



**COUNTY *of* VENTURA**

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Department of Airports



**COUNTY of VENTURA**  
Department of Airports

*14 CFR Part 150 Noise  
Compatibility Planning Study*

# **OXNARD AIRPORT**

County of  
Ventura



# Welcome and Introductions

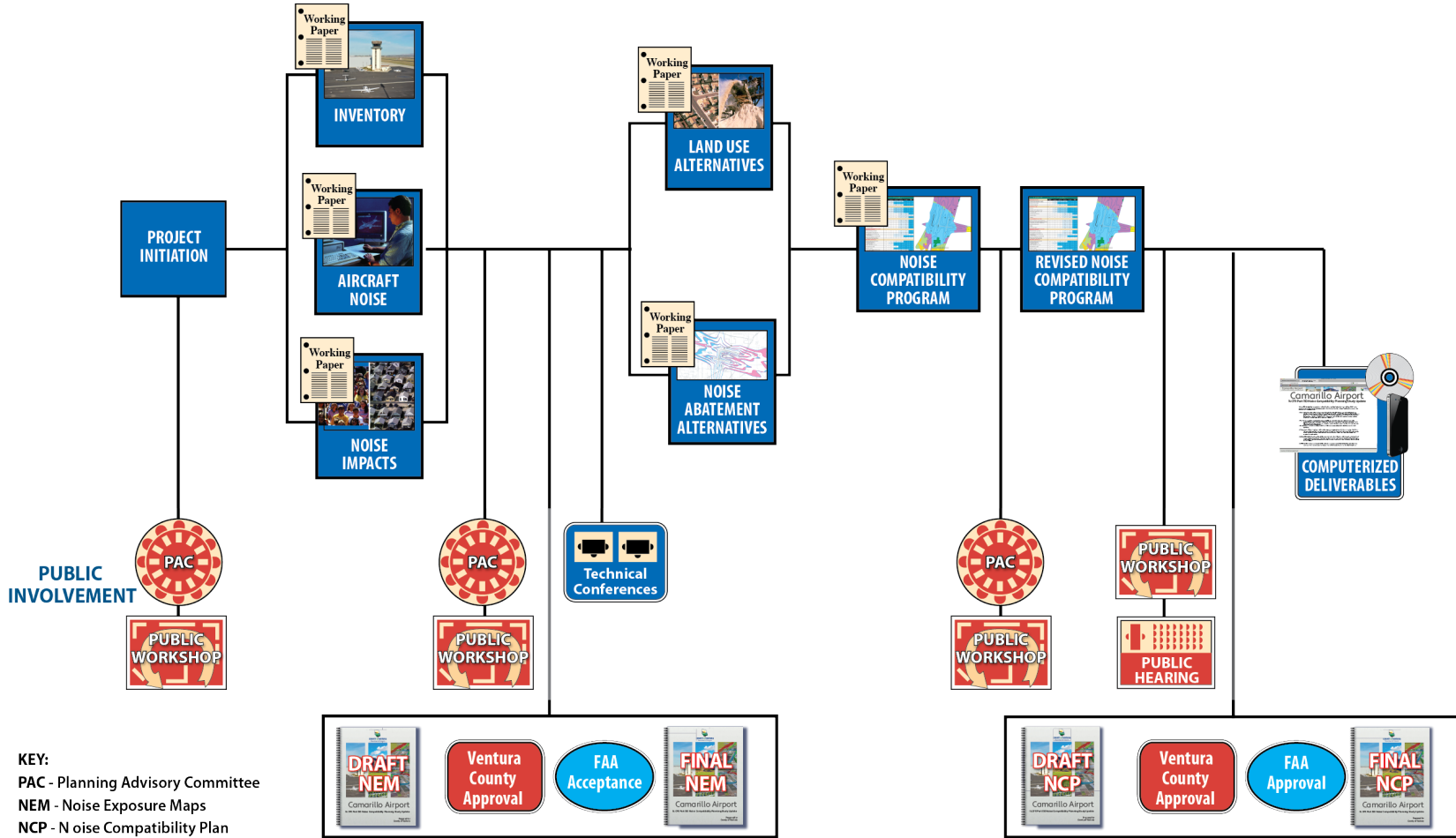


# Agenda

- 1. Welcome and Introductions**
  - Keith Freitas, Ventura County Department of Airports
- 2. Study Process and Proposed Meeting Schedule**
  - Dave Fitz, Coffman Associates
- 3. PAC Roles and Responsibilities**
  - Dave Fitz, Coffman Associates
- 4. Noise Exposure Maps Overview**
  - Kory Lewis, Coffman Associates
- 5. Noise Exposure Maps Inventory**
  - Madeline Holliman, Coffman Associates
- 6. Noise Modeling Overview**
  - Kory Lewis, Coffman Associates
- 7. Operations Forecasts**
  - Matt Quick, Coffman Associates
- 8. What are your expectations for the Oxnard Airport Part 150 Study?**
  - Elsa Argomaniz, Arellano Associates
- 9. Adjournment**

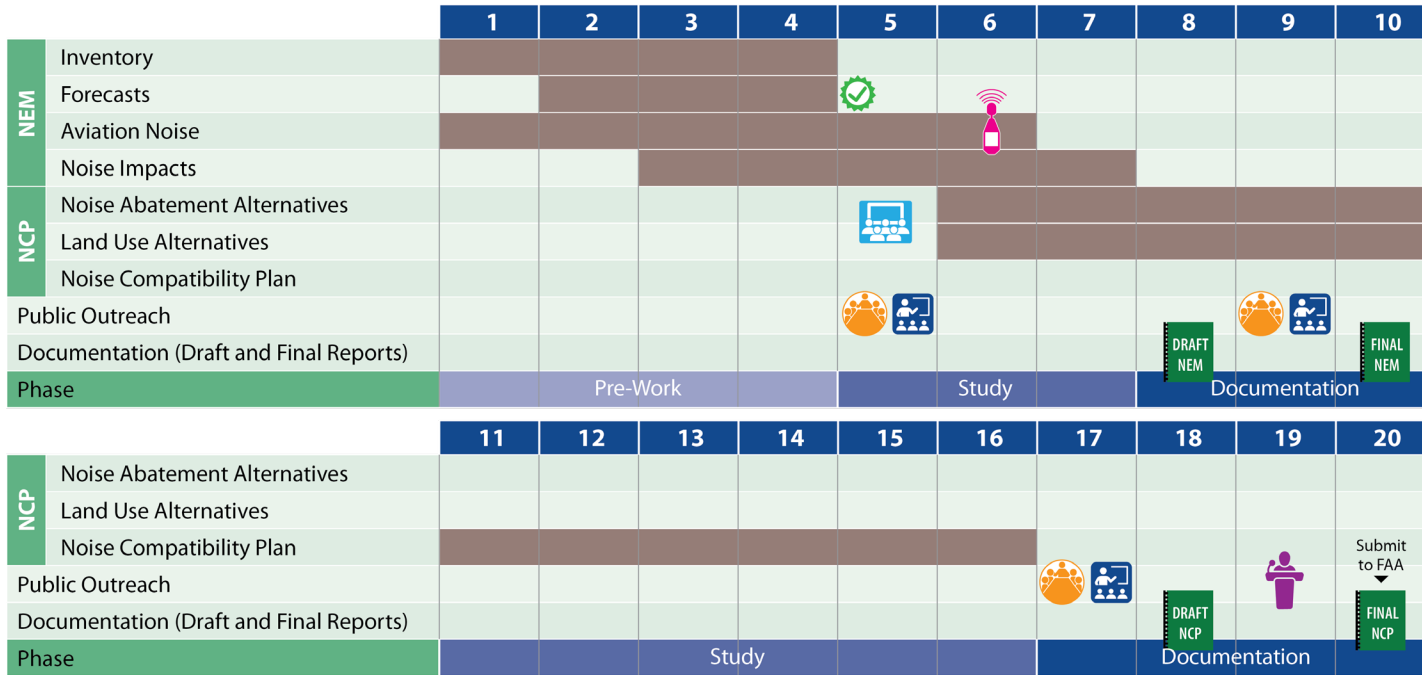
- **Spanish and Mixteco Interpretation Services are available**
- **What are your expectations for the Oxnard Airport Part 150 Study?**





**KEY:**  
 PAC - Planning Advisory Committee  
 NEM - Noise Exposure Maps  
 NCP - Noise Compatibility Plan

# Project Timeline



**LEGEND**

- FAA Approval of Forecasts
- Public Information Workshop
- Print/Electronic Document
- Noise Measurements
- Aviation & Land Use Technical Conferences
- NEM** - Noise Exposure Maps
- Planning Advisory Committee
- Public Hearing and/or Information Workshop
- NCP** - Noise Compatibility Plan

## PAC Roles and Responsibilities

- Sounding Board
- Linkage to the Community
- Resource
- Critical Review





# Noise Exposure Map Overview



### ***A NOISE EXPOSURE MAP:***

- ▶ Identifies the current and projected annualized aircraft noise levels at Oxnard Airport using the Community Noise Equivalent Level (CNEL) noise metric.
- ▶ Identifies measures to reduce the noise impacts within the noise exposure contours from aircraft operating to and from Oxnard Airport through changes in aircraft operations or airport facilities.

### ***A NOISE EXPOSURE MAP DOES NOT:***

- ▶ Evaluate aircraft operations from other area airports.
- ▶ Consider other types of impacts (air quality, accidents, etc.).
- ▶ Use noise metrics other than CNEL to determine noise impacts.
- ▶ Provide justification for airport expansion.

### ***A NOISE COMPATIBILITY PROGRAM:***

- ▶ Encourages future land uses which are compatible with aircraft noise, such as commercial or industrial in undeveloped areas.
- ▶ Determines methods to reduce the adverse impacts of noise above FAA thresholds in existing residential areas.
- ▶ Establishes a procedure to implement, review, and update the program.



## PILOT

- Responsible for safe operation of aircraft in the air and on the ground



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## VENTURA COUNTY

- No control over aircraft in flight
- May establish run-up times, voluntary noise abatement procedures, and traffic patterns



## LAND USE REGULATIONS



### VENTURA COUNTY

- Responsible for maintaining a safe airport
- Coordinates with neighboring communities & developers to promote land use compatibility



## FAA

- Establishes airspace - where aircraft may be flown
- Sets aircraft noise standards
- Certifies aircraft and pilots



## OTHER MUNICIPALITIES

- Promote compatible land use through zoning
- Set noise ordinances, but aircraft are exempt per City of Burbank v. Lockheed Air Terminal (411 U.S. 624 (1973))



## UNITED STATES

- Establishes the Part 150 Land Use Compatibility Planning Process
- No land use authority



## STATE OF CALIFORNIA

- Requires real estate disclosure within the Airport Influence Area (AIA)
- Requires sound insulation for new residential construction within the 60 CNEL noise contours
- Enables local land use planning through adoption of zoning ordinances and a General Plan
- Requires preparation of Airport Land Use Compatibility Plan (ALUCP)

# Noise Exposure Map Inventory



# Chapter 1 – Inventory Outline

## Roles and Responsibilities

- Federal
- State
- Local

## Land Use Policies and Regulations

- Existing
- Zoning
- General Plan

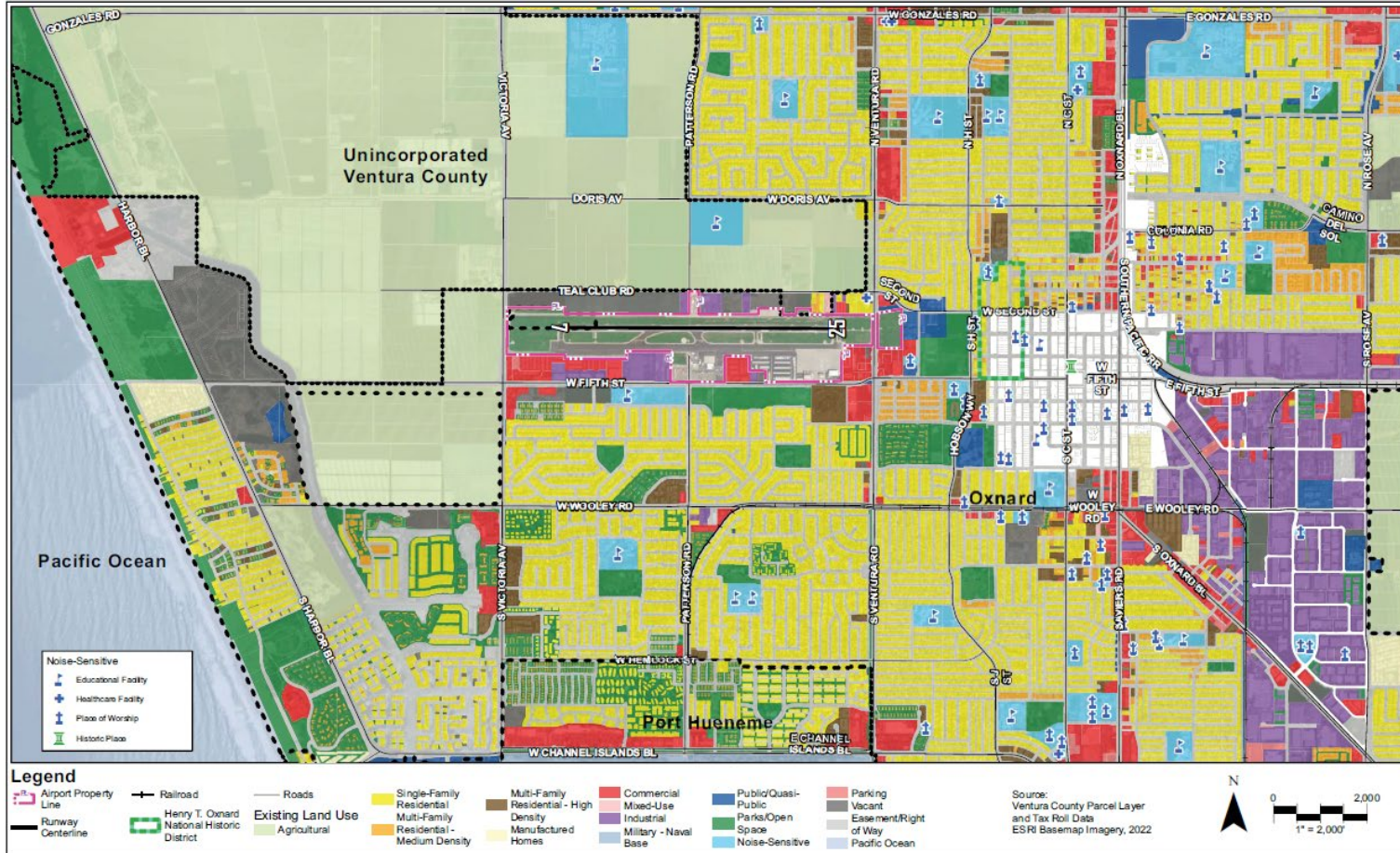
## Airport Facility Information

- Airside Facilities
- Landside Facilities
- Voluntary Noise Abatement Procedures

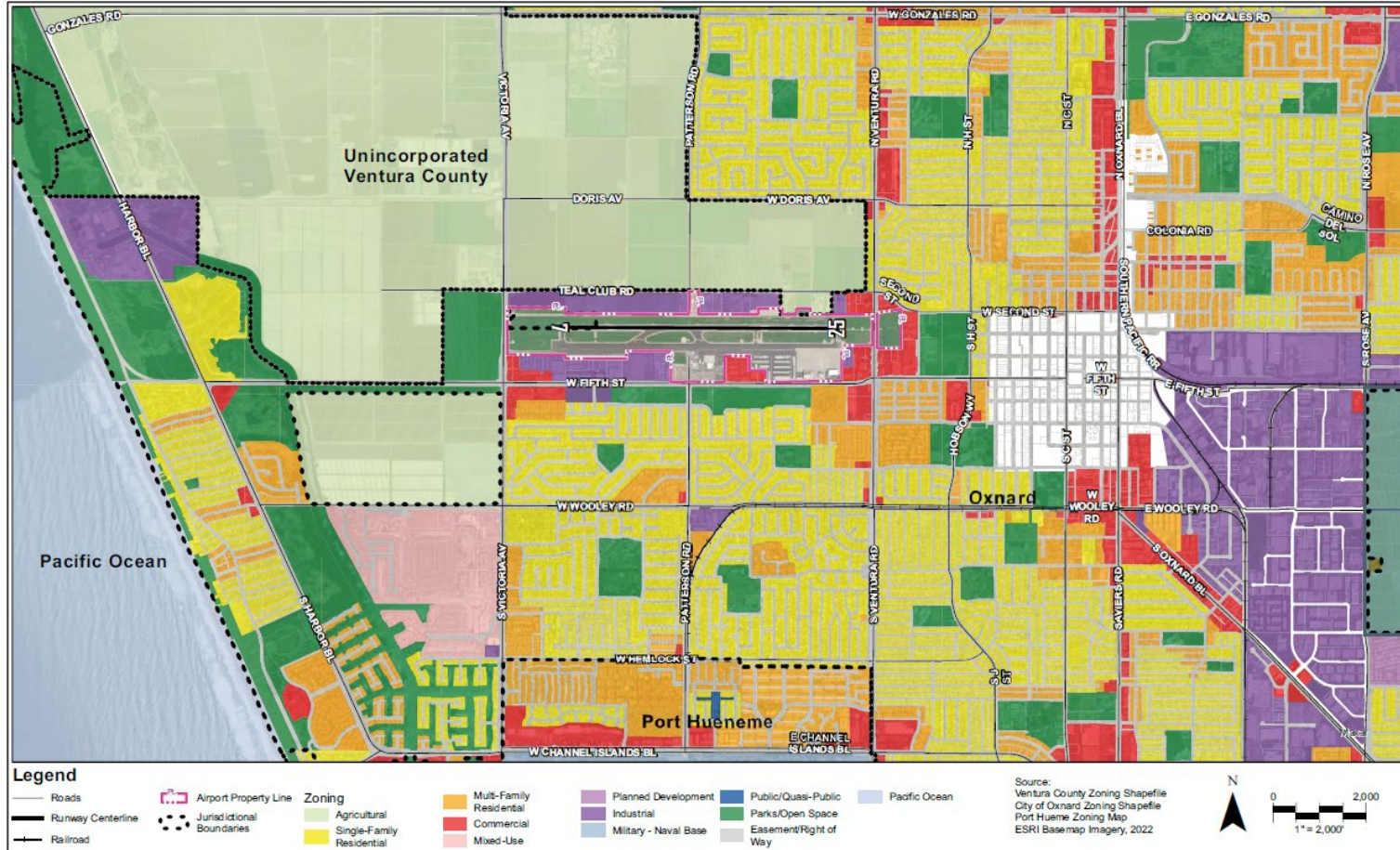




# Existing Land Use



# Zoning









## Fly Friendly Ventura County

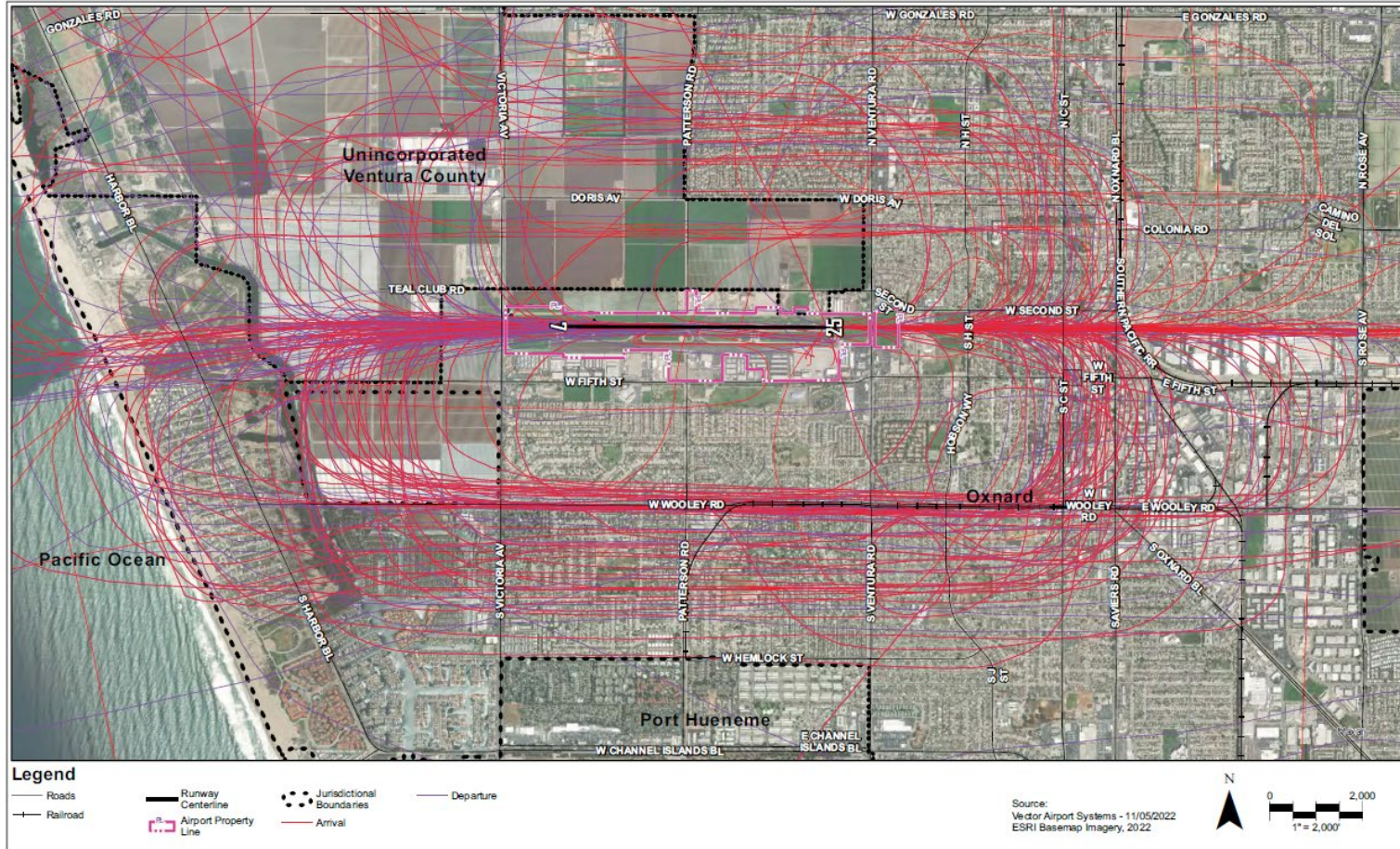


- Pilot Guide updated in 2022
- Distributed to aviation stakeholders, pilots and local flight schools
- Includes voluntary noise abatement procedures
- Available in print and on the Department of Airports website

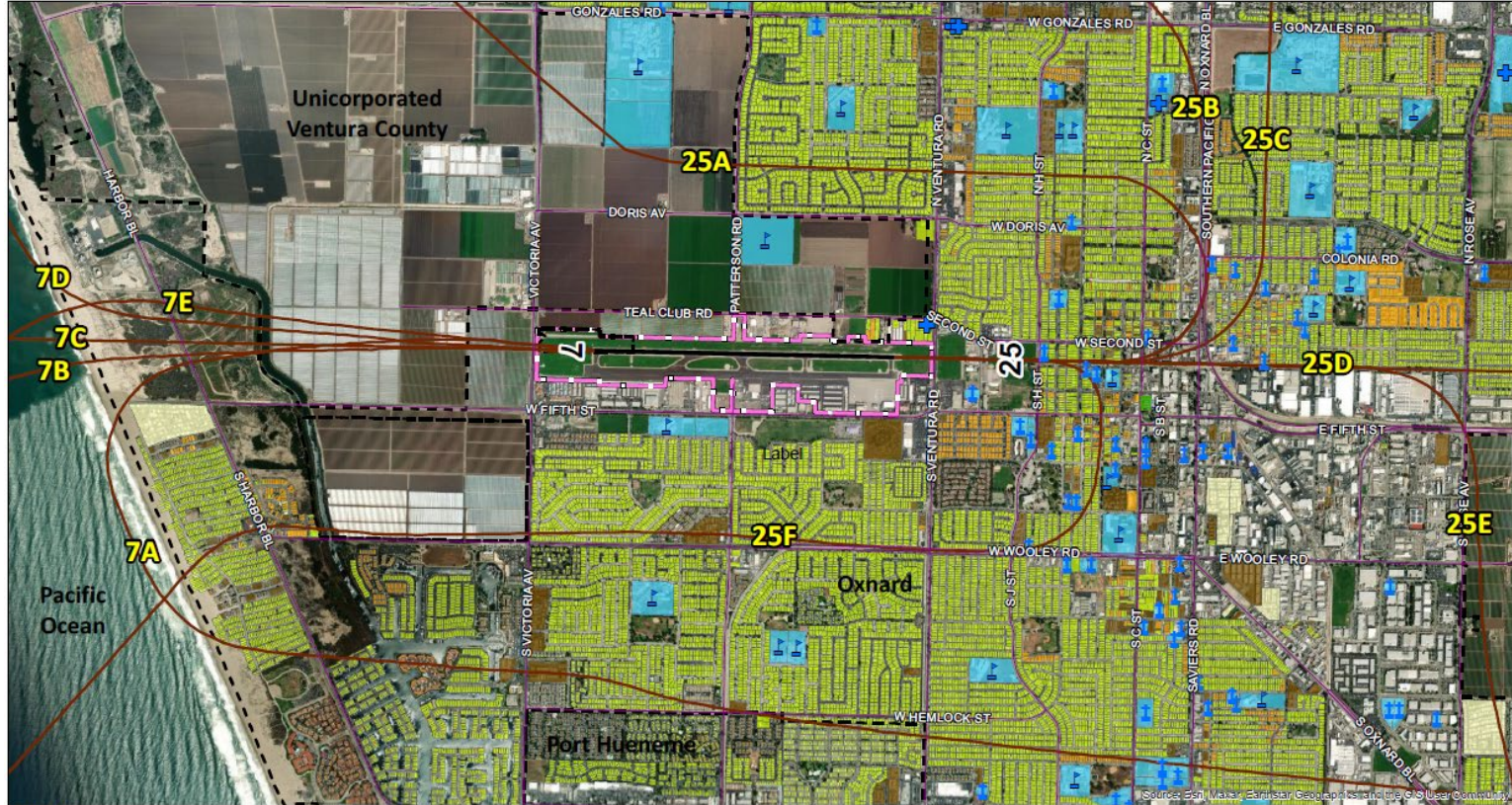
# Noise Modeling Overview



# Radar Flight Tracks



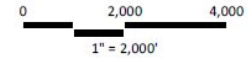
# Consolidated Arrival Flight Tracks



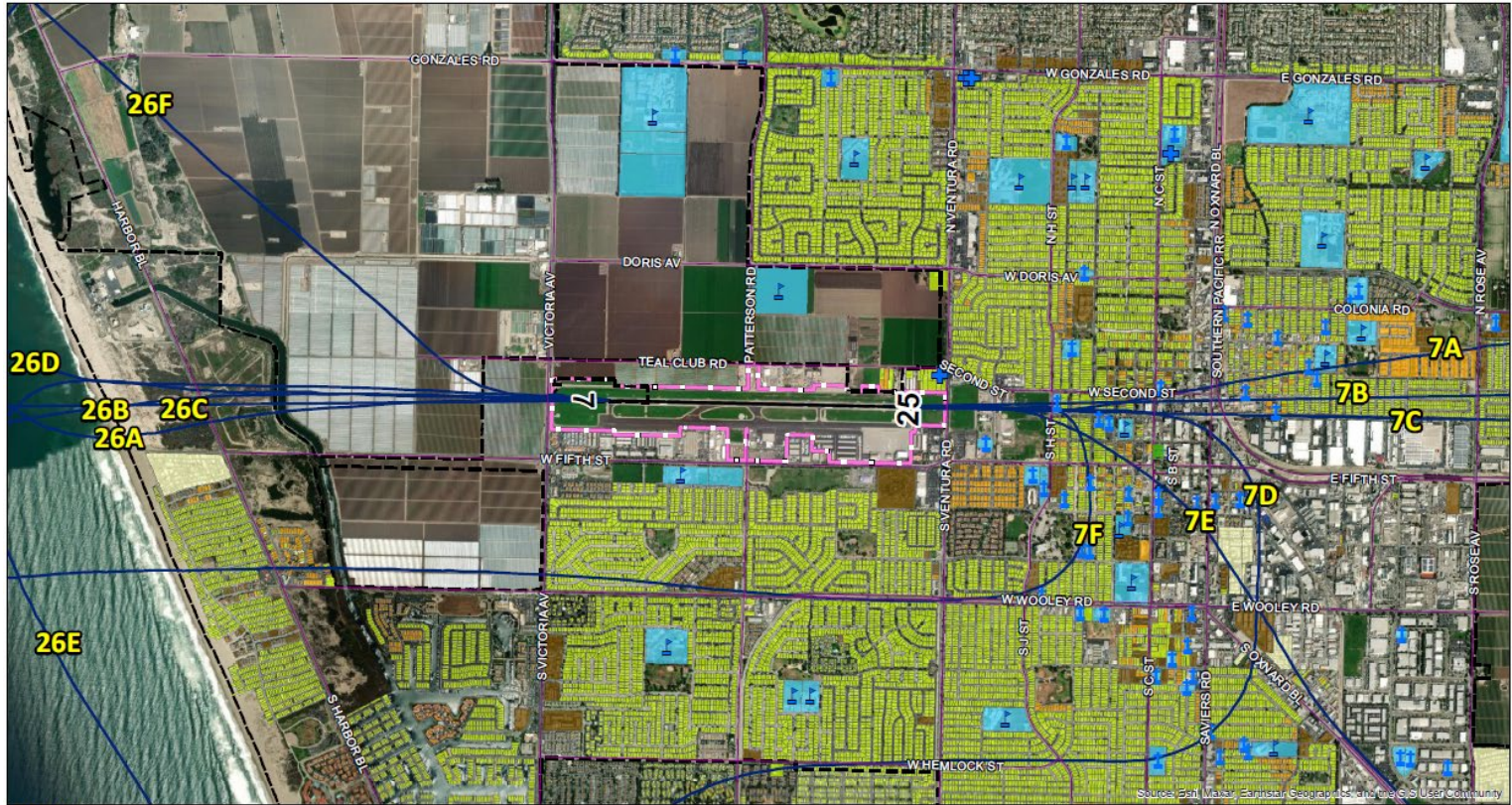
**LEGEND**

- |                             |                      |                           |   |                    |
|-----------------------------|----------------------|---------------------------|---|--------------------|
| Roads                       | Educational Facility | Jurisdictional Boundary   | Single-Family Residential                 | Manufactured Homes |
| Runway Centerline           | Healthcare Facility  | Airport Property Boundary | Multi-Family Residential - Medium Density | Noise Sensitive    |
| Consolidated Arrival Tracks | Place of Worship     |                           | Multi-Family Residential - High Density   |                    |

Source: ESRI Basemap Imagery (2022)  
Flight track data from Vector Airport Systems.



# Consolidated Departure Flight Tracks



**LEGEND**

- Roads
- Runway Centerline
- Consolidated Departure Tracks
- Educational Facility
- Healthcare Facility
- Place of Worship
- Airport Property Boundary
- Jurisdictional Boundary
- Single-Family Residential
- Multi-Family Residential - Medium Density
- Multi-Family Residential - High Density
- Manufactured Homes
- Noise Sensitive

Source: ESRI Basemap Imagery (2022)  
Flight track data from Vector Airport Systems.

0 2,000 4,000  
 1" = 2,000'

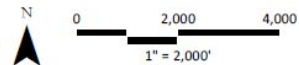
# Consolidated Touch and Go Flight Tracks



**LEGEND**

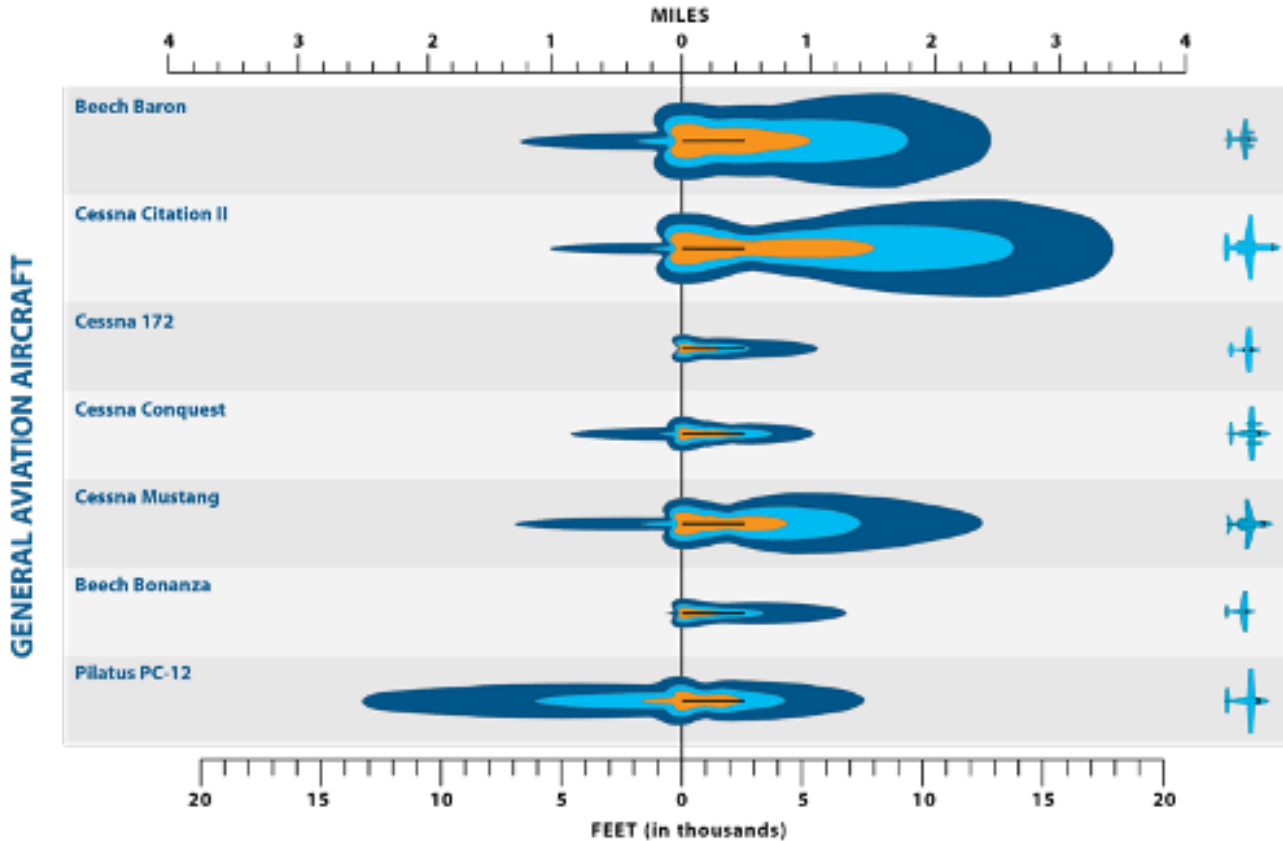
- Roads
- Runway Centerline
- OXR\_Consolidated\_tng
- Educational Facility
- Healthcare Facility
- Place of Worship
- Airport Property Boundary
- Jurisdictional Boundary
- Single-Family Residential
- Multi-Family Residential - Medium Density
- Multi-Family Residential - High Density
- Manufactured Homes
- Noise Sensitive

Source: ESRI Basemap Imagery (2022)  
Flight track data from Vector Airport Systems.  
Representative sampling used not all records shown.



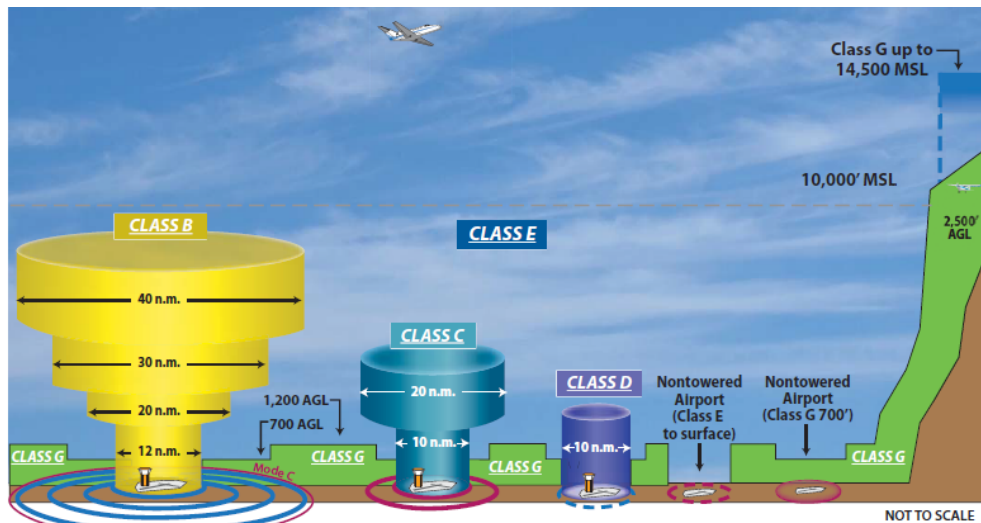


# Aircraft Noise Footprint Comparison



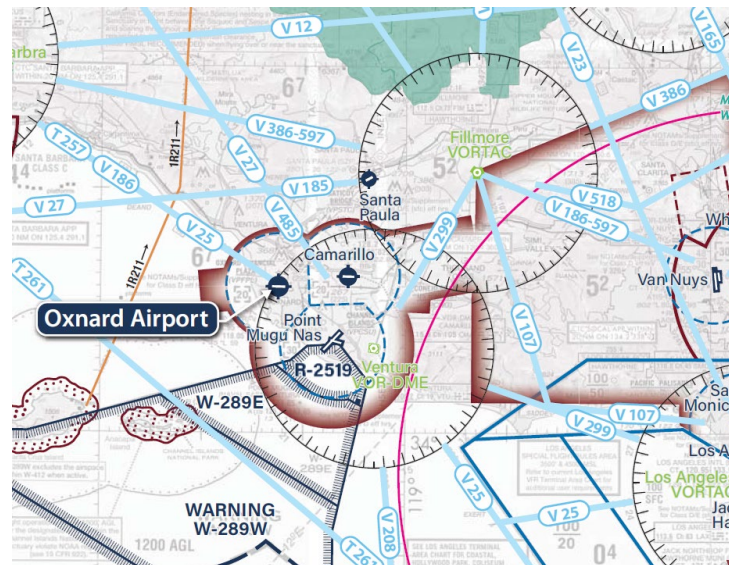
The contours represent sound exposure levels (SEL) of 85, 90 and 95 dB for one arrival and one departure of each aircraft type. The outer contour represents 85 dB SEL. The inner contour represents 95 dB SEL.

# Airspace



**DEFINITION OF AIRSPACE CLASSIFICATIONS**

- CLASS A** Think A - Alitude. Airspace above 18,000 feet MSL up to and including FL 600. Instrument Flight Rule (IFR) flights only, ADS-B 1090 ES transponder required, ATC clearance required.
- CLASS B** Think B - Busy. Multi-layered airspace from the surface up to 10,000 feet MSL surrounding the nation's busiest airports. ADS-B 1090 ES transponder required, ATC clearance required.
- CLASS C** Think C - Mode C. Mode C transponder required. ATC communication required. Generally airspace from the surface to 4,000 feet AGL surrounding towered airports with service by radar approach control.
- CLASS D** Think D - Dialogue. Pilot must establish dialogue with tower. Generally airspace from the surface to minimum 2,500 feet AGL surrounding towered airports.



**LEGEND**

- Airport with hard-surfaced runways 1,500' to 8,069' in length
- Airports with hard-surfaced runways greater than 8,069' or some multiple runways less than 8,069'
- VORTAC
- VOR-DME
- Compass Rose
- Class B Airspace
- Class C Airspace
- Class D Airspace
- Class E Airspace
- Class E Airspace with floor 700 ft. above surface
- MODE C
- Victor Airways
- Military Training Routes
- Prohibited, Restricted, Warning and Alert Areas
- Wilderness Areas
- Populated Areas



Source: US Department of Commerce, National Oceanic and Atmospheric Administration Los Angeles Sectional Charts, December 5, 2019

## Runway Use



## Time of Day

Day (0 dB Weighting Factor)											Evening (5 dB Weighting Factor)			Night (10 dB Weighting Factor)									
Jet 85.8% Turboprop 94.3% Piston 96.9% Helicopter 93.4%											Jet 5.3% Turboprop 3.0% Piston 2.6% Helicopter 1.9%			Jet 8.8% Turboprop 2.6% Piston 0.4% Helicopter 4.6%									
7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6

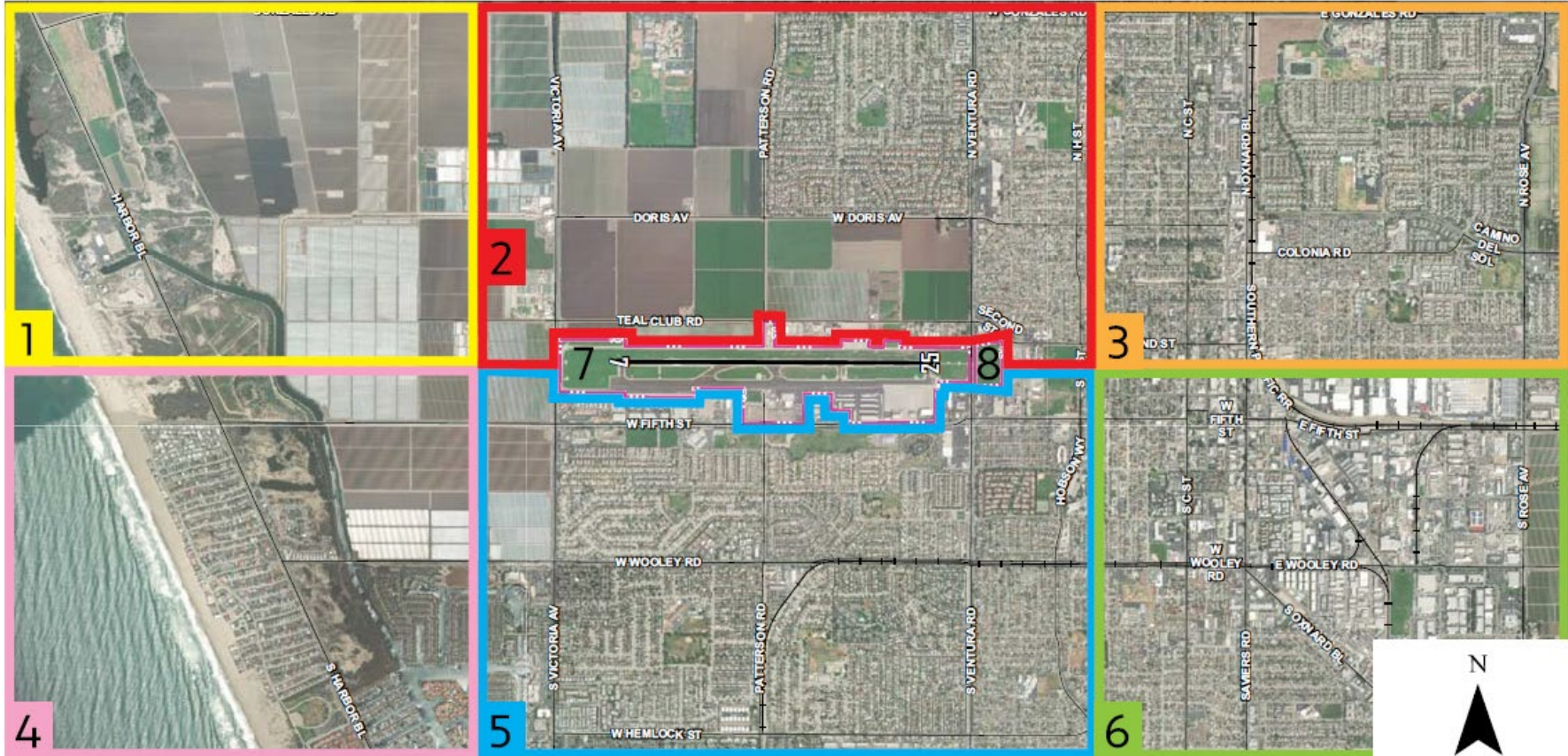
## What makes a good noise monitoring site?

- Located within the airport's FAA-mandated study area
- Unoccupied secured yard or rooftop
- Accessible to researchers 24 hours and 36 hours after installation
- Away from non-aircraft noise sources (i.e. construction sites, mowers, trains, sirens, pets)



Equipment setup consists of a briefcase-sized box and a camera tripod with a microphone.

# Noise Monitoring Zones



# Forecast Discussion



## Aviation Demand Forecasts

- Developed using FAA-approved methodologies to identify aviation activity measures in order to prepare forecast levels of demand that the airport could experience in the coming years.
- Sources include the *FAA Aerospace Forecasts – Fiscal Years 2022-2024*, the *FAA Terminal Area Forecast*, the *FAA Traffic Flow Management System Count*, airport traffic control tower (ATCT) records, and airport records for based aircraft.
- Aviation demand segments include:
  - Based aircraft
  - Annual aircraft operations
  - Design aircraft
  -
- These demand segments help to identify inputs for modeling aircraft noise (aircraft operations and aircraft fleet mix).



## Forecast Summary




	2022	2027	2032	2042
<b>ANNUAL OPERATIONS</b>				
<b>Itinerant</b>				
Air Taxi	4,659	4,770	5,343	6,618
General Aviation	27,385	29,667	32,177	38,111
Military	192	221	221	221
<b>Total Itinerant Operations</b>	<b>32,236</b>	<b>34,658</b>	<b>37,741</b>	<b>44,950</b>
<b>Local</b>				
General Aviation	55,579	57,838	60,189	65,181
Military	56	42	42	42
<b>Total Local Operations</b>	<b>55,635</b>	<b>57,880</b>	<b>60,231</b>	<b>65,223</b>
<b>Total Annual Operations</b>	<b>87,871</b>	<b>92,538</b>	<b>97,972</b>	<b>110,173</b>
<b>Annual Instrument Approaches</b>	<b>4,835</b>	<b>5,199</b>	<b>5,661</b>	<b>6,743</b>
<b>BASED AIRCRAFT</b>				
Single Engine	87	88	89	96
Multi-Engine Piston	15	15	14	14
Turboprop	8	10	13	18
Jet	2	7	13	22
Helicopter	8	10	12	17
<b>Total Based Aircraft</b>	<b>120</b>	<b>130</b>	<b>141</b>	<b>167</b>

The FAA has oversight responsibility to review and approve the aviation forecasts developed in conjunction with the Part 150 Noise Compatibility Study.



# Aircraft Reference Codes

A-I	Aircraft	TDG
	• Beech Baron 55	1A
	• <b>Beech Bonanza</b>	1A
	• Cessna 150, 172	1A
	• Eclipse 500	1A
	• Piper Archer, Seneca	1A
B-I		
	• Beech Baron 58	1A
	• Beech King Air 90	1A
	• Cessna 421	1A
	• Cessna Citation CJ1 (525)	1A
	• Cessna Citation 1(500)	2A
	• Embraer Phenom 100	1B
A/B-II <small>12,500 lbs. or less</small>		
	• Beech Super King Air 200	2A
	• Cessna 441 Conquest	1A
	• Cessna Citation CJ2 (525A)	2A
	• Pilatus PC-12	1A

B-II <small>over 12,500 lbs.</small>	Aircraft	TDG	
	• Beech Super King Air 350	2A	
	• Cessna Citation CJ3(525B), V (560)	2A	
	• Cessna Citation Bravo (550)	1A	
	• <b>Cessna Citation CJ4 (525C)</b>	1B	
	• Cessna Citation Latitude/Longitude	1B	
	• Embraer Phenom 300	1B	
	• Falcon 10, 20, 50	1B	
	• Falcon 900, 2000	2A	
	• Hawker 800, 800XP, 850XP, 4000	1B	
	• Pilatus PC-24	1B	
	A/B-III		
		• Bombardier Dash 8	3
		• <b>Bombardier Global 5000,</b> 6000, 7000, 8000	2B
• Falcon 6X, 7X, 8X		2B	
C/D-I			
	• Lear 25, 31, 45, 55, 60	1B	
	• Learjet 35, 36 (D-I)	1B	

C/D-II	Aircraft	TDG
	• Challenger 600/604/800/850	1B
	• Cessna Citation VII, X+	1B
	• Embraer Legacy 450/500	1B
	• <b>Gulfstream IV, 350, 450 (D-II)</b>	2A
	• Gulfstream G200/G280	1B
	• Lear 70, 75	1B
	• CRJ 700	2B
• ERJ 175, 195	3	
• CRJ 900	2B	
C/D-III <small>less than 150,000 lbs.*</small>		
	• Gulfstream V	2A
	• <b>Gulfstream G500, 550, 600, 650 (D-III)</b>	2B

C/D-III <small>over 150,000 lbs.</small>	Aircraft	TDG
	• Airbus A319-100, 200	3
	• <b>Boeing 737 -800, 900, BB72 (D-III)</b>	3
	• MD-83, 88 (D-III)	4
C/D-IV		
	• Airbus A300-100, 200, 600	5
	• Boeing 757-200	4
	• Boeing 747-300, 400	5
	• MD-11	6
D-V		
	• Airbus A330-200, 300	5
	• Airbus A340-500, 600	6
	• Boeing 747-100 - 400	5
	• Boeing 777-300	6
	• Boeing 787-8, 9	5

Note: Aircraft pictured is identified in bold type.

# Questions?




# What are your expectations for the Oxnard Airport Part 150 Study?





# Agenda

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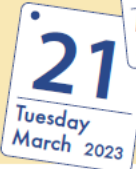

## Mark Your Calendars!




### Ventura County Department of Airports Part 150 Noise Study Community Meetings

The first community information meetings for the Part 150 Noise Studies have been scheduled.

- Camarillo Airport Part 150 Noise Study:  
March 20th, 2023  
5:30 p.m. - 7:30 p.m.
- Oxnard Airport Part 150 Noise Study:  
March 21st, 2023  
5:30 p.m. - 7:30 p.m.




The meetings will feature an open house format with a project overview presentation at 5:30 p.m. and again at 6:30 p.m.

 **Location:** Courtyard by Marriott, Oxnard-Ventura,  
600 E Esplanade Dr, Oxnard, CA 93036

Please note that study materials will be available in both English and Spanish. Live interpretation in Spanish and Mixteco will also be available.

**For more information visit [vcairports.org](http://vcairports.org).**



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# Public Comments



## Part 150 History at Oxnard Airport

- May 1998 – Noise Exposure Map update completed
- September 1998 – Noise Exposure Map approved by FAA
- February 2000 – Noise Compatibility Program update completed

