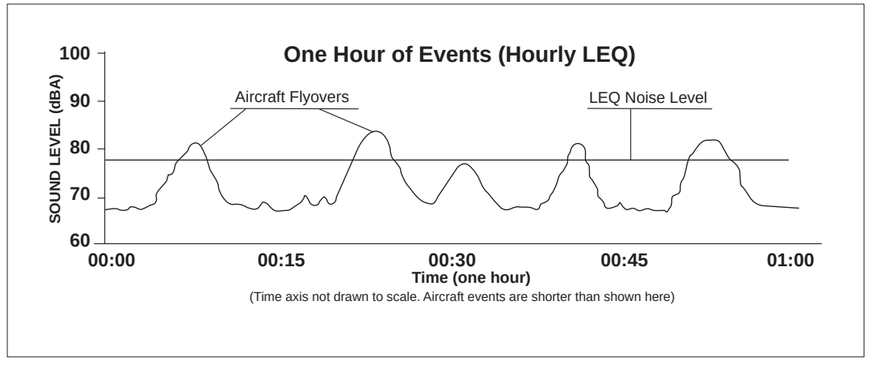
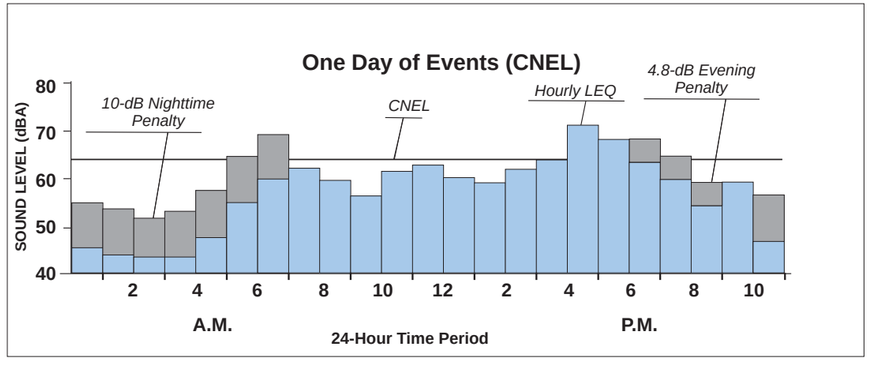
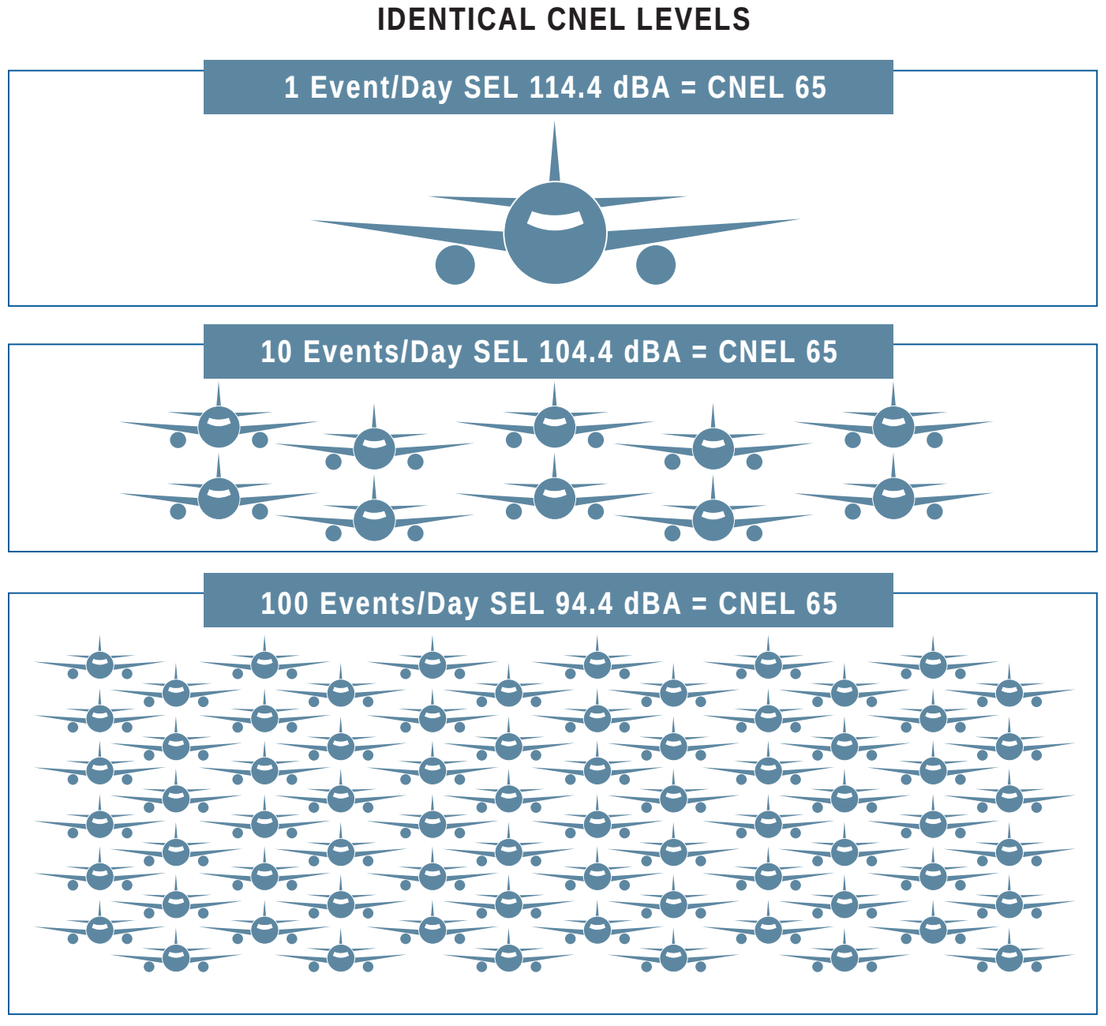
Aircraft Noise Levels









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