Chapter 1
INVENTORY

Chapter 1 (Inventory) of the Noise Exposure Maps document for Oxnard Airport describes the roles and responsibilities of each level of government for noise and land use compatibility planning as it relates to this study. The specific Code of Federal Regulations (CFR) for Federal Aviation Administration (FAA) actions on noise matters are outlined in detail. State of California regulations granting authority and guidance to the county and city levels for off-airport land use planning are summarized. The specific zoning ordinances and general plan documents of each city and county with jurisdictional authority over the study area surrounding Oxnard Airport are included in this discussion. Analysis of existing land use and updated generalized maps at the appropriate scale are included as a baseline for the study, along with radar flight track data to illustrate typical overflight traffic patterns. Airport facility and operational information are also provided in detail to establish the existing conditions and constraints at Oxnard Airport. The background information contained herein will be used throughout later chapters of the Noise Exposure Map analysis as well as to inform any future Noise Compatibility Program measures.

ROLES AND RESPONSIBILITIES

Federal, state, and local governments each have specific roles in reducing or limiting aviation noise impacts. The following sections provide an overview of each level of government's role in airport land use compatibility planning. Additional information on this topic is included in the Federal Aviation Noise Regulations of the Resource Library, located in **Appendix C**.

FEDERAL GOVERNMENT

The Federal Aviation Administration (FAA) is the federal government's agency dedicated to civil aviation safety and tasked with providing for "the safe and efficient use of national airspace." The FAA was created on August 23, 1958, under the Federal Aviation Act.

The FAA has recognized the concern that aviation noise can cause for communities; therefore, the FAA has provided support for noise reduction within its authority, including by the following:

- **Implementation and Enforcement of Aircraft Operational Procedures** – Where and how aircraft are operated is under the complete authority of the FAA. This includes pilot responsibilities, compliance with air traffic control instructions, flight restrictions, and monitoring compliance of aircraft operations and addressing careless and reckless operations of aircraft.
- **Management of the Air Traffic Control System** – The FAA is responsible for the control of navigable airspace and review of any proposed alterations in flight procedures for noise abatement.
- **Pilot Licensing** – Individuals licensed as pilots are trained under strict guidelines concentrating on safe and courteous aircraft operating procedures. For example, in recent years FAA Safety launched the ALC-500 course, a "Fly Neighborly" training program for helicopter operators, with the goal of educating pilots on noise-reducing solutions and effective communication with the community.[1] The course is based on a 2017 focused FAA and NASA flight test program.[2]
- **Certification of Aircraft** – The FAA requires the reduction of aircraft noise through certification, modification of engines, or aircraft replacement as defined in 14 Code of Federal Regulations (CFR) Part 36. Additionally, 14 CFR Part 91 outlines the phase-out of aircraft not meeting requirements under Part 36.
- **Airport Noise Compatibility Planning** – The FAA collaborates with aircraft sponsors to fund and evaluate Noise Compatibility Planning Studies and Noise Exposure Map Updates in accordance with 14 CFR Part 150 regulations.
- **Research and Technology** – In addition to providing 14 CFR Part 150 funding, the FAA funds numerous research efforts to investigate the impacts of aviation noise on communities and individuals. The establishment of the ASCENT Center of Excellence and Airport Cooperative Research Program are two such initiatives. The Continuous Lower Energy, Emissions and Noise (CLEEN) also drives the FAA's partnership with the private sector to incentivize improvements in aircraft technology to reduce noise.[3] On January 13, 2021, the FAA released a summary of its research programs to the public in Federal Register Volume 86, Number 8. In February 2021, the FAA released a final report of its Neighborhood Environmental Survey (NES), a detailed analysis of over 10,000 survey responses from individual neighborhoods surrounding a sample of 20 commercial service airports across the country to create a dose-response curve of annoyance in response to aircraft noise exposure.[4]
- **Community Engagement** – In addition to overseeing the community engagement requirements of each Part 150 Study, the FAA engages directly with communities to address noise issues, hosts a designated FAA Noise Obudsman at each of its nine regional offices that can be reached by community members directly, and hosts an online FAA Noise Portal where complaints can be submitted. The iFlyQuiet community engagement program published in 2021 is another example of this effort.[5]

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[1] FAA Course Catalog, January 2023 (https://www.faasafety.gov/gslac/ALC/course_catalog.aspx)

[2] Page, J. A., Rapoza, A.S., and Jacobs, E. W. (2021) *In Situ Development and Application of Fly Neighborly Noise Abatement Procedures for Helicopters* (https://www.volpe.dot.gov)

[3] FAA Noise & Research Programs, July 2022 (https://www.faa.gov/noise/research_programs)

[4] Miller, N. P.; Czech, J.J.; Hellauer, K. M.; Nicholas, B. L.; Lohr, S.; Jodts, E.; Broene, P.; Morganstein, D.; Kali, J.; Zhu, X.; Cantor, D.; Hudnall, J.; Melia, K. *DOT/FAA/TC-21/4_Analysis of NES* (2021) (https://www.airporttech.tc.faa.gov)

[5] iFlyQuiet Community Engagement Guide (2021) https://rotor.org/wp-content/uploads/2021/07/iFlyQuiet-Community-Engagement-Guide.pdf

The FAA collaborates with other federal agencies such as the U.S. Department of Transportation Volpe Center and the National Aeronautics and Space Administration (NASA) in support of these efforts, along with contributing to the Federal Interagency Committee on Noise (FICON). The federal government has also begun tracking changes in transportation noise across modalities, including road and rail. A simplified version of noise modeling is used in the National Transportation Noise Map published for 2016 and 2018 by the Volpe National Transportation Systems Center. Noise models for just under 750 included airports are one factor addressed in the federal government's multi-modal transportation noise model mapping.[6] Facilities with military-only operations are excluded.

The specific FAA regulations related to aircraft noise are codified under several Code of Federal Regulations (CFR) titles, including the following:

14 CFR Part 36, Federal Aircraft Noise Regulations

The FAA requires the reduction of aircraft noise with the regulations adopted under 14 CFR Part 36. Part 36 prohibits the escalation of noise levels from small, piston-driven aircraft, civil turbojet, and transport aircraft. Part 36 also requires new aircraft types to be markedly quieter than earlier models by limiting the noise emissions allowed by newly certified aircraft. To achieve this, Part 36 has a four-stage certification process, each with a progressively more stringent noise threshold. These regulations apply only to civilian fixed-wing aircraft and helicopters, and do not address noise generated by military aircraft or other non-stage aircraft (for example, former military aircraft, such as jet warbirds and other World War II-era aircraft).

The 1977 Amendment to Part 36 introduced a three-stage classification system to provide terminology that differentiates between the original and revised standards. The stages are classified as follows:

- Stage 1: aircraft have never been shown to meet any noise standards, either because they have never been tested, or because they have been tested and failed
- Stage 2: aircraft meet original noise limits, set in 1969
- Stage 3: aircraft meet more stringent limits, established in 1977

Amendments in 2005 created a fourth stage of certification. Stage 4 noise limits are defined as a cumulative 10 effective perceived noise level (EPNdB) less than those for Stage 3. Additionally, FAA published a Final Rule on November 3, 2017, which created Stage 5 noise standards. Stage 5 noise standards apply to new aircraft designs with a maximum certified takeoff weight of 121,254 lbs or more submitted on or after December 31, 2017, or with a maximum certified takeoff weight of less than 121,254 lbs on or after December 21, 2020. As noted in the Final Rule, the change sets a lower noise limit for these aircraft and does not affect either the operation of the current U.S. fleet or new type designs submitted before the applicable compliance date for Stage 5.[7]

[6] U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Noise Map Documentation* (2020)
[7] Federal Resister Vol. 82, No. 191, October 4, 2017, Pages 46123-46132 (https://www.federalregister.gov/documents/2017/10/04/2017-21092/stage-5-airplane-noise-standards); October 2019.

Federal law required the phase-out of civil subsonic jet aircraft with a maximum weight of 75,000 lbs or less that do not comply with Stage 3 standards by December 31, 2015.[8] Additional restrictions or phase-out dates have not been adopted for Stage 3, Stage 4, or Stage 5 aircraft.

Helicopter noise is also addressed within Part 36; however, these aircraft are only classified as Stage 1 and Stage 2. The Stage 2 certification date for helicopters was March 6, 1986. In contrast to fixed-wing aircraft, the Part 36 noise requirements for helicopters has not been reduced in a similar manner.

Propeller-driven small aircraft (ie., less than 12,500 lbs) were added as a 1974 amendment to Part 36, which is prior to the creation of the aforementioned Stages 1-5 classification. To this day, these small aircraft, such as a Cessna 172 or PC 12 aircraft, are only termed certified or uncertified versus being assigned a noise stage. The noise standards for small aircraft are evaluated in terms of A-weighted decibel (dBA) limits for level flyover 1,000 feet above ground level (AGL).

14 CFR Part 91, Subpart I, Operating Noise Limits

14 CFR Part 91, Subpart I prescribes operating noise limits and related requirements to the operation of civilian aircraft in the U.S. This section of the Federal Code ties back to 14 CFR Part 36, previously discussed, and specifically applies to civil subsonic jet (turbojet) aircraft with a maximum weight of 75,000 pounds (lbs) operating within the U.S. Also known as the "Fleet Noise Rule," 14 CFR Part 91, Subpart I mandated that Stage 1 aircraft were to be retired, retrofitted with hush kits, or have engines replaced with quieter ones by January 1, 1988.

Amendments passed in 1990 established a deadline of December 31, 1999, requiring Stage 2 aircraft exceeding 75,000 lbs to be discontinued from service. Per § 91.858 of 14 CFR Part 91, [9] Stage 2 aircraft over 75,000 lbs may continue nonrevenue service under the following circumstances:

- Sell, lease, or scrap of the aircraft;
- modify aircraft to comply with Stage 3, Stage 4, or Stage 5 noise levels;
- obtain scheduled heavy maintenance or significant modifications;
- deliver the aircraft to a lessee or return to seller;
- to park or store aircraft;
- prepare the aircraft for any of the aforementioned events; and
- operate under an experimental airworthiness certificate.

A phase-out date of December 31, 2015, was established for Stage 2 aircraft weighing less than 75,000 lbs within the *FAA Modernization and Reform Act of 2012*. No additional restrictions or phase-out dates have been established for Stage 3 or Stage 4 aircraft.

[8] 49 USC §47534, February 14, 2012
[9] 14 CFR 91, Subpart I, § 91.858 *Special Flight Authorizations for Non-Revenue Stage 2 Operations* (July 15, 2002, amended October 4, 2017).

Civil supersonic airplanes must comply with Stage 2 noise limits after October 13, 1977. In addition, overland supersonic flights over a speed of Mach 1 have been prohibited since 1973 under Section 91.817, Civil Aircraft Sonic Boom; however, due to an increased interest in development of supersonic aircraft, in January 2021 an amendment to § 91.817 streamlined and modernized the FAA's procedure for special flight authorizations.[10]

14 CFR Part 161, Notice and Approval of Airport Noise and Access Restrictions

The Airport Noise and Capacity Act of 1990 (ANCA) grants the FAA preemptive authority for setting noise restrictions at airports. Congress passed the act to address noise concerns at the federal level and provide a framework for addressing noise concerns at airports nationwide. Airports may not adopt noise restrictions that limit operations of Stage 2 or Stage 3 aircraft without following the regulations imposed in 14 CFR Part 161.

14 CFR Part 150, Airport Noise Compatibility Planning

A 14 CFR Part 150 Noise Compatibility Planning Study (Part 150 Study) is a voluntary process which results in the preparation of two official documents for participating airports: Noise Exposure Maps (NEM) and Noise Compatibility Program (NCP). The NEM document is the baseline analysis for the noise conditions at the airport and includes existing and forecast noise exposure contours. The NCP is the second phase of a complete Part 150 study that provides an analysis of alternatives to reduce or eliminate airport noise impacts identified in the NEM and concludes with a plan to effectively mitigate noise impacts. Additional information regarding the role of the airport operator and local, state, and federal governments to reduce airport impacts can be found in the Federal Aviation Noise Regulation section of the Resource Library, located in **Appendix C**.

Noise Exposure Maps

In addition to the baseline information included in this chapter, a Part 150 Study details the existing and projected noise conditions (i.e., the NEMs) based on operational variables discussed in Chapter Two. The scope of the noise environment at the airport is defined as those areas within the noise exposure maps for the existing condition and at least a five-year forecast. These noise contours are overlain on local land use maps to identify areas of existing or potential incompatible land uses. Supporting information is provided within the document to explain the methods used to develop noise exposure contours and land use analysis.

14 CFR Part 150 outlines the methodology and noise metrics to be used in analyzing and describing airport noise. It also establishes guidelines to identify land uses that are incompatible with varying noise levels. Airport proprietors are required to update noise exposure contours when changes in the operations at the airport would create any new, substantial, incompatible use. The most widely used

[10] Federal Register Volume 86, Number 10 (2021) *Special Flight Authorizations for Supersonic Aircraft*

measure to determine this change is an increase in the yearly day-night average sound level (DNL) of 1.5 decibels (dB), over incompatible land uses. In California, the Community Noise Equivalent Level (CNEL) metric is used in place of DNL. Airport operations at Oxnard Airport, advances in aircraft technology, and land development surrounding the airport are factors that have changed significantly since the most recent NEM publication for Oxnard Airport in 1998.

A limited degree of legal protection can be afforded to the airport proprietor through the preparation of NEMs. The re-codified *Aviation Safety and Noise Abatement Act of 1979* (ASNA), provides that:

> *A person acquiring an interest in property…in an area surrounding an airport for which a noise exposure map has been submitted…and having actual or constructive knowledge of the existence of the map may recover damages for noise attributable to the airport only if, in addition to any other elements for recovery of damages the person shows that:*
>
> *(1) after acquiring the interest, there was a significant*
> *(A) change in the type or frequency of aircraft operations at the airport;*
> *(B) change in the airport layout;*
> *(C) change in flight patterns;*
> *(D) increase in nighttime operations; and*
>
> *(2) the damages resulted from the change or increase.*[11, 12]

Additionally, Part 150 defines a change in the operation of an airport as an increase in the yearly DNL or 1.5 dB (or, in California, 1.5 CNEL) or greater in either a land area which was formerly compatible but is thereby made incompatible under 14 CFR Part 150 Appendix Table 1, or in a land area which was previously determined to be incompatible under that table and whose incompatibility is now significantly increased.[13]

Upon completion of the NEM document and local adoption, it is submitted to the FAA for review. FAA review concludes with a determination as to whether the NEMs were prepared in a manner consistent with Part 150 regulations. The NEMs produced with this study will be the second iteration for Oxnard Airport. A previous NEM was completed in 1998.[14]

Pursuant to FAA regulations, the revised NEM document is subject to public review and comment. Public comments regarding this study are located in **Appendix B** and are on file with the Los Angeles FAA Airport District Office manager.

[11] "Constructive knowledge" shall be attributed to any person if a copy of the noise exposure map was provided to him or her at the time of property acquisition, or notice of the existence of the noise exposure map was published three times in a newspaper of general circulation in the airport area.
[12] 49 USC §47506, the re-codified *Aviation Safety and Noise Abatement Act of 1979* (ASNA)
[13] 47 USC §47506
[14] Coffman Associates, Inc. *Oxnard Airport F.A.R. Part 150 Airport Noise Compatibility Study: Noise Exposure Maps* (May 1998).

Noise Compatibility Program

A Noise Compatibility Program includes an evaluation of various noise abatement and land use alternatives. The result of this planning effort can include a plan with recommendations for the abatement of aircraft noise that would reduce the noise experienced by noise sensitive land uses within the 65 CNEL. Two criteria are of particular importance when considering noise abatement recommendations: the airport proprietor may take no action that imposes an undue burden on interstate or foreign commerce; nor may the proprietor unjustly discriminate between different categories of airport users. The plan may include recommendations for land use compatibility planning and actions to mitigate the impact of noise on incompatible land uses. Additionally, regulations state that the program should contain provisions for updates and periodic revisions.

In a similar process to the NEM document review, the NCP is submitted to the FAA for evaluation. The FAA responds with a Record of Approval stating which program measures comply with Part 150 criteria. In some cases, a Part 150 Study will not have qualified components due to a lack of impacts within federally prescribed noise thresholds, which has been the case in past at Oxnard Airport. In these situations, measures may be recommended for adoption in an NCP to ensure future impacts do not occur. FAA may or may not accept the recommended measures. If impacts are found within the federally prescribed noise thresholds, an airport proprietor may become eligible for funding through the federal Airport Improvement Program (AIP) to implement the qualified components of the program.

FAA policy discourages development of new incompatible land uses within the airport environs. The FAA will not approve Noise Compatibility Program measures proposing correcting noise mitigation actions for incompatible development that could occur in the vicinity of airports after October 1, 1998. Additionally, funding for these projects will not be available from the AIP noise set-aside fund.

STATE AND LOCAL LAND USE AUTHORITIES

Control of land use in noise-impact areas around airports is a key tool in limiting the number of land uses exposed to noise. The federal government has no direct legal authority to regulate land use. This responsibility rests exclusively with state and local governments. The airport sponsor does, however, have a role regarding noise abatement and land use planning, which is "to reduce the effect of noise on residents of the surrounding area. Such actions include optimal site location, improvements in airport design, noise abatement ground procedures, land acquisition, and restrictions on airport use that do not unjustly discriminate against any user, impede the federal interest in safety and management of the air navigation system, or unreasonably interfere with interstate or foreign commerce."[15] Additionally, upon receipt of FAA grant funding, the airport sponsor agrees to take appropriate action, including the adoption of zoning laws, to the extent reasonable to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations in accordance with FAA Grant Assurance 21, *Compatible Land Use*.[16]

[15] As noted in FAA Order 5190.6B, Section 13.2(2), sponsor actions are, "subject to constitutional prohibitions against creation of an undue burden on interstate and foreign commerce, and unreasonable, arbitrary, and unjust discriminatory rules that advance the local interest, other statutory requirements, and interference with exclusive federal regulatory responsibilities over safety and airspace management."

[16] FAA Grant Assurances (https://www.faa.gov/sites/faa.gov/files/airports/new_england/airport_compliance/assurances-airport-sponsors-2022-05.pdf); May 2022.

The State of California legislates the authority of land use regulation to local governments. This regulation is accomplished through zoning ordinances and General Plans. The state has also established airport noise standards, noise insulation standards, and requirements for the establishment of Airport Land Use Commissions (ALUCs).

Zoning Ordinance

The State of California gives local jurisdictions, such as cities and counties, the authority to regulate the use of buildings, structures, and land through the adoption and administration of a zoning ordinance or code.[17] While land use plans, such as the General Plan, are intended to establish policies and goals to guide future development and land use, municipalities control land use through zoning ordinances and development codes.

Zoning helps control development in two primary land uses: residential and non-residential. Residential zoning classifications establish the number and type of dwelling units that can be constructed on a piece of land. Density, or the number of dwelling units per acre of land, is important in airport noise and land use compatibility planning. Increased density can increase the population in an area. If that area is exposed to high levels of airport noise, a greater impact can result. Limiting the density near an airport can help improve compatibility and limit the number of impacts on surrounding land uses. Two residential categories are used in the analysis: single-family residential and multi-family residential. As indicated by the classification name, each zone limits the number of residences allowed on a parcel.

Non-residential land use classifications, such as commercial and industrial, are typically considered to be compatible with airport operations because of their inherent noise characteristics. Commercial and industrial categories include areas zoned for manufacturing, business parks, and retail services; however, some specific noise-sensitive non-residential land uses, such as hospitals, libraries, and childcare facilities can be permitted in residentially zoned districts. On the other hand, residential type uses, such as senior living and group home facilities, can be permitted either by right or by conditional use in non-residential districts.

General Plan

The State of California requires each local jurisdiction to develop a "*long-range General Plan for the development of the city or county*" which "*shall consist of a statement of development policies and shall include diagrams and text setting forth objectives, principles, standards, and plan proposals*." Of the seven mandatory elements in the General Plan, two are especially important to the Part 150 Study – land use and noise.[18]

The land use element of the General Plan typically designates the proposed general distribution and intensity of land uses. This element serves as a framework for the plan and is intended to correlate all land use issues into a set of development policies. The land use element must include standards of population density and building intensity.

[17] California Government Code (GOV) Title 7, Division 1, Chapter 4 §65850
[18] California Government Code (GOV) Title 7, Division 1, Chapter 3, Article 5 §65302

The noise element identifies and evaluates the noise situation in the community. The projected noise levels are calculated and mapped for airports and other major noise sources, such as highways. Projected noise levels are used as a guide for establishing a pattern of land uses in the land use element that minimizes the exposure of residents to excessive noise.

Noise Insulation Standards

Part 2, Volume 1, Chapter 12, Section 1206.4 of the California Building Standards Code (Cal. Code Regs., Title 24) states that "interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room." The California Code of Regulations uses a day-night average sound level (L_{dn}) or the Community Noise Equivalent Level (CNEL) to be consistent with the noise element of the local general plan. According to the *California Airport Land Use Planning Handbook* (handbook),[19] the interior noise level resulting from exterior noise is equally important as exterior noise levels as a determinant of acceptable noise levels, which is subjective in nature. In residential circumstances, the determining factor is speech interference and sleep disruption.

The handbook states that while insulation methods are available, that should not be a mitigation measure for highly noise-impacted areas, and sound insulation should be reserved for existing land uses. For new development, the best form of noise mitigation is good land use planning and insulation measures should be used as a final course of action.

Airport Land Use Commission

The establishment of an Airport Land Use Commission (ALUC) is required for any county containing a public use airport served by regular commercial airline service. ALUCs do not have the authority to govern operations at any given airport. One role of the ALUC is to formulate a comprehensive plan that will provide for the orderly growth at each public-use airport and the area surrounding the airport within the jurisdiction of the commission.[20] These plans are typically referred to as Comprehensive Land Use Plan (CLUPs) or Airport Land Use Compatibility Plans (ALUCPs). Once adopted, local agencies must amend their General Plans, zoning ordinances, and other land use regulations to be consistent with the ALUCP or CLUP within 180 days as outlined in California Government Code 65302.3. The ALUC also reviews and provides recommendations concerning certain projects within the ALUC planning area in accordance with the policies outlined within the CLUP or ALUCP. The 20-year forecast noise contour produced as part of this study can be utilized by the ALUC as supporting material during its ALUCP update process.

STUDY AREA LAND USE POLICIES AND REGULATIONS

It is important to note the distinction between primary land use concepts used in evaluating development with the airport environs and existing land use, comprehensive plan, and zoned land use. Existing land use refers to property improvements as they ***exist today***.

[19] California Department of Transportation *California Airport Land Use Planning Handbook* (https://dot.ca.gov/programs/aeronautics/airport-land-use-planning).
[20] California Public Utilities Code (PUC) §21675

Zoning identifies the type of land use *permitted* on a given piece of property, according to the city and county zoning ordinances and maps. Local governments are required to regulate the subdivision of all lands within their corporate limits. Zoning ordinances should be consistent with the General Plan, where one has been prepared. In some cases, the land use prescribed in the zoning ordinance or depicted in the general plan may differ from the existing land use.

For the purpose of this study, the study area encompasses land within the following responsible jurisdictions: City of Oxnard, City of Port Hueneme, and Ventura County. The jurisdictional limits of each are depicted in **Exhibit 1A**. The location of Oxnard Airport, specifically, is shown in **Exhibit 1B**.

The General Plan land use identifies the *projected or future* land use, according to the goals and policies established in the locally adopted General Plan. This document guides future development within the city and county planning area and provides the basis for zoning designations. In some cases, the land use allowed in the zoning ordinance or depicted on the General Plan may differ from the existing land use.

Existing Land Use

An evaluation of the existing land uses surrounding the airport is necessary to understand if impacts result from noise exposure per Part 150 guidelines. **Exhibit 1C** illustrates existing land uses within the study area, including noise-sensitive uses such as schools, religious facilities, and hospitals. The study area, or the property near the airport where detailed land use information has been obtained, is comprised of all the land shown in **Exhibit 1C**. For comparative purposes, the total area for each land use category is presented in **Table 1A**. The areas of each land use category are based on parcels identified in **Exhibit 1C**.

The study area, as identified in **Table 1A**, is approximately 10,536 acres, 214 acres of which belong to the airport (2.0 percent of the study area). The predominate existing land uses are agricultural (22.7 percent), single-family residential (22.1 percent), and right-of-way/easements (20.9 percent). Easements/right-of-way consist of the arterial, collector, and local roads, utility easements, the railroad corridor, and Channel Islands Harbor. Other predominate existing land use categories in the study area are commercial, industrial, transportation, and utilities (10.0 percent) and parks/open space (8.0 percent). The remaining land uses are divided between multi-family residential (4.1 percent), public/quasi-public (1.6 percent), manufactured homes (0.7 percent), and mixed-use (0.1 percent). There are 313 acres of undeveloped/vacant land parcels comprising 3.0 percent of the study area. A portion of Naval Air Station Point Mugu is also within the study area and is classified as military – naval base (0.7 percent). The Pacific Ocean comprises 939 acres in the southwest corner of the map and is excluded from this land use discussion.

There are numerous noise-sensitive uses located throughout the study area which have a combined area of 438 acres and comprise 4.2 percent of the study area. There are no noise-sensitive uses identified west of the airport. There are two schools to the north of the airport, one healthcare facility and one place of worship. South of the airport there are three schools. The remaining noise-sensitive uses are east of S Ventura Road.


Maricopa
Frazier Park
Acton
Santa Barbara
Ojai
Carpinteria
Oak View
Fillmore
Piru
Santa Paula
Ventura
Moorpark
Simi Valley
San Fernando
Camarillo
Burbank
Oxnard
Thousand Oaks
Glendale
Port Hueneme
Agoura
Beverly Hills
City of Los Angeles
Santa Monica
Inglewood
Manhattan Beach
Carson
Redondo Beach
Avalon
Ventura
El Rio
W Gonzales Rd
Camarillo
Oxnard Airport
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210
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110
710
126
101B
232
118
34
1

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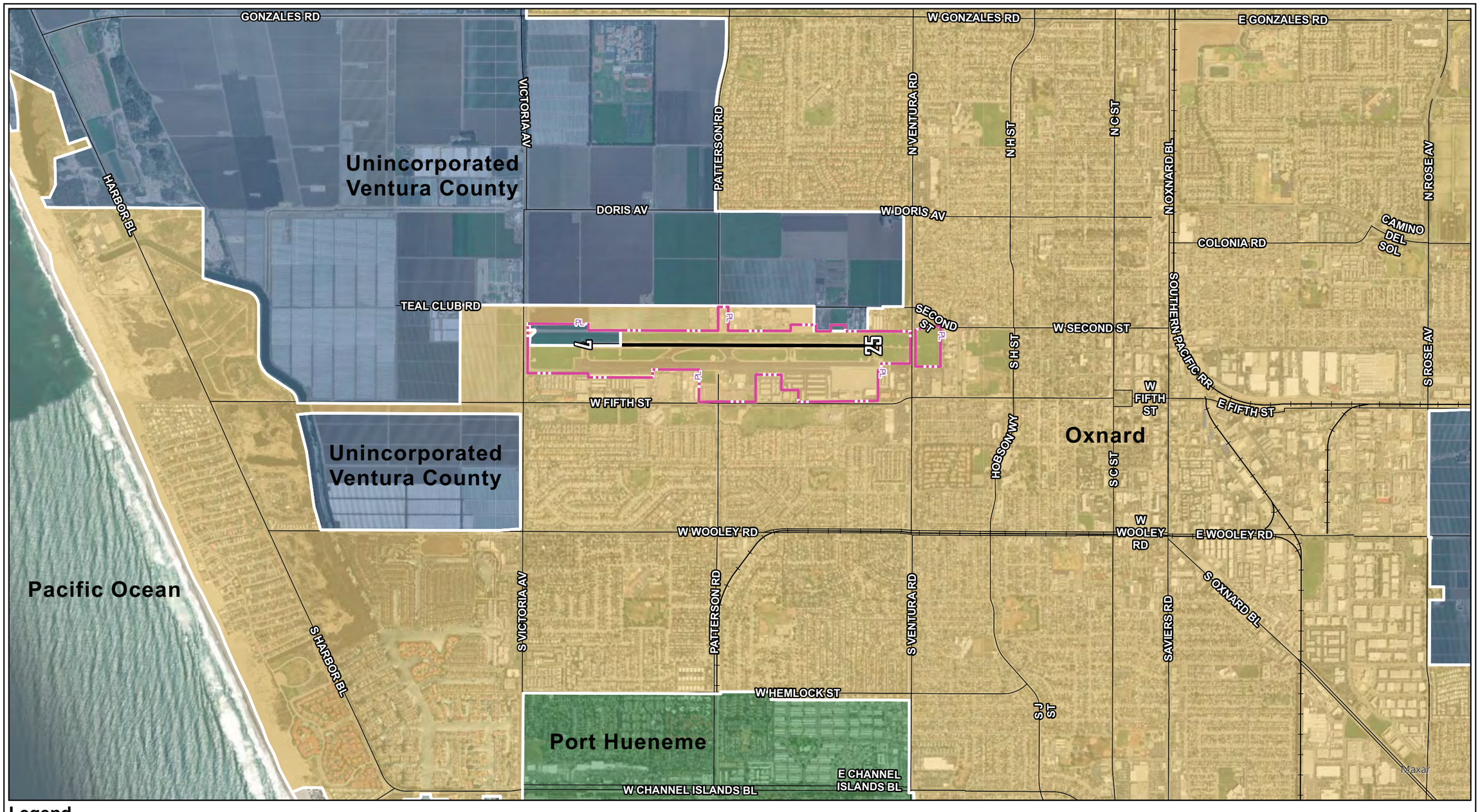


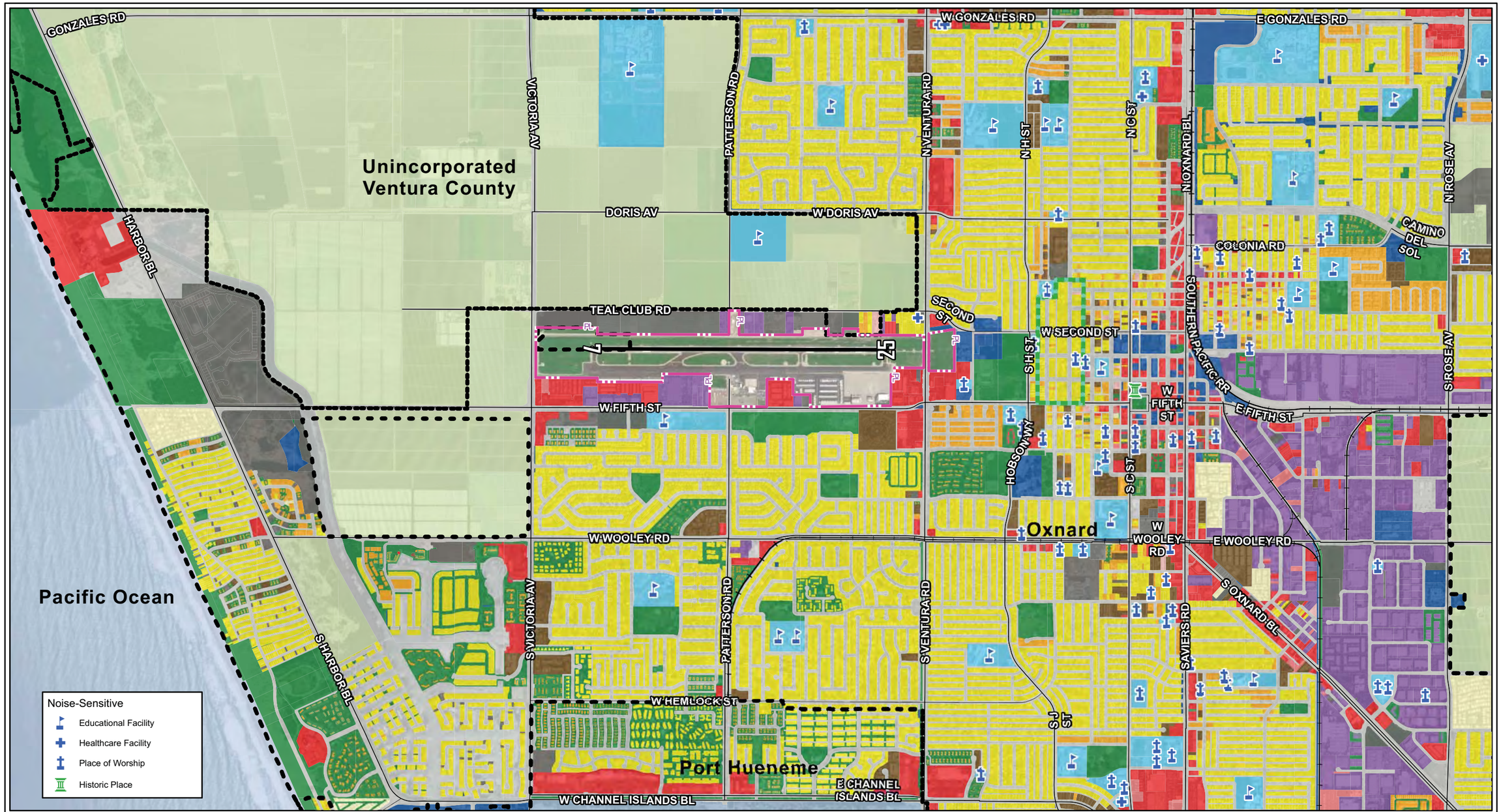
Legend

- Runway Centerline
- Railroad
- Roads
- Airport Propery Line
- Jurisdictional Boundaries
- Oxnard
- Unincorporated Ventura County
- Port Hueneme

Source:
Ventura County Cities Shapefile
ESRI Basemap Imagery, 2022

N

0 2,000
1" = 2,000'



Legend

- Airport Property Line
- Runway Centerline
- Railroad
- Henry T. Oxnard National Historic District
- Roads

Existing Land Use

- Agricultural
- Single-Family Residential
- Multi-Family Residential - Medium Density
- Multi-Family Residential - High Density
- Manufactured Homes
- Commercial
- Mixed-Use
- Industrial
- Military - Naval Base
- Public/Quasi-Public
- Parks/Open Space
- Noise-Sensitive
- Parking
- Vacant
- Easement/Right of Way
- Pacific Ocean

Source:
Ventura County Parcel Layer and Tax Roll Data
ESRI Basemap Imagery, 2022

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0 2,000
1" = 2,000'

TABLE 1A | Existing Land Uses

Land Use Type	Area (Acres)	Percentage of Study Area
Airport Property	214	2.0%
Agricultural	2,388	22.7%
Single-Family Residential	2,331	22.1%
Multi-Family Residential	434	4.1%
Commercial, Industrial, Transportation, and Utilities	1,051	10.0%
Mixed-Use	7	0.1%
Parks/Open Space	844	8.0%
Military – Naval Base	76	0.7%
Public/Quasi-Public	169	1.6%
Manufactured Homes	74	0.7%
Noise-Sensitive Uses	438	4.2%
Undeveloped/Vacant Parcels	313	3.0%
Right-of-Way/Easements	2,197	20.9%
Total	**10,536**	**100.0%**

Source: Ventura County Assessor's Office Local Tax Roll database (December 2022); ESRI Basemap Imagery (2022); Coffman Associates analysis and windshield survey from January 2023.

Historic Resources

According to the National Park Service's National Register of Historic Places (NRHP) database, there are two sites listed on the NRHP within the Part 150 Study area, the former Oxnard Public Library at 424 South C Street and the Henry T. Oxnard National Historic District located on F and G Streets between Palm and 5th Streets in Downtown Oxnard.[21] The California State Park's Office of Historic Preservation database was also consulted to determine if there are any California Historic Landmarks present within the Party 150 study area. No sites are listed as California Historical Landmarks or California Points of Historical Interest.

Zoning

The City of Oxnard and City of Port Hueneme, as well as Ventura County, have authority over the land uses in the study area around Oxnard Airport and have adopted zoning ordinances which establish a variety of zones to control land use within all areas of their respective jurisdictions.

For the purpose of this Part 150 Study, the zoning districts have been generalized to provide a uniform display of the zoning districts from the communities affected by Oxnard Airport air traffic. **Table 1B** represents the classification of zoning districts for each jurisdiction and how those zoning districts fit into a generalized zoning land use category.

[21] National Park Service's National Register of Historic Places (https://www.nps.gov/subjects/nationalregister/database-research.htm); October 2019).

TABLE 1B | Classification of Zoning Districts

Generalized Zoning Category	City of Oxnard	City of Port Hueneme	Ventura County
Agricultural			AE, RA, TP, CA
Single-Family Residential (Low-Density)	R-1, R-B-1, R-W-1, MHP-C, R-BF	R-1	RE, RO, R1, RES CR, CRE, CR1, RB, RBH
Multi-Family Residential (Medium-Density)	R-2, R-3, R-W-2, R-2-C, R-3-C	R-2	R2, CR2
Multi-family Residential – Apartment/Condo Residential (High-Density)	R-4	R-3	RHD
Commercial (including Office and Professional)	C-O, C-1, C-2, CBD CNC, CVC, HCI	C-1, C-S	CO, C1, CC
Mixed-Use	CPC	R-4, R-5	R/MU, TC
Planned Development	MH-PD, P-D	PD, DR	RPD, CPD, CRPD
Industrial	C-M, BRP, M-L, M-1, M-2 CDI, EC, COD	M-1, M-PR	M1, M2, M3, IND, CI
Public/Quasi-Public		P-R	
Parks/Open Space	C-R, RC, RP		COS

Sources: City of Oxnard Planning Division; City of Port Hueneme Community Development Department; Ventura County Planning Division; Coffman Associates analysis.

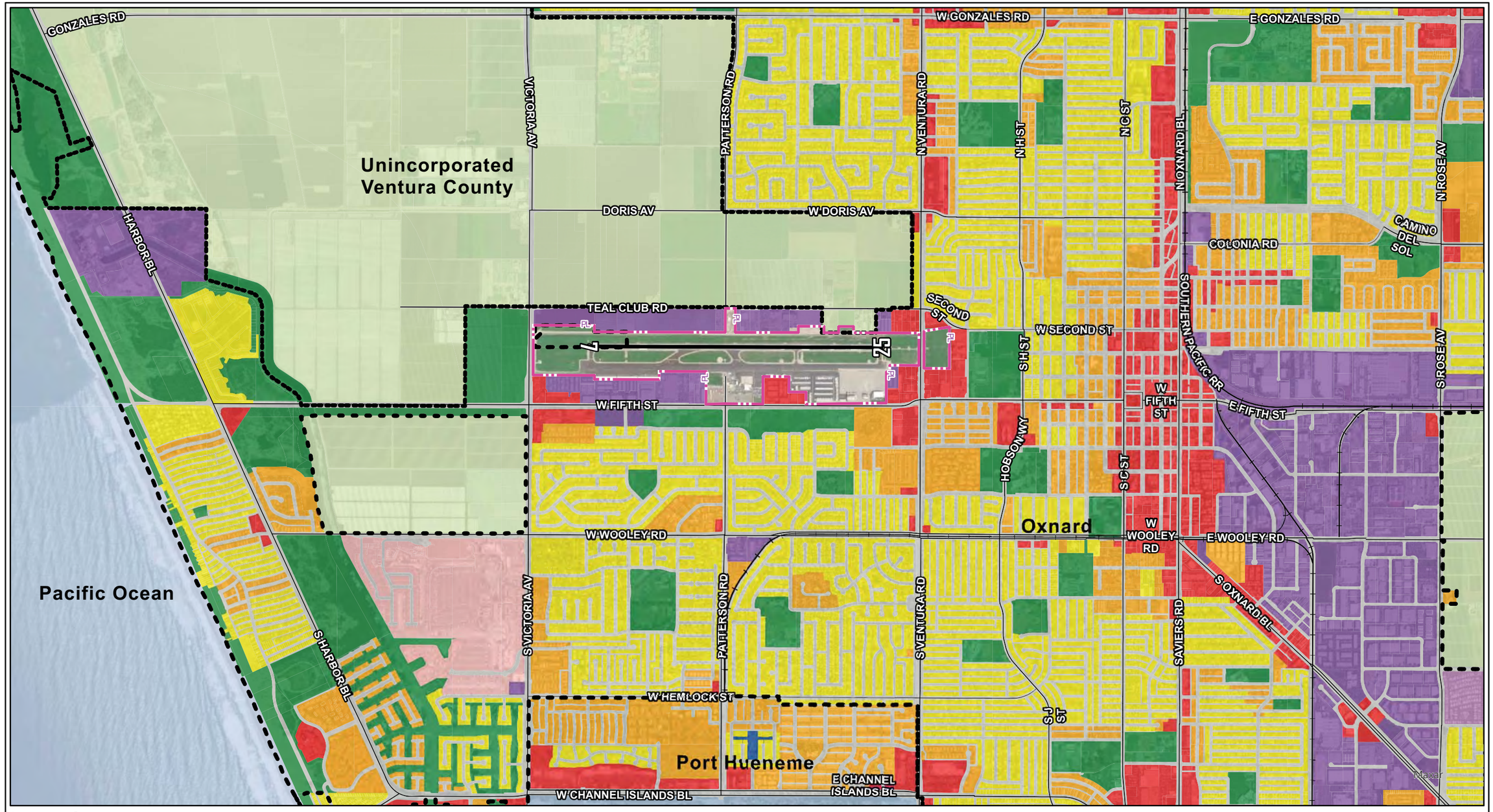
Table 1C and **Exhibit 1D** present the generalized zoning districts in the study area.

Agricultural zoning accounts for over 20 percent of the study area (20.6 percent) and is found exclusively within unincorporated Ventura County. Another significant portion of the study area is zoned single-family residential (18.6 percent) within the incorporated cities of Oxnard and Port Hueneme. Rights-of-way, made up of the arterial, collector, and local road network, comprises an additional 18.2 percent of the study area. Other predominant zoning districts within the study area include parks/open space (10.7 percent), multi-family residential (9.6 percent), industrial (8.7 percent) and commercial zoning districts (5.3 percent). The land designed as airport property makes up 2.0 percent of the total study area. Additional zoning districts include mixed-use (1.8 percent), military use (0.7 percent), planned development (0.2 percent), and public/quasi-public (<0.1 percent). Note that there are no areas zoned to be vacant.

TABLE 1C | Generalized Zoning within the Study Area

Land Use Type	Area (Acres)	Percentage of Study Area
Airport Property	214	2.0%
Agricultural	2359	22.4%
Single-Family Residential	2,136	20.3%
Multi-Family Residential	1007	9.6%
Commercial	562	5.3%
Mixed-Use	192	1.8%
Planned Development	21	0.2%
Industrial	921	8.7%
Military - Naval Base	76	0.7%
Public/Quasi-Public	4	<0.1%
Parks/Open Space	1129	10.7%
Right-of-Way	1915	18.2%
Total	**10,536**	**100%**

Sources: Ventura County Assessor's Office Local Tax Roll database (December 2022), City of Oxnard Planning Division; City of Port Hueneme Community Development Department; Ventura County Planning Division; Coffman Associates analysis.



Legend

- Roads
- Runway Centerline
- Railroad
- Airport Property Line
- Jurisdictional Boundaries

Zoning

- Agricultural
- Single-Family Residential
- Multi-Family Residential
- Commercial
- Mixed-Use
- Planned Development
- Industrial
- Military - Naval Base
- Public/Quasi-Public
- Parks/Open Space
- Easement/Right of Way
- Pacific Ocean

Source:
Ventura County Zoning Shapefile
City of Oxnard Zoning Shapefile
Port Hueme Zoning Map
ESRI Basemap Imagery, 2022

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City of Oxnard Airport Hazard Overlay Zone – 1964 Code, Sec. 36-5.13.1, Ord. No. 2132 Oxnard Code of Ordinances

The Zoning Ordinance for the City of Oxnard establishes a Sphere of Influence known as the Airport Hazard Overlay Zone surrounding the Oxnard Airport bounded on the north by Doris Avenue, on the east by "B" Street, on the south by Wooley Road, and on the west by Edison Canal. The overlay zone applies to new development of vacant property and to modifications of commercial or institutional development involving an increase of building height over 25' or a 25 percent increase in floor area.

The following requirements are established: Sec. 16-293 Review by Federal Aviation Administration (FAA):

- Sec. 16-294 Aircraft Hazard and Land Use Risk Assessment
- Sec. 16-296 Review by Oxnard Airport Authority

General Plan

The land use element of a General Plan designates the proposed general land use distribution and intensity in a jurisdiction. The land use element serves as a framework for the plan and is intended to correlate all land use issues into a set of development policies. The land use element should reflect the community's vision on the distribution of land use and align with other general plan elements.[22]

The general plan land use designations from the following sources are identified on **Exhibit 1E** with the total area for each land use category presented in **Table 1D**.

TABLE 1D | General Plan Land Use

Land Use Type	Acreage	Percentage of Study Area
Airport Property	214	2.0%
Agricultural	2125	20.2%
Single-Family Residential	1,951	18.5%
Multi-Family Residential	1545	14.7%
Commercial	728	6.9%
Mixed-Use	13	0.1%
Industrial	650	6.2%
Military - Naval Base	76	0.7%
Public/Quasi-Public	433	4.1%
Parks/Open Space	740	7.0%
Right-of-Way	2061	19.6%
Total	**10,536**	**100.0%**

Sources: Ventura County Assessor's Office Local Tax Roll database (December 2022); City of Oxnard Planning Division; City of Port Hueneme Community Development Department; Ventura County Planning Division; Coffman Associates analysis.

[22] *State of California General Plan Guidelines 2017 (Rev 2020)*, Chapter 4, State of California Governor's Office of Planning and Research (http://www.opr.ca.gov/planning/general-plan/guidelines.html).

- City of Oxnard – *City of Oxnard 2030 General Plan* (Published October 2011; amended December 2016)
- Port Hueneme – *2045 Port Hueneme General Plan* (Published October 2022)
- Ventura County – *Ventura County 2040 General Plan* (Adopted September 15, 2020; updated October 12, 2021)

In the general plan land use designations of the above jurisdictions, the distribution of land use closely resembles that of the current zoning. Primary planned land uses are agricultural (20.2 percent) and single-family residential (18.5 percent). The right-of-way accounts for an additional 19.6 percent of planned land use. Slight increases are planned for multi-family residential (14.7 percent), commercial (6.9 percent), and public/quasi-public (4.1 percent) land uses in the general plans, whereas other predominate categories such as parks/open space (7.0 percent), industrial (6.2 percent), and mixed-use (0.1 percent) slightly decrease. Airport property (2.0 percent) and military use (0.7%) are not anticipated to change in acreage in the general plan land use designations. Note that no areas are planned to be vacant.

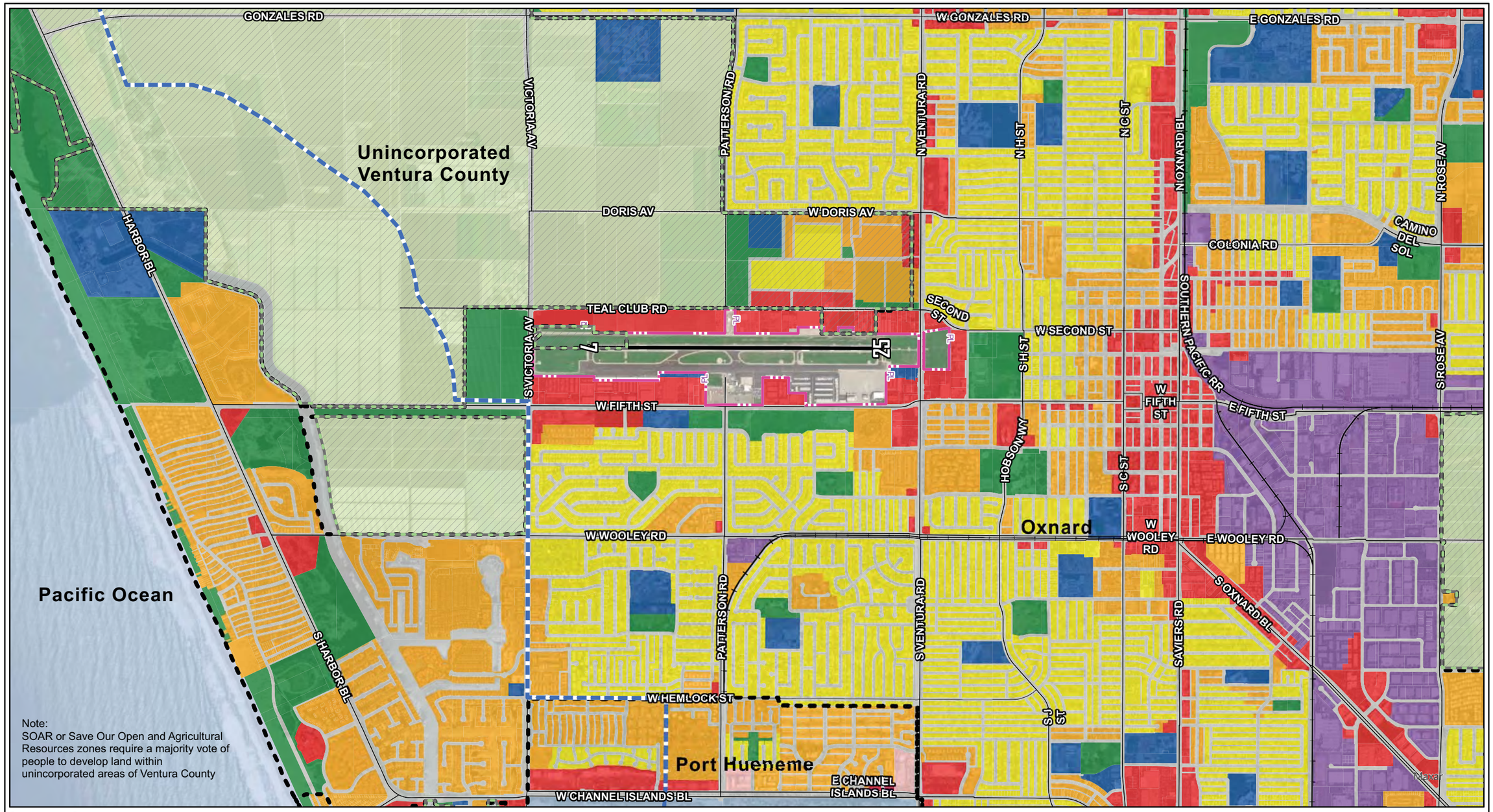
Study Area General Plans

In 1976, the State of California required a noise element addressing specific guidelines to be incorporated into local general plans. These guidelines are outlined in Appendix D of the *State of California General Plan Guidelines*, [23] issued by the Governor's Office of Planning and Research (OPR). The essential goals of the noise element outlined in Appendix D of OPR's *General Plan Guidelines* are:

- To provide sufficient information concerning the community noise environment so that noise may be effectively considered in the land use planning process, therefore lending a foundation for a community noise ordinance to address noise complaints.
- To develop strategies for abating excessive noise exposure through cost-effective mitigation techniques combined with zoning ordinances to avoid incompatible land uses.
- To protect existing regions of a planning area where the noise environment is determined to be acceptable, while also protecting those locations determined to be "noise sensitive."
- To utilize the definition of the CNEL or L_{dn} noise contour for local compliance with the State Noise Insulation Standards, which require specified levels of outdoor-to-indoor noise reduction for new multi-family residential construction in locations where the outdoor noise exposure exceeds CNEL 60 dB.[24]

According to the OPR *General Plan Guidelines*, the noise element of a general plan should apply the most up-to-date and detailed information available to reflect that community's noise environment, including stationary sources, predicted levels of noise, and the impacts of noise to local residents. California Government Code (CGC) §65302(f)(1)[25] requires a noise element to "identify and appraise noise problems in the community and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels…" for several sources outlined in the code,

[23] *State of California General Plan Guidelines 2017*, Chapter 4, State of California Governor's Office of Planning and Research (http://www.opr.ca.gov/planning/general-plan/guidelines.html); November 2019.
[24] Title 24, California Code of Regulations and Chapter 35 of the Uniform Building Code
[25] California Government Code Title 7, Division 1, Chapter 3, Article 5 *Authority for and Scope of General Plans* (https://leginfo.legislature.ca.gov); November 2019.


GONZALES RD
W GONZALES RD
E GONZALES RD
Unincorporated
Ventura County
VICTORIA AV
PATTERSON RD
N VENTURA RD
N H ST
N C ST
N OXNARD BL
N ROSE AV
DORIS AV
W DORIS AV
HARBOR BL
CAMINO DEL SOL
COLONIA RD
TEAL CLUB RD
SECOND ST
W SECOND ST
S VICTORIA AV
7
25
S H ST
SOUTHERN PACIFIC RR
S ROSE AV
W FIFTH ST
W FIFTH ST
E FIFTH ST
HOBSON WY
S C ST
Oxnard
W WOOLEY RD
W WOOLEY RD
E WOOLEY RD
Pacific Ocean
S OXNARD BL
S HARBOR BL
PATTERSON RD
S VENTURA RD
SAVIERS RD
W HEMLOCK ST
S J ST
Port Hueneme
E CHANNEL ISLANDS BL
W CHANNEL ISLANDS BL
Maxar
Note:
SOAR or Save Our Open and Agricultural Resources zones require a majority vote of people to develop land within unincorporated areas of Ventura County
Legend
Roads
Railroad
SOAR Zone
Runway Centerline
Coastal Zone Boundary Line
Airport Property Line
Jurisdictional Boundaries
Future Land Use
Agricultural
Single-Family Residential
Multi-Family Residential
Commercial
Mixed-Use
Industrial
Military - Naval Base
Public/Quasi-Public
Parks/Open Space
Easement/Right of Way
Pacific Ocean
Source:
Ventura County General Plan Shapefile
City of Oxnard General Plan Shapefile
Port Hueme General Plan Map
ESRI Basemap Imagery, 2022
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including "commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test standards, and all other ground facilities and maintenance functions related to airport operations" (CGC §65302(f)(1)(F)).

The following sections provide excerpts from the previously discussed planning documents that offer land use planning guidance addressing noise for areas around the airport.

City of Oxnard General Plan

Goals and policies relevant to this Oxford Airport Part 150 study are referenced in Chapters 3, 4, and 6 of the City of Oxnard General Plan published in October 2011.[26]

- *Goal CD-5 Appropriate Industrial Development*

  CD-5.2 Compatible Land Use: Ensure adequate separation between sensitive land uses (residential, educational, open space, healthcare) to minimize land use incompatibility associated with noise, odors, and air pollutant emissions.

- *Goal CD-8 Growth Management*

  CD-8.5 Impact Mitigation: Ensure that new development avoids or mitigates impacts on air quality, traffic congestion, noise, and environmental resources to the maximum extent feasible.

- *Goal ICS-10 Air Transportation*

  ICS-10.1 Support Oxnard Airport: Continue to support commercial air service at Oxnard Airport as outlined in the Oxnard Airport Master Plan.

  ICS-10.2 Oxnard Airport Compatible Land Use: Continue to ensure that the land use and zoning adjacent to Oxnard Airport is compatible in order to minimize potential noise and safety problems.

  ICS 10.3 Airport Operations Monitoring: Monitor impacts, such as vehicle congestion, overflight noise, and air pollution, from operations at the Oxnard Airport and work with the County Department of Airports to reduce these impacts if they are excessive.

- *Goal ER-6 Aesthetic, Scenic, and Landscape Resources*

  ER-6.6 New Development Private Open Space: Ensure that new development incorporates open space areas that provide community and neighborhood identity, private quality exterior private open space for each housing unit, and minimize conflicting land uses and noise generators.

[26] City of Oxnard, California 2030 General Plan, Goals & Policies(https://www.oxnard.org/wp-content/uploads/2017/06/Oxnard-2030-General-Plan-Amend-06.2017-SM.pdf); October 2011.

- *Goal SH-5 Noise Safe Residential and Working Environments*

  SH-5.1 Noise Abatement Programs: Promote intergovernmental noise abatement coordination and public information programs.

  SH-5.2 State Noise Insulation Standards: Continue to enforce State Noise Insulation Standards for projects in high noise environments and require developers to comply with the noise mitigation measures designed by an acoustical engineer.

  SH-5.3 Sound Attenuation Measures: Promote, where feasible, alternative sound attenuation measures such as berms, heavy landscaping, and resurfacing of noise walls to promote noise absorption as well as deflection, berms and landscaping, or location of buildings away from the roadway and other noise sources.

  SH-5.6 Compatibility with Oxnard Airport: Work with the Oxnard Airport in revising flight paths to minimize flyovers of residential areas, especially “touch and go” pattern flying at low altitude and at relatively high frequency.

- *Goal SH-6 Noise Consideration in Development Review*

  SH-6.5 Land Use Compatibility with Noise: Encourage non-noise sensitive land uses to locate in areas that are permanently committed to noise producing land uses, such as transportation corridors and industrial zones.

  SH-6.6 Locating Education Institutions to Avoid Noise Disruption: Locate educational institutions in areas where students and teachers can perform both inside and outside activities without excessive distraction from noise.

  SH-6.8 Noise Contour Maps: Utilize, and periodically update, noise contour maps as a guide to land use decisions and utilize noise compatibility analyses prepared by the County Airports Department and the U.S. Navy.

  SH-6.9 Minimize Noise Exposure to Sensitive Receptors: Prohibit the development of new commercial, industrial, or other noise generating land uses adjacent to existing residential uses, and other sensitive noise receptors such as schools, child and daycare facilities, health care facilities, libraries, and churches if noise levels are expected to exceed 70 dBA.

  SH-6.12 Noise Abatement Programs: Promote intergovernmental noise abatement coordination and public information programs.

  SH-6.13 Noise Acceptable for Open Windows and Patios: Continue to require noise analysis of proposed development projects as part of the environmental review process and then require mitigation measures to reduce noise impacts to acceptable levels within outside activity areas and within residential structures without relying on mechanical ventilation, if feasible.

Chapter 3 of the Oxnard General Plan also describes the City of Oxnard Urban Restriction Boundary (CURB), which restricts the City of Oxnard from allowing urban services and urbanized uses of land outside of the CURB line to help prevent urban sprawl. The CURB was first adopted in 1998, extended in 2016, and is in effect through December 31, 2050.

2045 Port Hueneme General Plan

Goals and policies relevant to this study are referenced in Chapter 7 – Noise of the most recent 2045 Port Hueneme General Plan which was adopted in 2021.[27] The purpose of Chapter 7 is to minimize exposure to excessive noise from all noise sources. Aircraft overflights are considered a minor source of noise in Port Hueneme.

- *Goal N1 – Minimizing Exposure to Excessive Noise from All Noise Sources*

  The Port Hueneme 2045 General Plan identifies noise-sensitive land uses and acceptable noise levels using a Noise Compatibility Matrix adapted from Appendix D of the California General Plan Guidelines.[28] The land uses identified as noise-sensitive are residential, residential care, child/elder care facilities, schools, places of worship, and hospitals.

Ventura County 2040 General Plan

The first Ventura County General Plan was adopted in 1988. A comprehensive update to the General Plan was recently completed for the first time in 30 years, and the updated Ventura County 2040 General Plan was adopted on September 15, 2020.[29]

In the Ventura County 2040 General Plan, noise is addressed within the state-mandated Hazards and Safety Element in Chapter 7, Section 7.9. According to Section 7.9, aircraft is considered one of the predominant sources of noise in the county, along with traffic, transit, and freight trains. The section lists noise-sensitive land uses and includes noise compatibility standards.

- *HAZ-9: To protect the health, safety, and general welfare of county residents by striving to eliminate or avoid the adverse noise impacts on existing and future noise sensitive uses.*

  HAZ-9.1 Limiting Unwanted Noise: The county shall prohibit discretionary development which would be impacted by noise or generate project-related noise which cannot be reduced to meet the standards prescribed in Policy Haz-9.2. This policy does not apply to noise generated during the construction phase of a project.

[27] 2045 Port Hueneme General Plan (https://www.ci.port-hueneme.ca.us/1272/2045-General-Plan); September 2021.
[28] *State of California General Plan Guidelines 2017*, Appendix D, State of California Governor's Office of Planning and Research (https://opr.ca.gov/docs/OPR_Appendix_D_final.pdf); November 2019.
[29] Ventura County 2040 General Plan (https://vc2040.org/review/documents); September 2020.

HAZ-9.2 Noise Compatibility Standards: The county shall review discretionary development for noise compatibility with surrounding uses. The county shall determine noise based on the following standards:

[…]3. New noise sensitive uses proposed to be located near airports:

a. Shall be prohibited if they are in a Community Noise Equivalent Level (CNEL) 65 dB or greater, noise contour; or

b. Shall be permitted in the Community Noise Equivalent Level (CNEL) 60 dB to CNEL 65 dB noise contour area only if means will be taken to ensure interior noise levels of CNEL 45 dB or less.

HAZ-9.6 Airport Noise Compatibility: The county shall use the aircraft noise analysis prepared for local airports or the noise contours from the current NBVC-Point Mugu Air Installations Compatible Use Zones (AICUZ) study, as most appropriate for a project location, as an accurate mapping of the long-term noise impact of the airport's aviation activity. The county shall restrict new discretionary residential land uses to areas outside of the 60 decibel Community Noise Equivalence Level (dB CNEL) aircraft noise contour unless interior noise levels can be mitigated to meet a maximum 45 dB CNEL.

HAZ-9.7 Noise Control Priorities: The priorities for noise control for discretionary development shall be as follows:

1. Reduction of noise emissions at the source.
2. Attenuation of sound transmission along its path, using barriers, landform modification, dense plantings, building orientation and placement, and the like.
3. Rejection of noise at the reception point using noise control building construction, hearing protection or other means.

Ventura County's Save Open Space and Agricultural Resources (SOAR)

SOAR is a county-wide initiative organized by voters in Ventura County, California, with the purpose of protecting the natural and agricultural resources of the county by addressing development pressure and urban sprawl. The Ventura County SOAR ballot measure petition was approved in November 1998 by 63 percent of voters of the general public. In November 2016, a measure to extend the original SOAR expiration date in Ventura County from 2020 to 2050 was approved by 59 percent of voters. The initiative establishes City Urban Restriction Boundary (CURB) lines around the cities in the county, protecting unincorporated Ventura County land from annexation by the cities of Oxnard or Camarillo. Approval for development of agricultural land outside the CURB line requires a majority vote of the citizens countywide.[30] A notable exception is that 20 acres outside the CURB may be shifted to affordable housing per year to meet the City's Regional Housing Needs Assessment (RHNA) target. The SOAR boundary is shown on the future land use map in **Exhibit 1E**.

[30] Save Open Space & Agricultural Resources (2018) https://www.soarvc.org/communities/ventura-county/

Ventura County Airports Comprehensive Use Plan

The Ventura County Transportation Commission serves as the Airport Land Use Commission (ALUC) authorized and required by state law. Cal PUB, Division 9, Aviation Part 1, Chapter 4, Article 3.5, Section 21670 et seq.) The ALUC is responsible for preparing a comprehensive airport land use plan for each public use airport in the County. Ventura County's *Airports Comprehensive Land Use Plan* for the county's public use airports and one military airport was adopted in 1991 and updated in 2000.[31]

Area Specific Plans

Area Specific Plans within the study area are shown on **Exhibit 1F**.

Ventura County Coastal Area Plan

As part of its General Plan, Ventura County has several Area Plans with more specific land use programs and goals. The Part 150 study area includes a portion of unincorporated Ventura County along the coast which is included in the Ventura County Coastal Area Plan. In accordance with the California Coastal Act of 1976, the California State Legislature mandates regulation of land for management, conservation, and development of California's coastal resources and transfers authority to local governments to adopt Local Coastal Programs. The Ventura County Coastal Area Plan is the basis for Ventura County's Local Coastal Program and Land Use Plan, which incorporate coastal policies aligned with state policies mandated by the Coastal Act.[32]

City of Oxnard – Teal Club Specific Plan (Proposed)

As of October 2021, the Teal Club Specific Plan is in in the Administrative Draft Phase with City of Oxnard Development Services. The Teal Club proposed area is 149.72 acres north of airport property on Teal Club Road and within the City of Oxnard Sphere of Influence and inside the Oxnard CURB boundary. The current use is agricultural. Proposed development will include a change in use to commercial for development of a business park and Urban Village, as well as residential with the addition of up to 990 single-family and multi-family residential units.

Additional City of Oxnard Specific Plans

As shown on **Exhibit 1F**, there are three additional Specific Plans within the study area boundary for Oxnard Airport, including Northeast Community, Las Cortes, and Mandalay Bay Phase IV.

[31] Coffman Associates, Inc *Airport Comprehensive Land Use Plan for Ventura County* (July 2000)
[32] Ventura County General Plan, Coastal Area Plan (https://vcrma.org/en/local-coastal-program); October 2021

AIRPORT FACILITY INVENTORY

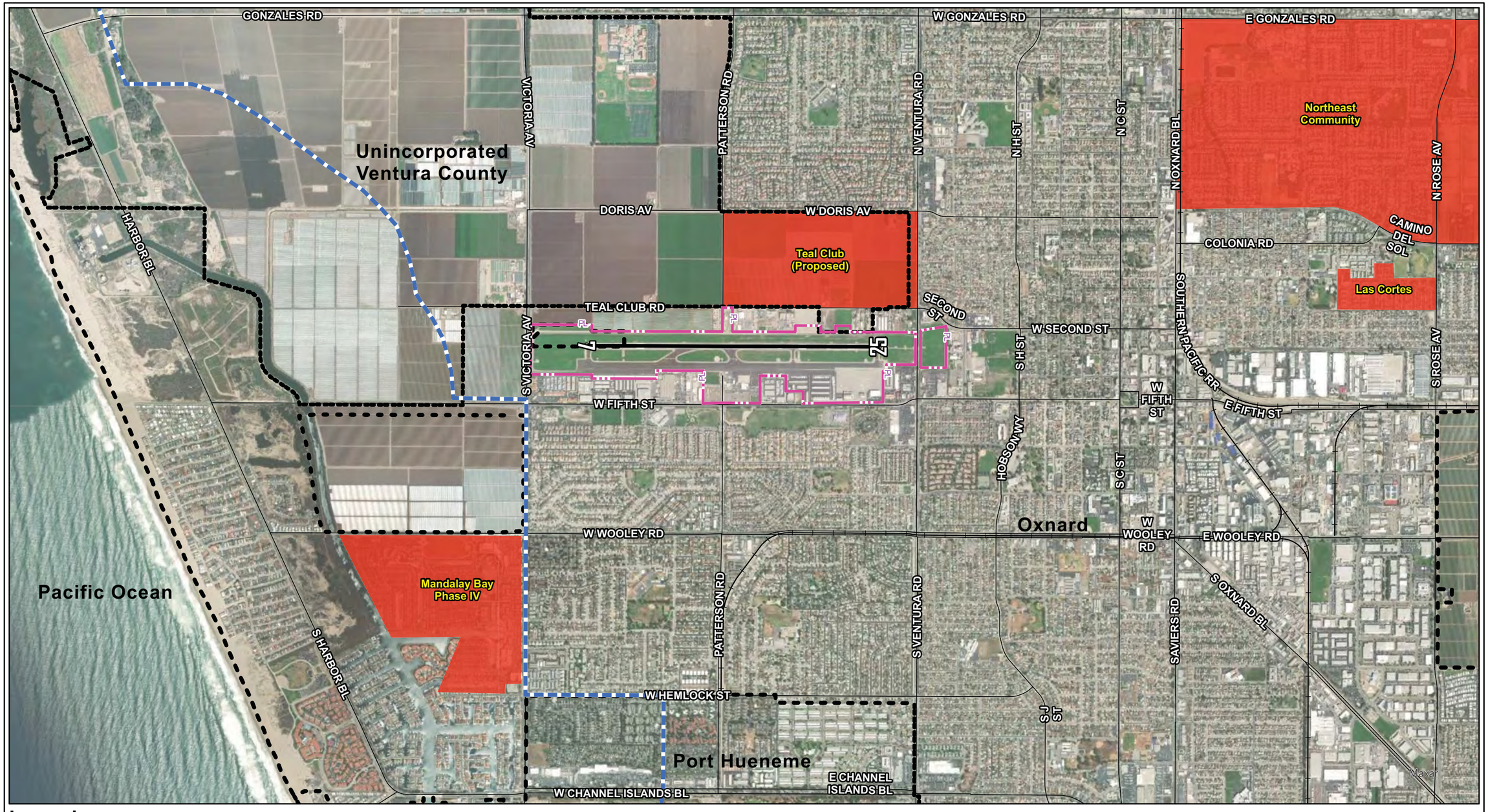
Airport facilities can be categorized into two separate classifications: airside facilities and landside facilities. The airside facilities are directly associated with aircraft operations. These facilities may include, but are not limited to, runways, taxiways, airport lighting, and navigational aids. Landside facilities pertain to facilities necessary to provide safe and efficient transition from surface transportation to air transportation, as well as support aircraft servicing, storage, maintenance, and safe operations. The existing airside and landside facilities are presented on **Exhibit 1G.**

AIRSIDE FACILITIES

OXR is served by a single runway (7-25) configuration oriented in an east-west manner. Runway 7-25 is 5,953 feet long by 100 feet wide. Runway 25 is marked as a precision instrument runway, while Runway 7 is marked as a non-precision instrument runway. Precision instrument markings include landing designation, centerline, threshold markings, aiming point, touchdown zone, and edge markings. Non-precision markings include a runway designation, threshold, and aiming point. It is important to note that a 453-foot displaced landing threshold is present on Runway 25. Runway 7-25 has a gradient of 0.2 percent, sloping up from west to east. Runway 7-25 is equipped with medium intensity runway lighting (MIRL), runway end identifier lights (REILs) serve Runway 7, a medium intensity approach lighting system with sequenced flashing lights (MALSF) serves Runway 25, and four-box precision approach path indicator (PAPI-4) systems serve both ends of the runway. In addition, the pavement strength rating for Runway 7-25 is published as 91,000 pounds single wheel loading (S), 117,000 pounds dual wheel loading (D), and 174,000 pounds dual tandem wheel loading (2D). Runway 7-25 is served by a 75-foot-wide full-length parallel taxiway (Taxiway F), with a separation of 365 feet from runway centerline to taxiway centerline. In addition, there are five taxiways that connect Runway 7-25 and parallel Taxiway F, which include Taxiways A, B, C, D, and E moving east to west. All taxiways are equipped with medium intensity taxiway lighting (MITL).

Table 1E summarizes the airside facilities data available at OXR. Navigational aids (NAVAIDS) include a lighted wind indicator, supplemental windcones, a segmented circle, and a rotating beacon that remains in operation from sunset to sunrise.

The airport has a wide mix of aircraft hangars including large conventional hangars, box hangars, and T-hangars. At this time, OXR has approximately 256,200 square feet (sf) of hangar space on the airfield. There is a full range of fixed base operators (FBOs) and specialty aviation service operators (SASOs) located on the airport that provide aviation services including fueling, line services, aircraft maintenance, rental cars, hangar space/leasing, aircraft parts, flight instruction, aircraft rental and charter services, and other services. These businesses and organizations include: Aspen Helicopters/Oxnard Jet Center, Golden West Jet Center, Light Helicopter Depot, California Aeronautical University: Ventura County Flight Training Center, Ventura County Airporter, AeroComputers, Executive Hangars West, Dollar Car Rental, Enterprise, Avis/Budget, Hertz, Ventura County Credit Union, and STC Group. Fuel storage and dispensing facilities are owned by Ventura County Department of Airports and are operated by Aspen Helicopters/Oxnard Jet Center and Golden West Jet Center.



Legend

- Roads
- Railroad
- Runway Centerline
- Airport Property Line
- Jurisdictional Boundaries
- Specific Area Plan
- Coastal Zone Boundary Line

Source:
City of Oxnard General Plan
ESRI Basemap Imagery, 2022

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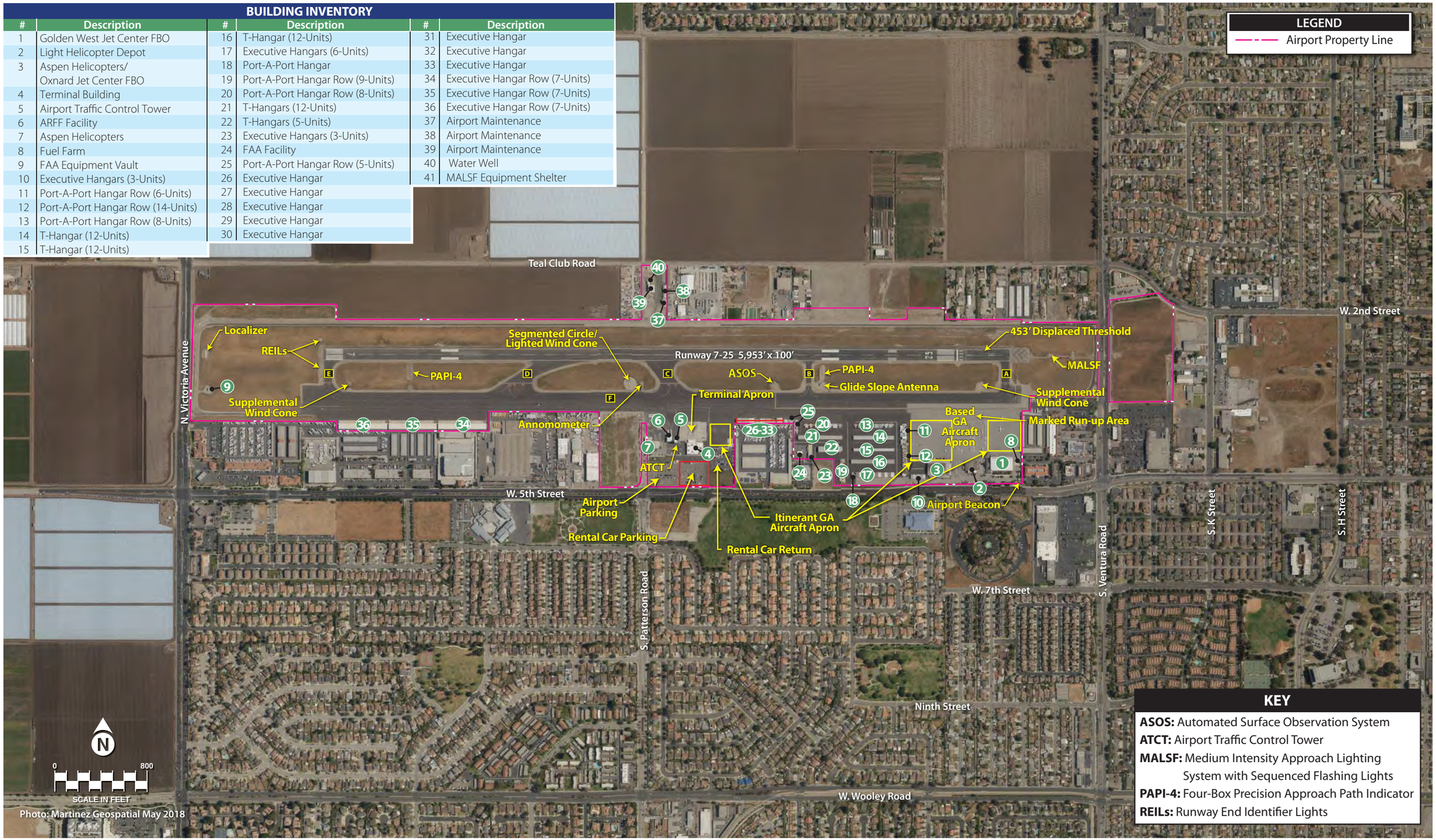
1" = 2,000'

BUILDING INVENTORY

#	Description	#	Description	#	Description
1	Golden West Jet Center FBO	16	T-Hangar (12-Units)	31	Executive Hangar
2	Light Helicopter Depot	17	Executive Hangars (6-Units)	32	Executive Hangar
3	Aspen Helicopters/ Oxnard Jet Center FBO	18	Port-A-Port Hangar	33	Executive Hangar
		19	Port-A-Port Hangar Row (9-Units)	34	Executive Hangar Row (7-Units)
4	Terminal Building	20	Port-A-Port Hangar Row (8-Units)	35	Executive Hangar Row (7-Units)
5	Airport Traffic Control Tower	21	T-Hangars (12-Units)	36	Executive Hangar Row (7-Units)
6	ARFF Facility	22	T-Hangars (5-Units)	37	Airport Maintenance
7	Aspen Helicopters	23	Executive Hangars (3-Units)	38	Airport Maintenance
8	Fuel Farm	24	FAA Facility	39	Airport Maintenance
9	FAA Equipment Vault	25	Port-A-Port Hangar Row (5-Units)	40	Water Well
10	Executive Hangars (3-Units)	26	Executive Hangar	41	MALSF Equipment Shelter
11	Port-A-Port Hangar Row (6-Units)	27	Executive Hangar		
12	Port-A-Port Hangar Row (14-Units)	28	Executive Hangar		
13	Port-A-Port Hangar Row (8-Units)	29	Executive Hangar		
14	T-Hangar (12-Units)	30	Executive Hangar		
15	T-Hangar (12-Units)				



KEY

ASOS: Automated Surface Observation System
ATCT: Airport Traffic Control Tower
MALSF: Medium Intensity Approach Lighting System with Sequenced Flashing Lights
PAPI-4: Four-Box Precision Approach Path Indicator
REILs: Runway End Identifier Lights

TABLE 1E | Airside Facilities Data - Oxnard Airport

Runway 7-25	
Runway Length (feet)	5,953’
Runway 25 Threshold Displacement (feet)	453’
Runway Width (feet)	100’
Runway Surface Material	Asphalt
Condition	Good
Pavement Markings	Precision / Non-Precision
Runway Weight Bearing Capacity	
Single Wheel Weight Bearing Capacity	91,000 lbs
Dual Wheel Weight Bearing Capacity	117,000 lbs
Dual Tandem Wheel Weight Bearing Capacity	174,000 lbs
Lighting and Navigation	
Runway Lighting	MIRL
Runway End Identifier Lights (REILs)	Yes (7)
Approach Lighting System	MALSF (25)
Taxiway Lighting	MITL
Approach Aids	PAPI-4 (Both Ends)
Instrument Approach Procedures	ILS, VOR, RNAV (GPS)
Air Traffic Control	ATCT (7:00 a.m. – 9:00 p.m.)
Weather or Navigational Aids	• ASOS • Anemometer • CTAF/UNICOM • Oxnard Tower/Ground Control • Segmented Circle • Lighted Wind Indicator • Supplemental Windcones • Rotating Beacon

- ASOS: Automated Surface Observation System
- CTAF: Common Traffic Advisory Frequency
- GPS: Global Positioning System
- MALSF: Medium Intensity Approach Lighting System with Sequenced Flashing Lights
- MIRL: Medium Intensity Runway Lighting
- MITL: Medium Intensity Taxiway Lighting
- PAPI: Precision Approach Path Indicator
- REIL: Runway End Identifier Lights
- RNAV: Area Navigation
- UNICOM: Universal Communication Frequency
- VOR: Very High Frequency Omnidirectional and Range

Source: FAA Airport Master Record (Form 5010-1); Oxnard Airport Layout Plan (2021); Jviation Oxnard Airport Runway 7-25 Published Strength and Weight Update (2022); airport communication.

Two aviation-related development projects are currently proposed on airport property. One development will support an expansion of the existing Aspen Helicopters facilities, and the second is a proposed redevelopment of a seven acre site by MS Construction.

LANDSIDE FACILITIES

Landside facilities include all airport elements other than the runway/taxiway system and navigational aids which are not accessible to aircraft, including: terminals, storage hangars, aprons, vehicle parking lots, and fuel farms.

Landside facilities at Oxnard include the terminal building, airport parking lot, rental car parking, and rental car return lots. The second floor of the existing terminal building has vacant office space available for lease. The airport is proactively seeking a long-term lease with an aviation startup company to occupy the space. In addition to the ATCT located on airport property, the FAA has an office facility and equipment vault at the Oxnard Airport. The FBO’s, helicopter depot and other facilities are accessible from W 5th Street.

PAN-PACIFIC UAS TEST RANGE COMPLEX

In November 2022, the Ventura County Department of Airports entered into a Master Agreement with the University of Alaska Fairbanks to make Oxnard Airport's UAS testing site a member of the Alaska Center for Unmanned Aircraft Systems Integration (ACUASI), also known as the Pan-Pacific UAS Test Range Complex.[33] The partnership will allow Oxnard Airport's UAS site to be utilized by third parties for testing, research, and educational purposes, with the University's coordination and cooperation. The partnership will contribute to the airport's efforts to better support clients, such as Swarm Aero, with UAS-based operations.

AIRPORT OPERATIONS

Oxnard Airport is situated at 44.8 feet MSL. The traffic pattern altitude for all single engine aircraft is 1,000 feet AGL (1,045 feet MSL) and 1,400-feet AGL (1,445 feet MSL) for multi and turbine engine aircraft. The airport utilizes a non-standard left-hand traffic pattern for Runway 7 upon request and standard left-hand traffic pattern for Runway 25. The non-standard right left traffic pattern for Runway 7 is intended to avoid traffic pattern congestion over the City of Oxnard to the south.

Runway use is dictated by prevailing wind conditions. Ideally, it is desirable for aircraft to land directly into the wind. The prevailing wind condition favors Runway 25 the majority of the time. Runway 7 is favored during Santa Ana winds.

NOISE ABATEMENT PROCEDURES

Due to the proximity of noise-sensitive land uses to Oxnard Airport, voluntary Noise Abatement Procedures have been adopted that provide several recommended noise abatement measures.

For all aircraft arriving and departing, those measures include:

- Voluntary curfew between 10:00 PM to 7:00 AM
- Remain as high as practical over residential areas during overflight, approached and departures.
- When able fly downwind north of Wooley Road.
- Use best rate of climb when departing runways.
- No formation takeoffs or landings without prior permission from Airport Director.
- Touch and Go's and Stop and Go's are prohibited on
    - Weekdays from 8:00 PM to 7:00 AM.
    - Weekends from 8:00 PM to 8:00 AM.

For Runway 25 touch and go pattern:

- Ask tower to use Right Turn pattern
- Published Traffic Pattern Altitude:
    - Single engine aircraft – 1,043' MSL
    - Multi and turbine engine aircraft – 1,443' MSL

- Utilize best rate of climb, conditions permitting, turn crosswind when 700' AGL is reached.
- Turn crosswind before the Edison Canal or turn crosswind at least ½ mile past the shoreline
- Maintain pattern altitude until turning base leg.
- Downwind leg should be flown north of Wooley Road

For Runway 25 extended touch and go pattern:

- When asked by tower to extend to shoreline for pattern work, please extend ½ mile or more past the shoreline.
- Turn crosswind over the ocean.
- Turn downwind leg over the ocean and fly north of Wooley Road.

For Runway 25 Right/Left Crosswind Departures

- Use best rate of climb.
- Remain on runway heading until beyond departure end of runway and 700' AGL before proceeding on course.

For Runway 25 Straight out Departures

- When departing the airport traffic area use best rate of climb, remain on runway heading until beyond the departure end of the runway and 700' AGL before proceeding on course.

For Runway 25 straight in Arrival:

- Cross the Camarillo Airport at or above 2000' and remain as high as practical over the city until commencing final descent.
- Exercise extreme caution due to Camarillo traffic and instrument approaches being conducted to Oxnard's Runway 25.

For Runway 7 Touch and Go Pattern:

- Published Traffic Pattern Altitude:
    - Single engine aircraft – 1,043' MSL
    - Multi and turbine engine aircraft – 1,443' MSL
- Utilize best rate of climb, conditions permitting, turn crosswind when within 300' of pattern altitude.
- Maintain pattern altitude until turning base leg.

For Runway 7 Departure:

- Departures from mid-field intersection (Taxiway C) are prohibited.
- When departing the airport traffic area use best rate of climb and remain on runway heading until reaching the airport boundary (Ventura Rd) before proceeding on course.
- Exercise extreme caution due to opposite direction instrument approach traffic.

Additional flight pattern information is provided on a pilot guide available in print and online by the airport (**Exhibit 1H)**. The pilot guide also outlines the noise abatement procedures previously listed. The airport requests that all pilots adhere to the noise abatement program outlined above. The flight schools at the airport implement a flight schedule to ensure no early or late flights impact neighboring noise-

sensitive uses. The voluntary noise abatement procedures are published both in print and on the city's website, and pilots are routinely directed to both and requested to abide by them whenever possible consistent with safety. The noise abatement program at Oxnard Airport is voluntary, not mandatory, due to implications of ANCA which establishes precedent of national aviation noise policies over local policies under 14 CFR Part 161.

Ventura County Department of Airports has also established a noise complaint form on their website where complaints can be filed, logged, and tracked online at https://vcairports.org.

INSTRUMENT APPROACH PROCEDURES

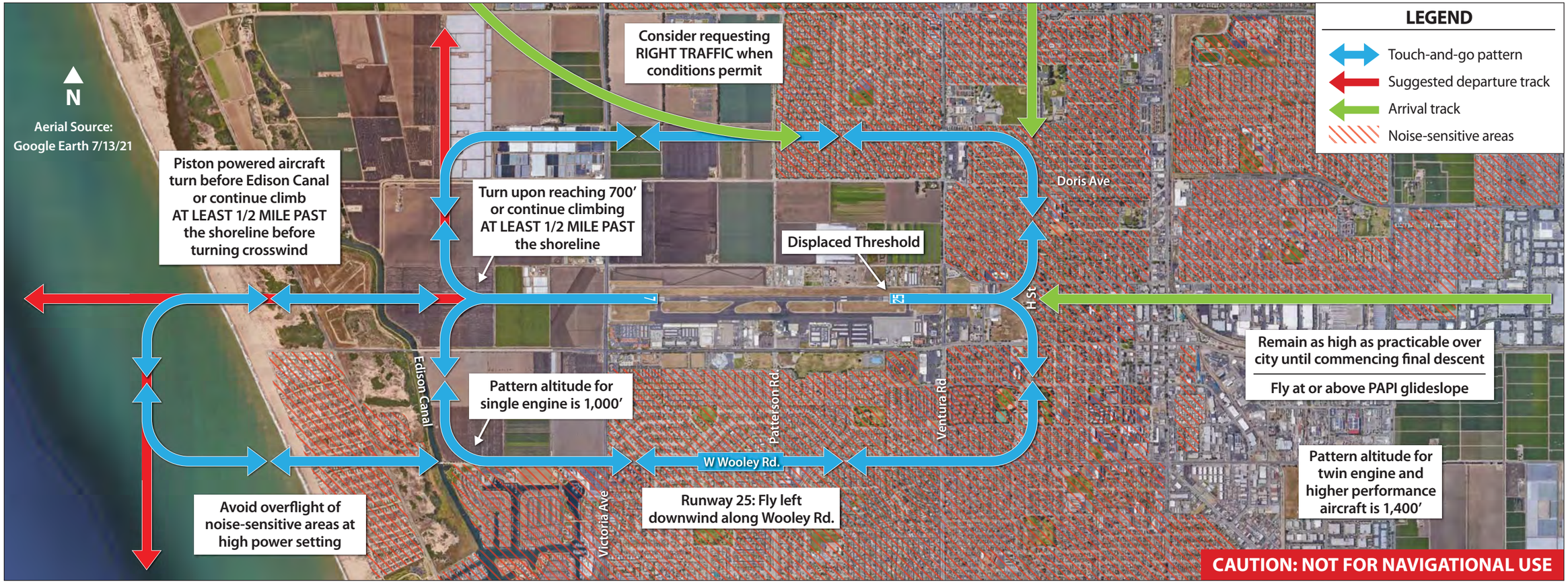
Instrument approach procedures are a series of predetermined maneuvers established by the FAA using electronic navigational aids to assist pilots in locating and landing at an airport. The capability of an instrument approach is defined by the visibility and cloud ceiling minimums associated with the approach. Visibility minimums define the horizontal distance that the pilot must be able to see to initiate the approach. Cloud ceilings, in some cases, define the lowest level a cloud layer (defined in feet above the ground) can be situated for a pilot to initiate the approach.

Instrument approach procedures are available to Runway 25 and Runway 7, the details of which are shown in **Table 1G**. The most sophisticated instrument approach procedures at OXR are associated with the ILS to Runway 25. The ILS or localizer (LOC) Runway 25 approaches provide visibility minimums as low as 1-mile and cloud ceilings of 250 feet AGL. In addition, each runway end at OXR is served by GPS approaches with associated minima. Currently, the GPS approaches to each runway include an LPV component. Runway 25 is also served by a VOR instrument approach providing straight-in and circling approaches.

TABLE 1G | Instrument Approach Data - Oxnard Airport

	Weather Minimum by Aircraft Approach Category					
	Category A & B		Category C		Category D	
	Cloud Ht.	Visibility	Cloud Ht.	Visibility	Cloud Ht.	Visibility
RNAV (GPS) RWY 25						
LPV DA	294'	1.0 mi	294'	1.0 mi	294'	1.0 mi
LNAV/VNAV DA	333'	1.0 mi	333'	1.0 mi	333'	1.0 mi
LNAV MDA	520'	1.0 mi	520'	1.375 mi	520'	1.375 mi
Circling	520'	1.0 mi	700'	1.75 mi	760'	2.25 mi
RNAV (GPS) RWY 7						
LPV DA	287'	1.0 mi	287'	1.0 mi	287'	1.0 mi
LNAV/VNAV DA	319'	1.0 mi	319'	1.0 mi	319'	1.0 mi
LNAV MDA	480'	1.0 mi	480'	1.375 mi	480'	1.375 mi
Circling	520'	1.0 mi	700'	1.75 mi	760'	2.25 mi
ILS OR LOC RWY 25						
Straight-in ILS	294'	1.0 mi	580'	1.5 mi	580'	1.5 mi
Straight-in LOC	580'	1.0 mi	580'	1.5 mi	580'	1.5 mi
Circling	580'	1.0 mi	700'	1.75 mi	760'	2.25 mi
VOR RWY 25						
Straight-in	540'	1.0 mi	540'	1.375 mi	540'	1.375 m
Circling	540'	1.0 mi	700'	1.75 mi	715'	2.25 mi

Source: U.S. Terminal Procedures effective December 1, 2022 through December 29, 2022.



RECOMMENDED VOLUNTARY NOISE ABATEMENT PROCEDURES:

The airport environs are noise-sensitive in all quadrants. Aircraft operators are requested to practice noise abatement fly quiet procedures whenever possible consistent with safety.

- Please limit consecutive touch-and-go operations to no more than three. Additional pattern work in the same flight should conduct full stop-taxi backs.
- Voluntary curfew - ALL operations - 11:00 p.m. to 6:00 a.m.
- Older/louder turbojet aircraft are requested to avoid use of the airport.
- Remain as high as practical over residential areas during overflight, approaches, and departures.
- Use best rate of climb when departing any runway.
- No touch-and-go's or stop-and-go's between 8:00 p.m. and 7:00 a.m. (8:00 am on weekends).
- No formation takeoffs or landings without prior permission from the Airport Director.
- No high power engine run-ups for maintenance between 7:00 p.m. and 7:00 a.m.
- Late night arrivals use GPS Runway 7 approach when wind, weather, and safety permit.
- Use extreme caution when departing Runway 7 due to opposite direction instrument approach traffic.
- Southbound departures off Runway 25 by piston powered (less than 12,500 lbs.) aircraft, after reaching 700', turn left past the runway end and before the Edison Canal, or continue to climb AT LEAST 1/2 MILE PAST the shoreline.
- Exercise extreme caution on Runway 25 due to Camarillo traffic and instrument approaches being conducted to Oxnard's Runway 25.
- Straight-in arrivals on Runway 25: cross the Camarillo Airport at or above 2000' and remain as high as practical over the city until commencing final descent.
- No departures on Runway 7 from midfield intersection (Taxiway C).
- Runway 25 Pattern: requesting right traffic will reduce overflight of noise sensitive areas. Follow all ATC instructions.

Compliance with recommended noise abatement procedures is encouraged. No procedure should be allowed to compromise flight safety.

LOCATION:

FAA Identification: OXR
Lat/Long: 34-12-02.9050N 119-12-26.0150W
Proximity to Oxnard: 1 mile west of city
Field elevation: 44.8'
Runway 07-25: 5,953' x 100'
(Runway 25 displaced threshold 453')

TRAFFIC PATTERN ALTITUDES:

Single Engine Aircraft - 1,000'
Multi-engine/Turbine Aircraft - 1,400'

COMMUNICATIONS:

CTAF: 134.95 (Pilot Controlled Lighting)
ATIS: 118.05
Oxnard Ground Control: 121.9
Oxnard Tower: 134.95 (7:00 a.m. - 9:00 p.m.)
Point Mugu App/Dep Control: 124.7
Los Angeles Center: 135.5
Santa Barbara RCAG: 327.1
ASOS: Phone (805) 382-0592
Nearest NAVAID: CMA VOR 115.8, 067°/5.2 DME
ILS-Runway 25: 108.7

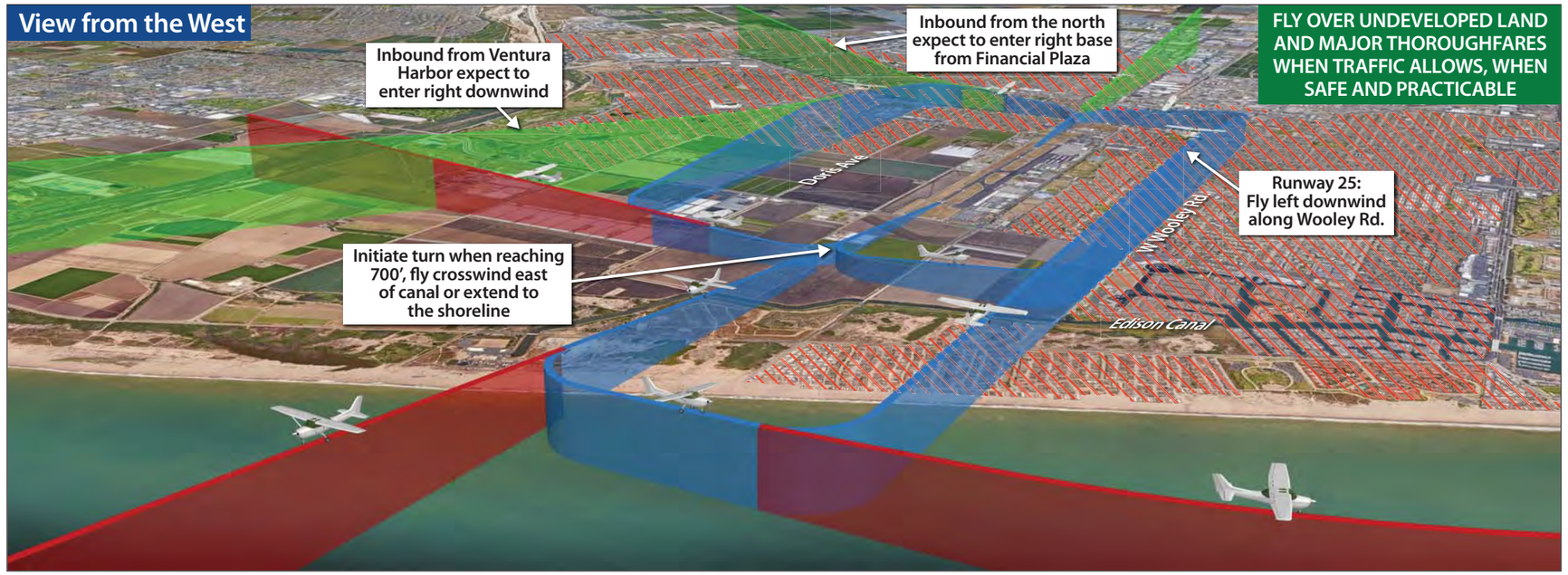
LANDING FEE:

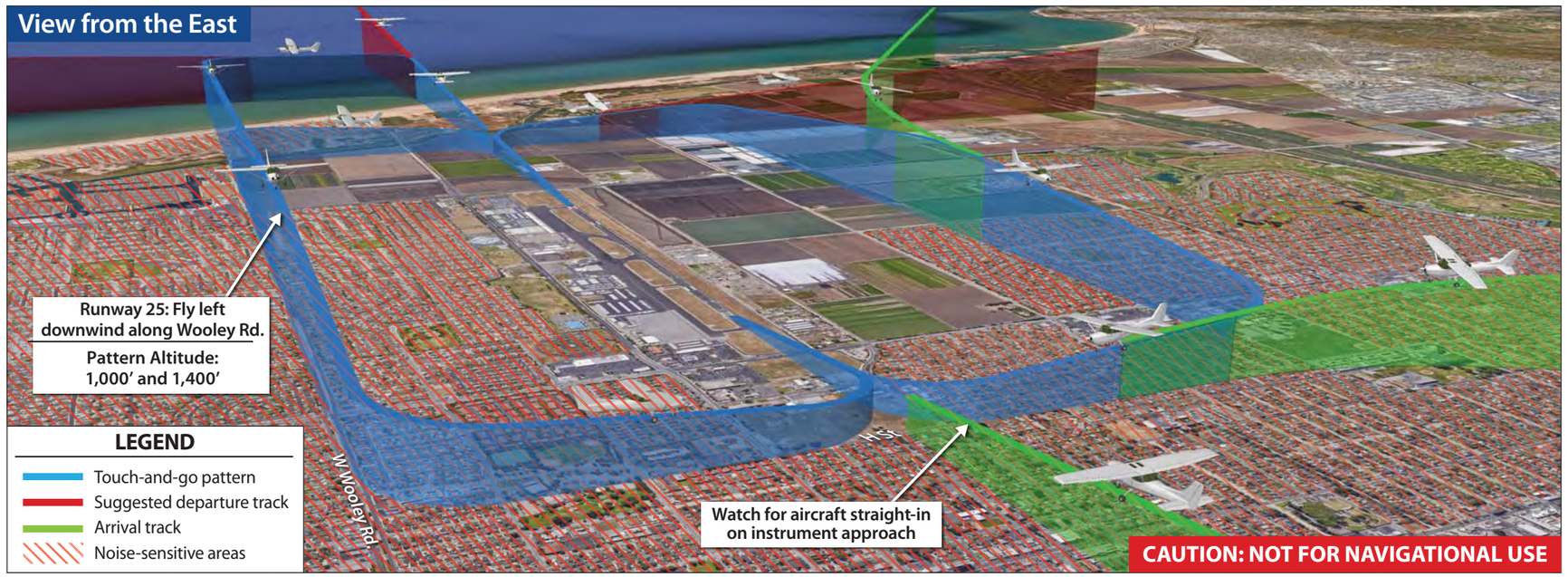
Landing fees apply to aircraft over 12,500 lbs.

AIRPORT SERVICES:

Full Service FBOs:

- ***Oxnard Jet Center*** (805) 985-2490
  AVFuel: 100LL and Jet A
- ***Golden West Jet Center*** (805) 382-9333
  AVFuel: 100LL and Jet A





AIRSPACE AND AIR TRAFFIC CONTROL

The *Federal Aviation Administration Act of 1958* established the FAA as the responsible agency for the control and use of navigable airspace within the United States. The FAA has established the National Airspace System (NAS) to protect persons and property on the ground and to establish a safe and efficient airspace environment for civil, commercial, and military aviation. The NAS covers the common network of U.S. airspace, including air navigation facilities; airports and landing areas; aeronautical charts; associated rules, regulations, and procedures; technical information; and personnel and material. Oxnard Airport has no direct control over airspace management or ATCT for aircraft operating at the airport. These functions are handled by the FAA and the local ATCT staff.

The Oxnard ATCT is located south of Runway 7-25, near midfield. The tower is open 14 hours daily, from 7:00 a.m. – 9:00 p.m. Operating conditions for aircraft at Oxnard Airport are also influenced by aircraft at other nearby airports, most notably Camarillo Airport and Naval Air Station Point Mugu. **Exhibit 1J** shows radar flight track data collected by Vector for arrivals (show in red) and departures (shown in blue) over a 24-hour period at Camarillo Airport. Arrival activity from the north of Runway 7 is extensive during the 24-hour period depicted, however arrivals from the east are also prevalent. The arrival tracks are generally concentrated south of E Gonzales Road. Departure activity in this sample vary but appear more concentrated to the west of Runway 25.

AIRSPACE STRUCTURE

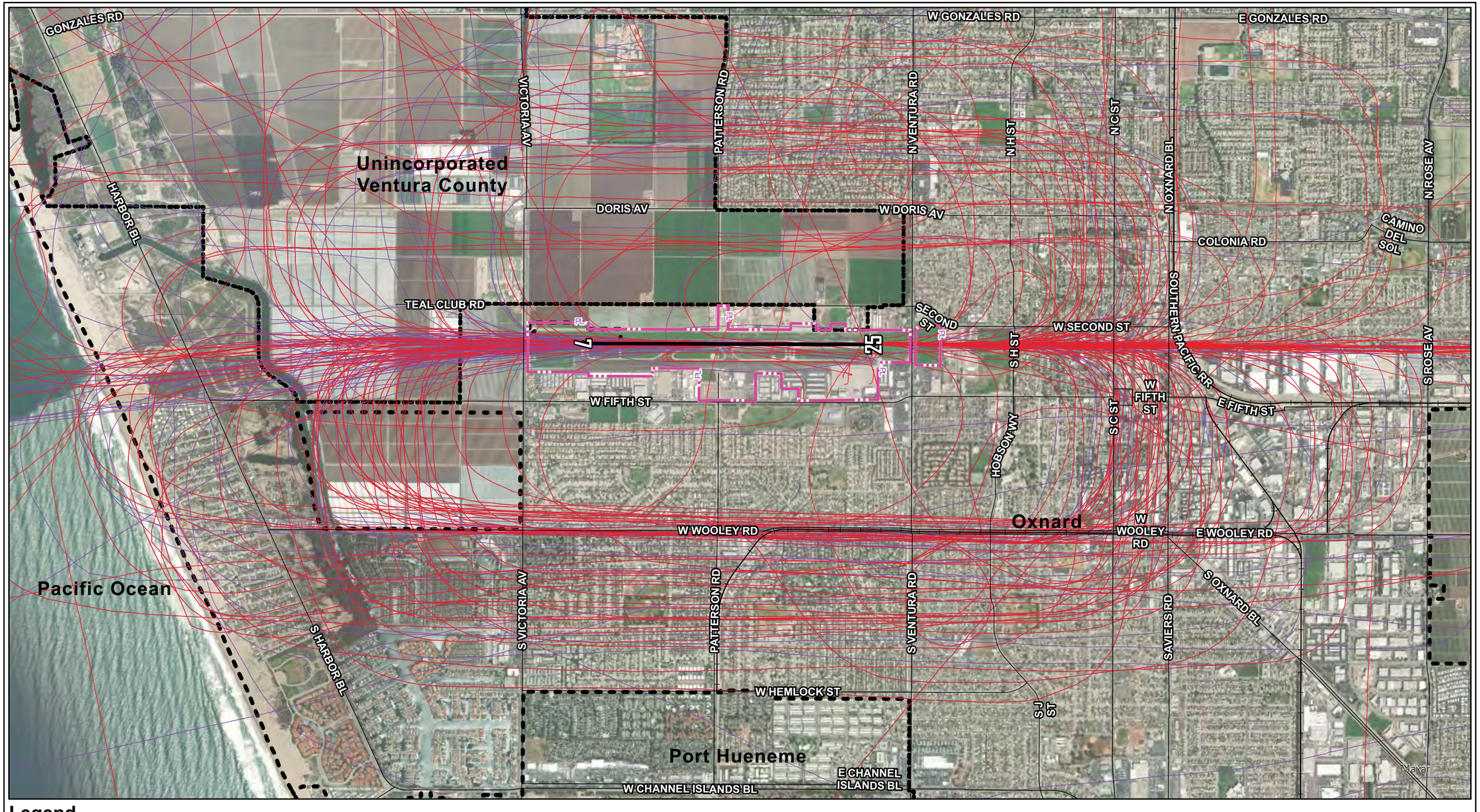
FAA has established a standardized airspace system to regulate the use of airspace for all airports within the U.S. Within the FAA's system, airspace is broadly classified as either controlled or uncontrolled. The difference between controlled and uncontrolled airspace relates primarily to requirements for pilot qualifications, ground-to-air communications, navigation and air traffic services, and weather conditions. Six classes of airspace have been designated in the U.S. **Exhibit 1K** shows the airspace structure classifications and terminology established by the FAA. Airspace designated as Classes A, B, C, D, or E is considered controlled airspace. Aircraft operating within controlled airspace are subject to varying requirements for positive air traffic control. **Exhibit 1L** presents the classifications of airspace within the vicinity of OXR.

- Class A airspace is controlled airspace and includes all airspace from 18,000 feet mean sea level (MSL) to Flight Level 600 (approximately 60,000 feet MSL).
- Class B airspace is controlled airspace surrounding high activity commercial service airports, such as Los Angeles International Airport. Class B airspace is individually tailored and consists of a surface area and two or more layers.
- Class C airspace is airspace that is within 30 nautical miles (nm) of primary airports of Class B airspace and within 10 nm of designated airports. The normal radius of the outer limits of Class C airspace is 10 nm. The nearest Class C airspace serves Santa Barbara Airport to the northwest and Bob Hope Airport (Burbank) to the east.

- Class D airspace is controlled airspace surrounding low-activity commercial service or general aviation airports with an ATCT. Oxnard Airport airspace is classified as Class D from the surface to 2,500 feet MSL for approximately five nautical miles to the east and south of the airport. Class D airspace is only effective during the time that the ATCT is operational (7:00 a.m. to 9:00 p.m.). The Class D airspace surrounding OXR intersects with the Class D airspace serving Camarillo Airport to the east and Point Mugu NAS to the southeast.
- Class E airspace is controlled airspace surrounding an airport that encompasses all instrument approach procedures and low altitude federal airways. Only aircraft conducting instrument flights are required to be in contact with air traffic control when operating in Class E airspace. While aircraft conducting visual flights in Class E airspace are not required to be in radio contact with air traffic control, visual flight can only be conducted if minimum visibility and cloud ceilings exist.
- Class G airspace is uncontrolled airspace that does not require communication with an ATCT. Since the Class D airspace for Oxnard Airport is only effective when the ATCT is operational, when the tower is closed between 9:00 p.m. and 7:00 a.m., the Class D airspace reverts to Class G airspace.

SUMMARY

The information presented in this chapter provides a foundation upon which the remaining elements of the planning process will be constructed. Information on current airport facilities and utilization serves as a basis for the development of the aircraft noise analysis during the next phase of the study. The information found on the airport environs in this inventory section will allow the assessment of airport noise impacts.



Legend

- Roads
- Railroad
- Runway Centerline
- Airport Property Line
- Jurisdictional Boundaries
- Arrival
- Departure

Source:
Vector Airport Systems - 11/05/2022
ESRI Basemap Imagery, 2022

N

0 2,000
1" = 2,000'

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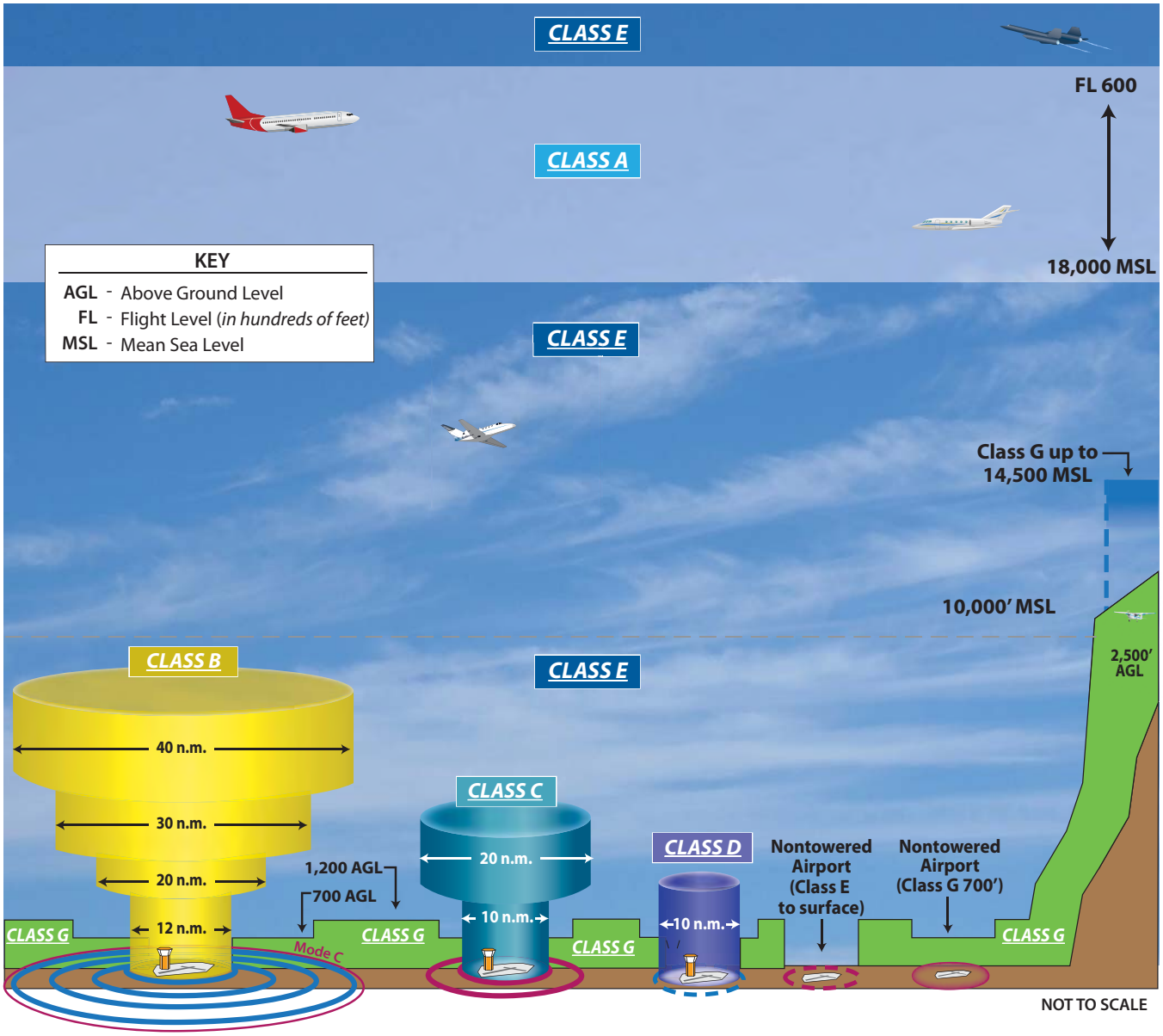


DEFINITION OF AIRSPACE CLASSIFICATIONS

CLASS A Think A - Altitude. 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.

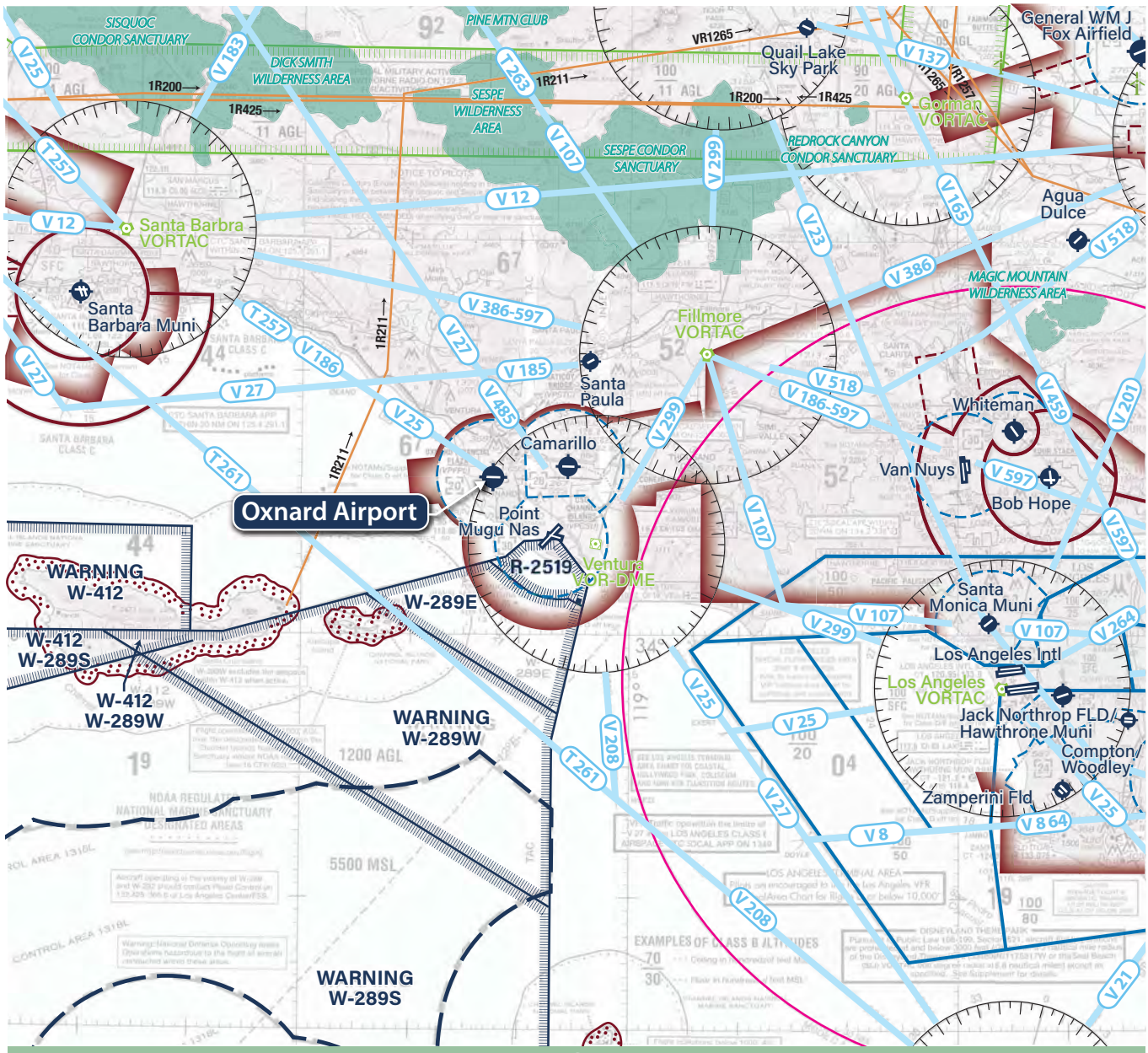
CLASS C Think C - Mode C. Mode C transponder required. ATC communication required. Generally airspace from the surface to 4,000 feet AGL surrounding towered airports with service by radar approach control.

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.

CLASS E Think E - Everywhere. Controlled airspace that is not designated as any other Class of airspace.

CLASS G Think G - Ground. Uncontrolled airspace. From surface to a 1,200 AGL (in mountainous areas 2,500 AGL) Exceptions: near airports it lowers to 700' AGL; some airports have Class E to the surface. Visual Flight Rules (VFR) minimums apply.

Source: www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/media/15_phak_ch15.pdf



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'
- Compass Rose
- VORTAC
- VOR-DME
- Differentiates floors of Class E Airspace greater than 700 ft. above surface
- ADIZ - Air Defense Identification Zone
- Wildlife Refuge
- Wind Turbine
- Prohibited, Restricted, and Warning Areas
- Special Airport Traffic Area
- Mode C
- Class B Airspace
- Class C Airspace
- Class D Airspace
- Class E (sfc) Airspace
- Class E (sfc) Airspace with floor 700 ft. above surface that laterally abuts 1200 ft. or higher Class E airspace
- Victor Airways
- Military Training Routes

NORTH

NOT TO SCALE

Source: Houston and San Antonio Sectional Chart, US Department of Commerce, National Oceanic and Atmospheric Administration, May 19, 2022