



COUNTY *of* VENTURA

Department of Airports



COUNTY of VENTURA
Department of Airports

*14 CFR Part 150 Noise
Compatibility Planning Study*

OXNARD AIRPORT

County of
Ventura



Agenda

1. Welcome and Introductions

- Keith Freitas, Ventura County Department of Airports

2. Five Key Takeaways for this Meeting

- Dave Nafie, Ventura County Department of Airports

3. Study Process

- Kory Lewis, Coffman Associates

4. Noise Exposure Contour Development

- Kory Lewis, Coffman Associates

5. Noise Impacts

- Kory Lewis, Coffman Associates

6. Noise Measurement Program

- Madeline Holliman, Coffman Associates

7. Where Do We Go From Here?

- Dave Fitz, Coffman Associates

8. PAC Discussion

- Laura Hernandez, Arellano Associates

9. Adjournment

Welcome and Introductions



Five Key Takeaways for this Meeting



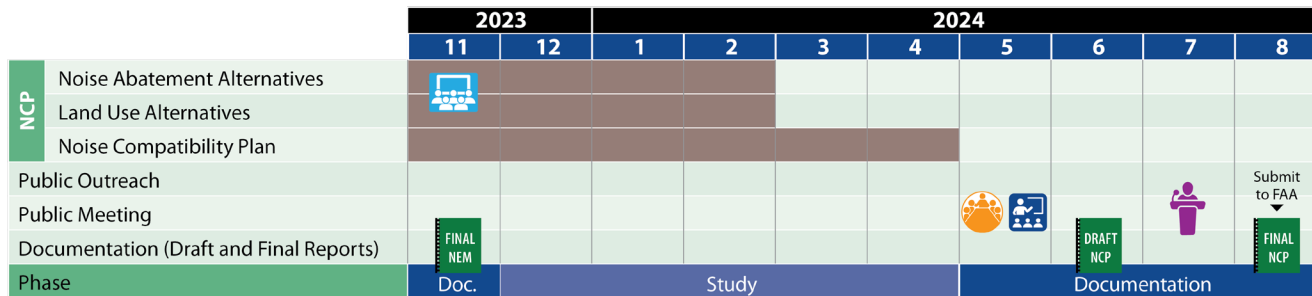
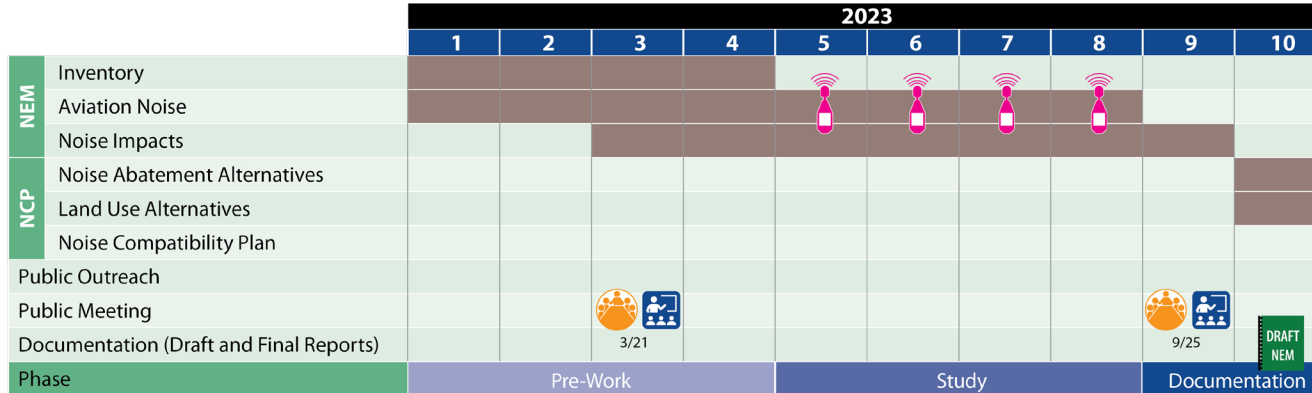
Five Key Takeaways for this Meeting

- *Review NEM vs NCP*
- *Review Modeling vs. Measurements*
- *Understand CNEL (Averaged) vs SEL (Measured)*
- *Understand FAA Approvals – Their Limits*
- *Know where we go from here*

Study Process



Project Timeline



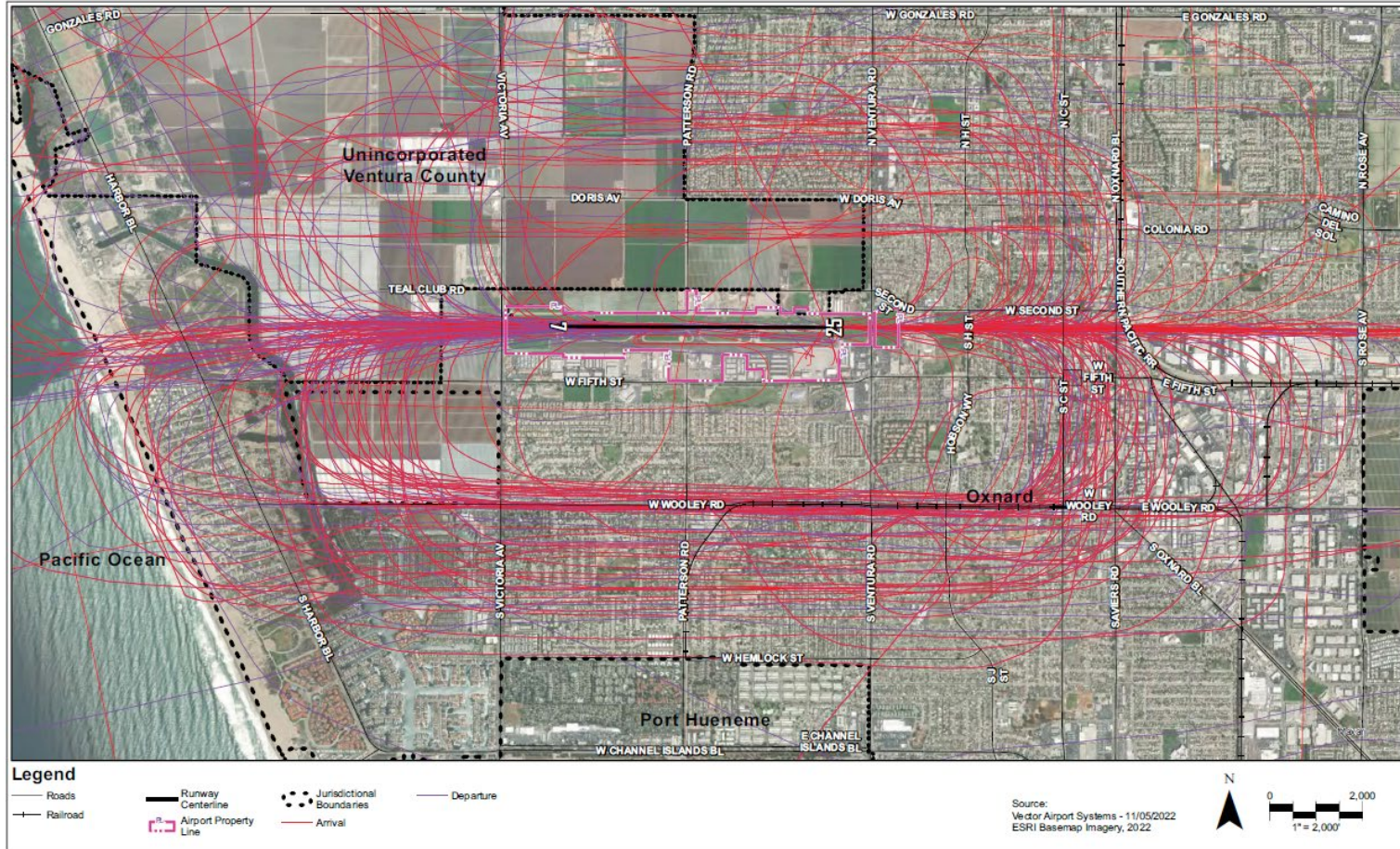
LEGEND

- 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

Noise Contour Development



Radar Flight Tracks



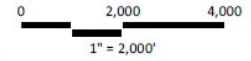
Consolidated Arrival Flight Tracks



LEGEND

- Roads
- Runway Centerline
- Consolidated Arrival Tracks
- Educational Facility
- Healthcare Facility
- Place of Worship
- Jurisdictional Boundary
- Airport Property 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.



Source: Esri, Maxar, Earthstar, GeoAnalytics and the GIS User Community

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

Forecast Summary

	2022	2027	2032	2042
ANNUAL OPERATIONS				
Itinerant				
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
Total Itinerant Operations	32,236	34,658	37,741	44,950
Local				
General Aviation	55,579	57,838	60,189	65,181
Military	56	42	42	42
Total Local Operations	55,635	57,880	60,231	65,223
Total Annual Operations	87,871	92,538	97,972	110,173
Annual Instrument Approaches	4,835	5,199	5,661	6,743
BASED AIRCRAFT				
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
Total Based Aircraft	120	130	141	167

The FAA has oversight responsibility to review and approve the aviation forecasts developed in conjunction with the Part 150 Noise Compatibility Study. Approved 6-1-2023.

Operational Fleet Mix

TABLE 3C | Operational Fleet Mix – Oxnard Airport

Aircraft Type ¹	AEDT Designator ²	2022 Operations ³	2027 Operations ⁴
GA Itinerant Operations			
Single-Engine Piston, Fixed	GASEPF	12,156	11,436
Single-Engine Piston, Variable	GASEPV	12,156	11,436
Multi-Engine Piston	BEC58P	2,354	2,354
Multi-Engine Piston	PA30	446	446
Helicopter, Small	R44	716	911
Helicopter, Small	EC130	195	248
Helicopter, Medium	SA365N	65	83
Helicopter, Large	S70	1,823	2,318
Single-Engine Turboprop, Small	CNA208	73	92
Multi-Engine Turboprop, Small	CNA441	473	601
Single-Engine Turboprop, Large	Pilatus PC-12	160	204
Multi-Engine Turboprop, Medium	SD330	410	522
Turbojet, Small	ECLIPSE500	97	360
Turbojet, Small	CNA500	136	505
Turbojet, Small	CNA510	3	11
Turbojet, Medium	CNA55B	147	547
Turbojet, Medium	LEAR35	91	339
Turbojet, Medium	CIT3	73	272
Turbojet, Medium	F10062	20	74
Turbojet, Medium	CNA560U	16	60
Turbojet, Large	CL600	210	784
Turbojet, Large	GV	67	251
Turbojet, Large	CNA680	65	244
Turbojet, Large	GIV	55	205
Turbojet, Large	CNA750	21	78
Turbojet, Large	EMB145	15	57
Military	C130	192	221
GA Itinerant Total Operations		32,236	34,658
GA Local Operations			
Single-Engine Piston, Fixed	GASEPF	27,418	28,500
Single-Engine Piston, Variable	GASEPV	27,418	28,500
Multi-Engine Piston	BEC58P	200	200
Helicopter, Small	R44	200	220
Helicopter, Large	S70	200	220
Single-Engine Turboprop (incl. T-6 Texan)	CNA208	72	99
Turbojet	CL600	72	99
Military	T-38A	56	42
GA Local Total Operations		55,635	57,880
Total Operations		87,871	92,538

¹ Coffman Associates analysis. No user-defined aircraft or profiles requiring FAA approval were used in the AEDT modeling.

² FAA Traffic Flow Management System Counts (TFMSC), Oxnard Airport, Calendar Year 2022















³ The FAA approved the forecast contained in Chapter 2 – Forecasts. (See **Appendix E.**)











⁴ Coffman Associates analysis.

Noise Impacts



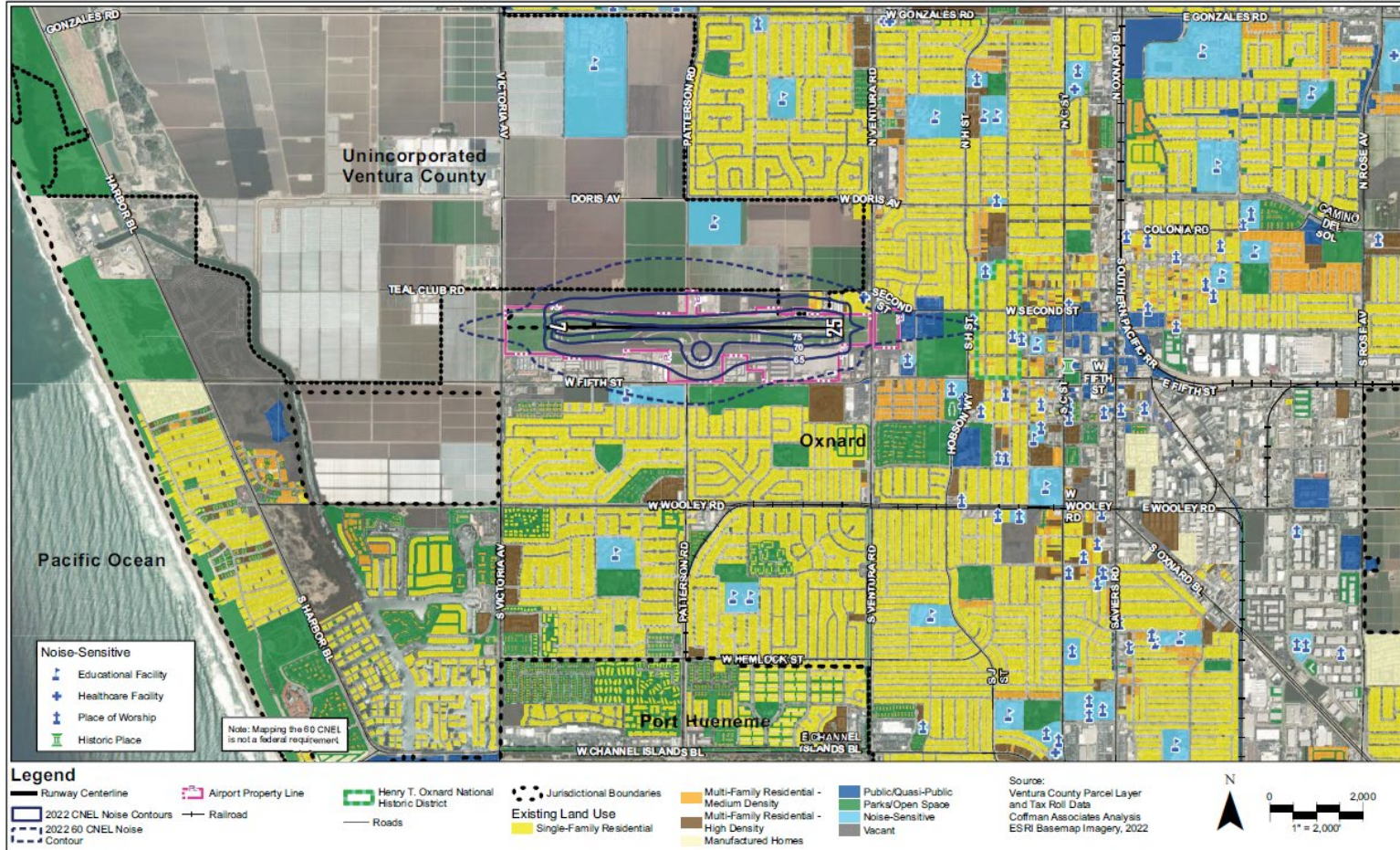
The Ventura County Department of Airports recognizes that some community members are disturbed by noise at levels below the FAA guidelines for noise exposure. Additional efforts to evaluate potential options to reduce the effects of noise exposure will be considered as part of the noise abatement and land use alternatives sections of the airport's Part 150 Noise Compatibility Program.

LAND USE		Yearly Day-Night Average Sound Level (DNL) in Decibels					
		Below 65	65-70	70-75	75-80	80-85	Over 85
Residential							
 Residential, other than mobile homes and transient lodgings	Y	N ¹	N ¹	N	N	N	
 Mobile home parks	Y	N	N	N	N	N	
 Transient lodgings	Y	N ¹	N ¹	N ¹	N	N	
Public Use							
 Schools	Y	N ¹	N ¹	N	N	N	
 Hospitals and nursing homes	Y	25	30	N	N	N	
 Churches, auditoriums, and concert halls	Y	25	30	N	N	N	
 Government services	Y	Y	25	30	N	N	
 Transportation	Y	Y	Y ²	Y ³	Y ⁴	Y ⁴	
 Parking	Y	Y	Y ²	Y ³	Y ⁴	N	
Commercial Use							
 Offices, business and professional	Y	Y	25	30	N	N	
 Wholesale and retail-building materials, hardware and farm equipment	Y	Y	Y ²	Y ³	Y ⁴	N	
 Retail trade-general	Y	Y	25	30	N	N	
 Utilities	Y	Y	Y ²	Y ³	Y ⁴	N	
 Communication	Y	Y	25	30	N	N	

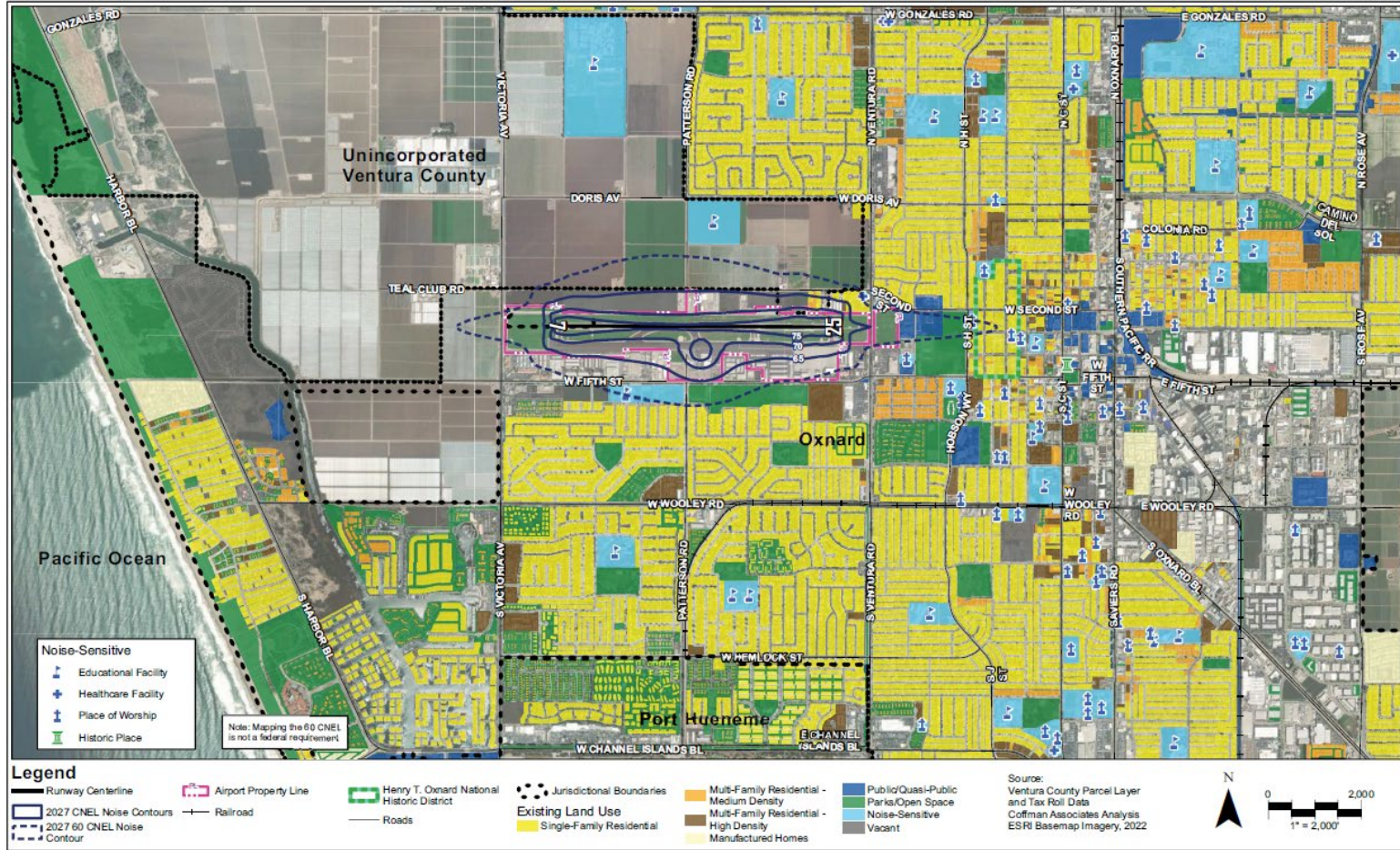
LAND USE		Yearly Day-Night Average Sound Level (DNL) in Decibels					
		Below 65	65-70	70-75	75-80	80-85	Over 85
Manufacturing and Production							
 Manufacturing, general	Y	Y	Y ²	Y ³	Y ⁴	N	
 Photographic and optical	Y	Y	25	30	N	N	
 Agriculture (except livestock) and forestry	Y	Y ⁶	Y ⁷	Y ⁸	Y ⁸	Y ⁸	
 Livestock farming and breeding	Y	Y ⁶	Y ⁷	N	N	N	
 Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y	
Recreational							
 Outdoor sports arenas and spectator sports	Y	Y ⁵	Y ⁵	N	N	N	
 Outdoor music shells, amphitheaters	Y	N	N	N	N	N	
 Nature exhibits and zoos	Y	Y	N	N	N	N	
 Amusements, parks, resorts, and camps	Y	Y	Y	N	N	N	
 Golf courses, riding stables, and water recreation	Y	Y	25	30	N	N	

The designations contained in this table do not constitute a federal determination that any use of land covered by the program is acceptable under federal, state, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally-determined land uses for those determined to be appropriate by local authorities in response to locally-determined needs and values in achieving noise compatible land uses.

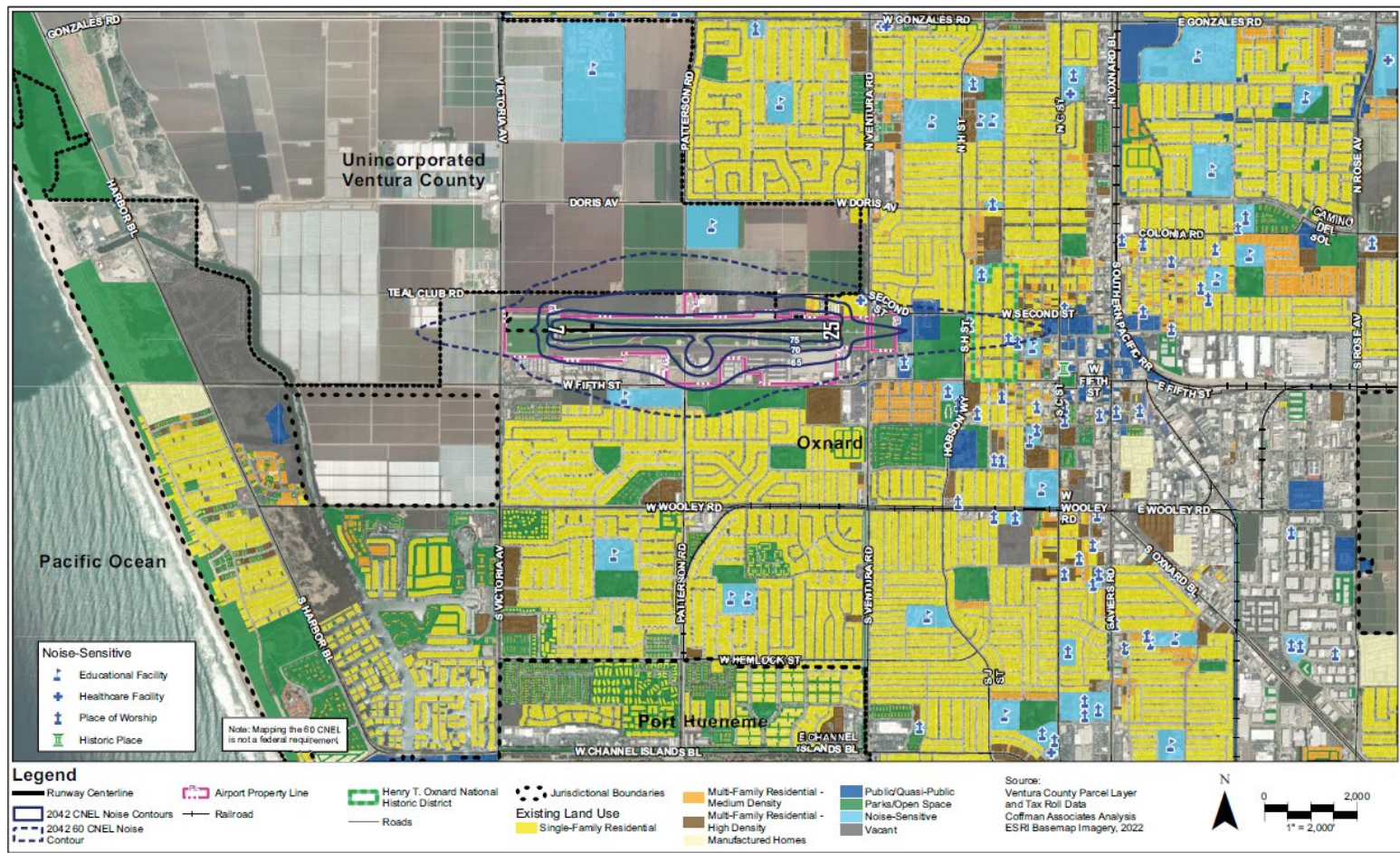
2022 Noise Contours



2027 Noise Contours



2042 Noise Contours



Land Use - 2022

TABLE 4A | Land Uses Exposed to 2022 Aircraft Noise Above 65 CNEL – Oxnard Airport

	Area (Acres)		
	65-70 CNEL	70-75 CNEL	75+ CNEL
Compatible Land Uses			
Airport Property	58.27	61.38	34.17
Commercial, Industrial, Transportation, and Utilities	18.74	0.17	0
Mixed-Use	1.03	0.21	0
Right of Way	0.59	0.83	0
Undeveloped ¹	34.55	1.12	0
Noise-Sensitive Land Uses			
Single-Family Residential	1.12	0.11	0
Multi-Family Residential	1.22	0.22	0
Public/Quasi-Public	0	0	0
Historic Properties	0	0	0
Total	115.52	64.04	34.17

¹ Undeveloped land consists of portions of multiple parcels.

Source: Coffman Associates analysis

TABLE 4B | Residential Parcels and Estimated Population Exposed to 2022 Aircraft Noise – Oxnard Airport (continued)

Estimated Population ³	65-70 CNEL	70-75 CNEL	75+ CNEL
	Parcels/Dwelling Units (d.u.) ²		
Single-Family Residential	36	0	0
Multi-Family Residential	56	0	0
Total:	92	0	0

¹ A portion of the parcel is also within the 70-75 CNEL noise contour; however, no permanent structures are located on that portion.

² Number of dwelling units is estimated based on the Ventura County Assessor's property use descriptions for each parcel, selecting the upper limit of any ranges and adding one dwelling unit for parcels described as containing guest houses, garage apartments, or sleeping rooms.

³ Estimated population is calculated by multiplying the number of dwelling units for residential land uses by the number of persons per household (4.00). Persons per household information is based on U.S. Census Bureau 2017-2021 American Community Survey information, as of July 1, 2022. Retrieved from: <https://www.census.gov/quickfacts/fact/table/oxnardcitycalifornia/PST045222>

Source: Coffman Associates analysis

Land Use - 2027

TABLE 4C | Land Uses Exposed to 2027 Aircraft Noise above 65 CNEL – Oxnard Airport

	Area (Acres)		
	65-70 CNEL	70-75 CNEL	75+ CNEL
Compatible Land Uses			
Airport Property	57.25	62.82	37.41
Commercial, Industrial, Transportation, and Utilities	20.91	0.25	0
Mixed-Use	1.04	0.23	0
Right of Way	0.75	0.90	0
Undeveloped ¹	36.40	1.54	0
Noise-Sensitive Land Uses			
Single-Family Residential	1.21	0.12	0
Multi-Family Residential	1.22	0.25	0
Public/Quasi-Public	0	0	0
Historic Properties	0	0	0
Total	118.78	66.11	37.41

¹ Undeveloped land consists of portions of multiple parcels.

Source: *Coffman Associates analysis*

Estimated Population³			
Single-Family Residential	36	0	0
Multi-Family Residential	56	0	0
Total:	92	0	0

² A portion of the parcel is also within the 70-75 CNEL noise contour. However, no permanent structures are located on that portion.

³ Number of dwelling units is estimated based on the Ventura County Assessor's property use descriptions for each parcel, selecting the upper limit of any ranges and adding one dwelling unit for parcels described as containing guest houses, garage apartments, or sleeping rooms.

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Source: *Coffman Associates analysis*



Noise Measurement Program

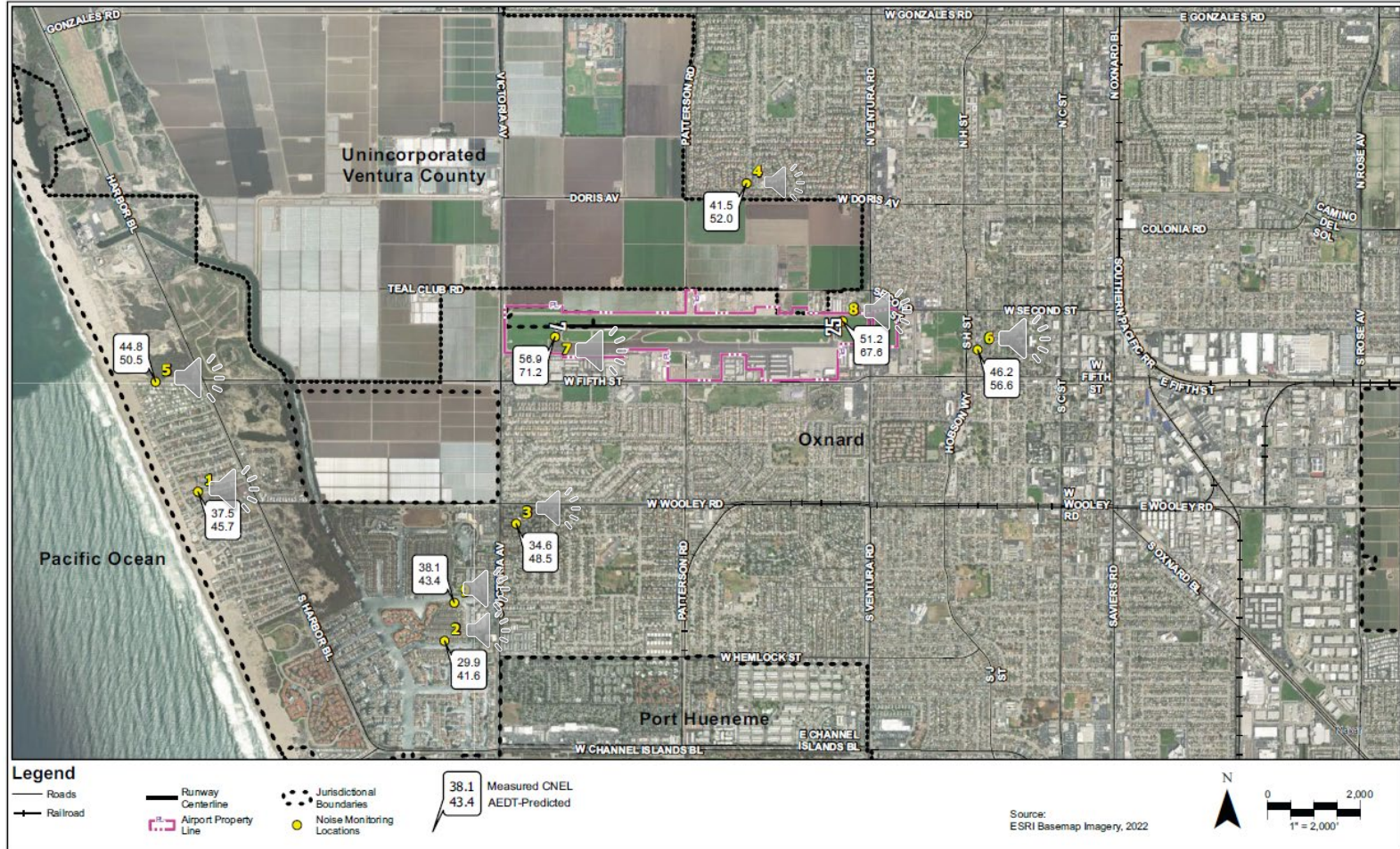
Noise Measurement Program

Successful results include the following:

- Noise monitoring was conducted in areas of concern in May, June, July, and August with cooperation from residents.
- Valid data gathered included aircraft events, which were verified through listening to digital recordings. The associated noise levels were used to calculate CNEL values for comparison to the AEDT outputs.
- The CNEL values from the aircraft event data correlate with the modeled values at all locations.
- Determined that no modeling adjustments were needed.

The noise measurement program results were beneficial as a tool for comparison to the AEDT model and the results indicate that the model inputs are accurate for the purposes of this study.

Noise Measurement Program



Noise Measurement Program

TABLE F3 | Noise Measurement Single Event Data Summary - Oxnard Airport

Site/Day	L _{max}	Max Duration (sec)	SOUND EXPOSURE LEVEL EVENT SUMMARY						Aircraft Events
			Below 60 dB	60-70 dB	70-80 dB	80-90 dB	90-100 dB	100+ dB	
Site 1 – Residence on Whitecap Street, Oxnard Shores neighborhood, Oxnard									
Day 1	81.4 ¹	262.4	118	149	24	5	0	0	60
Day 2	81.0 ²	3625.3	212	177	23	2	1	0	53
Site 2 – Residence on Harbour Island Lane, Channel Islands neighborhood, Oxnard									
Day 1	66.4 ³	12.8	0	11	1	0	0	0	6
Day 2	97.2 ⁴	383.1	0	85	15	2	2	2	4
Day 3	74.6 ²	207.8	205	124	19	2	0	0	63
Day 4	73.8 ⁴	573.9	157	102	22	4	0	0	69
Site 3 – Residence on Via Pacific Walk, Via Marina neighborhood, Oxnard									
Day 1	73.6 ³	573.9	119	111	27	1	0	0	43
Day 2	80.4 ²	737.0	94	106	22	6	0	0	46
Day 3	72.7 ¹	47.5	0	37	23	3	0	0	12
Day 4	86.5 ¹	40.6	0	30	31	2	0	0	22
Site 4 – Residence on Aspen Circle, Cabrillo neighborhood, Oxnard									
Day 1	77.6	193.7	252	262	41	2	0	0	102
Day 2	84.0 ²	193.7	213	236	46	2	0	0	134
Day 3	79.4	62.7	0	95	25	3	0	0	68
Day 4	80.1 ¹	46.3	0	83	39	6	0	0	77
Site 5 – Residence in Oxnard Shores Mobile Home Park, Oxnard									
Day 1	81.2	140.3	169	1245	101	10	0	0	114
Day 2	84.8	219.1	185	1206	100	12	1	0	132
Day 3	82.7	210.4	167	1104	92	11	0	0	87
Day 4	78.3	282.1	19	1169	97	15	0	0	159
Day 5	91.2 ²	37.7	0	3	43	9	2	0	12
Day 6	77.3 ²	22.5	0	5	47	9	0	0	26
Site 6 – Residence on G Street, Henry T. Oxnard Historic District, Oxnard									
Day 1	83.6 ²	70.9	0	60	34	12	0	0	29
Day 2	80.9	118.3	0	50	22	9	0	0	26
Day 3	83.1	48.4	0	45	28	6	1	0	19
Day 4	86.7	29.5	0	0	25	9	4	0	21
Day 5	75.1	28.2	0	1	22	7	0	0	18
Day 6	79.8	24.0	0	2	24	13	0	0	22
Site 7 – Oxnard Airport, Runway 7 west end									
Day 1	94.9	448.5	244	273	64	32	8	0	195
Site 8 – Oxnard Airport, Runway 25 east end									
Day 1	90.6	84.7	0	41	50	17	5	0	88
Site 9 – Residence on Farralon Way, Channel Islands neighborhood, Oxnard									
Day 1	76.5 ⁴	1250.4	366	182	57	3	1	0	159
Day 2	84.8 ⁴	1976.4	283	165	53	3	1	0	133
Day 3	69.5	34.8	0	9	8	1	0	0	16

Note: L_{max} and Maximum Duration may be from different events.

¹ Noise value generated by resident.

² Noise value generated by passing automobile traffic.

³ Noise value generated by wildlife.

⁴ Noise value generated by landscaping.

Source: Coffman Associates analysis

Where Do We Go From Here?

- **Finalize and submit Noise Exposure Maps to FAA for Acceptance**
- **Begin work on the Noise Compatibility Program**
 - **Noise abatement alternatives**
 - **Land use alternatives**
 - **Program management**



Questions or Comments

Please respond by October 15



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Mark Your Calendars!



Ventura County Department of Airports Part 150 Noise Study Community Meetings

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


- Oxnard Airport Part 150 Noise Study:
September 25th, 2023 • 5:30 p.m. - 7:30 p.m.
- 📍 Location: Oxnard Performing Arts Center
800 Hobson Way, Oxnard, CA
- Camarillo Airport Part 150 Noise Study:
September 26th, 2023 • 5:30 p.m. - 7:30 p.m.
- 📍 Location: Ventura County Office of Education
Conference and Educational Services Center
5100 Adolfo Road, Camarillo, CA 93012



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.

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.



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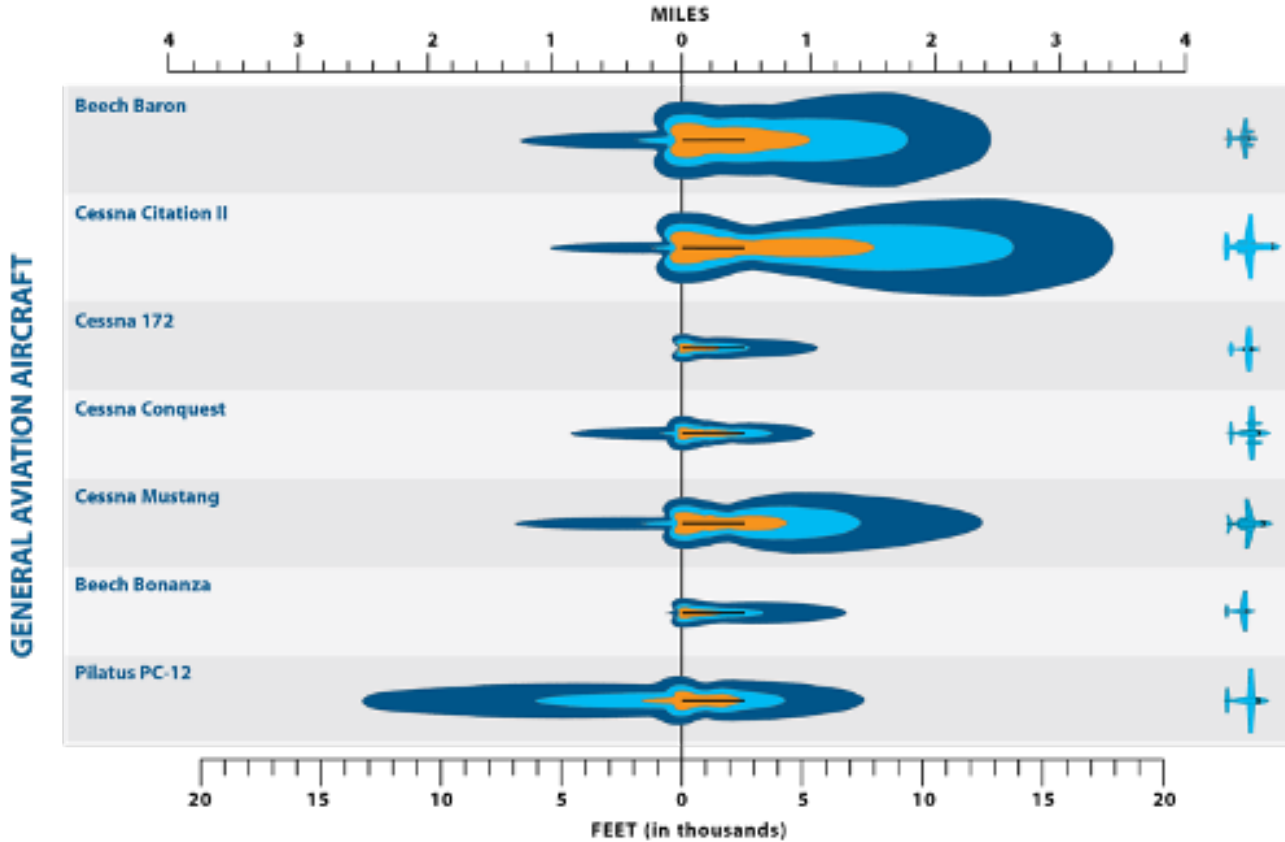
Public Comments

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

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.

