

BACKGROUND REPORT





This study was prepared under contract with the Ventura County Transportation Commission, with financial support from the Office of Economic Adjustment, Department of Defense. The content reflects the views of the key JLUS partners involved in the development of this study and does not necessarily reflect the views of the Office of Economic Adjustment.

NAVAL BASE VENTURA COUNTY JOINT LAND USE STUDY

BACKGROUND REPORT

Prepared Under Contract with:



Ventura County Transportation Commission
950 County Square Drive
Suite 207
Ventura, CA 93003

Prepared by:



September 2015

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Acknowledgements

Policy Committee

The Policy Committee (PC) served an active and important role in providing policy direction during the development of the Naval Base Ventura County Joint Land Use Study (JLUS). The Policy Group comprised the following individuals:

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Technical / Advisory Committee

The Technical / Advisory Committee (TAC) served a key role in the development of the Naval Base Ventura County JLUS, providing the overall advisory support, review, and guidance of the study. The TAC comprised the following individuals:

-
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The Ventura County Transportation Commission (VCTC) served as the overall JLUS project management agency and the administrator of the Office of Economic Adjustment grant that helped to fund the study.



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Matrix Design Group, Inc. was the project consultant hired to conduct the JLUS project through coordination with and assistance from VCTC, the PC, the TAC, the public, and other stakeholders.



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The Department of Defense's Office of Economic Adjustment (OEA) provided federal grant money to VCTC to conduct the JLUS. The JLUS content reflects the views of the key JLUS partners involved in the development of this study and does not necessarily reflect the views of the Office of Economic Adjustment.



- **Amanda Fagan**
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Acronyms

A

| | |
|--------|---|
| AB | Assembly Bill |
| ALUC | Airport Land Use Commission |
| ACLUP | Airport Compatibility Land Use Plan |
| AE | Agricultural Exclusive [Ventura County Non-Coastal Zoning District] |
| AGL | above ground level |
| AICUZ | Air Installations Compatible Use Zones |
| AirOps | Air Operations |
| AOP | Activity Overview Plan |
| APCD | Air Pollution Control District |
| APZ | Accident Potential Zone |
| AT/FP | Anti-Terrorism / Force Protection |
| AVIS | Air Vehicle Installed Systems |
| AVW | Air Vehicle Weapons |

B

| | |
|--------|---|
| BAH | Basic Allowance for Housing |
| BASH | Bird Air Strike Hazard |
| BEACON | Beach Erosion Control for Clean Oceans and Nourishment |
| BLM | Bureau of Land Management |
| BOEM | Bureau of Ocean Energy Management |
| BRP | Business and Research Park [Oxnard Non-Coastal Zoning District] |

C

| | |
|----------|---|
| C1 | Neighborhood Commercial [Ventura County Non-Coastal Zoning District] |
| C-1 | Commercial [Port Hueneme Zoning District] |
| C-M | Light Manufacturing [Oxnard Non-Coastal Zoning District] |
| C-O | Commercial Office [Oxnard Non-Coastal Zoning District] |
| C2PD | General Commercial Planned Development [Oxnard Non-Coastal Zoning District] |
| C-A | Coastal Agricultural [Ventura County Coastal Zoning District] |
| CAFO | Concentrated Animal Feeding Operation |
| CALTRANS | California Department of Transportation |
| CARB | California Air Resources Board |
| CBC | Construction Battalion Center |
| CBD | Commercial Downtown [Oxnard Non-Coastal Zoning District] |
| CC-2 | Calleguas Creek Levee 2 |
| CCM | Camarillo Commons Mixed Use [Camarillo Zoning District] |
| CCWMA | Calleguas Creek Watershed Management Area |
| CDI | Coastal Dependent Industry [Oxnard Coastal Zoning District] |
| CDP | Coastal Development Permit |
| CDP | Commercial Planned Development [Ventura County Non-Coastal Zoning District] |
| CEQA | California Environmental Quality Act |
| CFR | Code of Federal Regulations |
| CGS | California Geologic Services |
| CM | Coastal Industrial [Ventura County Coastal Zoning District] |
| CMLUCA | California Military Land Use Compatibility Analyst |

| | |
|-------|---|
| CMP | Ventura County Congestion Management Program |
| CNC | Coastal Neighborhood Commercial [Oxnard Coastal Zoning District] |
| CNEL | Community Noise Equivalent Level |
| CO | Carbon Monoxide |
| CO | Commercial Office [Ventura County Non-Coastal Zoning District] |
| COA | Certificate of Authorization |
| CODR | Conventional Ordnance Deficiency Reports |
| COS | Coastal Open Space [Ventura County Coastal Zoning District] |
| COM | Communication / Coordination |
| CRSMP | Coastal Regional Sediment Management Plan |
| CSUCI | California State University Channel Islands |
| CUP | Conditional Use Permit |
| CURB | City Urban Reserve Boundaries |
| CVC | Coastal Visitor-Serving Commercial [Oxnard Coastal Zoning District] |
| CVW-9 | Carrier Air Wing Nine |
| CZ | Clear Zone |

D

| | |
|-------|---|
| dB | decibel [unit of measurement for noise] |
| dba | A-weighted decibel |
| DHS | Department of Homeland Security |
| DNL | day-night level |
| DOD | Department of Defense |
| DODI | Department of Defense Instruction |
| DOI | Department of Interior |
| DON | Department of Navy |
| DRWEB | Deficiency Reporting Web |
| DS | Dust, Smoke, and Steam |

E

| | |
|------|------------------------------------|
| EA | Environmental Assessment |
| EAP | Encroachment Action Plan |
| ECA | emission control areas |
| EIR | Environmental Impact Report |
| EIS | Environmental Impact Statement |
| EMR | Electromagnetic Radiation |
| EOC | Emergency Operations Center [NBVC] |
| EPA | Environmental Protection Agency |
| EPDC | expected peak day concentration |
| ESA | Endangered Species Act |
| ESQD | Explosive Safety Quantity Distance |

F

| | |
|-------|---|
| FAA | Federal Aviation Administration |
| FAR | Federal Aviation Regulation |
| FCC | Federal Communications Commission |
| FCGMA | Fox Canyon Groundwater Management Agency |
| FEMA | Federal Emergency Management Agency |
| FESA | Federal Endangered Species Act |
| FL | flight level |
| FLAME | Federal Land Assistance, Management and Enhancement |
| FMRA | FAA Modernization and Reform Act |
| FRQ | Frequency Spectrum Interference / Impedance |
| ft | feet [unit of measurement] |
| FTE | full-time equivalent |
| FTS | Flight Termination System |
| FZ | Frequency Zone |

G

| | |
|-------|---|
| G-2 | General Commercial [Oxnard Non-Coastal Zoning District] |
| GAPS | Global Automobile Processing Services |
| GLAT | Government Lot Acceptance Test |
| GMP | Fox Canyon 2007 Groundwater Management Plan |
| GREAT | Groundwater Recovery Enhancement and Treatment |
| GWJ | Genesee and Wyoming Incorporated |

H

| | |
|---------|---|
| HAZREPS | hazard reports |
| HCI | Harbor-Channel Islands [Oxnard Coastal Zoning District] |
| HERF | Hazards of Electromagnetic Radiation to Fuel |
| HERO | Hazards of Electromagnetic Radiation to Ordnance |
| HERP | Hazards of Electromagnetic Radiation to Personnel |
| HZR | Height Restriction Zones |

I

| | |
|-------|--|
| IFDS | Integrated Frequency Deconfliction System |
| IFR | instrument flight rule |
| IMO | International Maritime Organization |
| INRMP | Integrated Natural Resources Management Plan |
| IR | Instrument Route |
| IRWMP | Integrated Regional Water Management Plan |
| ITSP | Interregional Transportation Strategic Plan |

J

| | |
|------|-----------------------------------|
| JDRS | Joint Deficiency Reporting System |
| JLUS | Joint Land Use Study |
| JUA | Joint Use Agreement |

K

L

| | |
|-------|--|
| LAFCo | Local Agency Formation Commission |
| LAS | Competition for Land, Air, and Sea Space |
| LCP | Local Coastal Program |
| LG | Light and Glare |
| LI | Legislative Initiatives |
| LID | Low Impact Development |
| LOS | Level of Service |
| LU | Land Use |

M

| | |
|------|---|
| M1 | Industrial Park [Ventura County Non-Coastal Zoning District] |
| M2 | Limited Industrial [Ventura County Non-Coastal Zoning District] |
| M2 | Limited Industrial [Ventura County Non-Coastal Zoning District] |
| M3 | General Industrial [Ventura County Non-Coastal Zoning District] |
| M-2 | Heavy Manufacturing [Oxnard Non-Coastal Zoning District] |
| MAA | Mutual Aid Agreement |
| MDO | marine diesel oil |
| MGO | marine gas oil |
| MHPI | Military Housing Privatization Initiative |
| MIA | Military Influence Area |
| MOA | Memorandum of Agreement |
| MPO | Metropolitan Planning Organization |
| MS-4 | Municipal Separate Storm Sewer System |
| MSL | mean sea level |
| MSR | Municipal Service Review |
| MTR | Military Training Route |

N

| | |
|---------|--|
| N | No |
| NAAQS | National Ambient Air Quality Standards |
| NAVAIR | Naval Air Systems Command |
| NAWC-WD | Naval Air Warfare Center, Weapons Division |
| NBVC | Naval Base Ventura County |
| NCZO | Non-coastal Zoning Ordinance |

| | |
|-------|--|
| NEPA | National Environmental Protection Act |
| NGO | Non-governmental Organization(s) |
| NIER | Non-ionizing Electromagnetic Radiation |
| nm | nautical mile [unit of measurement] |
| NO2 | Nitrogen Dioxide |
| NOAA | National Oceanic and Atmospheric Administration |
| NOSSA | Naval Ordnance Safety and Security Activity |
| NPDES | National Pollutant Discharge Elimination System |
| NPS | Nonpoint Source Pollution |
| | |
| NREL | National Renewable Energy Laboratory |
| NSR | New Source Review |
| NTIA | National Telecommunications and Information Administration |
| NVG | night vision goggles |

O

| | |
|-------|---|
| O3 | Ozone |
| OCSLA | Outer Continental Shelf Lands Act |
| OEA | Office of Economic Adjustment |
| OEHHA | Office of Environmental Health Hazard Assessment |
| OHD | Oxnard Harbor District |
| OS | Open Space [Ventura County Non-Coastal Zoning District] |

P

| | |
|-------|--|
| PC | Policy Committee |
| PM | Particulate Matter |
| PM2.5 | particulate matter with particles less than 2.5 micrometers in diameter |
| PM10 | particulate matter with particles between 2.5 and 10 micrometers in diameter |
| PMTC | Pacific Missile Test Center |
| ppm | parts per million [unit of measurement for air pollutants] |
| PT | Public Trespassing |

Q

| | |
|-----|--------------------|
| QDR | Quadrennial Review |
|-----|--------------------|

R

| | |
|-----------|--|
| R | Restricted Airspace |
| R1 | Single-family Residential [Oxnard Non-Coastal Zoning District] |
| R-1 | Single-family Residential [Port Hueneme Zoning District] |
| R-2 | Limited Multi-family Residential [Port Hueneme Zoning District] |
| R-3 | Multi-family Residential [Port Hueneme Zoning District] |
| R-4 | Mixed Use [Port Hueneme Zoning District] |
| R-5 | Transitional / Residential Coastal-Related Industry [Port Hueneme Zoning District] |
| R-C | Recreational Commercial [Camarillo Zoning District] |
| RA | Rural Agriculture [Ventura County Non-Coastal Zoning District] |
| RBH | Residential Beach Harbor [Ventura County Coastal Zoning District] |
| RC | Roadway Capacity |
| RC | Coastal Recreation [Oxnard Coastal Zoning District] |
| RCMP I/II | Range Complex Management Plan, Volumes I and II |
| RDT&E | Research, Development, Testing & Evaluation |
| RE | Rural Exclusive [Camarillo Zoning District] |
| REPI | Readiness and Environmental Protection Integration |
| RFI FZ | Radio Frequency Interference Free Zone |
| RFMO | FAA Regional Frequency Management Office |
| RFP | Request for Proposals |
| RFQ | Request for Qualifications |
| RHD | Residential High Density [Ventura County Non-Coastal Zoning District] |
| ROW | right-of-way |
| RP | Coastal Resource Protection [Oxnard Coastal Zoning District] |
| RPD | Residential Planned Development [Camarillo Zoning District] |
| RPD | Residential Planned Development [Ventura County Non-Coastal Zoning District] |
| RTP | Regional Transportation Plan |

S

| | |
|-----------------|--|
| SA | Safety |
| SAC | Channel Islands National Marine Sanctuary Advisory Council |
| SB | Senate Bill |
| SCAG | Southern California Association of Governments |
| SIB | Safety Investigation Board |
| SIREPS | submittal of safety investigation reports |
| SLCUM | Standard Land Use Coding Manual |
| SMA | Oxnard Plain Sediment Management Area |
| SMMNRA | Santa Monica Mountains National Recreation Area |
| SMP | Smoke Management Plan |
| SNI | San Nicolas Island |
| SNR | Scarce Natural Resources |
| SNTC | System for Naval Target Control |
| SO ₂ | Sulfur Dioxide |
| SOAR | Save Open Space and Agriculture Resources |
| SOI | Sphere of Influence |
| SR | State Route |
| SRCMP | Sea Range Complex Management Plan |
| SUA | Special Use Airspace |
| SUP | Special Use Permit |
| SWP | California State Water Plan |

T

| | |
|-----|--|
| TAC | Technical / Advisory Committee |
| TDR | Transfer of Development Rights |
| TIP | Transportation Improvement Program |
| TP | Timberland Preserve [Ventura County Non-Coastal Zoning District] |

U

| | |
|-------------------|---|
| µg/m ³ | micrograms (one-millionth of a gram) per cubic meter air [unit of measurement for air pollutants] |
| UFC | Unified Facilities Criteria |
| U.S. | United States |

| | |
|-------|---|
| UAS | Unmanned Aerial System |
| URB | Urban Restriction Boundaries |
| UPRR | Union Pacific Railroad |
| USFS | United States Forest Service |
| USFWS | United States Fish and Wildlife Service |

V

| | |
|---------|---|
| VCAPCD | Ventura County Air Pollution Control District |
| VCAQCB | Ventura County Air Quality Control Board |
| VCAQMP | Ventura County Air Quality Management Plan |
| VCOATEP | Ventura County Operational Area Tsunami Evacuation Plan |
| VCRR | Ventura County Railroad |
| VCTC | Ventura County Transportation Commission |
| VCWPD | Ventura County Watershed Protection District |
| VFR | visual flight rule |
| VO | Vertical Obstructions |

W

| | |
|---------|---|
| W- | Warning Area |
| WC/ATWC | West Coast and Alaska Tsunami Warning Center |
| WCVC | Watersheds Coalition of Ventura County |
| WWII | World War II |
| WMP | Calleguas Creek Watershed Management Plan |
| WMSS | Calleguas Creek Watershed Management Strategy Study |
| WORK | wide range of military equipment |
| WQQ | Water Quality and Quantity |

X

Y

| | |
|---|-----|
| Y | Yes |
|---|-----|

Z

Please see the next page.



1. Introduction

Please see the next page.



Introduction

Inside Chapter 1...

| | | |
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Naval Base Ventura County (NBVC) is located along the Central Coast of California in Ventura County. Within the County, NBVC is comprised of three non-contiguous mission facilities: NBVC Point Mugu, NBVC Port Hueneme, and NBVC San Nicolas Island.

While organizations and missions have changed over time, NBVC has been an integral part of the fabric of life in Ventura County for seventy-two years. The relationship between NBVC and the communities of Ventura County has been extraordinarily positive, with NBVC contributing to the County's social and economic well-being and the communities providing needed services to those working at NBVC. Preserving and enhancing this relationship through this Joint Land Use Study (JLUS) is critical to the combined futures of NBVC and the communities and institutions that make up the coastal region of Ventura County.

As the various communities and institutions in this part of Ventura County continue to grow, it is important that planning efforts are taken now to maintain the operational viability of NBVC to meet current and future mission requirements while protecting the health and safety of those that live, learn, and work in the surrounding region. The purpose of this JLUS effort is to achieve those dual goals of protecting both NBVC and the residents of Ventura County.

Due to the expansive footprint of the NBVC mission and the multiple agencies and entities potentially affected by the NBVC mission, there are a number of communities, agencies, and organizations participating as partners in the development of the NBVC JLUS. Partners include the cities of Camarillo, Oxnard, and Port Hueneme; the County of Ventura; Oxnard Harbor District; California State University Channel Islands; Ventura County Transportation Commission (VCTC); and NBVC. In addition to being a partner in the JLUS process, VCTC is also serving as the project sponsor and contract manager for the NBVC JLUS.

The NBVC JLUS advocates a proactive approach to increasing communication about decisions relating to land use regulation, conservation and natural resource management affecting communities and the military. This study seeks to avoid conflicts previously experienced between the U.S. military and local communities in other areas of the U.S. and throughout the world by engaging the military and local decision-makers in a collaborative process.

1.1. Why Prepare a Joint Land Use Study?

Although military installations and nearby communities are separated by a fence line, they often share natural and manmade resources such as land, airspace, water, and infrastructure. Despite the many positive interactions among local jurisdictions, agencies, and the military, and because so many resources are shared, the activities or actions of one entity can pose unintended negative impacts on another, resulting in conflicts. As communities develop and expand in response to growth and market demands, land use decisions have the ability to locate potentially incompatible development closer to military installations and operational areas. The result can generate new, or exacerbate existing, land use and other compatibility issues, often referred to as encroachment, which can have negative impacts on community safety, economic development, and

sustainment of military activities and readiness. This threat to military readiness is currently one of the military's greatest concerns.

Collaboration and joint planning between military installations, local jurisdictions, and agencies protects the long-term viability of existing and future military missions. Working together also enhances the health of local economies and industries and helps to protect public health and safety.

Recognizing the close relationship that should exist between installations and adjacent communities, the OEA implemented the JLUS program to help mitigate existing and future conflicts and enhance communication and coordination among all affected stakeholders and the public. This program aims to help preserve the sustainability of local communities within the JLUS area while protecting current and future operational missions at NBVC.

1.2. Why Is It Important to Partner with NBVC?

NBVC is the premier US Naval Base for fleets testing, evaluation, training and experimentation in all conflict scenarios and a premier naval construction mobilization base. Strategically located along the California coast, NBVC is a key element in the Department of Defense (DOD) infrastructure due to its geographical location and access to critical sea space and airspace.

NBVC supports local communities through direct and indirect employment, operations, and maintenance contracts, and as an active member of the local communities. In 2013, NBVC supported and served over 20,060 personnel (military and civilian) that provided a regional economic impact of \$2 billion (see Chapter 3 for more information on local benefits).

1.3. What Is a Joint Land Use Study?

A JLUS is a planning process accomplished through the collaborative efforts of a comprehensive set of stakeholders in a defined study area in order to identify compatibility guidelines within, and adjacent to, active military installations. These stakeholders include local jurisdictions, state, and federal officials, agencies and organizations, business organizations, local tribal governments, non-governmental organizations, and the military. In addition, the public also plays a vital role in the development and review of the JLUS.

The intent of the process is to establish and encourage a working relationship among military installations and stakeholders in the area to act as a team to prevent and / or reduce encroachment issues associated with current and future missions and local growth. To do this, a JLUS process culminates in an agreed upon set of recommended strategies that can be implemented by identified stakeholders to promote compatibility and relationships between the military and neighboring communities for the present and future.

This JLUS effort is funded through a grant from the DOD, Office of Economic Adjustment (OEA), and contributions by the VCTC. While OEA provides the grant funding, the content of the JLUS is produced by and for the local stakeholders. The project management entity for the NBVC JLUS is VCTC.

While funded by a federal grant, the content of the JLUS is produced by and for local stakeholders.

This JLUS is important to preserve long-term compatibility between NBVC and the surrounding areas and to better protect the health, safety, and welfare. The JLUS effort will benefit both NBVC and the surrounding region by:

- Protecting the health and safety of proximate residents and workers;
- Preserving long-term land use compatibility between NBVC and the surrounding communities;
- Promoting comprehensive community planning that addresses compatibility issues;
- Enhancing a cooperative spirit between NBVC and community officials; and
- Integrating surrounding local jurisdiction growth policy plans with the installation's plans.

JLUS Goal

The goal of the NBVC JLUS is to protect the viability of current and future operations, while simultaneously guiding community growth, sustaining the environmental and economic health of the region, and protecting public health, safety, and welfare.

JLUS Objectives

To achieve this goal, three JLUS objectives were identified.

- **Understanding.** Convene community and military representatives to identify, confirm, and understand compatibility issues in an open forum, taking into consideration both community and military perspectives and needs. This includes public awareness, education, and input organized in a cohesive outreach program.
- **Collaboration.** Encourage cooperative land use and resource planning among the military and surrounding communities so that future community growth and development are compatible with the training and operational missions at NBVC, while seeking ways to reduce operational impacts on adjacent land within the study area.
- **Actions.** Provide a set of mutually supported tools, activities, and procedures from which local jurisdictions, agencies, and the NBVC can select, prepare, and approve / adopt and use to implement the recommendations developed during the JLUS process. The actions include both operational measures to mitigate installation impacts on surrounding communities and local government and agency approaches to reduce community impacts on military operations. These tools will help decision makers resolve compatibility issues and prioritize projects within the annual budgeting process.

1.4. JLUS Study Area

The NBVC JLUS Study Area is defined as the land, sea and air areas near NBVC facilities and adjacent sea range that can impact current or future military operations (due to their use) or be impacted by military operations associated with these facilities. Detailed information about the study area is included in Chapter 2 (Community Profile) and Chapter 3 (Military Profile) later in this document.

The NBVC JLUS Study Area covers portions of unincorporated Ventura County; the cities of Camarillo, Oxnard, and Port Hueneme and San Nicolas Island; and the sea range areas off the coast. Figure 1-1 illustrates the NBVC JLUS Study Area.

1.5. Naval Base Ventura County

As described earlier, NBVC is comprised of three operating facilities – Point Mugu, Port Hueneme, and San Nicolas Island. NBVC supports approximately 80 tenant commands that encompass an extremely diverse set of specialties, including three warfare centers: Naval Air Warfare Center Weapons Division, Naval Surface Warfare Center Port Hueneme Division and Naval Facilities Engineering and Expeditionary Warfare Center. NBVC is also home to deployable units, including the Pacific Seabees and the West Coast E-2C Hawkeyes. For more information on NBVC and its three operating facilities, see Chapter 3, Military Profile.

Source:

http://www.cnmc.navy.mil/regions/cnrsw/installations/navbase_ventura_county.html

NBVC Point Mugu

NBVC Point Mugu occupies 4,486 acres of land as shown on Figure 1-2. NBVC Point Mugu supports aviation operations from two runways of 11,000 and 5,000 feet in length, providing training facilities for both active duty and reserve aviation units. Point Mugu also provides direct access to the Naval Air Systems Command (NAVAIR) Point Mugu Sea Range, a 36,000 square mile range used extensively for testing and research.



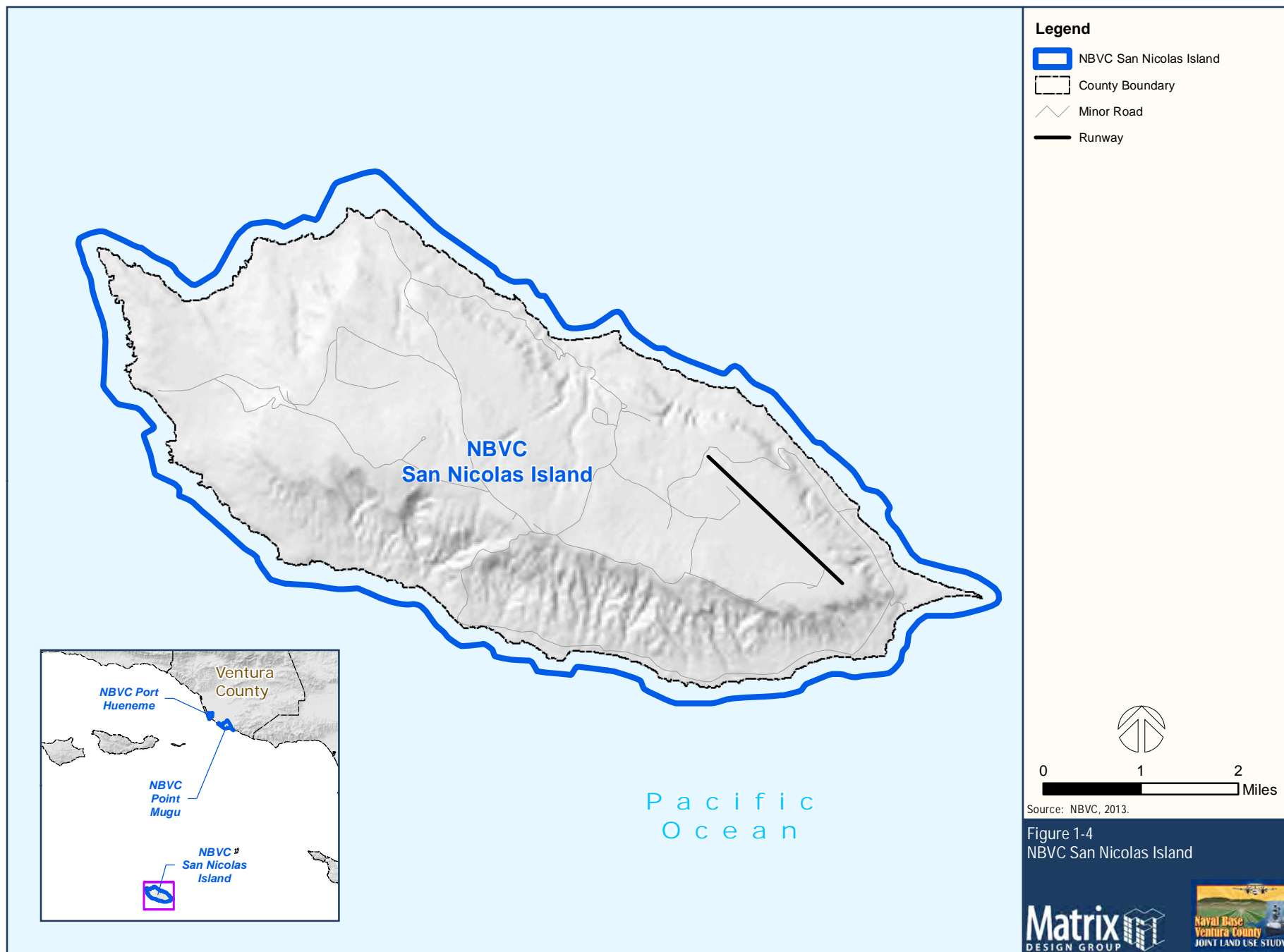
E-2C Hawkeye in flight

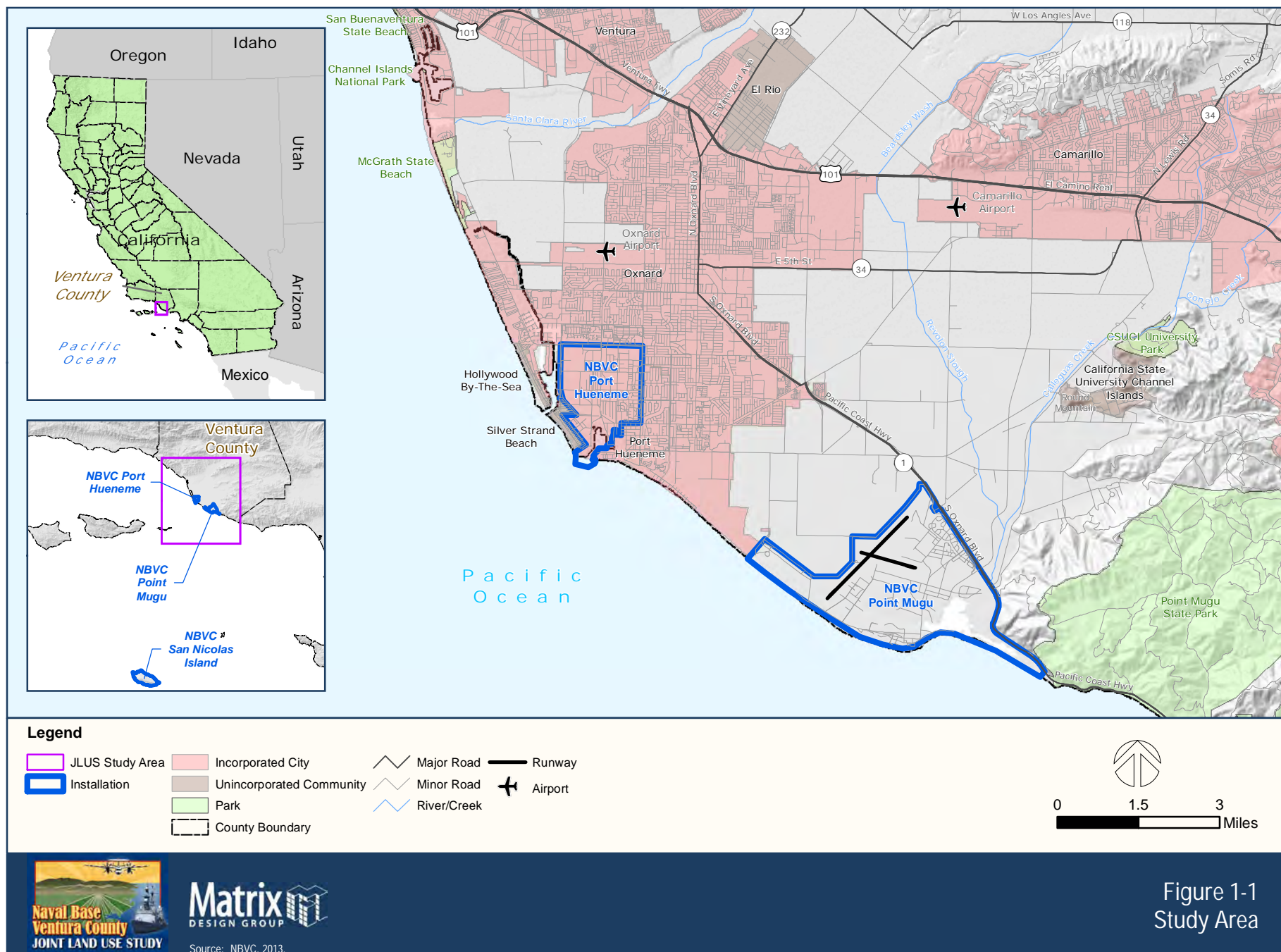
NBVC Port Hueneme

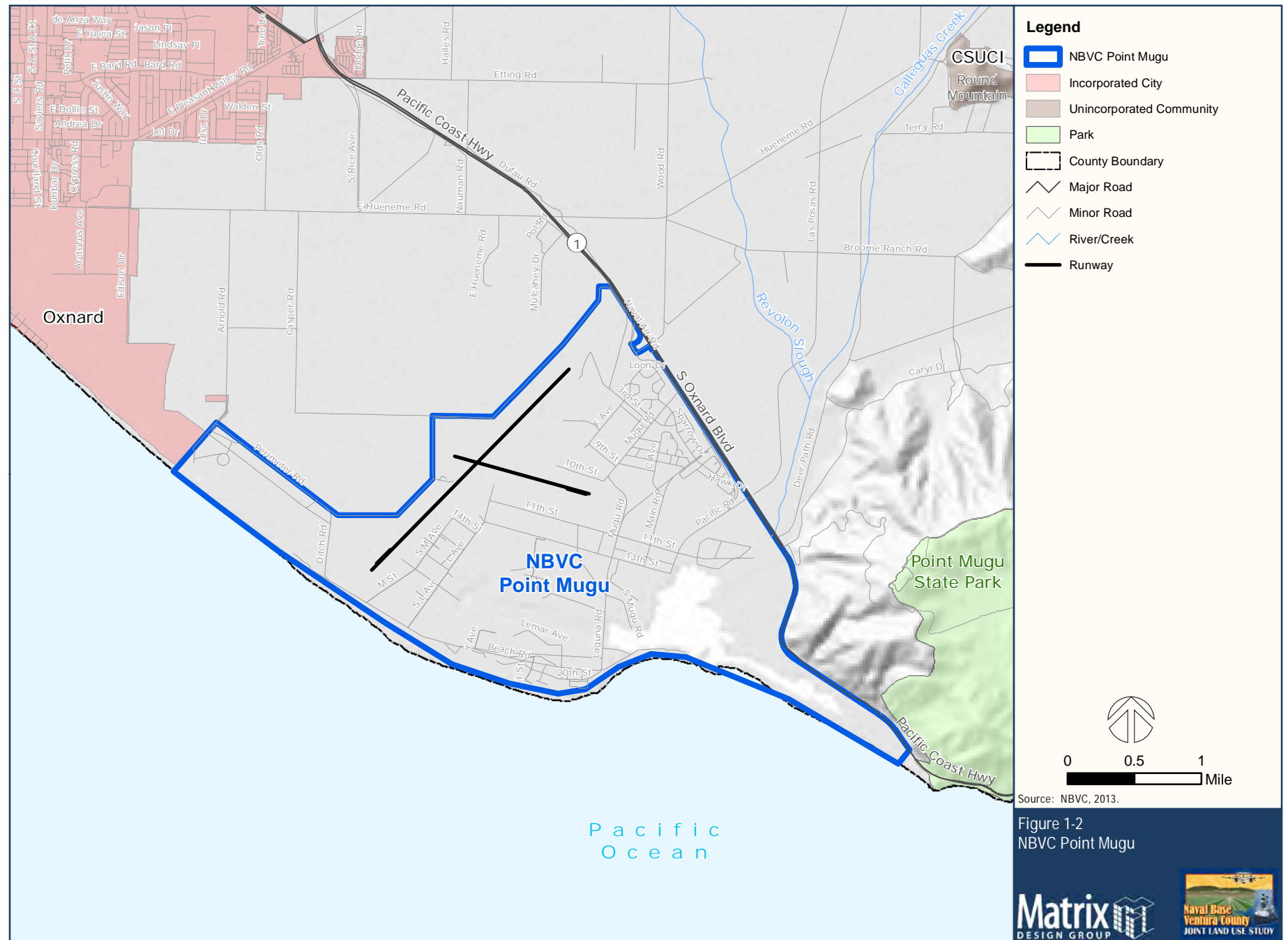
NBVC Port Hueneme occupies roughly 1,615 acres of land as shown on Figure 1-3. NBVC Port Hueneme is the Navy's only deep water port between San Diego and Washington State, and provides over 300 acres of lay-down space with port and railroad access for mobilization readiness and operations.

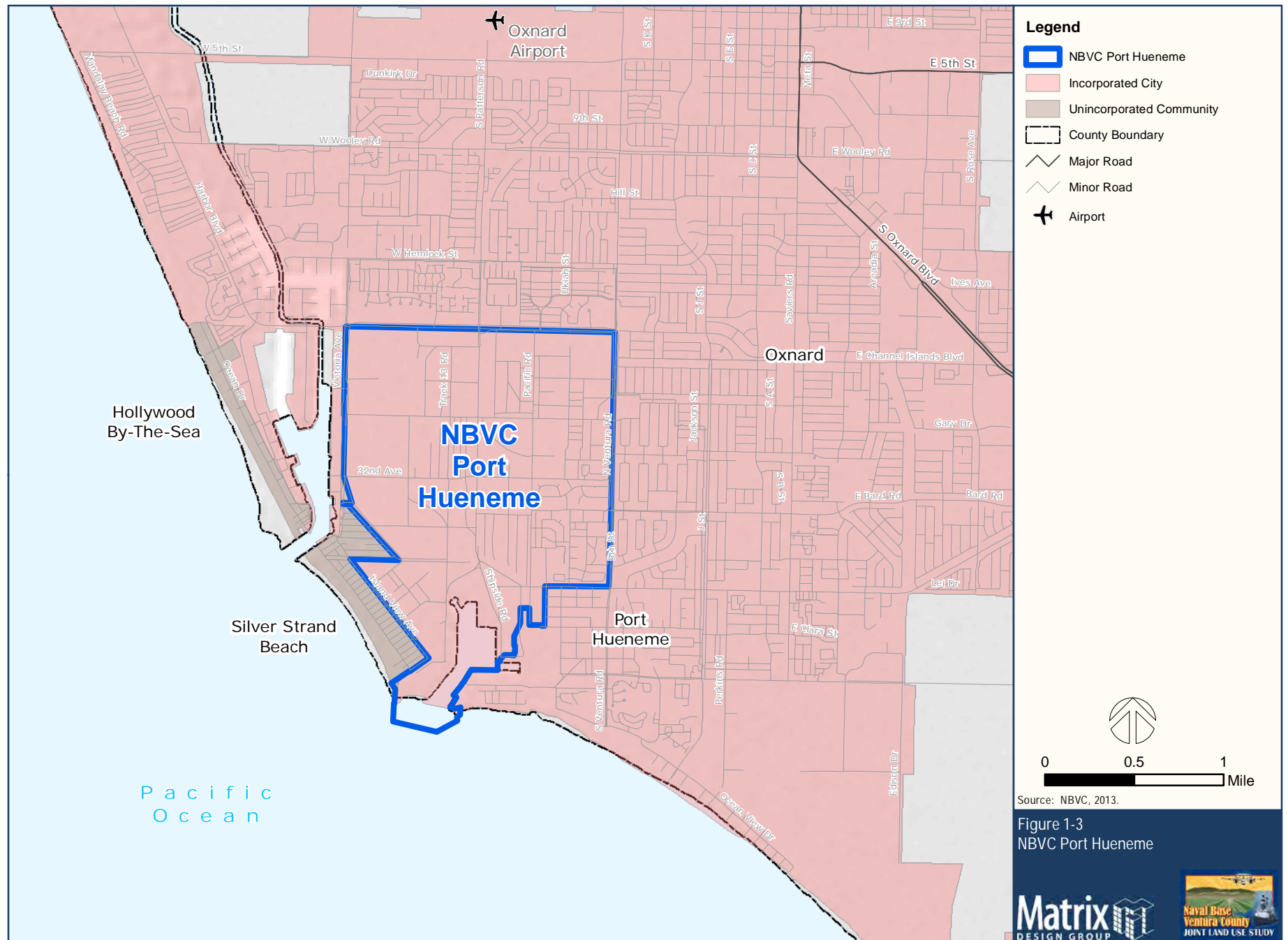
NBVC San Nicolas Island

NBVC San Nicolas Island (SNI) occupies the entire island, covering 14,562 acres of land in the Pacific Ocean. SNI is approximately 60 miles south-southwest of NBVC Point Mugu as shown on Figure 1-4. The island contains critical weapons testing facilities, and combined with the NAVAIR Point Mugu Sea Range (Sea Range), provides the Navy with excellent research, development acquisition, testing and evaluation of and training with weapons systems. . In addition, NBVC San Nicolas Island provides aircraft support services from a single runway facility on the island.









1.6. Stakeholder Participation and Public Outreach

The JLUS process is designed to create a locally relevant plan of action that builds consensus and obtains support from the various stakeholders involved. To achieve the JLUS goal and objectives, the NBVC JLUS process included stakeholder participation at every step in the JLUS development and included a public outreach program that provided a variety of participation opportunities throughout the JLUS process. The stakeholder participation and public outreach programs are designed to ensure that all stakeholders and the public have an opportunity to participate and provide feedback to the development and review of the JLUS.

Stakeholders

An early step in any planning process is the identification of stakeholders. Informing and involving stakeholders early in the project is essential to identifying, understanding, and resolving their critically important compatibility issues through the development of integrated recommended strategies and measures. Stakeholders include individuals, groups, organizations, and governmental entities interested in, affected by, or affecting the outcome of the JLUS project. Stakeholders identified for the NBVC JLUS included, but were not limited to, the following:

- Local jurisdictions (cities and counties);
- DOD officials (including OEA representatives) and military installation personnel;
- Local, county, regional, and state planning, regulatory, and land management agencies;
- Landholding and regulatory federal agencies;
- Advocacy organizations;
- Non-governmental organizations (NGOs); and,
- Other special interest groups (including local educational institutions and school districts).

Policy Committee and Technical / Advisory Committee

The list of stakeholders developed was used to develop two committees that guided the development of the NBVC JLUS. The responsibilities and list of participants for Sponsors, the PC, and the TAC are identified in Table 1-1.

JLUS Policy Committee (PC)

The PC consists of elected officials from participating jurisdictions, military installation leadership, and representatives from other interested and affected agencies. The PC is responsible for the overall direction of the JLUS, preparation and approval of the study design, policy recommendations, and approval of draft and final JLUS documents.

JLUS Technical / Advisory Committee (TAC)

The TAC is responsible for identifying and studying technical issues. Membership includes land planners, military base planners, business and development community representatives, natural resource protection organizations, and other subject matter experts as needed. The TAC assists in reviewing the analysis and the development of the JLUS and evaluation of implementation recommended strategies and tools. Items discussed by the TAC were reviewed by the PC for consideration and action.

PC and TAC Roles

The PC and TAC members serve as liaisons to their respective stakeholder groups and are responsible for conveying committee activities and information to their organizations and constituencies, and to bring back to their committee their organization's comments and suggestions for consideration. The PC members were also encouraged to conduct meetings with their organizations and/or constituencies to facilitate input.



PC Meeting #2, May 23, 2013

Table 1-1. JLUS Responsibilities and Participants

| Responsibilities | | Participants | |
|--|--|---|--|
| Sponsor | | | |
| <ul style="list-style-type: none">■ Coordination■ Accountability■ Grant Management■ Financial Contribution | <ul style="list-style-type: none">■ Office of Economic Adjustment■ Ventura County Transportation Commission | | |
| Policy Committee | | | |
| <ul style="list-style-type: none">■ Policy Direction■ Study Oversight■ Monitoring■ Report Adoption | <ul style="list-style-type: none">■ California Air National Guard■ California State University Channel Islands■ City of Camarillo■ City of Oxnard | <ul style="list-style-type: none">■ City of Port Hueneme■ County of Ventura■ NBVC■ Oxnard Harbor District | |
| Technical / Advisory Committee | | | |
| <ul style="list-style-type: none">■ Identify Issues■ Provide Expertise to Address Technical Issues■ Evaluate and Recommend Implementation Options to the PC■ Provide Draft and Final Report Recommendations to the PC | <ul style="list-style-type: none">■ Agricultural Commissioner■ Ag Innovations Network■ California Air National Guard■ California Coastal Conservancy■ California State University Channel Islands■ Camarillo Sustainable Growth■ Channel Islands Beach Communities Service District■ Channel Islands Harbor Department■ City of Camarillo■ City of Oxnard■ City of Port Hueneme■ County of Ventura■ County of Ventura Department of Airports■ Environmental Coalition of Ventura County | <ul style="list-style-type: none">■ EDC■ Environmental Defense Center■ Farm Bureau of Ventura County■ NBVC■ Oxnard Chamber of Commerce■ Oxnard Harbor District■ Pleasant Valley Recreation and Park District■ RDP-21■ Sierra Club■ SOAR■ Ventura County Economic Development Association■ Ventura Local Agency Formation Commission (LAFCo)■ Ventura/Santa Barbara Counties Small Business Development Center■ Watershed Protection District | |

Committee and Public Meetings / Workshops

Committee (TAC and PC) meetings and public workshops were held at each step in the development of the JLUS to ensure local issues and ideas were reflected in the JLUS documents. The meetings / workshops that have been conducted and are planned to occur in the future are shown in order of their occurrence in the following paragraphs. The relationship of these meetings / workshops to the overall JLUS process is shown on Figure 1-5.

Committee Meeting #1 (Joint Meeting of PC and TAC)

March 13, 2013

Camarillo Public Library, Camarillo, CA

This meeting served as the initial joint kick-off meeting for the committees. The meeting provided an overview of the JLUS project and presented information on the JLUS program and process. Additionally, the meeting provided an overview of the compatibility factors that are used by the consulting team to ensure a comprehensive look at potential issues. A brief description of each compatibility factor was provided as part of JLUS Fact Sheet #1.

At the end of the meeting, attendees were asked to share their initial thoughts on current or potential future compatibility issues by writing their thoughts on worksheets provided and annotating the locations of the issues using large table-size maps. Upon conclusion of this meeting, the consulting team used the worksheets and the annotations from the committees to begin the development of the initial compatibility issues.

Outcomes:

- Understanding of JLUS process
- Input on initial compatibility issues

TAC Meeting #2 / PC Meeting #2

May 23, 2013

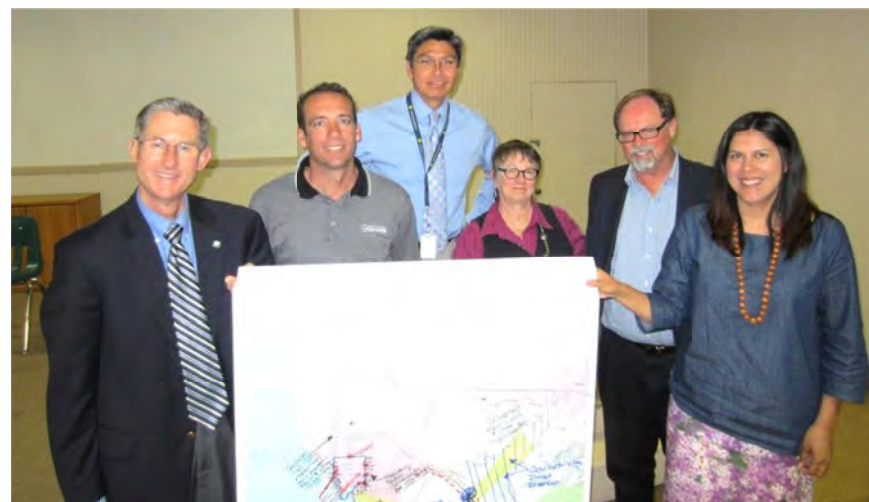
Freedom Center, Camarillo, CA

The TAC meeting was held in the morning and the PC meeting was held in the afternoon. At both meetings, the committee members received a presentation about initial compatibility issues identified at their last meeting and were asked to review and accept the study area as defined. Additionally, the composition of the committees were discussed and finalized.

For the TAC, following the presentation, the TAC broke into smaller groups and worked together to identify a more complete set of compatibility issues. At the afternoon PC meeting, the new issues identified by the TAC were discussed.

Outcomes:

- Development of a more comprehensive set of compatibility issues



Small group presentation, TAC Meeting #2, May 23, 2013

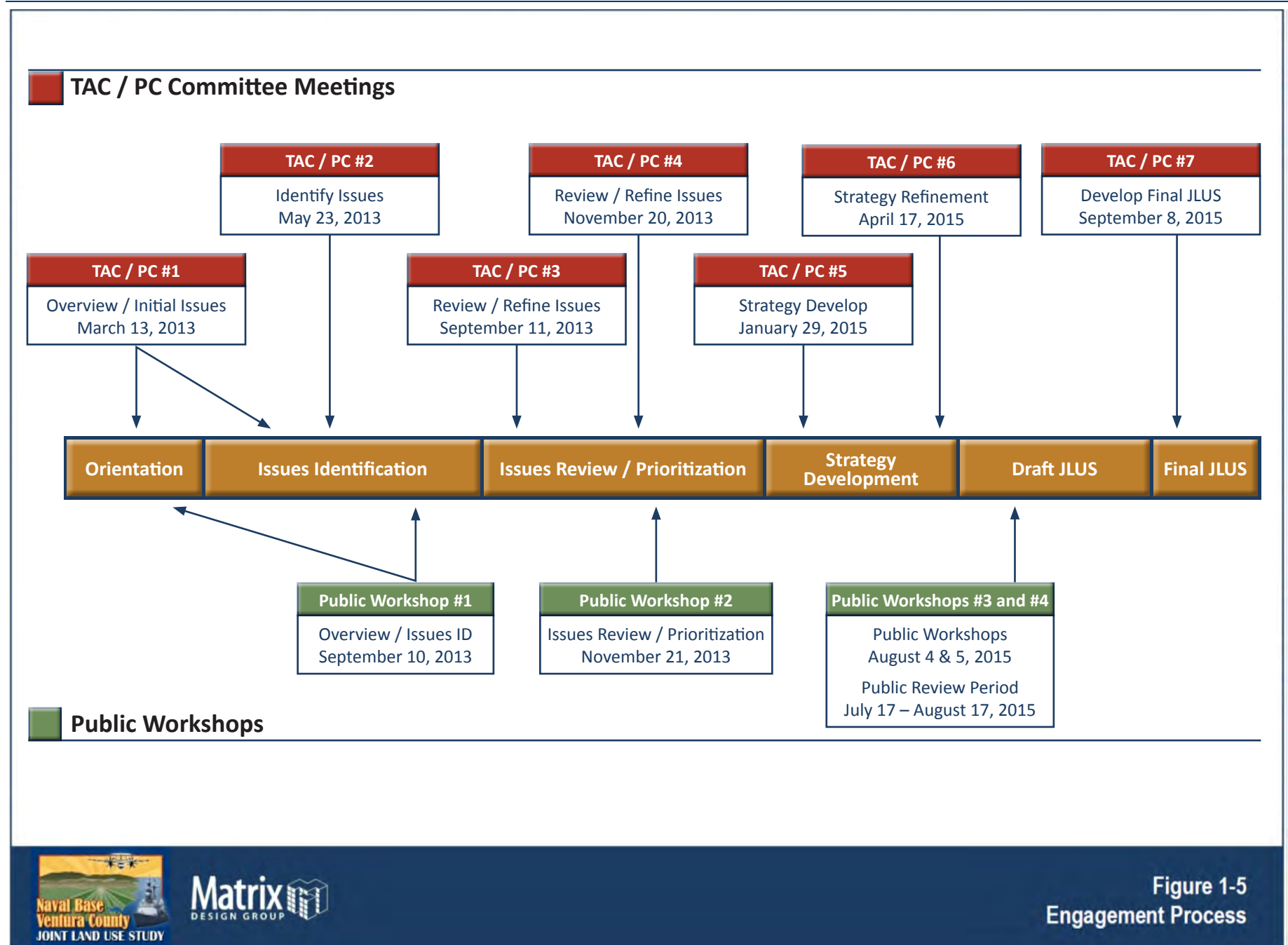


Figure 1-5
Engagement Process

Public Workshop #1 September 10, 2013 Camarillo Public Library, Camarillo, CA

This workshop ran between 6:30 and 8:30 PM and was attended by over 100 persons. At this workshop, the public received a formal presentation about the project and the purpose of the JLUS (similar to the presentation at TAC/PC #1). In this presentation, the 25 compatibility factors were described and JLUS Fact Sheet #1 was handed out to accompany this presentation.

After the presentation, the participants were asked to use the compatibility factors identified in Fact Sheet #1 and to identify specific compatibility issues that they thought should be addressed by the JLUS. Large, table-size maps were available to mark locations of these issues. Team members rotated between tables to answer questions from a group or on a one-to-one basis.



Public Workshop #1, September 10, 2013

Outcomes:

- Understanding of JLUS process
- Input on initial compatibility issues

TAC Meeting #3 / PC Meeting #3 September 11, 2013

Pleasant Valley Fields East Meeting Room, Camarillo, CA

The TAC meeting was conducted in the morning where the TAC members received a presentation providing an overview of the NBVC military missions, and an overview of the September 10th public workshop and additional

compatibility issues identified by the public. Between the stakeholders and the public, 88 compatibility issues were identified for evaluation.

Following the presentation, the TAC started working through the issue statements and provided comments and revisions, and in some cases, added new issue statements. These changes were made in a redline format so that committee members could confirm the changes as they were made. For each issue statement, the TAC was also asked to assign a priority level (see sidebar for description of priority levels). The committee members examined approximately half of the issues during this meeting.

At an afternoon meeting, the PC members received the same overview about the public workshop and an overview of the work that the TAC members performed on the compatibility issues in the morning. Key questions and concerns raised at the TAC meeting were reviewed for direction.

Outcomes:

- Review of public input on issues
- Review and revision of issue statements (first half)
- Prioritization of issues (first half)

Issue Priority Levels

- **High Priority.** These issues are critical to address within the year following completion of the JLUS.
- **Medium Priority.** These issues are important and should be addressed in the 1-3 years following completion of the JLUS.
- **Low Priority.** These issues need to be addressed in the 3-5 years following completion of the JLUS.
- **On-Going.** These issues need to be addressed on an on-going basis.
- **Awareness.** These issues do not need to be addressed in the short-term, but should be monitored.
- **Not an Issue.** Committee determines that this item is already addressed or is not an issue appropriate for the JLUS.

TAC Meeting #4 / PC Meeting #4

November 20, 2013

Orvene S. Carpenter Community Center, Port Hueneme, CA

The purpose of the morning TAC meeting was to complete the previous meeting's discussion and revision of compatibility issues. The TAC members provided additional input on content and language changes for the compatibility issues on an electronic version of the issues displayed on an overhead screen to enable real-time review and confirm changes as they were revised.

At an afternoon meeting, the PC members were given an overview of the work that the TAC members performed on the compatibility issues in the morning, and key questions and concerns raised at the TAC meeting were reviewed for direction.

During TAC / PC meetings #3 and #4, several technical issues were identified that warranted further discussion. The committees requested that coordination meetings be held separately with the Navy and the Oxnard Harbor District (OHD) to ensure the compatibility issues discussed were accurately portrayed. The results of these coordination meetings would be reviewed with the TAC / PC at their next meetings.

Outcomes:

- Completed review and revision of issue statements
- Completed prioritization of issues
- Direct follow-on meetings with Navy and OHD

Public Workshop #2

November 21, 2013

South Oxnard Community Center

This workshop ran between 6:30 and 8:30 PM and was attended by almost 40 persons. The workshop started with a brief presentation that provided an update on the development of the JLUS, a description of the military mission components (military footprint), and an overview of the workshop exercise.

After the presentation, the public was asked to review posters arranged around the room. The posters contained the text of each compatibility issue (as revised by the TAC and PC) and spaces to mark the priority level (high, medium, low, awareness, and on-going) using a set of dot stickers given to each participant. This prioritization would assist Matrix in identifying the timeframe for which the strategy should be addressed. Public members were encouraged to ask questions of staff on-hand and to suggest changes to the issues if desired.

Outcomes:

- Review of current issue statements that will be foundation of JLUS
- Public input on prioritization of issues



Public Workshop #2, November 21, 2013

Coordination Meeting with Oxnard Harbor District February 3, 2014

Compatibility issues related to OHD operations and the port that were discussed at the previous TAC/PC meetings #3 and #4 were discussed with technical experts from the OHD to ensure the issues were stated accurately. The team also reviewed outstanding data requests to ensure the project team had access to the latest information. During the meeting, some issue statements were refined to accurately portray the issue and current circumstances.

Coordination Meeting with Navy February 4, 2014

Compatibility issues related to Navy operations that were discussed at the previous TAC/PC meetings #3 and #4 were discussed with technical experts from the Navy and NBVC to ensure the issues were stated accurately. The team also reviewed outstanding data requests to ensure the project team had access to the latest information. Any revisions to issue statements made by the TAC/PC were reviewed and confirmed for use in the JLUS process and evaluation.

TAC Meeting #5 / PC Meeting #5 January 28 – 29, 2015 Freedom Center at Freedom Park

This set of meetings has two purposes. The TAC met on January 28th to discuss the content of the JLUS Background Report. On January 29th, both committees met to start the development of recommended strategies designed to address the compatibility issues identified.

Outcomes:

- Initial comments on JLUS Background Report
 - Initial development of JLUS strategies
-

TAC Meeting #6 / PC Meeting #6 April 17, 2015

Ventura County Government Center, Hall of Justice

This set of meetings focused on the review of the draft JLUS, including the draft set of recommended strategies developed to address compatibility issues.

Outcomes:

- Review and comment on draft JLUS and potential strategies and refine a final set of recommended strategies to include in the Public Draft JLUS.
-

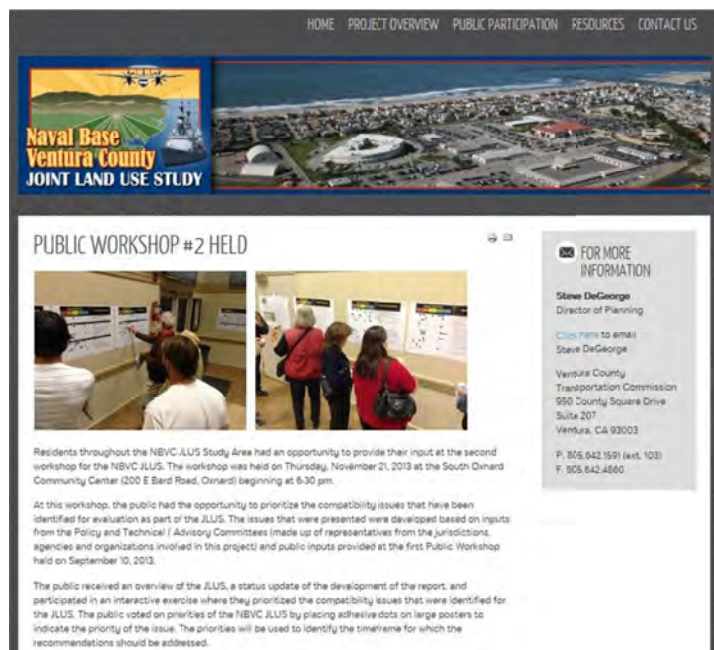
Public Workshops #3 and #4 August 4, 2015 (Camarillo Public Library, Camarillo, CA), and August 5, 2015 (Oxnard Performing Arts Center)

These workshops were conducted during the 30-day review period (which occurred from July 17 through August 17, 2015) for the JLUS documents. In order to present the JLUS to a broader range of public participants, one meeting was held in the City of Camarillo and one meeting was held in the City of Oxnard. The purpose of these workshops was to present the JLUS documents, answer questions, and receive comments.

Outcomes:

- Understanding of draft JLUS
- Answer questions concerning draft JLUS
- Receive public comments on draft JLUS documents

Project Website. A project website was developed to provide stakeholders, the public, and media representatives with access to project information. This website was maintained for the entire duration of the project to ensure information was easily accessible. Information contained on the website includes program points of contact, schedules, documents, maps, and public meeting information. The project website is located at www.nbvcjlus.org.



1.7. JLUS Implementation

It is important to note that once the JLUS process is completed, the final document is not an adopted plan but a set of recommended strategies to be used by local jurisdictions, agencies, and organizations in the NBVC JLUS Study Area to guide their future compatibility efforts. Acceptance of the study by stakeholders (e.g. jurisdictions, agencies, etc.) will confirm their collective support for identified implementation efforts. For instance, local jurisdictions may use the recommended strategies to guide future changes in subdivision regulations, zoning updates, and to assist in the review of development proposals in the study area. NBVC can use the JLUS to guide its interaction with local jurisdictions on future projects and manage internal planning processes with a compatibility-based approach.

1.8. JLUS Organization

The following is a brief overview of the organization of the NBVC JLUS documents, including the contents of the JLUS Report (a separate document) and the JLUS Background Report (this document).

JLUS Report

This report provides a brief discussion on the purpose and objectives of a JLUS, describes the overall benefits of the JLUS process, and provides an overview of the various stakeholders that assisted in the development of the study. The JLUS Report then provides a listing of the compatibility issues identified and the recommended strategies developed through the NBVC JLUS process to address each issue. The JLUS Report is the action plan for addressing compatibility.

Background Report

The JLUS Background Report is comprised of the following chapters.

JLUS Chapters

Chapter 1: Introduction. Chapter 1 provides an introduction and overview of the NBVC JLUS. This chapter describes the strategic and local importance of NBVC, background and intent of the JLUS, the goal and objectives used to

guide development of the JLUS, stakeholders involved in developing the JLUS, and the public outreach process.

Chapter 2: Community Profile. Chapter 2 provides a profile of the jurisdictions and institutions within the study area, providing a common basis for understanding the areas outside the NBVC facilities.

Chapter 3: Military Profile. Chapter 3 provides an overview of NBVC and its operational facilities, discusses the installation's mission and units, the strategic and local importance of NBVC, facility and training capabilities and operations, and potential future missions. This chapter also discusses the installation setting including housing, its economic impact on the community and history to provide the military baseline context for the JLUS. The chapter further provides information on the "military footprint". The military footprint is the areas outside the military facilities that impact or influence these areas. Examples include safety zones, noise contours, and approach and departure corridors.

Chapter 4: Existing Compatibility Tools. This chapter provides an overview of existing plans, programs, and studies that are relevant in addressing compatibility issues in the NBVC JLUS Study Area. Federal, state, regional, local, and military plans and programs are assessed. Chapter 4 also examines the effectiveness of each existing plans or programs relative to addressing the compatibility issues identified and described in Chapter 5. The purpose of this chapter is to filter the tools already available to stakeholders and discern whether the tool is adequate, in need of modification, or requires development to achieve compatibility planning objectives.

Chapter 5: Compatibility Assessment. This chapter presents the issues identified by the PC, TAC, the public, and JLUS team and provides an assessment of the compatibility issues identified. This chapter enumerates the issues and categorizes them into one of the 25 compatibility factors. The purpose of this chapter is to identify issues that are already addressed by existing tools, and which require new or modified tools to fully address the issue identified.

Compatibility Factors

Chapter 5 is organized by the 25 compatibility factors summarized below. These summary descriptions were used originally by the committees (as part of PC/TAC meetings #1 through #4) and the public (as part of Public Workshops #1 and #2) to identify and prioritize potential compatibility issues. Of the original 25 factors reviewed (noise and vibration were combined into one factor, so only 24 factors are listed), 22 were found to have issues that are detailed in Chapter 5. For each factor listed below, the section in Chapter 5 that contains further information on these issues is listed in parentheses.

- Air Quality (Section 5.1)
- Anti-Terrorism / Force Protection (Section 5.2)
- Biological Resources (Section 5.3)
- Climate Change (Section 5.4)
- Coordination / Communication (Section 5.5)
- Cultural Resources (no issues determined)
- Dust / Smoke / Steam (Section 5.6)
- Energy Development (Section 5.7)
- Frequency Spectrum Capacity (no issues determined)
- Frequency Spectrum Interference / Impedance (Section 5.8)
- Local Housing Availability (Section 5.9)
- Infrastructure Extensions (Section 5.10)
- Land Use (Section 5.11)
- Land, Air, and Sea Space Competition (Section 5.12)
- Legislative Initiatives (Section 5.13)
- Light and Glare (Section 5.14)
- Marine Environments (Section 5.15)
- Noise & Vibration (Section 5.16)
- Public Trespassing (Section 5.17)
- Roadway Capacity (Section 5.18)
- Safety (Section 5.19)
- Scarce Natural Resources (Section 5.20)
- Vertical Obstruction (Section 5.21)
- Water Quality and Quantity (Section 5.22)



2. Community Profile

Please see the next page.



Community Profile

Inside Chapter 2...

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This chapter provides a profile of the local jurisdictions and institutions within the Naval Base Ventura County (NBVC) Joint Land Use Study (JLUS) study area. These profiles provide a summary of the history and trends that influence the direction of each jurisdiction and institution. The chapter also provides general setting information on the JLUS study area.

Providing a look at certain demographic and economic characteristics of the participating JLUS communities and institutions can help to provide a baseline context from which informed decisions can be made when developing compatibility strategies. The goal is to provide information that enables stakeholders to gain an understanding of population and development trends that have the potential to affect the future of NBVC. Further, this chapter is designed to foster an understanding by the military about the types of activities occurring "outside the fence" when considering future missions and operations.

2.1. Regional Overview

As discussed in Chapter 1, the NBVC JLUS study area is defined as the land and sea areas near NBVC facilities that can impact current or future military operations (due to their use) or be impacted by military operations associated with these facilities. The NBVC facilities covered by this JLUS are NBVC Point Mugu, NBVC Port Hueneme, NBVC San Nicolas Island, and the Naval Air Systems Command Point Mugu Sea Range.

As shown on Figure 1-1 in the previous chapter, the NBVC JLUS study area covers portions of unincorporated Ventura County (including San Nicolas Island); the cities of Camarillo, Oxnard, and Port Hueneme; and the sea range areas off the coast. Institutions within the study area discussed in this chapter are Port of Hueneme / Oxnard Harbor District and the California State University Channel Islands (CSUCI). Geographically, the JLUS study area encompasses an area primarily referred to as the Oxnard Plain, coastal locations in Ventura County from the county line north to about Channel Islands National Park, the western edge of the Santa Monica Mountains, and the Pacific Ocean (including San Nicolas Island).

This chapter provides an overview of the study area and a description of each of the communities and partner institutions within the NBVC JLUS study area which includes the facilities at, the nearby cities of Camarillo, Oxnard, and Port Hueneme, the County of Ventura, Oxnard Harbor District, and California State University Channel Islands (CSUCI). Information on growth management tools and the transportation system in the study area round out the chapter.

Historic Profile

Pre-Contact / Early Contact

Prior to the first European arriving in 1542 (Juan Rodriguez Cabrillo landed near Point Mugu in that year), the study area was occupied by the Chumash Indians. The word Mugu is attributed as a derivative of the Chumash word “muwu” for “hand of the beach.” Muwu was also the name for the village in the area that was a major Chumash cultural center. Muwu existed up

through the 1700’s until residents were removed to Mission San Buenaventura (in modern City of Ventura).

Mission / Rancho Period (1769 – 1848)

The Mission Period started in 1769 with the first religious expeditions into California. The system eventually expanded to include 21 missions located from San Diego to San Francisco. In Ventura County, the only mission built was Mission San Buenaventura. In 1821, Mexico gained independence from Spain and took control of lands in much of California. By the mid-1800’s, a system of land grants, referred to as “ranchos” was established. The Point Mugu area, including Mugu Lagoon and extending to what is now Camarillo and the western fringe of the Santa Monica Mountains, was the location of two ranchos, the Rancho El Rio de Santa Clara o La Colonia and the Rancho Guadaluca.



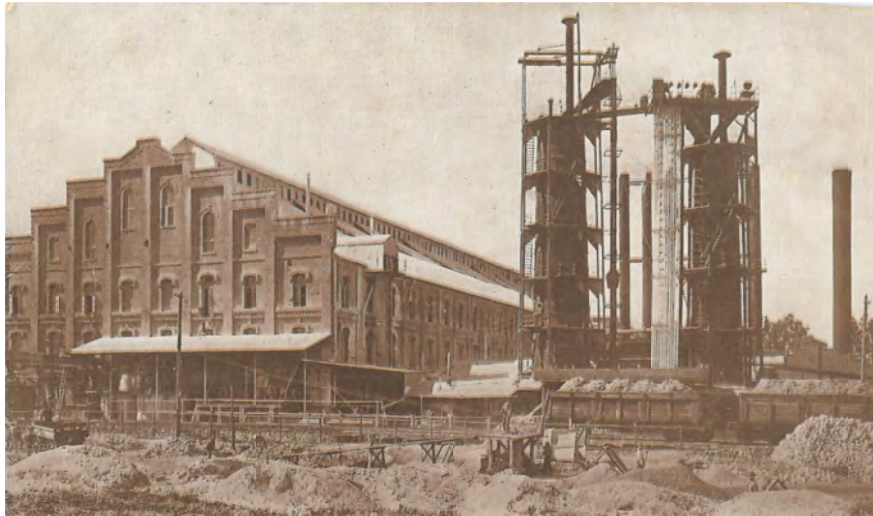
Mission San Buenaventura

Early California

Following the Mexican-American War, administration of what would become the State of California was transferred to American administration. In the late 1800’s, the two ranchos in this area were divided into parcels and some were sold for development, although development did not occur at the time. In the late 1800’s and early 1900’s, the arrival of the railroad (1887) contributed to the growth of commercial agriculture on the Oxnard Plain. While development grew in the area, the lands around Point Mugu remained undeveloped due to the marshy state of the land.

Railroads, Agriculture, and Local Development (1870-1940)

The rich soils of the Oxnard Plain, coupled with the availability of the port at Hueneme, enabled the growth of commercial agriculture in the area. Crops, including lima beans, corn, barley, flax, and wheat were the primary crops initially. The arrival of the railroad in Ventura County came in 1887 with the Southern Pacific line, effectively expanding the reach of the area to the rest of California and the country. By the late 1800’s, sugar beets were the primary crop, but this dominance only lasted about a decade.



Sugar beet factory in Oxnard (postcard, source unknown)

While the Oxnard Plain was developing as an agricultural center, the area around Mugu Lagoon was taking a more recreational line. The Mugu Lagoon attracted waterfowl and hunters, and as agriculture spread on the Plain, fear of losing the waterfowl areas sparked the creation to two hunting clubs: the Ventura County Game Preserve (established in 1908) and the Point Mugu Game Preserve (established in 1928).

In 1898, rail service was extended to the City of Oxnard. The arrival of the railroad to Oxnard had a detrimental effect on the port and the community of Hueneme. The decline of the port and Hueneme did not rebound until reinvestment with World War II.

World War II (1940's)

Key changes in the area, especially with the current NBVC locations, occurred as part of World War II. Details on these changes are presented in Section 3.1.

Modern Period (after 1950)

In explaining the history of modern Ventura County, some describe it as two geographic areas: East County and West County. East County includes communities located east of the Conejo Grade, and includes the cities of Thousand Oaks, Newbury Park, Lake Sherwood, Hidden Valley, Oak Park, Moorpark, and Simi Valley. The West County includes the cities of Camarillo, Oxnard, Somis, Port Hueneme, Ventura, Ojai, Santa Paula, Santa Rosa Valley, and Fillmore. The West County component best matches the JLUS study area.

Significant growth was initially driven by the Los Angeles area expansion into East County communities in the 1960's and 1970's. The completion of U.S. Highway 101 as a full freeway facility in the 1960's helped to connect the West County communities and brought some growth with it. But the connection brought more than a few commuters, it helped provide the East County area into better truck transportation that enhanced the transport of more time-sensitive or delicate products (like strawberries) and enhanced the areas access for tourism.

As the population grew, there was concern over the future of the county and agriculture. To address growth, Ventura County and the cities in the county adopted the Guidelines for Orderly Development. Growth management was further established through voter initiatives, such as the Save Open Space and Agricultural Resources (SOAR), and greenbelt initiatives designed to ensure a long-term approach to the protection of agricultural production in the area (see Section 2.6 for more information).

*Sources: Draft Integrated Natural Resources Management Plan (INRMP) for Naval Base Ventura County Point Mugu and Special Areas, 2013.
Wikipedia, 2014*

Compatibility Benefit – Managed Lands

Relative to compatibility planning, there are several federal, state and county managed land areas that help protect NBVC from encroachment concerns by limiting development in these areas. Table 2-1 shows the public and private land holdings in Ventura County.

Table 2-1. Land Ownership – Ventura County, 2011

| Land Ownership | Acreage | Percent of County |
|---|---------|-------------------|
| California Department of Fish and Game | 60 | 0.01% |
| California Department of Parks and Recreation | 20,890 | 1.76% |
| Local Government | 28,090 | 2.36% |
| Non-Profit Conservancies and Trusts | 3,167 | 0.27% |
| California State University Channel Islands | 1,187 | 0.10% |
| Other State Lands | 266 | 0.02% |
| Private | 525,670 | 44.23% |
| State Conservancies | 5,557 | 0.47% |
| United States Bureau of Land Management | 2,745 | 0.23% |
| United States Bureau of Reclamation | 4,724 | 0.40% |
| United States Department of Defense | 20,248 | 1.70% |
| United States Fish and Wildlife Service | 2,513 | 0.21% |
| United States Forest Service | 562,395 | 47.32% |
| United States Park Service | 10,994 | 0.93% |

Source: CALFIRE, 2011. California Multi-Source Land Ownership (ownership11_2). CSUCI, 2015.

Los Padres National Forest

The Los Padres National Forest was created in December 1936 encompassing nearly 2 million acres of forestland along the central California coast. Nearly half of this land is located in the northern region of Ventura County. Approximately 48 percent (875,000 acres) of the forest is designated as wilderness. The forest allows for multiple outdoor uses, including backpacking, camping, hunting, and other outdoor recreational activities.

The forest land also supports mining claims for mineral wealth, including gold, copper, uranium, chrome, and others. The forest also produces oil, gas, and geothermal energy. The forest is managed by the U.S. Forest Service through five administrative districts with offices in King City, Santa Maria, Santa Barbara, Ojai, and Frazier Park.

Santa Monica Mountains National Recreation Area

The Santa Monica Mountains National Recreation Area encompasses approximately 150,000 acres along the Santa Monica Mountain range in Los Angeles and Ventura Counties. The range runs east-west along the coast and includes numerous state parks and recreation areas. The national recreation area was created by Congress in 1978 to preserve the scenic and natural qualities of the region. The area is managed by the U.S. National Park Service and the California Department of Parks and Recreation.

Channel Islands National Park

The Channel Islands National Park includes five of the eight Channel Islands and six square miles of ocean off of the California coast. Anacapa Island is the smallest and closest island to the coast, and is considered a part of Ventura County. Its close proximity to the coast makes it the most visited island in the park. The park is popular with birdwatchers, and a significant portion of the park is closed to visitors to protect the environment for endangered species, including the California Brown Pelican.

Point Mugu State Park

The Point Mugu State Park is located in the southern portion of Ventura County along SR 1 to the east of NBVC Point Mugu. The park is managed by the California Department of Parks and Recreation and provides access to five miles of the California coast allowing for hiking, beach going, camping, and fishing.

Ventura County and Point Mugu Game Reserves

The Ventura County Game Preserve is located adjacent to the northwest border of NBVC Point Mugu. The Ventura County Nature Reserve covers approximately 600 acres of wetlands and is a popular bird hunting location for local hunters.

La Jenelle Park

La Jenelle Park is located between Silver Strand Beach and NBVC Port Hueneme. The park was established by the County of Ventura to protect the shipwreck created by the sinking of the La Jenelle luxury liner in April 1970. The readily accessible shipwreck remains close to shore making the park a popular location for shipwreck divers. The land around the wreck is part of the NBVC Port Hueneme facilities. These areas have been identified for habitat rehabilitation through the removal of invasive species and dust control implementation.

Sources: California Department of Parks and Recreation Point Mugu State Park Homepage, accessed December 2013; Port Hueneme Integrated Natural Resources Management Plan 2012; U.S. Forest Service Los Padres National Forest Information Page, accessed December 2013; Ventura County General Plan 2007

Compatibility Benefit – Agriculture

The area has a moderate Mediterranean climate and excellent soils, providing an area that is very conducive to agriculture production. In 2011, the nearly 96,000 acres of irrigated cropland in the county generated an economic value of over \$1.9 billion (see Section 2.2 for more information on the economy). Relative to compatibility planning, the county's roots in agriculture and the residents dedication to maintaining this agricultural heritage has inspired residents and local governments to enact a number of laws and regulations to protect agricultural lands from the northward sprawl of Los Angeles, located approximately 50 miles to the east. Many of the lands protected by the growth management tools established (described further in Section 2.5) protect lands that are the most sensitive to compatibility associated air operations with the airfield at Point Mugu.

2.2. Jurisdictions and Institutions

Ventura County



| | |
|-----------------------------------|-------------------------------------|
| Year Incorporated: | 1873 |
| 2014 Estimated Population: | 842,967 |
| Projected 2040 Population: | 995,375 |
| Major Industries: | Agriculture and Government Services |

Ventura County is located on the California coast approximately 40 miles northwest of Los Angeles and covers an area of 1,873 square miles ranging from coastal mountains to agriculture fields to pristine shorelines to urbanized cities. Nearly 46 percent of the total land area in the county is home to the Los Padres National Forest, located in the northern portion of the county.

The county's modern history dates back to the establishment of the Chumash people in 1770 and the Spanish mission at San Buenaventura in 1782. With the admission of California into the United States and subsequent oil speculation, agricultural growth, and land development, the population of the area greatly increased until the county split from Santa Barbara County in 1873. The county seat is located in the City of San Buenaventura, commonly referred to as Ventura.

NBVC is located along the County's coast, which provides the necessary and ideal environment for the Navy and DOD to accomplish their wide variety of different mission. NBVC hosts many unique tenant commands, each with their own missions and its location serves as, among other things, a Center of Excellence for the Seabees Construction Battalion, and home for the extensive research, evaluation, testing, and development commands that NBVC executes in association with the adjacent sea range and restricted airspace. It also serves as an important DOD mobilization site. NBVC and its operations are discussed in greater detail in Chapter 3, Military Profile.

Naval Base Ventura County Joint Land Use Study

Ventura County includes 10 incorporated cities, a number of unincorporated communities, and large areas of agricultural and open space lands. For cities in the county, urban development is limited to the jurisdictional and City Urban Reserve Boundary (CURB) of each of the 10 cities in Ventura County (see table below for 2014 population). The limitations on growth along major transportation corridors (such as U.S. Highway 101 and State Route 1) and protection of the agricultural and open space resources makes the county unique among the other counties in the state.

Incorporated cities in Ventura County are (an “*” designates those cities within the NBVC JLUS Study Area):

- | | |
|---------------|--------------------|
| ■ Camarillo * | ■ Port Hueneme * |
| ■ Fillmore | ■ San Buenaventura |
| ■ Moorpark | ■ Santa Paula |
| ■ Ojai | ■ Simi Valley |
| ■ Oxnard * | ■ Thousand Oaks |

The county’s economy is well-diversified, with major industries including: agriculture; retail trade; healthcare and social assistance; accommodation and food services; manufacturing; and professional, scientific, and technical services. In calendar year 2012, agriculture provided nearly \$2 billion dollars and supported approximately 31,000 jobs in Ventura County. Like the agriculture industry, the government services and military industry, particularly NBVC and Naval Warfare Center and Naval Construction Battalion are significant employers in the region providing an economic impact of nearly \$2 billion dollars and supporting employment of approximately 20,060, including 11,457 military and civilian personnel, and 5,850 on-site contractors. An estimated 2,753 jobs are created through indirect effects (Naval Base Ventura County – 2013 Overview, 2013).

Sources: California Department of Finance, 2014; California Employment Development Department, 2013; Economic Development Cooperative-Ventura County, 2013, Naval Base Ventura County – 2013 Overview, 2013, retrieved from <http://www.navyregionsouthwest.com/external/content/document/4275/1737715/1/IFS%20NBVC%202013.pdf>; Frequently Asked

Questions about Ventura County Farming, Farm Bureau of Ventura County, retrieved June 2014, http://www.farmbureauvc.com/pdf_forms/Farming-FAQ-2013.pdf; 2040 Population Forecast Ventura Cities and Counties, May 2008. Ventura County Council of Governments.

City of Camarillo



| | |
|-----------------------------------|----------------------------------|
| Year Incorporated: | 1964 |
| 2014 Estimated Population: | 66,752 |
| Projected 2040 Population: | 79,391 |
| Major Industry: | High-tech and Specialty Products |

In the post-war period, the city of Camarillo incorporated in 1964 to encompass the expanding communities in the valley. The 19.65 square mile city is situated along a stretch of U.S. Highway 101 through the heart of Ventura County, approximately six miles northeast of the NBVC facilities and is home to an estimated 65,000 residents.

It has since developed into a center for retail and employment. In the 1990s, the city encouraged the development of the Camarillo Premium Outlets mall to increase local sale revenues while reducing the incidence of retail leakage (residents of Camarillo spending money outside the city). The mall generates nearly \$3 million in annual sales tax revenue for the city and remains a major draw for shoppers throughout the Los Angeles area.

Education, health, social services, and manufacturing also comprise a significant segment of the local economy with many major employers including AECOM, Harbor Freight Tools, Hi-Temp Insulation, St. John’s Pleasant Valley Hospital, Technicolor, and Vitesse.

The City of Camarillo encourages urban development along the urban corridor, U.S. Highway 101. This practice fosters sustainable growth and protects the unique fabric of the community, the preservation of open space, natural environments, and agriculture land. The preservation of open space is a consistent theme for the City and is demonstrated by planned parks

throughout high and low dense / intense land use areas. It is evident there is a trend to preserve open space and agricultural land uses along the northern and southern city limit boundaries as that is where lower densities and intensities are planned. The sphere of influence (SOI) boundary is consistent with protection of open space and agricultural land as the land uses planned for those areas include low density rural residential and low to low-medium density uses.

The city continues to ensure desirable communities by providing the best options for residential development and commercial land use by providing a balanced, environmental community design.

Sources: City of Camarillo General Plan 2004; City of Camarillo Homepage, 2013; Economic Development Collaborative- Ventura County, Ventura County Star, 8 August 2010; 2040 Population Forecast Ventura Cities and Counties, May 2008. Ventura County Council of Governments.

City of Oxnard



Year Incorporated: 1903
2014 Estimated Population: 203,645
Projected 2040 Population: 250,608

Major Industries:
Agriculture and Professional Business Services

The City of Oxnard was incorporated in 1903 as the center of the local agriculture industry, which soon became an “agribusiness” during the 1930’s. This development was the result of the increased shipping capabilities from the newly establish Oxnard Harbor District, a role it still maintains. The City includes approximately 27 square miles of land along the Pacific Coast where U.S. Highway 101 and State Route (SR) 1 intersect. The surrounding Oxnard Plain provides the community with year-round agricultural production, public areas, and is bordered by the Pacific Ocean and various mountain ranges. The area has a diversified economic base that includes agriculture, defense, international trade, manufacturing, and tourism. In 2010 the population was just under 200,000 making it the largest city in Ventura County. This is due in

part to NBVC’s proximity to Oxnard making the city a convenient home for many of the contractors and military personnel working at NBVC.

Much of Oxnard’s land use patterns are based off of the city’s central vicinity, during expansion much of the development grew in all directions spreading outwards from the city center. U.S. Highway 101 is where most of the higher density development is located. Much of Oxnard’s redevelopment is focused in the central city. Open spaces, beaches, low to medium residential and multiple industrial sites surrounded by agricultural areas are found in the northeast and eastern portions of the City—all elements that characterize the City of Oxnard.

Sources: City of Oxnard 2030 General Plan; Economic Development Collaborative-Ventura County, 2013; Save Open Space & Agricultural Resources Homepage, 2013; 2040 Population Forecast Ventura Cities and Counties, May 2008. Ventura County Council of Governments.

City of Port Hueneme



Year Incorporated: 1948
2014 Estimated Population: 22,399
Projected 2040 Population: 24,788

Major Industries:
Manufacturing and Tourism

The City of Port Hueneme, incorporated in 1948, is located on the coast between the City of Oxnard and NBVC. As of the 2010 Census, it had a population of 21,723, which is a slight decrease from the 2000 Census population of 21,845.

The City of Port Hueneme is urbanized and is focusing in the redevelopment of housing areas, and commercial / industrial uses. The commercial / industrial areas are an important factor to the City because it supports the range of diversity in the community and allows for a broad range of opportunities for “one-stop-shopping”. Much of the mixed use development in the City is located along Pleasant Valley Road just west of Ventura Road.

As a growing second home community with increased prices and competition for housing, the city has taken measures through its general plan to introduce higher densities in the city. These efforts are to help balance the housing options and to further strengthen the commercial portion of the Port of Hueneme. This type of in-fill development, or organic growth, within the city presents both challenges and opportunities for the City with respect to rising housing prices and incorporating development that will be sustainable.

Source: Port Hueneme General Plan 2015; Economic Development Collaborative-Ventura County, 2013; Sea Grant North Carolina 2011 Report; 2040 Population Forecast Ventura Cities and Counties, May 2008. Ventura County Council of Governments.

California State University Channel Islands



| | |
|---------------------------------------|--|
| Year Established: | 2002 |
| 2014 Fall Headcount: | 5,909 |
| 2014 Full Time Equivalent: | 5,189 |
| Projected Buildout Enrollment: | 15,000 |
| Newest Buildings: | Classroom/ Faculty Office Renovation and Addition, West Hall |

The CSUCI campus is located about two miles south of the city of Camarillo situated on 1,187 acres. The campus is bordered by agricultural farm land on the north, west, and south sides and by the Santa Monica Mountains on the east. The university got its start 50 years ago with Governor Pat Brown's desire to study the need for a university in Ventura County. In 1997, the CSUCI campus found a home when the California State University Board of Trustees voted to accept the site of the former Camarillo State Hospital. In 2002 and 2003, the CSUCI campus welcomed their first transfer students and the first class of new freshmen students, respectively. Since then, the university has steadily grown in numbers to an enrollment of 5,909 students (headcount) for Fall 2014 and a full time equivalent in 2014 of 5,189.

With the student populations growing rapidly, future expansions for the school are held to high planning standards to protect and preserve the existing architecture and open spaces. These areas are of such importance because they support the unique experience and integrity of the University's characteristics. With a formal center as the most important open space feature and mirrored symmetry for building concepts, this Mission Revival and Spanish Revival Colonial style allows for a balanced look between historic and new campus architecture. Each open space is characterized accordingly to support the surrounding facilities and environment.

Most of the University's expansion is located in the northeast region, next to the Santa Monica Mountains. Along with the expansion, an environmental responsibility program was established to promote sustainable facilities. Wind and solar generation facilities are being considered to not only reduce greenhouse emissions and the carbon footprint of the campus but also for research and evaluation.

Port of Hueneme / Oxnard Harbor District



| | |
|------------------------------------|--|
| Year Established: | 1937 |
| Current Operations: | > 7 billion in cargo |
| Economic Output: | \$ 1 billion economic impact and over 9,400 jobs |
| Newest Capital Improvement: | Hueneme Shore Side Power Project |

The Port of Hueneme is an area encompassing 4.67 square miles and managed by the Oxnard Harbor District (OHD) to support the efficient, international commercial shipping of goods. The Port supports over \$7 billion in cargo annually and contributes over \$1 billion in economic impact to the region. Additionally, OHD provides more than 9,400 jobs to the regional area.

The Port is a joint-use facility in that OHD has been granted periodic use of Wharf 3 when use does not conflict with mission critical activities of the U.S. Navy. This area is approximately 25 acres and provides operations

capabilities for both military and commercial use; this is the primary berth for visiting cargo handling and commercial carriers.

OHD finds the importance in balancing both commercial and public use for future increase in population and shipping services. Future development is sought to increase both recreation and visitor serving facilities along the Sunkist Site and Market Street in coordination with the Port of Hueneme.

Ventura Local Agency Formation Commission



Year Established: 1963

Guidelines for Orderly Development: 1969

The Ventura Local Agency Formation Commission (LAFCo) is authorized by state law to promote expansion of government agencies through orderly formation and discourage urban sprawl while preserving agricultural land resources. The Ventura LAFCo performs their mission by regulating the boundaries for cities and special districts including annexations, incorporations, reorganizations, and SOIs. Ventura LAFCo also reviews public services and special studies. The agency also serves in the capacity of initiating the consolidations or dissolutions of special districts as appropriate. LAFCo can also act on public-public and public-private service agreements.

Source: Ventura County Local Agency Formation Commission, Agendas/Minutes, 2014.

2.3. Economy

Ventura County is home to a diverse local economy. Because of the temperate Mediterranean climate, the historic agricultural industry remains a vital part of the local economy, supporting a wide variety of crops, including strawberries, lemons, raspberries, celery, tomatoes, peppers, and oranges. The 2012 value of the nearly 96,000 acres of irrigated cropland in the county totaled over \$1.9 billion (see Table 2-2). Since World War II, manufacturing and aerospace held a solid place in the local economy, rooted by the activities at NBVC and NBVC Port Hueneme. Due to the county's position as the only major port between Los Angeles and San Francisco, international trade and commercial shipping has become an increasingly important economic driver in the region. A strong tourism and retail industry has also been supported due to the proximity of Los Angeles and the central California coast.

Table 2-2. California's Top 10 Agricultural Counties, 2012

| Count | Rank | 2012 value | Leading Commodities |
|----------------|----------|------------------|--|
| Fresno | 1 | 6,587,794 | Almonds, Livestock, Grapes, Milk |
| Kern | 2 | 6,212,362 | Grapes, Almonds, Milk, Vegetables |
| Tulare | 3 | 6,210,694 | Milk, Grapes, Cattle, Oranges |
| Monterey | 4 | 4,137,863 | Strawberries, Lettuce, Broccoli, Grapes |
| Merced | 5 | 3,280,209 | Milk, Almonds, Cattle, Chickens |
| Stanislaus | 6 | 3,277,843 | Milk, Almonds, Walnuts, Chickens |
| San Joaquin | 7 | 2,881,441 | Grapes, Walnuts, Milk, Almonds |
| Kings | 8 | 2,215,014 | Milk, Cotton, Cattle, Tomatoes |
| Ventura | 9 | 1,960,753 | Strawberries, Lemons, Raspberries, Celery |
| Imperial | 10 | 1,945,759 | Cattle, Hay, Wheat, Lettuce |

Source: California Agricultural Statistics Review 2013-2014

Figure 2-1 illustrates the major industries by number of employees in Oxnard-Thousand Oaks-Ventura MSA (which covers Ventura County) for the year 2010 (top) and projections for year 2020 (bottom).

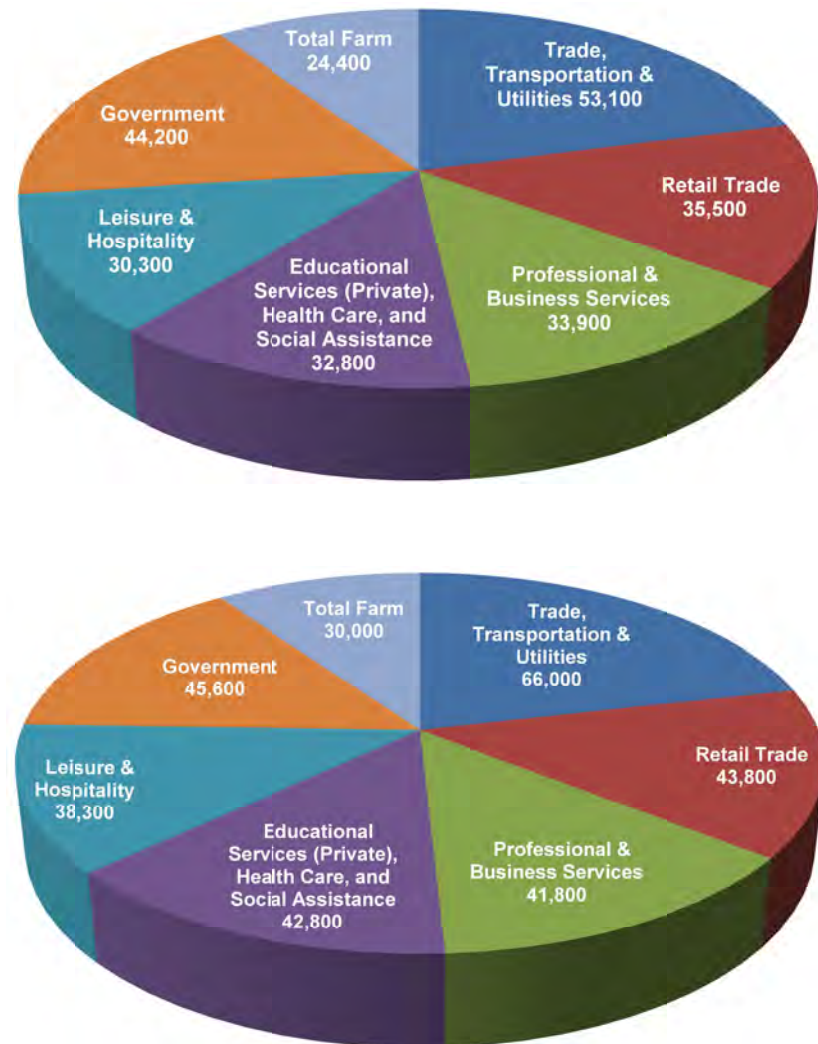
The values in Figure 2-1 identify trade, transportation, utilities, government, and retail trade as the largest sectors by employment in the region. These industries reflect the influence of aerospace and technology research industries in the area since World War II, and the growing impact of tourism. The same sectors are projected to remain the largest employing industries through 2020.

Healthcare, educational services, social assistance, hospitality, and professional and business services are also projected to remain significant employers in the future. This shows both the strength of these industries, and of the diversified local economy, which is supported by the research and work conducted at NBVC. The Economic Development Cooperative of Ventura County actively promotes the county as a center of manufacturing through its Manufacturing Outreach Program, and through other programs ranging from small business loans and assistance to promoting the harbor.

The growing affluence of the region can be observed in the increasing median incomes. Table 2-3 shows the change in median income from 1990 to 2010 in the study area. Each jurisdiction has shown a significant increase in median income levels over the past twenty years with many 2010 levels nearly double over 1990. These values indicate the strength of local economies, the impact of the proximity of Ventura County to the Los Angeles Metropolitan area, and the desirability of the area for living. Note that each of the jurisdictions in the study area is above the 2010 national median income of \$50,502.

Sources: *Economic Development Cooperative- Ventura County, 2013, US Census Bureau, 2012; Ventura County 2011 Annual Crop Report; Ventura County 2012 Annual Crop Report*

Figure 2-1 2010 (Top) and 2020 (Bottom) Major Economic Sectors by Annual Average Employment



Source: *California State Economic Development Department, 2013*

Table 2-3. Median Household Income, 1990-2010

| Jurisdiction | 1990 | 2000 | % Change 1990 - 2000 | 2010 | % Change 2000 - 2010 |
|----------------------|----------|----------|----------------------------|----------|----------------------------|
| California | \$33,290 | \$46,816 | 40.6% | \$54,367 | 16.1% |
| Ventura County | \$45,612 | \$59,666 | 30.8% | \$76,728 | 28.6% |
| City of Camarillo | \$49,555 | \$65,959 | 33.1% | \$84,168 | 27.6% |
| City of Oxnard | \$37,174 | \$48,603 | 30.7% | \$60,191 | 23.8% |
| City of Port Hueneme | \$33,554 | \$42,246 | 25.9% | \$52,244 | 23.7% |

Source: U.S. Census 1990-2010

2.4. Study Area Growth Trends

The following section provides a profile of the study area's trends concerning population change, housing stock, economic development, transportation infrastructure, and water resources. This information establishes a regional context for growth and development in the JLUS area while providing a broad understanding of growth potential for compatibility analysis-based planning.

Population growth and subsequent land development trends in the study area remain a significant concern to local jurisdictions seeking to balance the demand for new housing and economic growth with natural resource preservation. As development pressure continues to build due to outward growth from Los Angeles, many communities have taken active measures to protect open space in the study area through local land use, zoning, and preservation techniques. Development pressure is exacerbated because there are few major transportation corridors to service urban development in Ventura County. U.S. Highway 101 is the only major thoroughfare traversing the entire county and experiences this increased pressure. Geographic limitations also contribute to development pressure because the coastal mountain topography limits developable land.

Population

The population data is based on information obtained from the California Department of Finance and the regional metropolitan planning association, the Southern California Association of Governments (SCAG). Population projections indicate the overall trend in population change to assist policymakers in making informed decisions. Table 2-4 shows population change between 1990 and 2010 and population estimates through 2020. It is important to note that the number identified for Ventura County includes the populations from the incorporated cities and the unincorporated county.

Table 2-4. Population Change 1990-2010 and Estimates through 2040

| Jurisdiction | 1990 | 2000 | % Change 1990-2000 | 2010 | % Change 2000-2010 | 2020 Est. | % Change Est. | 2040 Est. | % Change Est. |
|----------------------|---------|---------|-----------------------|---------|-----------------------|-----------|------------------|-----------|------------------|
| Ventura County | 669,016 | 753,197 | 12.6% | 823,318 | 9.3% | 890,037 | 9.0% | 995,375 | 11.8% |
| City of Camarillo | 52,303 | 57,077 | 9.1% | 65,201 | 14.2% | 72,232 | 10.7% | 79,391 | 9.9% |
| City of Oxnard | 142,216 | 170,358 | 19.8% | 197,899 | 16.2% | 216,718 | 9.5% | 250,608 | 15.6% |
| City of Port Hueneme | 20,319 | 21,845 | 7.5% | 21,723 | -0.6% | 22,508 | 3.6% | 24,788 | 10.1% |

Source: California Department of Finance; Southern California Association of Governments; 2040 Population Forecast Ventura Cities and Counties, May 2008. Ventura County Council of Governments.

The City of Oxnard, with a population of nearly 200,000 representing nearly a quarter of the county's total population, has a considerably larger population than all other cities in Ventura County. This large population center located close to NBVC can play a significant part in shaping compatibility policy between the installation and surrounding communities. Each of the jurisdictions, with the exception of the City of Port Hueneme, experienced substantial population growth over the last twenty years. Reasons for the slow growth rate in Port Hueneme include a 98 percent built out and a large percentage of second homes. These factors can greatly impact housing affordability for local residents and military personnel.

Future Population Projections

SCAG projected twenty year population growth estimates for the counties and municipalities within its jurisdiction. Table 2-4 shows the county's population between 2000 and 2020, which continues to increase at a slower rate. This is in part due to the active measures taken to curb large-scale suburban sprawl throughout the county and reduce the effects of cost of housing increases in the area. As current urban boundary ordinances will soon expire in the cities of Camarillo and Oxnard, there may be renewed pressure for population growth in these localities.

2.5. Housing Value and Trends

Housing trends are an important indicator of economic vitality because they show population growth or decline relative to new residential construction and can indicate future types of residential and commercial development. Table 2-5 shows the median house value change between 2000 and 2010 for each jurisdiction. It is important to note that the number identified for the county is representative of housing values in the overall county area, inclusive of all the cities within the county. The cities have reported their own median housing value based on the census and the California's Department of Finance, Research and Demographics Division.

Table 2-5. Median House Value 2000-2010

| Jurisdiction | 2000 | 2010 | % Change 2000-2010 |
|----------------------|-----------|-----------|--------------------|
| Ventura County | \$248,700 | \$568,700 | 128.6% |
| City of Camarillo | \$252,100 | \$558,200 | 121.4% |
| City of Oxnard | \$189,400 | \$454,700 | 140.0% |
| City of Port Hueneme | \$165,200 | \$387,200 | 134.3% |

Sources: California Department of Finance, Research and Demographic Division, 2000, 2010.

From 2000 to 2010, the median house values in Ventura County experienced explosive growth. Nearly every jurisdiction in the county had median house values double during the ten year period, with prices in the City of Oxnard increasing the most at 140 percent. This rapid growth in home values has substantial effects on housing options for local residents, especially military personnel who rely on Basic Allowance for Housing (BAH) allotments to assist with housing costs. A BAH is a U.S. allowance that provides service members housing compensation when government quarters are not provided. These rates are appropriated by geographic location, pay grade, and dependency status. It also depends on the housing costs and local markets within the United States.

As house prices continue to rise in communities around NBVC, housing costs have impacted military personnel. This can have long term compatibility consequences for these communities.

Sources: Integrated Cultural Resources Management Plan Point Mugu and Port Hueneme, NBVC, 2013; US Department of Housing and Urban Development Report, 2012; Ventura County Star, 17 April 2013

The median monthly rental rates compared to the NBVC BAH rates show a potentially increasing strain on affordable rental housing for military personnel. Table 2-6 identifies the change in the median monthly rental rates for the overall county, inclusive of all cities within the county, and the three JLUS-assessed cities in the study area for the past 30 years. There has been a steady increase, but most importantly each jurisdiction has realized over a 50 percent increase in change from 2000 to 2010 in monthly rents. Table 2-7 shows the 2013 NBVC BAH rates. Ventura County has a 2010 Median Rental Rate of \$1,382. The BAH for a grade E-4 without dependents is less than the median rent. The class level E-4 in the U.S. Navy is a Petty Officer Third Class, which is the fourth enlisted rank and the lowest rank of non-commissioned officers (NCO), (this rank is comparable in pay grade to a Senior Airman in the U.S. Air Force and a Corporal in the U.S. Army and Marines), . While BAH may cover the county wide median rental rates for most grades, the housing affordability varies between cities. However, rental dwellings may increase the strain on the local rental markets were military personnel are in higher concentrations, especially in the cities of Oxnard and Port Hueneme which are closest to the base.

Table 2-6. Median Monthly Rental Rates 1990-2010

| Jurisdiction | 1990 | 2000 | % Change 1990 -2000 | 2010 | % Change 2000-2010 |
|----------------------|-------|-------|------------------------|---------|-----------------------|
| Ventura County | \$754 | \$892 | 18.3% | \$1,391 | 55.9% |
| City of Camarillo | \$834 | \$975 | 16.9% | \$1,507 | 54.5% |
| City of Oxnard | \$686 | \$780 | 13.7% | \$1,219 | 56.2% |
| City of Port Hueneme | \$709 | \$803 | 13.3% | \$1,322 | 64.6% |

Source: California Department of Finance, Research and Demographic Division, 2000, 2010; US Census, 1990.

Table 2-7. NBVC BAH for Military Personnel 2013

| Grade | Without Dependents | With Dependents |
|-------|--------------------|-----------------|
| E-1 | \$1362.00 | \$1701.00 |
| E-2 | \$1362.00 | \$1701.00 |
| E-3 | \$1362.00 | \$1701.00 |
| E-4 | \$1362.00 | \$1701.00 |
| E-5 | \$1527.00 | \$1794.00 |
| E-6 | \$1620.00 | \$1989.00 |
| E-7 | \$1707.00 | \$2127.00 |
| E-8 | \$1833.00 | \$2277.00 |
| E-9 | \$1893.00 | \$2445.00 |
| W-1 | \$1665.00 | \$1995.00 |
| W-2 | \$1830.00 | \$2190.00 |
| W-3 | \$1899.00 | \$2373.00 |
| W-4 | \$2025.00 | \$2472.00 |
| W-5 | \$2163.00 | \$2592.00 |
| O-1E | \$1794.00 | \$2160.00 |
| O-2E | \$1881.00 | \$2346.00 |
| O-3E | \$1989.00 | \$2493.00 |
| O-1 | \$1608.00 | \$1815.00 |
| O-2 | \$1761.00 | \$1986.00 |
| O-3 | \$1920.00 | \$2367.00 |
| O-4 | \$2145.00 | \$2637.00 |
| O-5 | \$2232.00 | \$2826.00 |
| O-6 | \$2373.00 | \$2853.00 |
| O-7 | \$2421.00 | \$2883.00 |

Source: DoDHousingNetwork.com, 2013

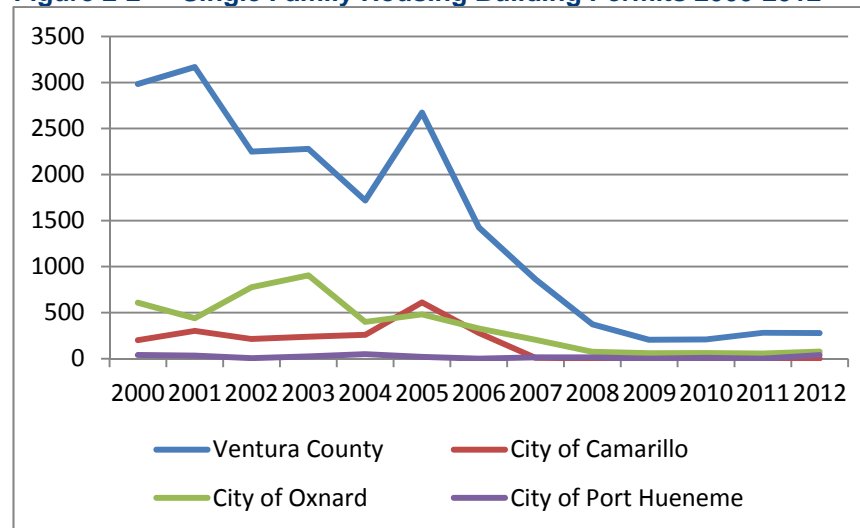
In addition to housing prices, the number of building permits issued by local jurisdictions is a strong indicator of local growth. Figures 2-2 and 2-3 illustrate the number of building permits issued by the cities of Camarillo, Oxnard, and Port Hueneme between the years 2000 through 2012 for single family and multifamily units, respectively.

The line for Ventura County on both graphs is for the entire county, and includes the permits issued by the three cities (Camarillo, Oxnard, and Port Hueneme) as well as other cities and unincorporated areas in the county.

These permits strongly correlate to state and national housing trends which experienced substantial growth in the early 2000s followed by significant downturn in 2007 due to the recession and recent steady recovery. These trends are evident in the region as permitting levels of both single family and multi-family units plummeted after 2007. During this time, homebuyer financing became restricted which further limited development opportunities. Second, while there has been a shortage in new development for all land uses, a regional slowing of development occurred prior to the national trend in 2007-2008 which may be indicative of local policies to preserve open space and curb suburban development throughout the county.

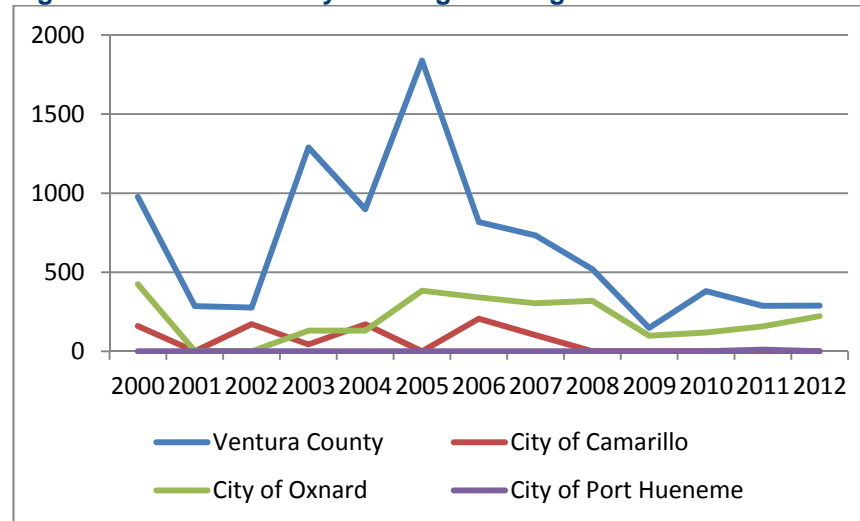
A potential challenge for these jurisdictions and NBVC is the shortage of affordable multi-family housing which can support greater numbers of young military personnel without families. Recent trends have shown a strong development pattern toward single-family housing which may not meet the needs of this demographic.

Figure 2-2 Single Family Housing Building Permits 2000-2012



Source: US Census 2000 – 2012

Figure 2-3 Multi-Family Housing Building Permits 2000-2012



Source: US Census 2000 – 2012

Future Housing Projections

Table 2-8 represents the estimated change in housing units within the JLUS Study Area from 2010 to 2035. The housing stock in the JLUS Study Area is expected to grow in the next couple decades, primarily in the cities of Camarillo and Oxnard. Oxnard is estimated to see the largest increase in housing units, with an increase of 18 percent from 2010 to 2020, almost double the rate of Ventura County as a whole. An increase in housing units in Oxnard from 2020 to 2035 is anticipated as well, with another 20 percent increase. Camarillo's housing stock is expected to grow from 2020 to 2035 as well, but at only an 8.3 percent rate, it will drop lower than the County's overall rate. Port Hueneme's housing stock is estimated to increase from 2010 to 2020, but at have the rate of the County. No growth is estimated between 2020 and 2035 for Port Hueneme.

Table 2-8. Housing Units 2010-2035

| Jurisdiction | 2010 | 2020 | % Change 2010 -2020 | 2035 | % Change 2020-2035 |
|----------------------|---------|---------|------------------------|---------|-----------------------|
| Ventura County | 266,920 | 292,293 | 9.5% | 318,388 | 8.9% |
| City of Camarillo | 24,504 | 27,463 | 12.1% | 29,741 | 8.3% |
| City of Oxnard | 49,797 | 58,770 | 18.0% | 70,567 | 20.1% |
| City of Port Hueneme | 7,080 | 7,391 | 4.4% | 7,391 | 0% |

Source: *Southern California Association of Governments Growth Management, May 2011*

2.6. Growth Management Tools

Guidelines for Orderly Development (1996)

The 1996 Guidelines for Orderly Development have been adopted by the County of Ventura, all cities within Ventura County and the Ventura County LAFCo. This version refines the guidelines originally adopted in 1969. The overall goal of these guidelines remains that urban development should be located within incorporated cities.

The intent of these Guidelines, as stated in the County's summary sheet, is to:

- Clarify the relationship between the Cities and the County with respect to urban planning.
- Facilitate a better understanding regarding development standards and fees.
- Identify the appropriate governmental agency responsible for making determinations on land use requests.

Ordinances and policies are to follow these guidelines and should strive to be incorporated into General Plans.

The general policies stated in the Guidelines are as follows:

- Urban development (urban is defined as parcels less than two acres in size) should occur, whenever and wherever practical, within incorporated cities which exist to provide a full range of municipal services and are responsible for urban land use planning.
- The cities and Ventura County should strive to produce general plans, ordinances and policies which will fulfill these Guidelines.

Sphere of Influence

Government Code § 56076 defines a sphere of influence (SOI) as a plan for the probable physical boundaries and service area of a local agency, as determined by the Local Agency Formation Commission. Within Ventura County, LAFCo is required to determine SOIs for each agency (i.e., city and special district) whose boundaries are subject to LAFCo authority.

More specifically, the purposes of LAFCo are:

1. discourage urban sprawl,
2. preserve open space and prime agricultural land,
3. ensure efficient provision of government services; and
4. encourage the orderly formation and development of local agencies.

An agency's SOI often, but not always, covers a larger territory than the agency's authorized service area. Additionally, as necessary, LAFCo reviews and updates each agency's SOI every five years.

SOAR

In 1995, Save Open Space and Agricultural Resources (SOAR), a non-profit group, was organized to protect the area's rich agricultural land from encroaching development. The group coordinated the SOAR initiative. The key features of SOAR are:

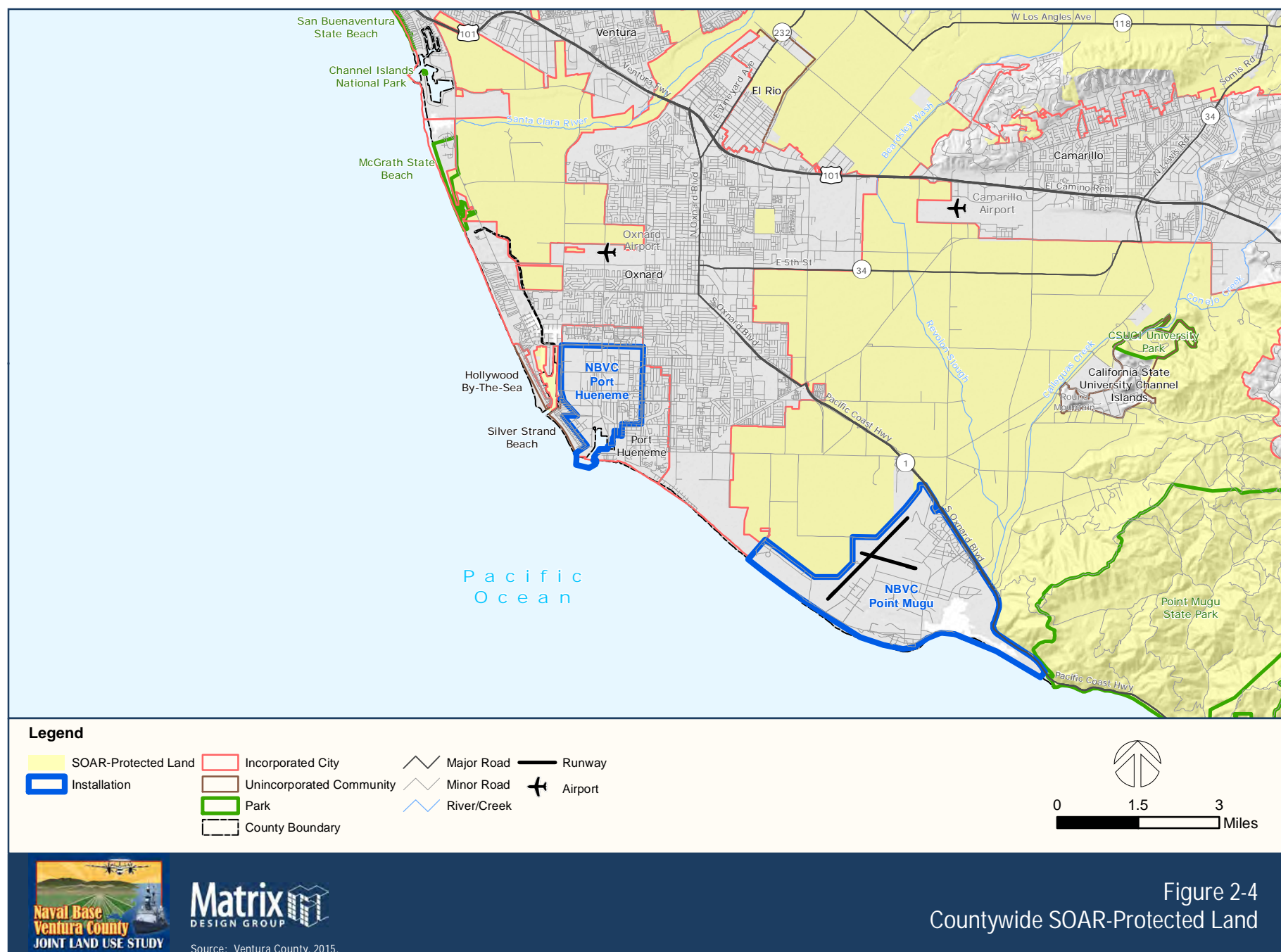
- Requires a countywide vote on amendments to the Ventura County General Plan land use designations from Agricultural, Open Space or Rural to more intense land use designations or weaken the land use policies protecting agricultural resources.
- Establishes City Urban Restriction Boundaries (CURBs) and requires a citywide vote to permit development outside the CURB line for the purposes of urban development.
- LAFCo has endorsed the use of city SOAR initiatives/ordinances in consideration of proposed amendments to city Spheres of Influence (SOI) and city annexations.
- Reinforces existing greenbelts, city SOIs, Guidelines for Orderly Development, and Ventura County General Plan.

Ventura County enacted the SOAR initiative for the county and eight of the 10 cities within the county have done so as well (see Table 2-9). As shown on Table 2-9, a number of SOAR initiatives will expire in 2020. As many of the areas protected by SOAR are located within the approach and departure corridors for NBVC Point Mugu (see Figure 2-4), the expiration or modification of areas protected could have an adverse impact on compatibility, depending on locations changed. SOAR also permits specific developments that do have the potential to impact agricultural lands. These impacts are later discussed in Chapter 5 of this Background Report, under Issue LU-8 (Land Use).

As a result of the Guidelines for Orderly Development and the SOAR initiative, over one million acres of open space and agricultural land within Ventura County are protected. The lands protected under SOAR are shown on (Figure 2-4).

Table 2-9. SOAR Initiatives / Ordinances

| Jurisdiction | Enacted | Expires |
|-----------------------|---------------------|----------------------|
| Ventura | Nov. 7, 1995 | Dec. 31, 2030 |
| Ventura County | Nov. 3, 1998 | Dec. 31, 2020 |
| Camarillo | Nov. 3, 1998 | Dec. 31, 2020 |
| Oxnard | Nov. 3, 1998 | Dec. 31, 2020 |
| Simi Valley | Nov. 3, 1998 | Dec. 31, 2020 |
| Thousand Oaks | Nov. 3, 1998 | Dec. 31, 2030 |
| Moorpark | Jan. 12, 1999 | Dec. 31, 2020 |
| Santa Paula | Nov. 7, 2000 | Dec. 31, 2020 |
| Fillmore | Jan. 17, 2002 | Dec. 31, 2020 |



CURB

Based on the requirements in each city's adopted SOAR initiative, a City Urban Restriction Boundary (CURB) was established to the urban development boundary or urban limit line. The purpose of the CURB is to delineate areas within which are appropriate for urban development and to ensure development goals, objectives, and policies are oriented to protecting this boundary and the underlying SOAR initiative. However, there are certain developments that are able to be exempt from CURB's initiative, such as affordable housing, and have the potential to impact the agricultural lands. The following pages describe and illustrate the SOI, CURB, and the city boundaries for each of the jurisdictions in the JLUS Study Area. The last figure in this subsection, Growth Management Tools, illustrates the SOAR-protected land in the county to depict the full picture of the protection that SOAR provides for the agricultural component of the community and the unintended benefit to the military.

City of Camarillo

The SOI for the **City of Camarillo** covers approximately 22.9 square miles and was established in 1998 along with the establishment of the CURB. The SOI and CURB lines are coterminous. The city's SOI, CURB, and city limits boundaries are shown in Figure 2-5.

According to the **City of Camarillo's** General Plan, their CURB (acronym is defined as the "Camarillo Urban Restriction Boundary") was established in 1998 to match the City's SOI plus the area contained in two additional areas. These are:

- i. that certain parcel of approximately 140 acres immediately outside the western edge of the influence line south of the 101 Freeway easterly of and at the intersection of Central Avenue, and easterly of the Greenbelt line in that general location, currently designated commercial/office on the Camarillo General Plan Map, and for which a request for annexation was pending prior to January 1, 1998; and

- ii. that certain parcel of approximately 300 acres immediately outside of the City's sphere of influence line that is located south of Pleasant Valley Road, east of Calleguas Creek, north of the westerly extension of Howard Road and west of Pancho Road.

According to geographic information systems (GIS) data received from the City, the City of Camarillo's CURB encompasses approximately 2,623 acres outside of the current city limits; 2,126 acres located to the north edge, 144 acres located to the west edge, 310 acres located to the south edge, and 43 acres located to the east edge.

The City of Camarillo's city limit boundaries covers approximately 19.8 square miles in the central portion of Ventura County.

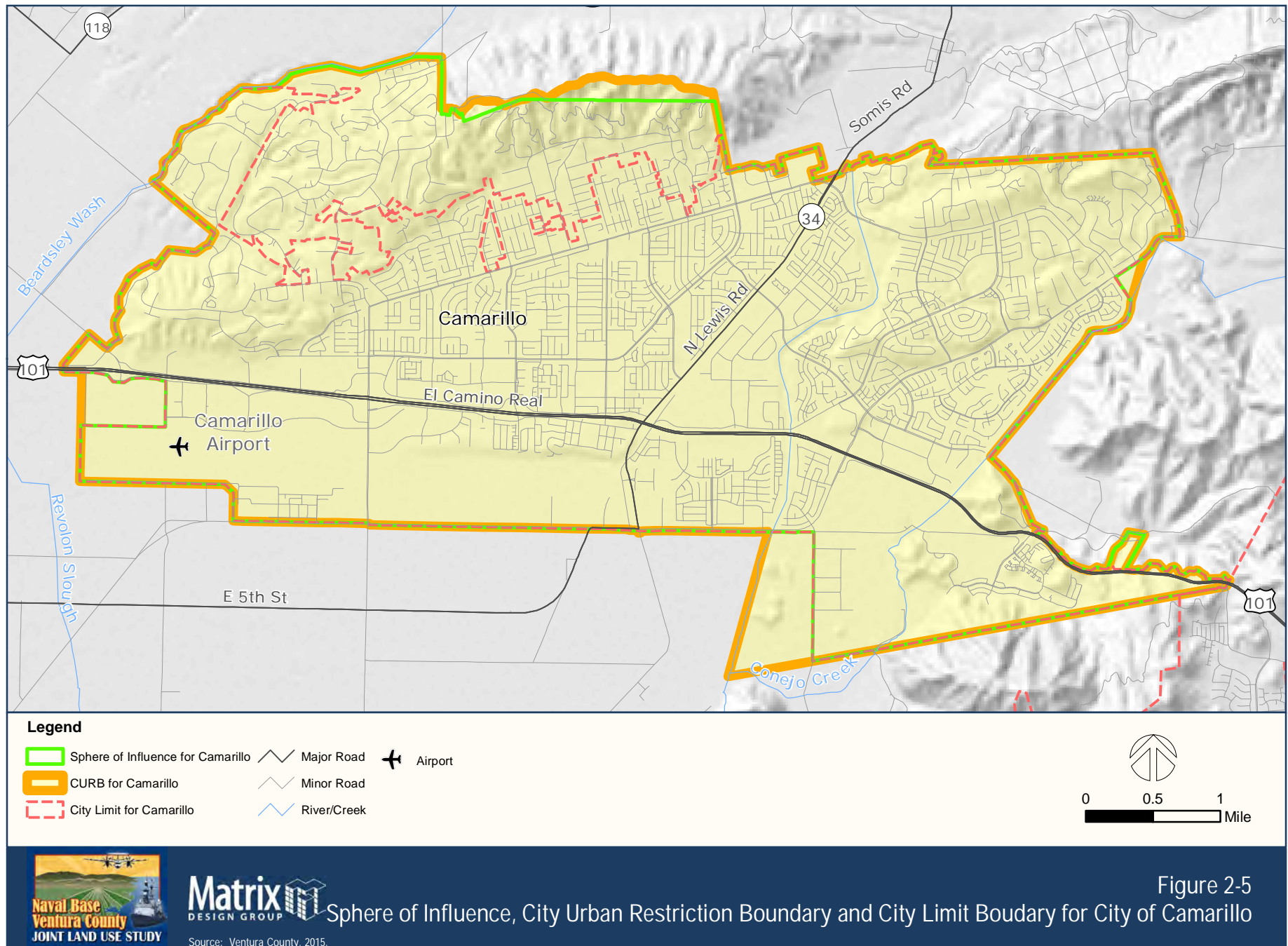


Figure 2-5
Sphere of Influence, City Urban Restriction Boundary and City Limit Boudary for City of Camarillo

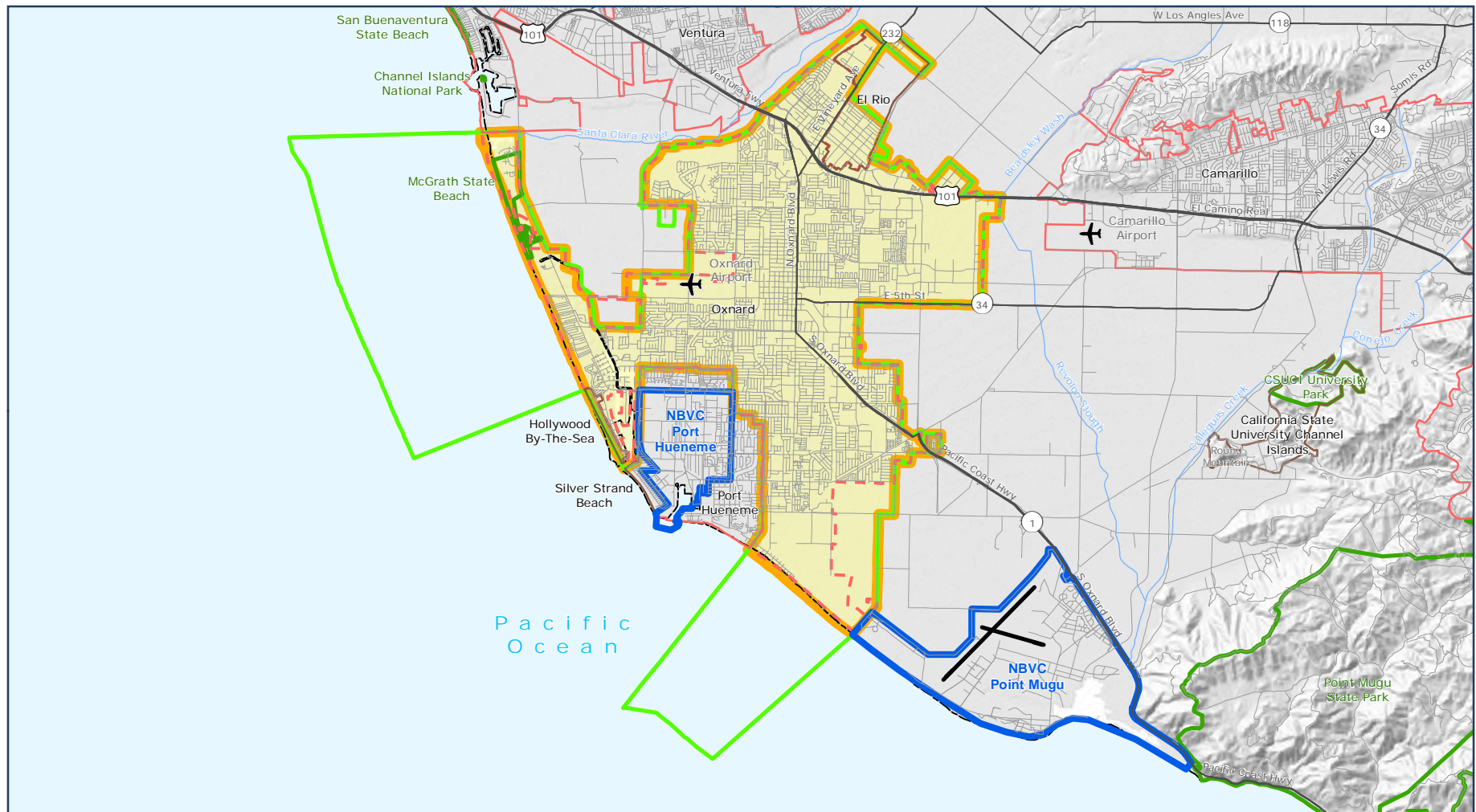
City of Oxnard

The SOI for the **City of Oxnard** is approximately 29.9 square miles and was determined by the Ventura LAFCo on June 8, 1983 and amended in June 2000 due to the probable growth of the physical boundaries and service areas of the City. When the citizens voted on the SOAR in the City of Oxnard, this action established the CURB, which defines the urban development boundary for the city until December 31, 2020.

According to GIS data received from the City, the **City of Oxnard's** CURB line encompasses approximately 2,648 acres outside of the current city limits; 1,003 acres located at the northeast corner of the city, 615 acres to the west edge, and 1,030 acres located at the southeast corner of the city.

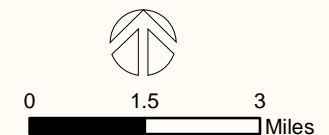
The **City of Oxnard's** city limit boundaries covers approximately 27.1 square miles in the southern portion of Ventura County's coastline.

The current City of Oxnard SOI, CURB, and city limits boundaries are illustrated on Figure 2-6.



Legend

- | | | | | |
|--------------------------------|--------------------------|-----------------|------------|---------|
| Sphere of Influence for Oxnard | Installation | Park | Major Road | Runway |
| CURB for Oxnard | Incorporated City | County Boundary | Minor Road | Airport |
| City Limit for Oxnard | Unincorporated Community | River/Creek | | |



Matrix
DESIGN GROUP

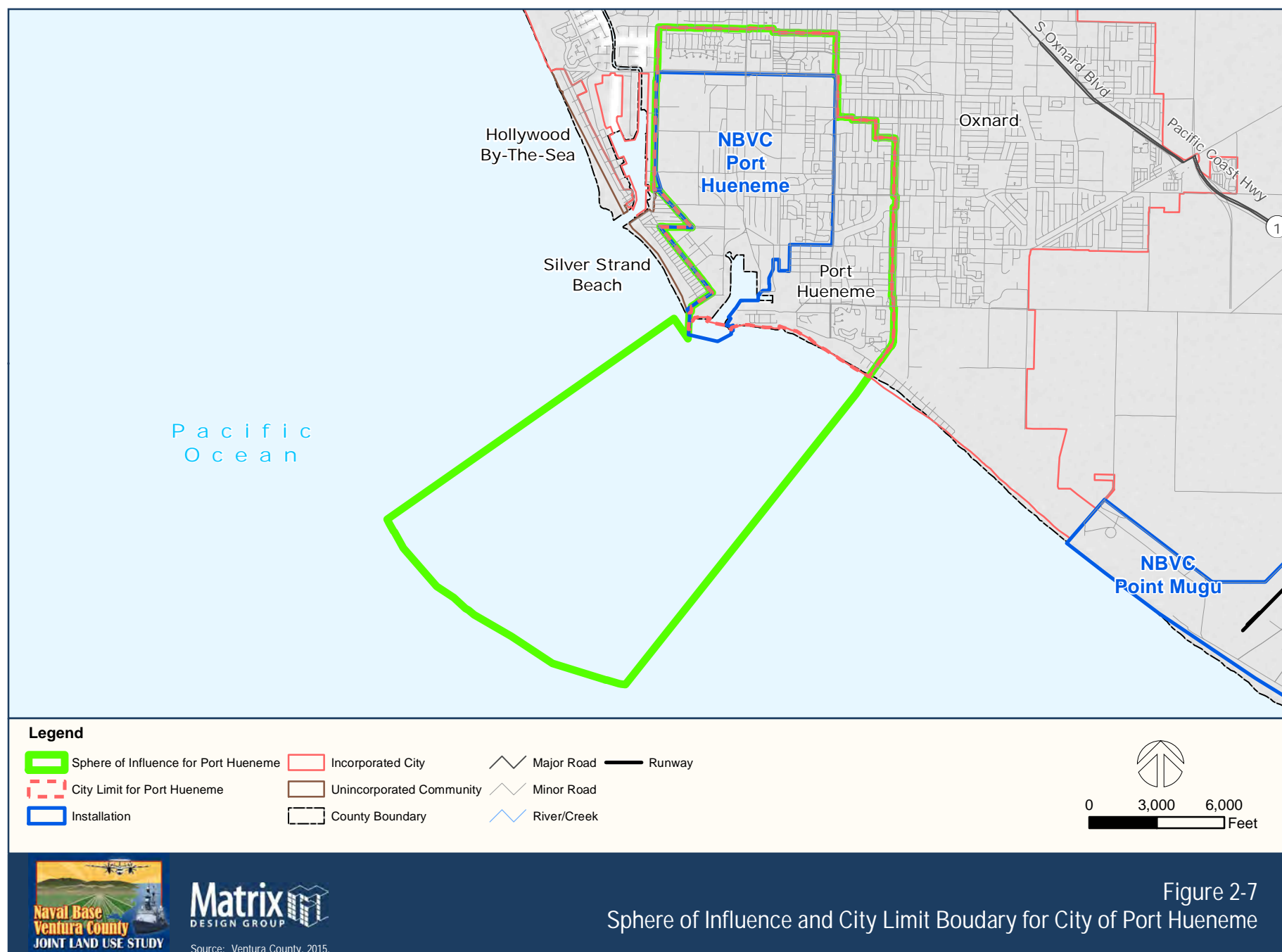
Source: Ventura County, 2015.

Figure 2-6
Sphere of Influence, City Urban Restriction Boundary and City Limit Boundary for City of Oxnard

City of Port Hueneme

The **City of Port Hueneme** is land locked by the City of Oxnard, developed unincorporated communities, NBVC Port Hueneme, and land owned by the Oxnard Harbor District. As the city does not have adjacent agricultural areas to protect, the city has not adopted a SOAR ordinance nor established a CURB line. However, the City through the Ventura LAFCo has established a SOI that encompasses approximately 11.1 square miles.

According to GIS data received from the City, the **City of Port Hueneme's** city limits encompasses 4.5 square miles in the southern portion of Ventura County's coastline. Figure 2-7 illustrates the City of Port Hueneme's SOI and city limit boundary lines.



Matrix
DESIGN GROUP

Source: Ventura County, 2015.

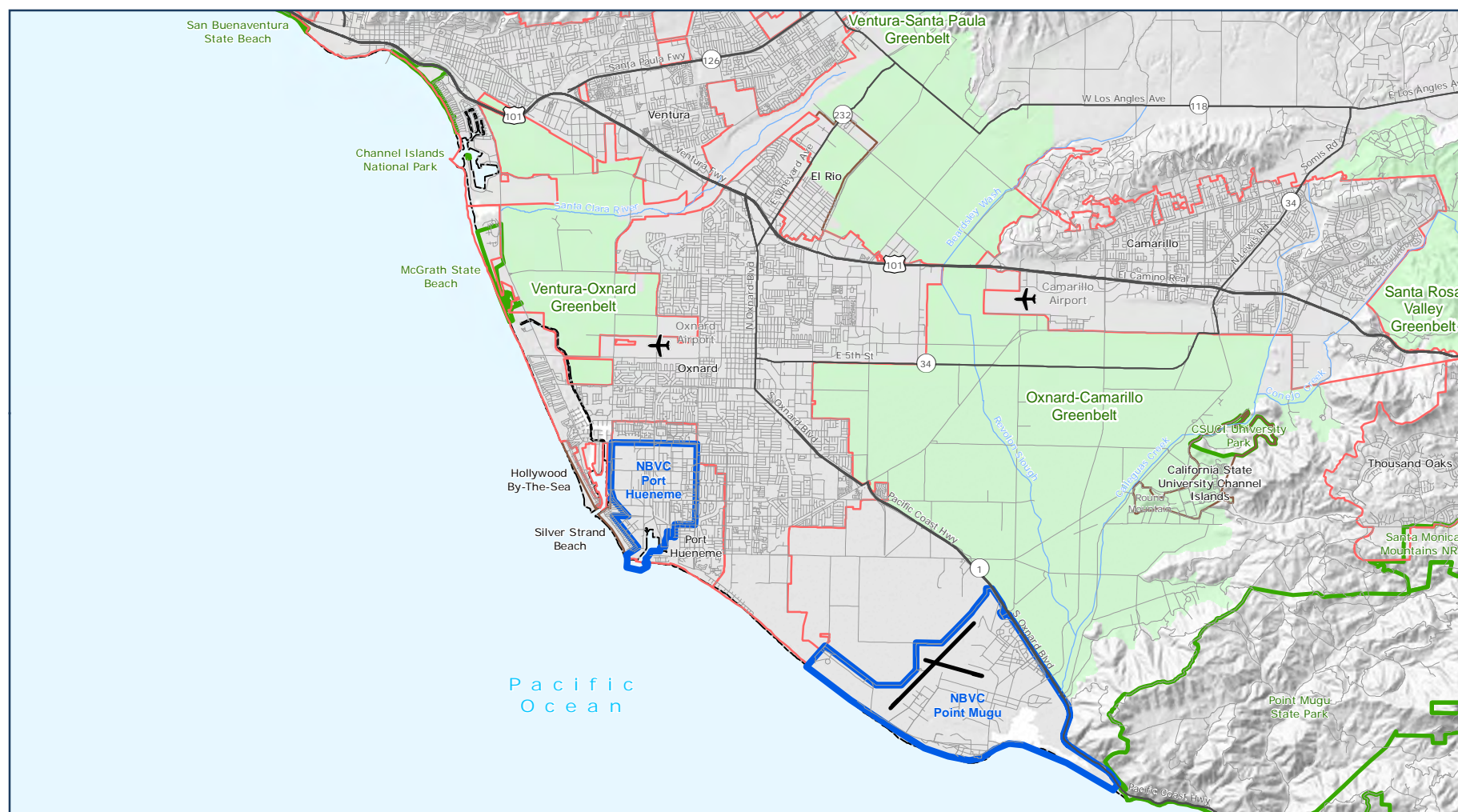
Greenbelts

Greenbelts are established by agreements between Ventura County and specific cities. These greenbelt agreements, and the greenbelts they establish, ensure that entities entering into these agreements will not annex land within the subject areas, resulting in the preservation of open space buffers between entities. It is important to note that LAFCo endorses greenbelts as statements of local policy, and will not approve an annexation proposal from a city that is in conflict with a greenbelt agreement unless exceptional circumstances are shown to exist. In addition, the County pledges not to permit development within these areas. The greenbelts in the county were originally adopted by resolution, but currently, most are adopted by ordinance. There are currently seven greenbelt agreements in Ventura County. Three of these are located either fully or partially within the JLUS Study Area – the Oxnard-Camarillo Greenbelt, Ventura-Oxnard Greenbelt, and Santa Rosa Valley Greenbelt. These are shown on Figure 2-8.

During the 1980's, the cities of Camarillo and Oxnard signed a joint resolution with the County of Ventura to create the Oxnard-Camarillo Greenbelt Agreement. This agreement calls for the preservation of a large agricultural area (approximately 27,000 acres) between the cities of Oxnard and Camarillo.

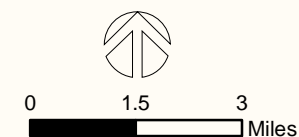
The Santa Rosa Valley Greenbelt was established in 1985 through a joint resolution between the City of Camarillo and the County of Ventura. The greenbelt encompasses areas to the north and east of the City of Camarillo in order to protect lands within existing plans.

The Ventura-Oxnard Greenbelt Agreement was established through a joint resolution by the cities of San Buenaventura and Oxnard and the County of Ventura in 1994 and was added to in 2002. The greenbelt is located south of San Buenaventura and north and west of Oxnard. It includes 5,104 acres of unincorporated County land.



Legend

| | | | |
|---|---|--|--|
| Greenbelt | Incorporated City | Major Road | Runway |
| Installation | Unincorporated Community | Minor Road | ✈ Airport |
| Park | County Boundary | ~ River/Creek | |



Matrix
DESIGN GROUP

Source: Ventura County, 2015.

Figure 2-8
Greenbelts

2.7. Current Development Overview

The NBVC JLUS study area supports a myriad of land uses, ranging from open space and agricultural uses to concentrated residential and commercial developments. The cities of Port Hueneme and Oxnard are located directly north and also to the east of NBVC Port Hueneme while the city of Camarillo is situated northeast of NBVC Point Mugu. This section discusses the setting and proposed development in the vicinity of NBVC facilities beginning with NBVC Port Hueneme and following with NBVC Point Mugu.

It is important to note that Ventura County enacted the Save Open-Space and Agricultural Resources (SOAR) initiative in eight of the 10 cities within the county. The SOAR initiative takes another step in preventing urban sprawl by enabling the right to vote by individual citizen on proposed development that is planned for locations outside the communities and on open space and agricultural land. This initiative provides another layer of protection against urban sprawl and uncontrolled growth and development.

NBVC Port Hueneme

North

NBVC Port Hueneme is bordered to the north by the cities of Port Hueneme and Oxnard. The areas immediately around the installation include several low density residential neighborhoods which are already built out. The current zoning regulations in most areas immediately surrounding the installation do not support higher density. However, zoning regulations along Victoria within the commercial zoned areas do permit higher density development.

East

The land east of NBVC Port Hueneme includes the City of Port Hueneme and the City of Oxnard. Additional areas east of NBVC Port Hueneme include largely open space and agricultural land. The city of Oxnard has taken steps towards protecting open space with the adoption of the SOAR initiative to protect agricultural lands on the outskirts of the city, including areas to the east of NBVC Port Hueneme.

South

NBVC Port Hueneme is bordered to the south by the City of Port Hueneme, OHD facilities and the Pacific Ocean.

West

The area west of NBVC Port Hueneme contains the unincorporated community, Silver Strand which includes many vacation homes and residences of Navy personnel. The community is largely built out. The current Ventura County Coastal Zoning Ordinance exempts the neighborhood from its zoning regulations. Additional lands include the Channel Islands Harbor, which the Ventura County Harbor Department has land use jurisdiction over.

NBVC Point Mugu

North

The area north of NBVC Point Mugu is unincorporated agricultural land in Ventura County. The land is currently zoned for agricultural uses and is protected by the countywide SOAR initiative.

East

NBVC Point Mugu is bordered on the east by the Santa Monica Mountains National Recreation Area and the Point Mugu State Park. These lands are managed by the U.S. National Park Service and the California Department of Parks and Recreation.

South

NBVC Point Mugu is bordered to the south by the Pacific Ocean.

West

The Pacific Ocean borders NBVC Point Mugu immediately to the west.

NBVC San Nicolas Island

NBVC San Nicolas Island is located in the Pacific Ocean and contains significant infrastructure including radio communications, radar systems, and telemetry systems to support Navy weapons testing. It also maintains an active 10,000 foot lighted runway.

Development in this location is limited to potential off-shore energy production facilities such as oil and wind energy facilities.

2.8. Transportation

Road System

U.S. Highway 101 is the major north-south route through Ventura County. This six-lane freeway serves as a major tourist route during the weekends and freight path along the coast from Port Hueneme to Los Angeles and San Francisco. The area is traversed by several state highways, as shown in Figure 2-9, including SR 1, otherwise known as the Pacific Coast Highway, which also serves as Oxnard Boulevard through the City of Oxnard. SR 1 runs north-south from the Pacific Coast at Point Mugu where it intersects U.S. Highway 101 in Oxnard. SR 23 runs north-south between Moorpark and Thousand Oaks at the eastern edge of the study area. This roadway ranges in size from a six-lane, divided, limited-access freeway in Thousand Oaks to a narrow and winding two lane road through the Santa Monica Mountains National Recreation Area.

SR 118 is primarily a two-lane arterial running east-west through the north end of the valley. SR 126 is a four lane divided freeway that connects the City of Ventura to I-5, 40 miles to the northeast. SR 33 begins at the north end of the City of Ventura at Highway 101 and runs north through the Los Padres National Forest, ultimately connecting to SR 166. In addition to serving as transportation and commuter routes, the local roads are used for the mobilization of military equipment which can increase congestion through local communities. Figure 2-9 also shows federally-designated commercial truck corridors and routes throughout the Study Area

Bus

The area is served by several public transit systems, including the Ventura Inter-city Service Transit Authority (VISTA), Gold Coast Transit, and other local services. VISTA provides services throughout Ventura County with nine routes including express, highway, and university routes. Gold Coast Transit District (GCTD), formerly known as South Coast Area Transit, operates fixed-route public transit service in the cities of Ojai, Oxnard, Port Hueneme, and Ventura and the unincorporated areas of Western Ventura County. Utilizing a fleet of 54 clean-fueled buses, Gold Coast Transit (GCT) carries nearly 4 million passengers annually on its 20 bus routes. GCTD currently operates daily bus service on three routes adjacent to the Port Hueneme facility entrances along Ventura Road and Channel Islands Blvd. There are also Greyhound bus line stops in Oxnard, Thousand Oaks, and Ventura.

The City of Camarillo operates the Camarillo Area Transit (CAT), a citywide fixed-route bus service and Dial-a-Ride service Monday through Saturday. Dial-a-Ride services function off of a two-hour notice and guarantee same-day service. In addition to the Dial-a-Ride service, the City of Camarillo operates a free trolley bus service. The trolley bus route starts at the Metrolink train station, runs west on Daily Drive, south down Las Posas Road, and then east on Ventura Boulevard back to the Metrolink station. The trolley bus does stop at various shopping centers along the route yet riders may flag the trolley whenever necessary along the route. The trolley service operates Sunday through Thursday 10 a.m. to 6 p.m. and Friday/Saturday 10 a.m. to 10 p.m.

In addition, the City of Oxnard operates the Harbor and Beach Dial a Ride which provides service to/from the community surrounding the Port Hueneme facility to the Airport, Amtrak station and major transfer points.

Source: Gold Coast Transit Homepage, accessed November 2013, <http://www.goldcoasttransit.org/>, VISTA inter-city Routes and Schedules, accessed November 2013, <http://www.goventura.org/?q=travel-ventura>; Camarillo Area Transit accessed June 2014, <http://www.ci.camarillo.ca.us/i3.aspx?p=96>.

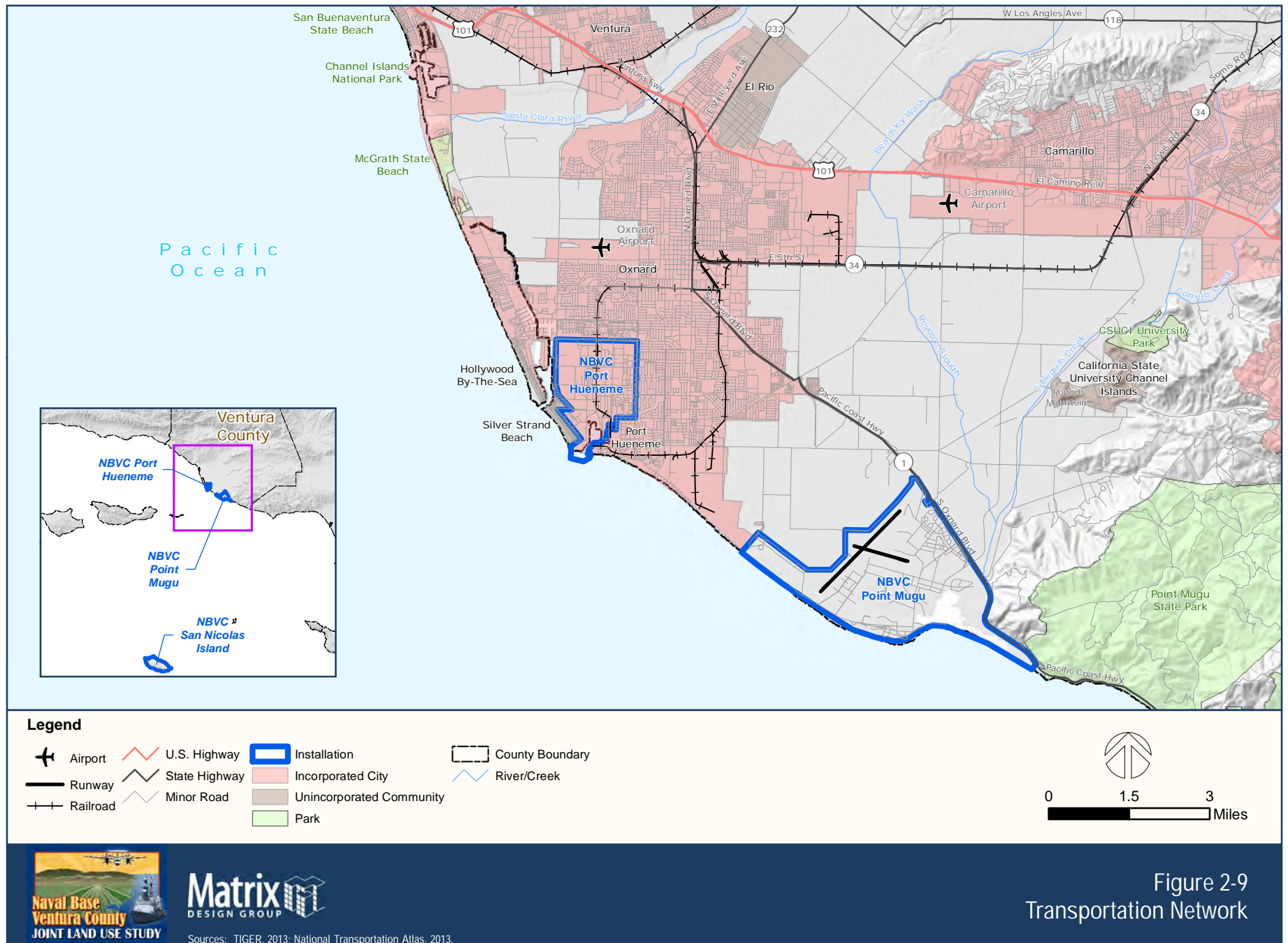


Figure 2-9
Transportation Network

Train

The area is served by Amtrak's passenger rail along two routes, the Pacific Surfliner which offers service between San Luis Obispo and San Diego and Coast Starlight which offers service between Los Angeles and Seattle.

Metrolink provides commuter rail service from the area to Los Angeles and other Southern California counties. The Ventura County Line passes through East Ventura, Oxnard, Camarillo, and Moorpark before going through Simi Valley and on towards Los Angeles. In addition to passenger rail, the Union Pacific Railroad maintains an active freight line that runs through the county. The Ventura County Railroad Company operates a local line that connects the Union Pacific line in Oxnard to NBVC and the Port of Hueneme. This line is the main railway into downtown Oxnard extending twelve miles on four spurs and provides a significant thoroughfare for the transport of freight and goods from NBVC, south Oxnard, and the Port of Hueneme.

Source: Ventura County General Plan 2011; Port of Hueneme Harbor District, 2013

Air

Four airports operate in Ventura County, including NBVC Point Mugu, two county airports (Camarillo and Oxnard), and a private airport at Santa Paula. The public airports offer varying levels of air travel service:

Oxnard Airport: Oxnard Airport is a general aviation facility that caters to local air traffic and small, privately owned aircraft. No major passenger air carriers have served Oxnard since 2010. The airport provides service to Ameriflight, which is a light air freight company serving regional airports throughout the country. The airport supports military aviation which one or two operations per day on average. The airport had over 54,400 flight operations during 2012. The County maintains an aircraft incident prevention plan as part of its general plan goals and policies to mitigate hazards and guide development around the airport.

Camarillo Airport: The County maintains a 6,000 foot runway on the southwest corner of Camarillo. Camarillo Airport is a general aviation facility that services single engine aircraft, in addition to a limited number of multiengine and jet aircraft. The airport supports military aviation as well, averaging three or fewer operations per day. There were over 132,600 flight operations in 2012. There are no schedule commercial services to the airport.

Santa Paula Airport: This privately-owned airport is located approximately 18 miles north of NBVC in the town of Santa Paula along SR 126. The airport has been used by private pilots since its construction 1927. Today, the airport is home to 300 aircraft and logged over 97,000 flight operations in 2012. The airport offers limited services.

Source: Airport Comprehensive Land Use Plan for Ventura County, 2000; Ameriflight Homepage, 2013; <http://www.airnav.com/airport/KOXR>

Please see the next page.



3. Military Profile

Please see the next page.



Inside Chapter 3...

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This chapter provides an overview of Naval Base Ventura County (NBVC) and the three operating facilities that make up NBVC – NBVC Point Mugu, NBVC Port Hueneme, and NBVC San Nicolas Island. This military profile provides an overview of the installation’s history, its location (setting) in Ventura County, the economic and strategic importance of NBVC, and a general description of the operations conducted on and from NBVC.

Identifying and describing the various activities performed on the three operating facilities and in the surrounding airspace and adjacent Point Mugu Sea Range, provides valuable insight into the importance of NBVC as a national strategic asset and as a part of the fabric of Ventura County. The purpose of providing this information is to enable stakeholders to make informed decisions about future development and economic growth within communities and institutions proximate to NBVC that could potentially impact the viability and future role of the installation.

3.1. History of Lands and Operations at NBVC

1930's – 1940's

Port Hueneme. With the onset of America's involvement in World War II in 1941, the Navy needed a west coast location for mobilization of troops and supplies. Port Hueneme was selected for development based on the existing harbor and port facilities that could be quickly put to use. In 1942, the Navy purchased the Port Hueneme harbor and adjacent lands and established the Advance Base Depot Port Hueneme. This facility included large storage facilities and training and staging facilities for the new Naval Construction Battalion (Seabees). The facility was later re-designated as the Construction Battalion Center (CBC) Port Hueneme.

Point Mugu. Following the establishment of Port Hueneme, the Navy leased 4,000 acres of land around Mugu Lagoon for use as a training facility in 1943. A temporary runway was added to the facility in 1946 and the facility was redesignated as the Naval Air Missile Test Center (NAMTC) by 1946. In 1948, funds to acquire the lands and to construct permanent facilities were authorized, and in 1949, the installation was designated as a U.S. Naval Air Station.



Naval Air Missile Test Center, Point Mugu, 1946 (Navy Historical Records)

San Nicolas Island. San Nicolas Island was administered to the Navy starting in 1933, but during World War II, it was placed under U.S. Army control as a surveillance post. The island was returned to Navy management in 1944 and started its role as part of the Navy's test facilities.

1950's – 1990's

But both facilities experienced periods of shrinkage and growth associated with changes in military demands over this period. There was a large decrease in activity after World War II, followed by increases in activity associated with the Korean conflict and actions in Vietnam and the Middle East. During this period, Port Hueneme became the only active Seabee base on the U.S. West Coast and was assigned as a homeport in 1974.

The Navy established the Pacific Missile Range (PMR) for ballistic missile testing at Point Mugu in 1958. By the next year, NAMTC was renamed as the Naval Missile Center (NMC). The Navy combined NMC and PMR in the mid-1970s and named the new entity the Pacific Missile Test Center (PMTc). By 1989 it was the only active site to test and train for the Standoff Land Attack Missile (SLAM). In 1993, the PMTC was renamed to Naval Air Warfare Center Weapons Division and the naval air station was renamed as Naval Air Weapons Station (NAWS). In 1998, Point Mugu received its current name of Naval Air Station (NAS) Point Mugu.

2000's – Today

In late 2000, CBC Port Hueneme and NAS Point Mugu were consolidated into Naval Base Ventura County (NBVC) under control of the Commander U.S. Pacific Fleet. Today NBVC is under control of the Commander Navy Region Southwest. Later, San Nicolas Island (SNI), an important asset in NBVC's mission for research, development, testing, and evaluation (RDT&E) was incorporated into NBVC.

Source: Draft Integrated Natural Resources Management Plan (INRMP) for Naval Base Ventura County Point Mugu and Special Areas, 2013.

3.2. Installation Setting

NBVC is located on the central coast of California in Ventura County. With its Mediterranean climate and close proximity to the Pacific Ocean, this site is ideal for the Navy to carry-out and execute a variety of missions. NBVC comprises three non-contiguous operating facilities totaling over 23,500 acres of land. The three operating facilities are **NBVC Point Mugu** (Figure 3-1), **NBVC Port Hueneme** (Figure 3-2), and **NBVC SNI** (Figure 3-3). Tenant commands at NBVC utilize the Naval Air Systems Command's (NAVAIR) **Point Mugu Sea Range** that covers 36,000 square miles of air and sea space beginning at the coastline and extending seaward for more than 180 nautical miles (NM) in the Pacific Ocean.

Source: Draft Integrated Natural Resources Management Plan (INRMP) for Naval Base Ventura County Point Mugu and Special Areas, 2013.

NBVC Point Mugu

NBVC Point Mugu is situated on approximately 4,486 acres on the central California Coast about 1.5 miles east of the City of Oxnard (at its closest point) and about 5 miles south-southwest of the City of Camarillo. Highway 1 borders NBVC Point Mugu to the north and east, the Pacific Ocean to the south and west, Ventura County Game Reserve to the west and northwest, and Ormond Beach to the west (see Figure 3-1).

NBVC Point Mugu also includes Laguna Peak, a 39-acre site located 1.5 miles northeast of Point Mugu and north of Highway 1 at the westernmost point of Santa Monica Mountains (see Figure 3-1). This site contains a paved access road traversing privately-held land and an antenna site at the top of the mountain. This mountainous terrain provides both private and public open space land for grazing, agriculture, and recreation activities. East of Laguna Peak is the Santa Monica Mountains National Recreation Area and Point Mugu State Park. This area provides various recreation amenities to the region including campgrounds and beach facilities. The NBVC Point Mugu and Laguna Peak properties comprise several major land uses including open space, RDT&E uses, natural reserve, and operational, administrative, and public works uses, as illustrated on Figure 3-1.

A unique, environmental feature in this setting includes the 620 acres of freshwater pond habitats for migratory waterfowl, shorebirds, waders, and other resident birds located directly northwest of NBVC Point Mugu airfield. These freshwater habitats are maintained by two duck hunting clubs in this area, the Point Mugu Game Reserve and Ventura County Game Reserve. North of the base is characterized by vast agricultural lands and smaller agriculturally-oriented residential developments. The California State University Channel Islands (CSUCI) is located about 3.5 miles northeast of NBVC Point Mugu.

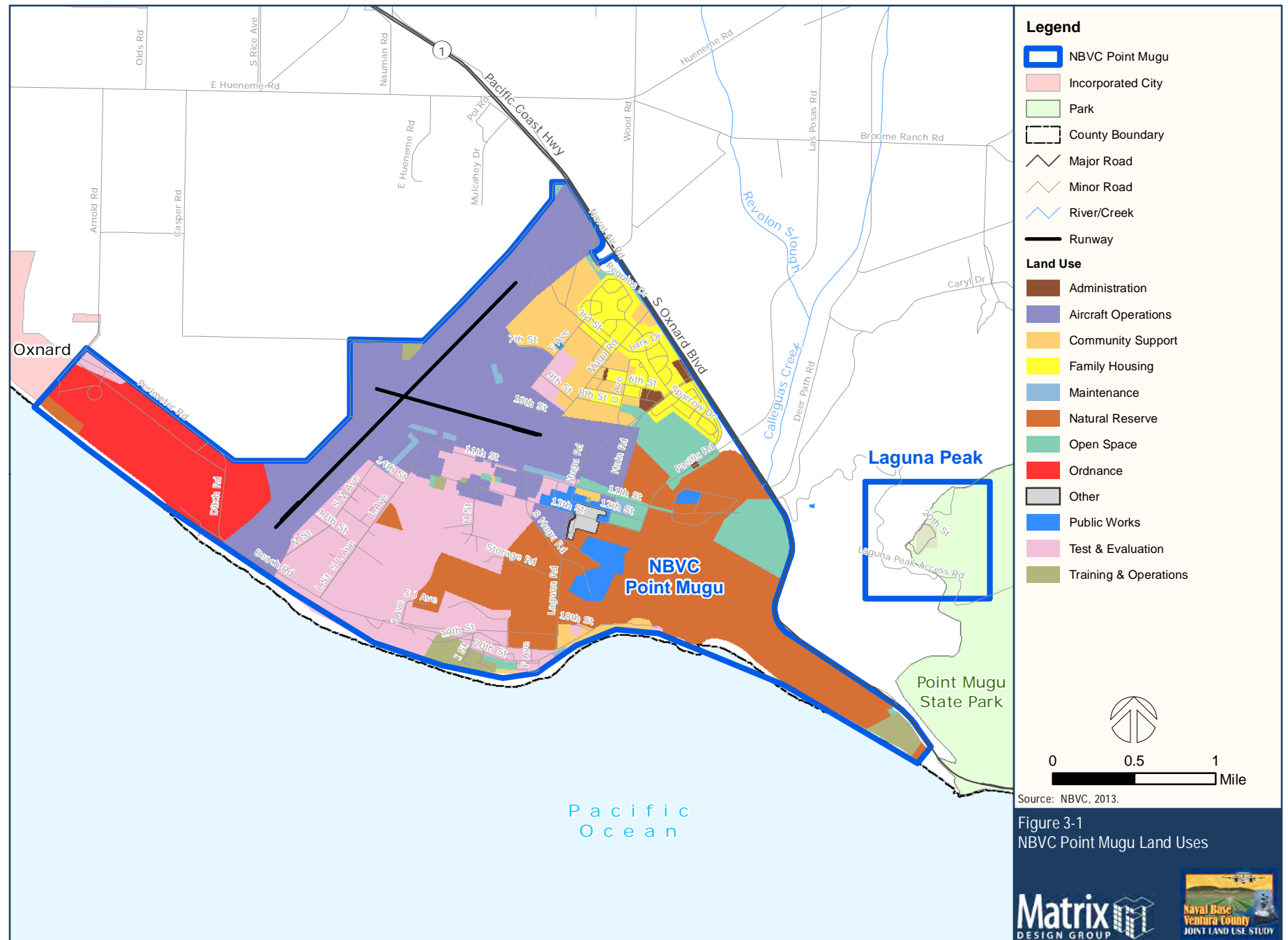
Source: Draft Integrated Natural Resources Management Plan (INRMP) for Naval Base Ventura County Point Mugu and Special Areas, 2013.

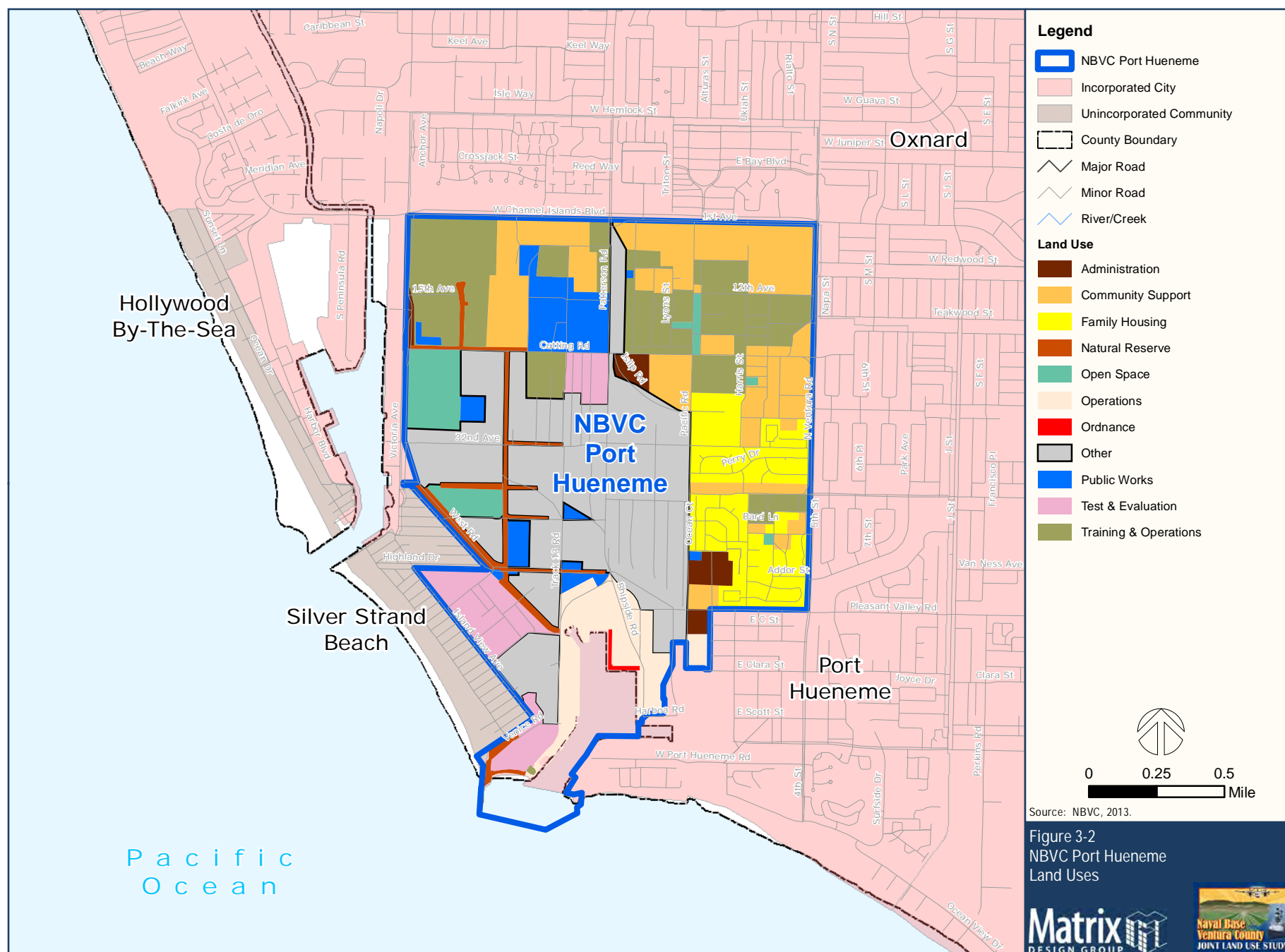
NBVC Port Hueneme

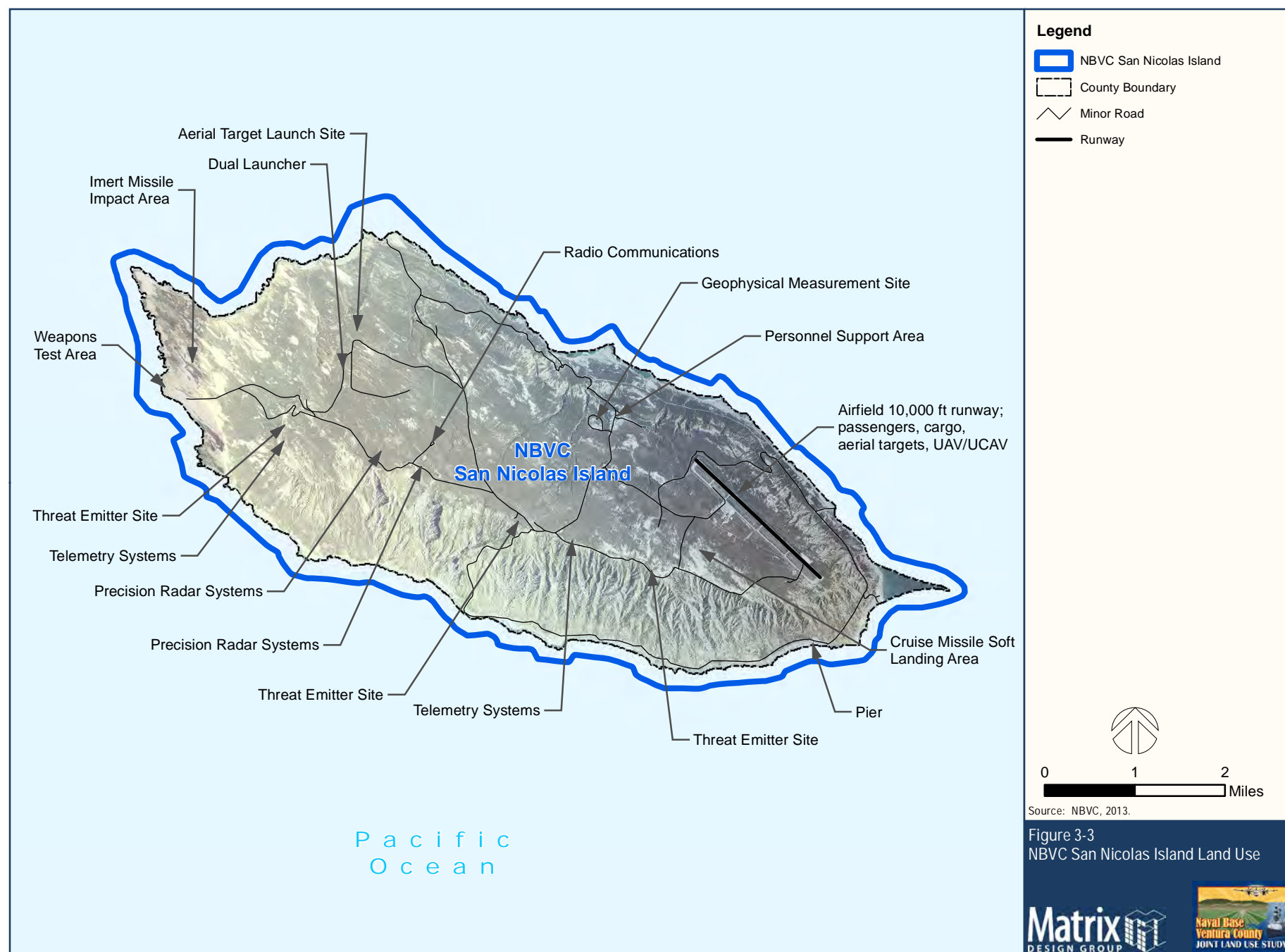
NBVC Port Hueneme is bordered by the City of Port Hueneme to the west and north, the City of Oxnard and the unincorporated Silver Strand community to the east and the Pacific Ocean to the south.

NBVC Port Hueneme land uses support logistics, RDT&E, port operations, training, housing, community support, administration, natural resource management areas, ordnance storage areas, and public works as illustrated on Figure 3-2. In addition to these uses, NBVC Port Hueneme is the only deep water commercial port facility between Los Angeles and San Francisco, and the Navy's only deep water port between San Diego County and Washington State.

The installation shares Port Hueneme Harbor with the Oxnard Harbor District (OHD), the commercial operator of the Port. The U.S. Navy controls the northern and western portions of the harbor, while OHD has authority over the eastern channel.







The Navy-owned portion of the port comprises about 200 acres on the southern end of the installation. OHD owns and operates approximately 69 acres of land in the harbor area and eastern channel (Channel A). NBVC Port Operations has complete control of all military vessels entering and exiting the harbor, and all internal movements. Commercial traffic in the eastern channel is controlled and organized by OHD in collaboration with NBVC Port Operations.

Source: *Integrated Natural Resources Management Plan Naval Base Ventura County Port Hueneme, 2012.*

NBVC San Nicolas Island

NBVC SNI is a Navy-owned, 17,427-acre remote island situated about 60 miles south of NBVC Point Mugu in the Pacific Ocean. The island has a mix of land uses including a runway facility, supporting buildings and roadway infrastructure, and test and evaluation and communications facilities as illustrated in Figure 3-3. These uses support its primary mission as a military weapons testing and evaluation site.

Source: *Integrated Natural Resources Management Plan San Nicolas Island California, 2006-2010.*

NBVC Special Areas

There are several NBVC Special Areas associated with NBVC. These are lands owned, leased, withdrawn, or otherwise used for military training by NBVC. These lands are: Camarillo Housing at Catalina Heights (52 acres), Fort Hunter Liggett (10.8 acres), Laguna Peak (39 acres), Red Mountain (0.04 acre), Santa Ynez Peak (antenna, no land), Tassajara Peak (antenna, no land), Prince Island (38 acres), San Miguel Island (9,533 acres), Santa Cruz Island (8 acres), and Santa Rosa Island (0.01 acre). Due proximity and use, Laguna Peak is included in this JLUS. The other special use areas are not addressed in this JLUS due to their location or limited scope of use.

Source: *Draft Integrated Natural Resources Management Plan (INRMP) for Naval Base Ventura County Point Mugu and Special Areas, 2013.*

3.3. NBVC Economic Impact

The NBVC JLUS study area encompasses portions of unincorporated Ventura County and the cities of Camarillo, Oxnard, and Port Hueneme. Though agriculture is a primary contributor to the county economy, the Department of Defense (DOD) is a significant component of the regional and local economies. NBVC is the largest employer in Ventura County with more than 17,320 personnel (military, Department of Defense, civilian and contractors) that work for, or are stationed on, the base.

NBVC provides almost \$2 billion in economic benefit to the local and regional economy on an annual basis primarily through the purchase of goods and services (indirect and induced) and through salaries (payroll). Figure 3-4 illustrates the total impact separated into typical economic impact categories.

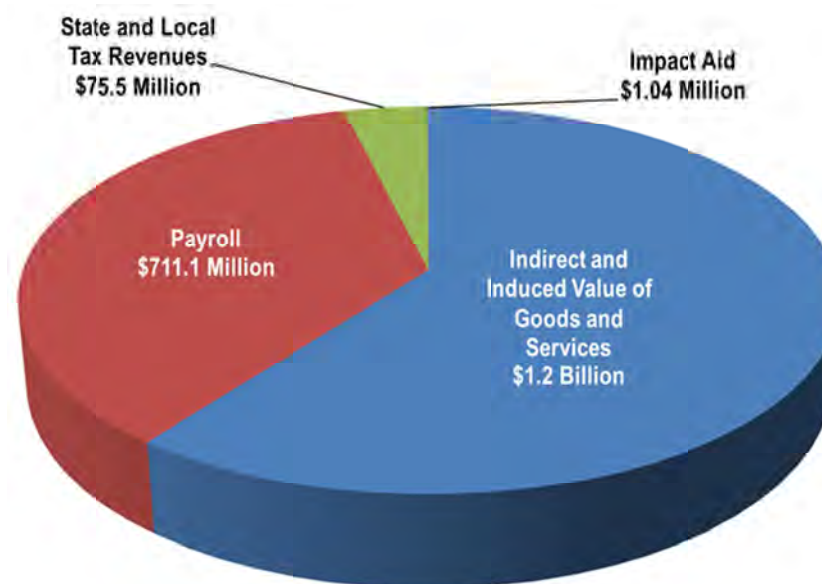


Figure 3-4 FY 2013 NBVC Economic Impact

Source: *Naval Base Ventura County Economic Impact and Community Involvement Report, 2013.*

3.4. Military Strategic Importance

NBVC is not only important to the local community through the economic impact as described and illustrated earlier, but also for the capabilities provided by the NBVC mission components. NBVC is a very important asset to the Navy and the DOD as a whole because it provides the facilities and management of assets that allow for a variety of tenant commands to operate and conduct a wide variety of missions in support of U.S. national security.

NBVC is home to more than 80 military commands, with all military branches represented. Major tenant commands at NBVC include Commander Airborne Command and Control Logistics Wing; 31st Seabee Readiness Group, Naval Air Warfare Center-Weapons Division; Naval Surface Warfare Center, Port Hueneme Division; Naval Expeditionary Logistics Center; Naval Facilities Engineering Service Center; and the Naval Satellite Operations Center. A tenant command is an organization that is located on a base such as NBVC, but does not report to the base's chain of command. In other words, it does not report directly to the commanding officer of NBVC. NBVC provides shore installation support to its tenant commands but NBVC's tenant commands do not report to Commander Navy Installations Command (CNIC) or NBVC.

The U.S. Navy mission at NBVC provides invaluable RDT&E of the latest air and shipboard weapons systems in the nation's defense inventory and the area provides ideal conditions for telemetry. This RDT&E mission ensures the Navy remains at the cutting-edge of technology, equipment, and operations to maintain the military's strategy and superiority in the air, on shore, and below water. The extensive RDT&E mission complemented by the Construction Battalion Training and Mobilization mission provide U.S. Navy sailors and other military personnel with unmatched capabilities for surface and subsurface vertical and horizontal construction of military facilities and equipment specifically designed for each mission.

NBVC has many important facilities that allow the Navy and other tenant commands to conduct their missions. Port of Hueneme is the only military deep water port between San Diego and Washington State and has approximately 473 acres of laydown space and 16 miles of railroad with

portside access. Point Mugu operates and maintains two runways, Runway 3-21 is 11,000 feet and Runway 9-27 is 5,500 feet. Runway 3-21 is capable of handling the largest of Air Force aircraft, including the C-5 Galaxy. Its un-encroached airfield and proximity to San Diego is beneficial since it has the ability to support the fleet concentration area and can support aircraft carriers in San Diego and around the world.

Four Seabee battalions, Underwater Construction Team TWO of the Third Naval Construction Brigade, and Naval Construction Training Center (Seabee College) are homeported at Port Hueneme. The Navy's combat skilled construction force serves around the world in support of military construction requirements.

NBVC's location also provides tenant commands with easy access to important training areas such as the 36,000-mile Point Mugu Sea Range and nearby restricted air space and IR-200 airspace connection to Naval Air Weapons Station China Lake. NBVC provides the Pacific Fleet with a premier mobilization site, complete with a deep water port, rail head, and airfield.

3.5. NBVC Mission

NBVC's mission requires a coordinated approach between the three non-contiguous facilities and the multi-faceted components of each mission. This coordinated approach, encompassing multiple Navy capabilities, makes this installation a unique and extremely valuable Navy and national asset.

Mission

To support and enable the Fleet, Fighter and Family by providing effective and efficient readiness from the shore.

Vision

To fight and win our nation's wars and to provide for the readiness of our naval forces, we will support the Chief of Naval Operations tenets of Warfighting First, Operate Forward, and Be Ready.

Source: http://www.cnic.navy.mil/regions/cnrsw/installations/navbase_ventura_county/about/policies.html

Generally, the NBVC mission can be categorized as providing a myriad of support shore services to military personnel and dependents. These services include training and skills proficiency in naval facility construction (horizontal and vertical construction), carrier landing practice and proficiency, and a range of RDT&E activities. To better understand these needs, each operational area is discussed separately: NBVC Port Hueneme (CBC Port Hueneme), NBVC Point Mugu, and NBVC SNI.

NBVC Point Mugu and Special Areas operate under the Chief of Naval Operations (CNO). As part of the Navy's streamlined shore structure management, NBVC operates under the direction of CNIC and Commander Navy Region Southwest in San Diego.

NBVC Point Mugu

NBVC Point Mugu is a national defense resource that provides a unique combination of mission capabilities to the Navy and DOD. The mission of NBVC is "to provide integrated shore services to support the diverse needs of the fleet, fighter, and family in Ventura County." NBVC Point Mugu provides site operation support services to the military defense complex in Ventura County that encompasses all military activities at NBVC Point Mugu, NBVC Port Hueneme, NBVC San Nicolas Island, and NBVC Special Areas.

NBVC Point Mugu is a major shore command for aviation while supporting various other missions including military training and mobilization, Seabee support, and the RDT&E of air and ship weapons systems for national strategic defense. Additionally, NBVC Point Mugu provides intermediate maintenance services (calibration, repair, replacement, of damaged or unserviceable parts, components, or assemblies; limited manufacture of parts; and technical assistance) for aircraft for all military personnel and transiting aircraft in the Ventura County area. NBVC Point Mugu operates and administers maintenance of base facilities including airfield operations for four runways that support the U.S. Pacific Fleets, Naval Air Warfare Center Weapons Division (NAWCWD), and over 40 tenant commands and transient units. The units and tenants that NBVC Point Mugu hosts are briefly described later in this chapter.

NBVC Point Mugu, Point Mugu Sea Range, and Laguna Peak support mission-related functions that include, but are not limited to, the following:

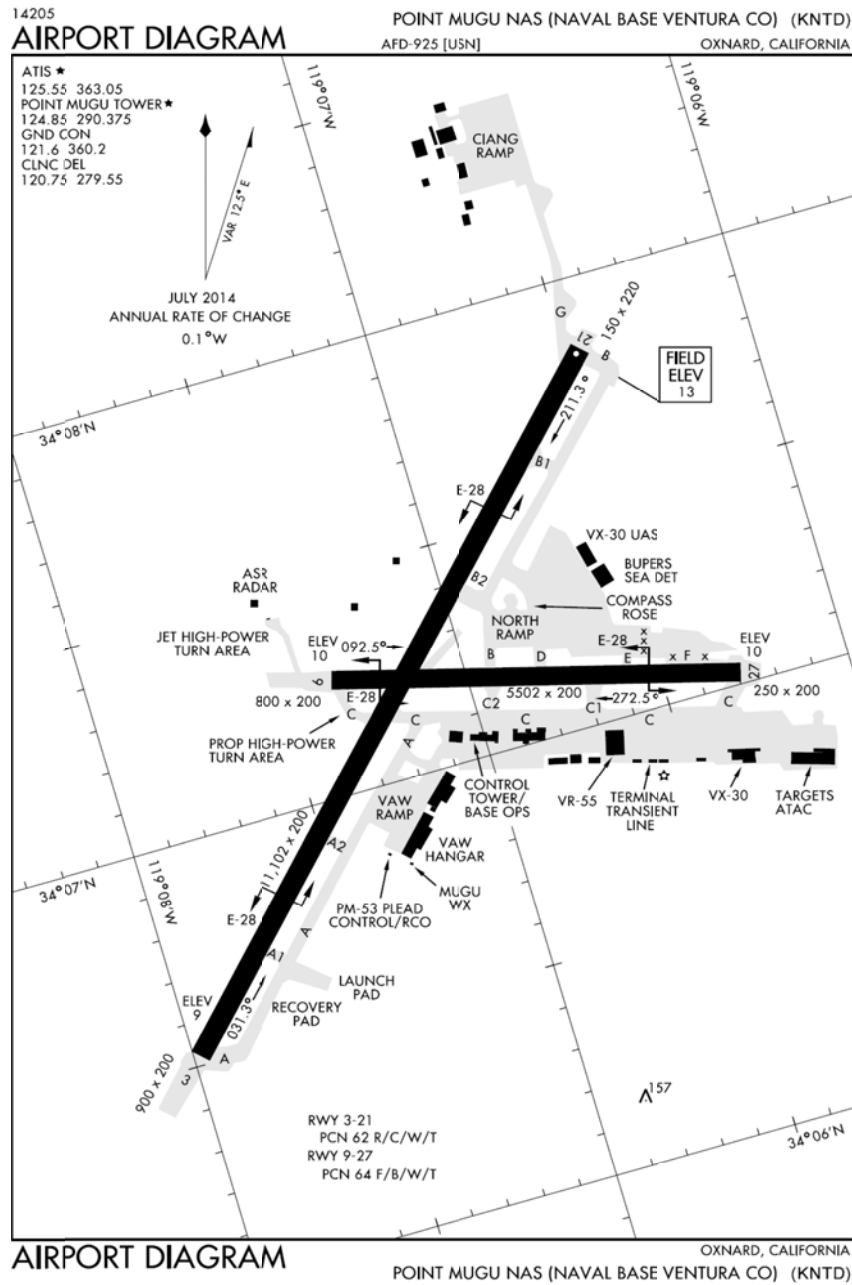
- Air Operations,
- Construction Battalion Training and Mobilization (Seabees),
- Military Training,
- Ordnance Storage and Loading, and
- Research, Development, Acquisition, Testing, and Evaluation (RDAT&E).

Additionally, NBVC Point Mugu supports other U.S. military service branches and international military forces (e.g., Japanese Self-Defense Force and the Israeli Defense Force).

NBVC Point Mugu Air Operations

NBVC Point Mugu has command responsibility for all airfield facilities and operations including air traffic control tower operations, training (i.e. carrier deck certification), Bird / Wildlife Aircraft Strike Hazard (BASH) program, maintenance and storage of ordnance and their associated facilities, aircraft maintenance facilities. The operations are supported by a number of facilities including 853 buildings and two runways.

Runway 03/21 is oriented south-north and Runway 09/27 is oriented west-east (see diagram on the next page). Runway 03/21 is oriented south-north and Runway 09/27 oriented west-east (see diagram on the next page). Runway 03/21 is 200 feet wide and 11,100 feet long and is the main runway where a majority of the operations are performed. Runway 09/27 is 200 feet wide and 5,500 feet long and is the secondary runway. The facilities and airfield assets make it possible for the Commands to launch more than 205 missiles, 181 targets, and supporting more than 1,870 range operations critical to air and sea weapons systems testing and evaluation annually.



Point Mugu Sea Range

The Point Mugu Sea Range is approximately 36,000 square miles of air and sea space extending seaward from NBVC Point Mugu for approximately 180 NM in the Pacific Ocean and encompassing NBVC SNI. This asset provides the Navy with invaluable RDT&E capabilities of missile launches for air and shipboard weapons systems. The sustained capability and utilization of the Point Mugu Sea Range is a major asset to the Navy and commands operating from NBVC.

NBVC Special Area: Laguna Peak

NBVC also encompasses several special areas including Laguna Peak. Laguna Peak is a 39-acre site located 1.5 miles northeast of Point Mugu in the Santa Monica Mountains (see Figure 3-1). This site contains antennas and other communication systems that provide telemetry, radio communication and data transmission, surveillance radar, and airborne and surface target control. This site is a valuable asset to the NAWCWD and the Naval Satellite Operations Center (NAVSOC).

Sources: *Draft Integrated Natural Resources Management Plan (INRMP) for Naval Base Ventura County Point Mugu and Special Areas, 2013; NAWS Point Mugu AICUZ Update, 1992.*

NBVC Port Hueneme

NBVC Port Hueneme is host to many missions, with more than 40 tenant commands with diverse DOD missions ranging from Seabee support, mobilization and military training, to test and evaluation of air and shipboard weapons systems for the strategic defense of the United States. Mission related functions at the base include Port Operations, RDT&E, Training, Ordnance Handling and Loading, and Seabee Operations and Mobilization. Many of the installation's departments, such as the Supply Department, Civil Engineers Support Office, and Facilities System Office provide direct support to other Navy commands. Other branches of the military are supported through various tenant missions, including the U.S. Coast Guard, U.S. Marines, U.S. Army and U.S. Air Force.

NBVC Port Hueneme's contribution as a home base has been one of the primary missions since 1942; it provides all training, administrative and logistics for the Naval Construction Battalions (Seabees). Seabees are responsible for training and skills proficiency of naval sailors in all aspects of vertical and horizontal construction supporting the Navy mission during conflicts; this includes constructing both surface and subsurface facilities to support specific mission requirements. The Seabees are also responsible for all components of the mobilization mission including storage, shipment, and mobilization of equipment. The land space at NBVC Port Hueneme is necessary to ensure the Seabees and the Navy have sufficient operating area to train, store, stage, and mobilize. To support their complex logistics mission, the Seabees have several units and tenants that support their efforts which are discussed later in this chapter.

NBVC Port Hueneme is also home to the Littoral Combat Ship (LCS) Mission Package Support Facility. This facility is operated by the Naval Sea Systems Command (NAVSEA) and support the LCS that is home ported in San Diego. NAVSEA also supports a number of ships from Port Hueneme as part of its mission.

NBVC San Nicolas Island

NBVC SNI supports the testing and evaluation capacity for weapons systems and large-scale unmanned aerial vehicles (UAV). The airfield on NBVC SNI provides for the capability of UAV launchings to be evaluated under conditions most likely experienced in combat and in other theatres. NBVC SNI also provides the Navy with the ability to evaluate missile and weapons systems by radar, photography, and telemetry. Along with this valuable testing and evaluation mission, the airfield serves as a divert airfield for transiting aircraft operating over the sea range.

Sources: Naval Base Ventura County Activity Overview Plan, 2006; Integrated Natural Resources Management Plan San Nicolas Island California, 2006-2010.

3.6. Commands at NBVC

The Naval Air Warfare Center, Weapons Division (NAWCWD) is an organization within the Naval Air Systems Command (NAVAIR), dedicated to maintaining a center of excellence in weapons development for the Department of the Navy (DoN). The following pages briefly summarize each mission and their function in the organization.

Major Tenants

Naval Air Warfare Center, Weapons Division



C-2A Carrier

The Naval Air Warfare Center-Weapons Division (NAWCWD) is responsible for ensuring the U.S. Navy is superior in battle scenarios. The NAWCWD integrates advancing technology through the use of electronic components with weapons systems on aircraft to ensure well-planned, skilled capabilities are applied to aircraft.

The NAWCWD applies the technologies researched, developed, tested and evaluated at NBVC Point Mugu. Responsibilities and activities include:

- Perform RDT&E, logistics and in-service support for guided missiles, free-fall weapons, targets, support equipment, crew systems, and electronic warfare systems,
- Integrate weapons and avionics on tactical aircraft,
- Operate the Navy's western land and sea range test and evaluation complex, and
- Apply new technology to ensure battlespace superiority.

The NAWCWD manages the Sea Range to perform their activities in the RDT&E of air and ship weapons systems.

Naval Construction Force

The Naval Construction Force (NCF) primarily located at NBVC Port Hueneme is responsible to educate, train, equip, prepare, mobilize, and maintain the readiness of the Pacific Naval Construction Force units. The SCB is the fundamental unit within the NCF.

Commander, Airborne Command Control Logistics Wing

Commander, Airborne Command Control Logistics Wing (CACCLW), located at NBVC Point Mugu, administers oversight for the Aircraft Intermediate Maintenance Department and the Aviation Supply Department.

The CACCLW is responsible for all of the Navy's E-2C Hawkeye squadrons and C-2A squadrons. This includes providing:

- sustained combat and logistic operations through community leadership;
- aircraft and weapons system management;
- operational coordination and tasking;
- safety awareness;
- education and training; and
- administrative support.

E-2's provide numerous command and control functions for the Carrier Strike Group and Joint Force Commander, including:

- all-weather airborne early warning;
- airborne battle management;
- surface surveillance coordination;
- air interdiction;
- offensive and defensive counter air control;
- close air support coordination;
- time critical strike coordination;
- search and rescue airborne coordination; and
- communications relay.

The primary mission of a C2 squadron is to transport passengers, high-priority cargo, and mail to and from carriers and shore bases while providing support to the Carrier Strike Groups.

An integral component of the Carrier Strike Group air wing, the E-2C uses computerized radar, Identification Friend or Foe and electronic surveillance sensors to provide early warning, threat analysis against potentially hostile air and surface targets.

Tenant Commands

There are many tenant commands hosted at NBVC that support the DOD mission. Table 3-1 identifies each support tenant and provides a mission summary.



E-2C Hawkeye over NBVC Point Mugu

Source: *Naval Base Ventura County Activity Overview Plan, 2006*; http://www.navy.mil/navydata/fact_display.asp?cid=1100&tid=100&ct=1;

Overview of Key Aircraft at NBVC

*E2-C Hawkeye*

The E2-C aircraft is an early warning aircraft system that allows the Navy to collect data using radar and other telecommunications systems. The aircraft is durable in all weather conditions. The radar, identification, friend or foe (IFF) and detection systems enable the aircraft to provide early warnings against air and surface targets.

Length: 57.5 feet
 Height: 18.3 feet
 Wingspan: 80.7 feet
 Speed: 345 miles per hour
 Ceiling: 30,000 feet
 Range: 1,540 nautical miles

Crew: 5 (2 pilots, 3 Naval flight officers)

Armament: None

Source:

US Navy E-2 Logistics Aircraft Fact File, 2009; E-2 Hawkeye: Eye on the Future (Northrop Grumman), 2000

*Triton UAV*

The MQ-4C Triton Unmanned Aerial Vehicle is a surveillance aircraft that is able to provide the military with intelligence, surveillance, and reconnaissance over areas and perform rescue missions.

Length: 47.6 feet
 Height: 15.3 feet
 Wingspan: 130.9 feet
 Speed: 357 miles per hour
 Ceiling: 60,000 feet
 Range: >9,950 nautical miles

Crew: 4 (Air Vehicle Operator, Mission Commander, 2 Sensor Operators)

Armament: None

Source:

NAVAIR Aircraft and Weapons, 2012

*NP-3D Orion*

The NP-3D Orion aircraft is used at the Point Mugu Sea Range as well as worldwide for missile testing support. Additional operations include radar and visual safety surveillance, data collection and retransmission, Time, Space, Position Information (TSPI) optical collections and general support.

Length: 116.8 feet
 Height: 33.7 feet
 Wingspan: 99.6 feet
 Speed: 180 miles per hour
 Ceiling: 27,000 feet
 Range: 3,800 nautical miles

Crew: Minimum flight crew – 5
 Normal crew – 11
 Max accommodation - 21

Armament: None

Source:

<http://www.amarcexperience.com/AMARCArticleP3Orion.asp>

*C-130J Hercules*

The C-130 Hercules is an air transport aircraft designed to be used in troop and cargo transport and medical evacuation. This aircraft is used by international and US military units. The Navy, Marine Corps, Air Force and Coast Guard all utilize the aircraft. This aircraft is representative of aircraft operated by the Navy and Air Force Reserve from the NBVC Point Mugu airfield.

Length: 97.9 feet
 Height: 38.3 feet
 Wingspan: 132.7 feet
 Speed: 417 miles per hour
 Ceiling: 28,000 feet
 Range: 3,548 nautical miles

Crew: 3 (two pilots and loadmaster)

Armament: None

Source:

http://www.navy.mil/navydata/fact_display.asp?cid=1100&tid=500&ct=1

Table 3-1. NBVC Tenant Commands

| Tenant Name | Mission Summary and Responsibilities |
|---|---|
| Naval Facilities Engineering and Expeditionary Warfare Center (NAVFAC EXWC) | NAVFAC EXWC delivers specialized engineering and technology solutions that support sustainable facilities and provides logistics and expeditionary systems support for Navy combat force capabilities. |
| Airborne Tactical Advantage Company | The Airborne Tactical Advantage Company provides a growing fleet of tactical aircraft and services to the U.S. military, including the world's largest outsourced civilian airborne tactical air training, threat simulation, and research and development. |
| Channel Islands Air National Guard (146th Air Wing) | The Air National Guard's federal mission is to maintain well trained well-equipped units available for prompt mobilization during war and provide assistance during national emergencies (such as natural disasters or civil disturbances). During peacetime, the combat-ready units and support units are assigned to most Air Force major commands to carry out missions compatible with training, mobilization readiness, humanitarian, and contingency operations. When Channel Island Air National Guard is not mobilized or under federal control, it reports to the governor of California. Under state law, the Air National Guard provides protection of life, property and preserves peace, order, and public safety. These missions are accomplished through emergency relief support during natural disasters such as floods, earthquakes, and forest fires; search and rescue operations; support to civil defense authorities; maintenance of vital public services and counterdrug operations. |
| Naval Surface Warfare Center Port Hueneme Division (NSWC-PHD) | The NAVSEA Port Hueneme Surface Warfare Center Division provides in service engineering, test and evaluation, and integrated logistics support for combat and weapon systems installed in the US Navy surface fleet, US Coast Guard fleet, and many foreign navy fleets. NAVSEA Port Hueneme Surface Warfare Center Division's mission is to ensure that warfare systems operate safely for the fleet sailors and are effective in hitting their mark. |
| Civil Engineer Corps Officer School (CECOS) | The Civil Engineer Corps Officer School (CECOS) provides professional military education for Civil Engineer Corps officers and civilians ensures sailors in civil engineering are trained to assume the challenging responsibilities of a Naval Officer and engineer in support of the Navy's military construction force and shore installations. CECOS also supports the Navy's construction force and shore installations. |
| Naval Air Maintenance Training Group Detachment | The Naval Air Maintenance Training Group Detachment is responsible for training sailors effectively to maintain the E-2C Hawkeye and C-2A Greyhound aircraft. |
| Explosive Ordnance Disposal Mobile Unit (EODMU) | Explosive Ordnance Disposal Mobile Unit 3 is now based in China Lake; however, for some ordnance found at NBVC, and determined unsafe for transport to China Lake, the unit may dispose of ordnance at NBVC. Explosive Ordnance Disposal Mobile Unit 3 provides immediate explosive ordnance disposal, diving, and demolition services on land or at sea in support of Navy assets aboard NBVC and on Point Mugu Sea Range. Additionally, the unit provides emergency Explosive Ordnance Disposal support for flight operations, and support for local, state, and federal law enforcement agencies. |
| Defense Automation and Production Service (DAPS) | DAPS provides document automation and production services to NBVC and other DOD and federal agencies. |
| Naval Dental Clinic | The Naval Dental Clinic provides dental services to several branches of service including the Navy, Marine Corps, Air Force, and other authorized personnel on water and land. The clinic offers such services as routine general dental services, including x-rays, preventative dentistry, fillings, and root canal therapy. |
| Naval Ambulatory Care Center (NACC) | The NACC provides quality care and access to comprehensive medical services. |

| Tenant Name | Mission Summary and Responsibilities |
|--|---|
| Naval Exchange (NEX) | The NEX provides discounted quality goods and services to NBVC personnel and supports quality-of-life programs. |
| Naval Construction Training Center (NCTC) | The NCTC is a world-class professional, multi-service training school providing highly-skilled and militarily proficient Seabees, Airmen, Soldiers, and Marines who are ready and capable to operate in any environment the ability to construct military equipment and structures (vertical and horizontal construction) on sea, land, and under water. |
| Center for Seabees and Facilities Engineering (CSFE) | <p>The CSFE is the headquarters' for the following subordinate commands throughout the U.S.</p> <ul style="list-style-type: none"> ▪ Civil Engineer Corps Officers School (CECOS), Port Hueneme, CA ▪ Naval Construction Training Center, Port Hueneme, CA ▪ Naval Construction Training Center, Gulfport, MS ▪ CSFE Detachment Sheppard Air Force Base, TX ▪ CSFE Detachment Fort Leonard Wood, MO <p>The CSFE trains and develops Naval engineers and construction force professionals by providing them with the needed skill sets and knowledge to support career growth and readiness through the use of Revolution in Training techniques.</p> |
| Engineering Duty Officer School (EDOS) | The EDOS mission is to enhance and improve the professional proficiency of Engineering Duty Officers through training in plans, programs, and policies associated with the life cycle engineering of naval ships and systems. This mission also fosters community development among Engineering Duty Officers. |
| Naval Satellite Operations Center (NAVSOC) | The NAVSOC is responsible for maintaining, operating, and managing the naval satellite systems to provide warfighters with reliable satellite services. |
| Fleet Logistics Support Squadron 55 (VR-55) | VR-55 is a U.S. Navy C-130 squadron that provides around-the-clock logistical coverage to Naval assets deployed throughout the world. VR-55 is composed of Officers and Enlisted who are both Full Time Support and Selected Reserve. |
| Detachment 1, 345th Training Squadron United States Air Force (USAF) | The Detachment 1, 345th Training Squadron is responsible for providing automotive technical training to active duty, reserve, Air National Guard, and DOD civilians in 26 different disciplines including diesel, material handling equipment, fire truck, refueling, and maintenance control and analysis courses. |
| Marine Corps Training Center | The Marine Corps Training Center provides Reserves with the capability to conduct live fire exercises and skilled field training, instruction in first aid, land navigation, rappelling and other needed skills required for mobilization. |
| Naval Facilities Institute (NFI) | The NFI is responsible for the identification, development and delivery of facility acquisition training. NFI also provides contracting support to the Navy and the DOD. |
| 30th Naval Construction Regiment (NCR) | The Commander, 30th Naval Construction Regiment administers and operationally controls four Pacific Fleet Naval Mobile Construction Battalions, one Construction Battalion Maintenance Unit, and one Underwater Construction Team. |
| Naval Cargo Handling Battalion Fourteen (NCHB 14) | The NCHB 14 is a component of the Naval Expeditionary Logistics Support Force responsible for the load and discharge of aircraft and ships including Maritime Pre-positioned ships, Marine Corps Assault Follow-on Echelon ships, and operates limited ocean and air terminals at any location across the globe. |
| Naval Research Lab (NRL) | NRL is committed to research and education in vibrations, sounds, structural dynamics, nonlinear dynamics, and wave propagation. |

| Tenant Name | Mission Summary and Responsibilities |
|---|--|
| Commander U.S. Naval Forces Korea (CNFK) Detachment 119 | The CNFK Detachment 119 is the Navy regional coordinator for the Republic of Korea. It provides Navy leadership and expertise to joint, combined, and Navy commands for training, plans, programs and sustainment on land in defense of the Republic of Korea. |
| Naval Operational Support Center (NOSC) | The NOSC is a base located within proximity of the City of Oxnard. The base was established in 2000 when the Naval Air Station Point Mugu and Naval Construction Battalion Center Port Hueneme merged. |
| Air Test and Evaluation Squadron (VX) 30 | The VX-30 Squadron provides aircraft for flight and ground testing support for Point Mugu Sea Range and training operations for NAWC-WD. There are two aircraft that are utilized by VX-30, including the NP-3D and C-130. |
| Defense Acquisition University (DAU) | The DAU provides curriculum based training, both in the classroom and online, to foster professional development through a variety of means including publications, research, and consulting related to acquisition functions. |
| Fleet Maritime Patrol | The Fleet Maritime Patrol is a rapidly deployable Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) system designed to support fleet and joint operations. |

Source: Naval Base Ventura County Activity Overview Plan, 2006; Provided by NBVC Comments, June 2014.

3.7. NBVC Operational Footprints

Mission activities conducted on and from NBVC can generate potential impacts on surrounding community areas should incompatible land uses be allowed to develop. Examples of these potential mission impacts include noise and vibration from overhead flights or the risk of an aircraft accident. Conversely, the military mission is susceptible to hazards and other incompatibilities created by certain types of civilian development or activities, such as obstructions to air space or location of noise sensitive uses in high noise zones. Understanding the overlapping spatial patterns of these compatibility zones, or “mission footprint” is essential for promoting compatible and informed land use decisions.

There are several elements that make up the mission footprint that extend outside the NBVC property boundaries. These essential elements play a key role in the installation’s viability for sustaining current and future mission operations. These elements are listed below and described in more detail in the remainder of this chapter.

NBVC Point Mugu Footprint Elements

- Fixed-Wing Flight Tracks
- Military Training Routes
- Imaginary Surfaces
- Airfield Accident Potential Zones
- Aircraft Noise Contours
- Airspace Control
- Part 77 Vertical Obstruction Compliance
- BASH Relevancy Area

Point Mugu Sea Range

- Sea Range
- Special Use Airspace

NBVC Port Hueneme Profile

- Mobilization Corridors
- Force Protection
- Port / Port Basin (Joint Use Facilities Capabilities)
- Mobilization and Laydown Areas

NBVC Point Mugu Footprint Elements

The NBVC Point Mugu Profile covers the military operational components that comprise the training, ordnance storage, RDT&E, and minimal logistics support activities conducted at NBVC Point Mugu. This area includes the aircraft accident potential zones, noise contours, imaginary surfaces, flight tracks, and the military training routes that interface with the urban development in the vicinity of the airfield. It is important to understand each military operational footprint relative to land use impacts so communities may be better prepared to plan compatible land uses near military operational areas. The Point Mugu footprint elements are discussed and shown on the following pages.

Airfield Approach and Departure Flight Tracks – Fixed Wing

According to the NBVC Point Mugu Air Installations Compatible Use Zones (AICUZ) Report, an aircraft operation is normally defined as either a takeoff or a landing. A round trip flight, where an aircraft leaves NBVC Point Mugu, conducts its flight plan, and then returns to land at NBVC Point Mugu would count as two operations. Activities such as touch-and-go's, Field Carrier Landing Practices (FCLP), and practice instrument approaches also count as two operations because there is a landing (or low approach to the runway) followed by a takeoff or go-around.

Flight tracks are developed to provide guidance on the range of standard operations that may occur at an airfield. These are created using information gathered from air traffic controllers and pilots, and other sources such as the presence of development in outside communities. When flight tracks are developed they attempt to avoid urban development as much as possible to reduce impacts and risk to the general public and commercial or general aviation activities, but safety of operations is paramount in the design of these patterns.

The flight tracks associated with Field Carrier Landing Practice or touch and go patterns (closed patterns) are isolated to the area surrounding the installation and consist of low-level altitude flights. However, as shown in Figure 3-5, the closed-pattern flight tracks do not directly impact land uses associated with any of the communities in the JLUS study area.

Source: Naval Air Weapons Station Point Mugu AICUZ, 1992.

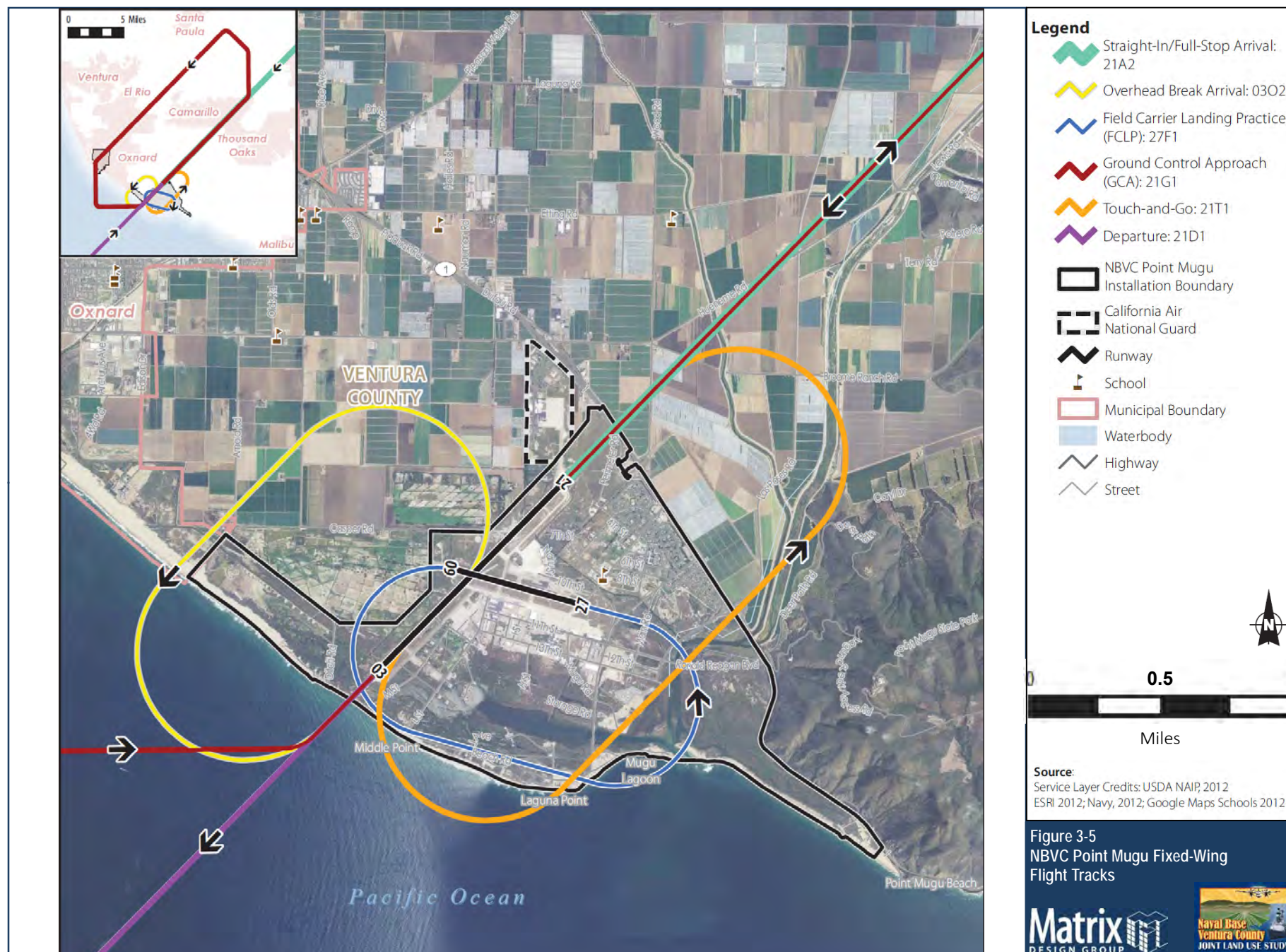
As Figure 3-5 illustrates, there are a number of flight tracks associated with fixed-wing aircraft operations for NBVC Point Mugu. To illustrate the predominant operational activities, Table 3-2 provides a summary of the annual flight operations, by runway (see illustration on page 3-10), for the years 2003 through 2011. As shown in the table, predominant operations are to take off and land in a southerly direction on Runway 21 and to take off and land in a westerly direction from Runway 27. It should be noted that the flight paths shown in Figure 3-5 are the primary paths used, but aircraft may deviate from these based on events such as weather.

Table 3-2. Flight Operations by Runway by Year

| Year | Runway | | | | |
|------|--------|-------|--------|-----|--------|
| | 21 | 3 | 27 | 9 | Total |
| 2003 | 18,092 | 3,404 | 10,670 | 348 | 32,514 |
| 2004 | 19,729 | 4,064 | 26,282 | 477 | 50,552 |
| 2005 | 19,047 | 4,293 | 21,583 | 410 | 45,333 |
| 2006 | 17,379 | 3,167 | 16,871 | 593 | 38,010 |
| 2007 | 14,854 | 2,774 | 15,627 | 247 | 33,502 |
| 2008 | 15,706 | 2,695 | 14,696 | 191 | 33,288 |
| 2009 | 16,813 | 2,743 | 13,523 | 176 | 33,255 |
| 2010 | 12,651 | 1,822 | 10,521 | 274 | 25,268 |
| 2011 | 12,712 | 1,905 | 15,108 | 109 | 29,834 |

Source: NBVC, 2014

The operations performed by the aircraft using these flight tracks can potentially create noise and vibration impacts on land uses under these paths.



Military Training Routes

Military training routes (MTRs) for NBVC are not situated in the JLUS study area (see Figure 3-6). Rather, the MTRs are located in the northern portion of Ventura County and do not impact land uses within the JLUS study area. However it should be noted and for planning purposes, MTRs are characterized by a centerline and a MTR corridor which can be anywhere from two nautical miles (NM) to 10 NM, that is one to five NM on either side of the MTR centerline. This airspace provides the pilots that train within this area the optimal space to perform the operations. This is important to consider as adjacent or proximate land uses may be impacted due to the expansive footprint of the MTR corridors. The degree of impacts is dependent on many variables such as weather and types of aircraft.

There are typically two types of military training routes—visual flight rule (VFR) and instrument flight rule (IFR).

Visual Flight Rule Military Training Route

A visual flight rule MTR is a route allowing pilots to operate an aircraft in weather conditions generally clear enough for the pilot to see where the aircraft is going. There are no VFR MTRs associated with the NBVC mission.

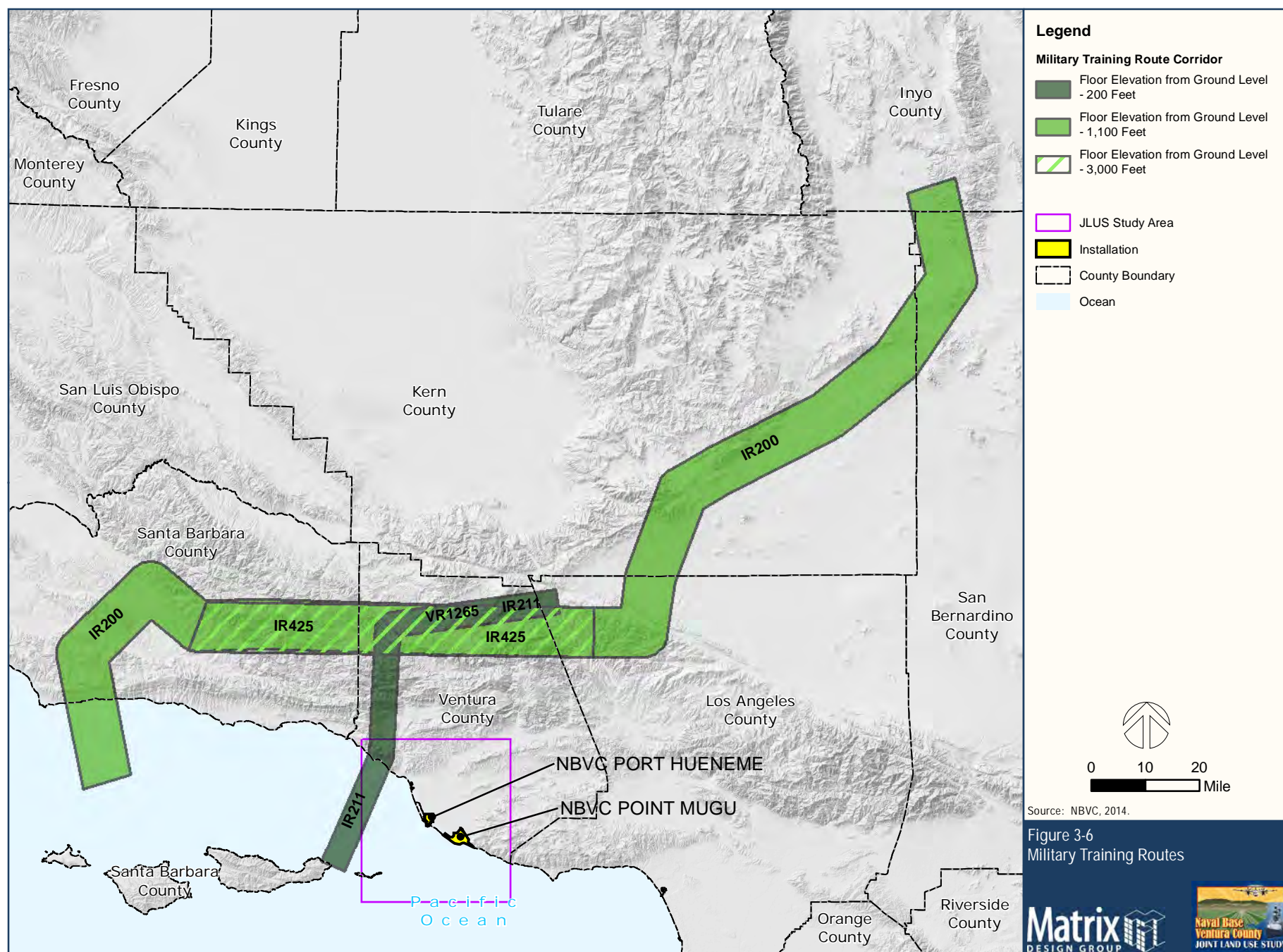
Instrument Flight Rule Military Training Route

An instrument flight rule (IFR or IR) is employed under conditions where flight by outside visual reference is not safe. An IFR flight relies on instruments in the flight deck, and navigation by electronic signals. There is one major IR associated with cruise missile testing and evaluation, IR-200.

IR-200 Cruise Missile Corridor

The IR-200 provides regulated airspace between the Point Mugu Sea Range and the Naval Air Weapons Station China Lake. This corridor, shown in Figure 3-6 begins 10 nautical miles north of SNI in the Pacific Ocean and traverses east through Ventura, Kern, and Los Angeles Counties in California. The IR-200 then continues north to the Utah Test and Training Center. This corridor is only used for cruise missile testing and evaluation and is the only one of its type on the West Coast.

The IR-200 corridor is not covered by the JLUS, but is shown here relative to its connectivity to the Point Mugu Sea Range.



Imaginary Surfaces

Federal Aviation Regulations, Part 77 specifies a series of imaginary height restriction surfaces surrounding an airport. The imaginary surfaces of an active runway are used to define the required airspace that must remain free of vertical obstructions in the vicinity of aviation operations to ensure safe flight operations. Figure 3-7 shows the slope of the surfaces that help guide military and community planners in land use planning around an airfield. Structures should not exceed these heights to protect the navigable airspace associated with the airfield, the safety of pilots and people and land uses on the ground. This is especially important in the Clear Zone and the Approach and Departure surfaces.

The extent or size of an imaginary surface depends on the type of runway. Military runways are categorized as either Class A or Class B based on the type of aircraft that use the runways. Class A runways are for airframes that are smaller and lighter. Class B runways are the category for the majority of military aircraft. NBVC Point Mugu runways are Class B runways and its relative imaginary surfaces are shown in Figure 3-8. For a complete technical explanation of the imaginary and transitional surfaces for the NBVC Point Mugu airfield, see Chapter 4 and Section 5.23.

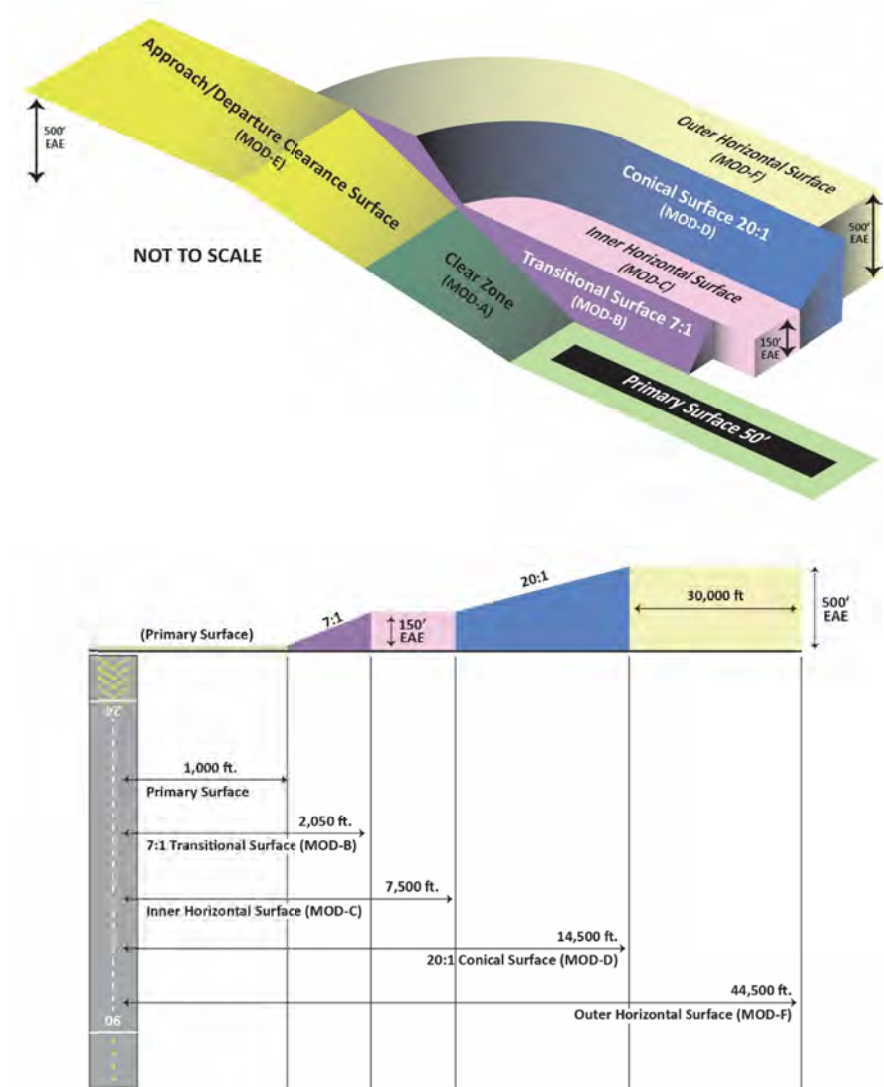
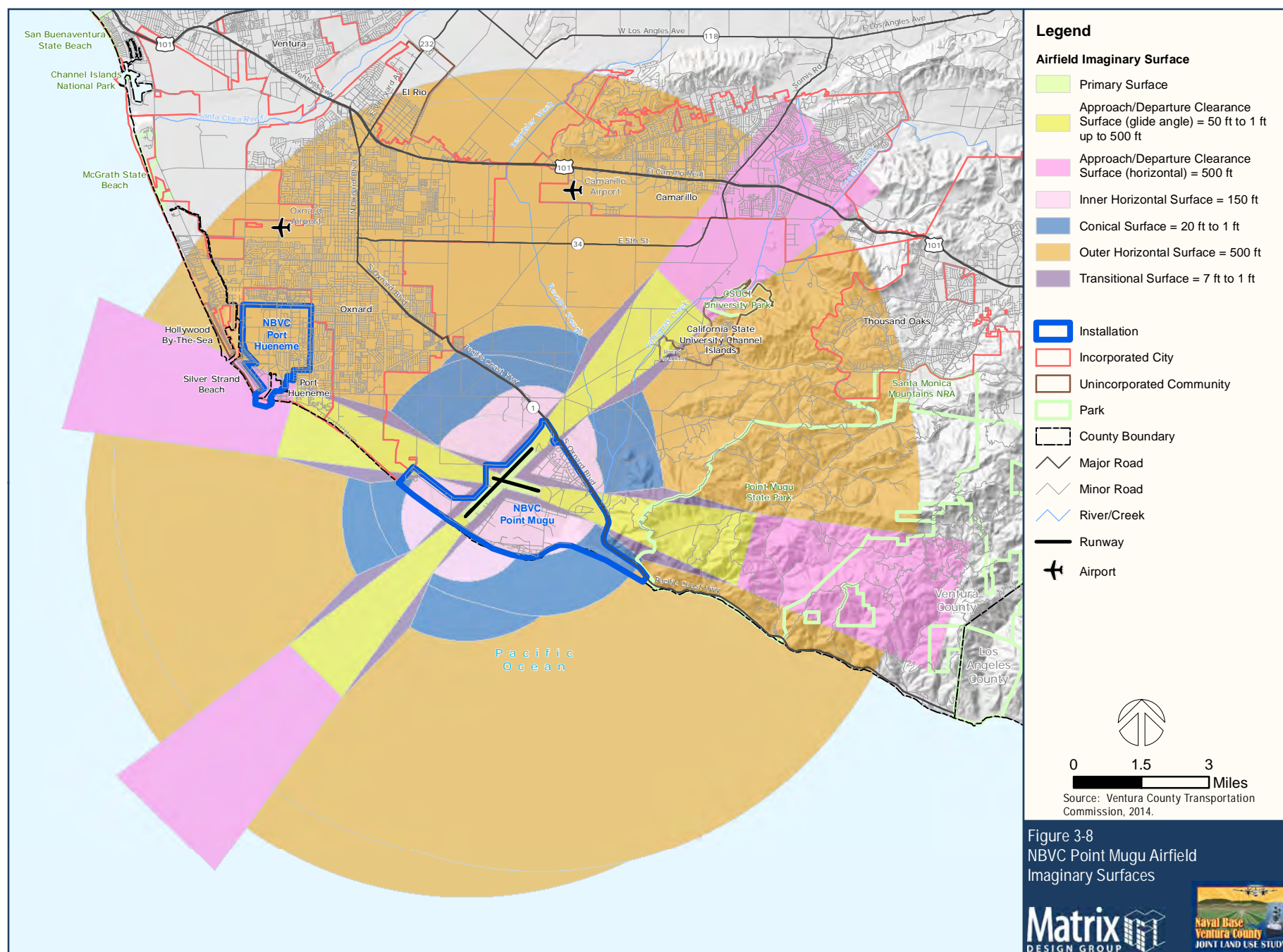


Figure 3-7 Imaginary Surfaces Cross-section



Airfield Accident Potential Zones

In addition to the assessment of imaginary surfaces, the second element of the airfield safety analysis is the assessment of Accident Potential Zones (APZ). Per Navy regulations, accident potential zones are developed to assist military and community planners in developing land uses that are compatible with airfield operations, thereby protecting health and safety. Within these zones, there are recommended types, densities, intensities, and heights of land uses. While the likelihood of an aircraft mishap occurring is remote, APZs are the areas identified through historic records of accidents that have the highest statistical likelihood of an accident occurring, and thus should be kept clear of dense development.

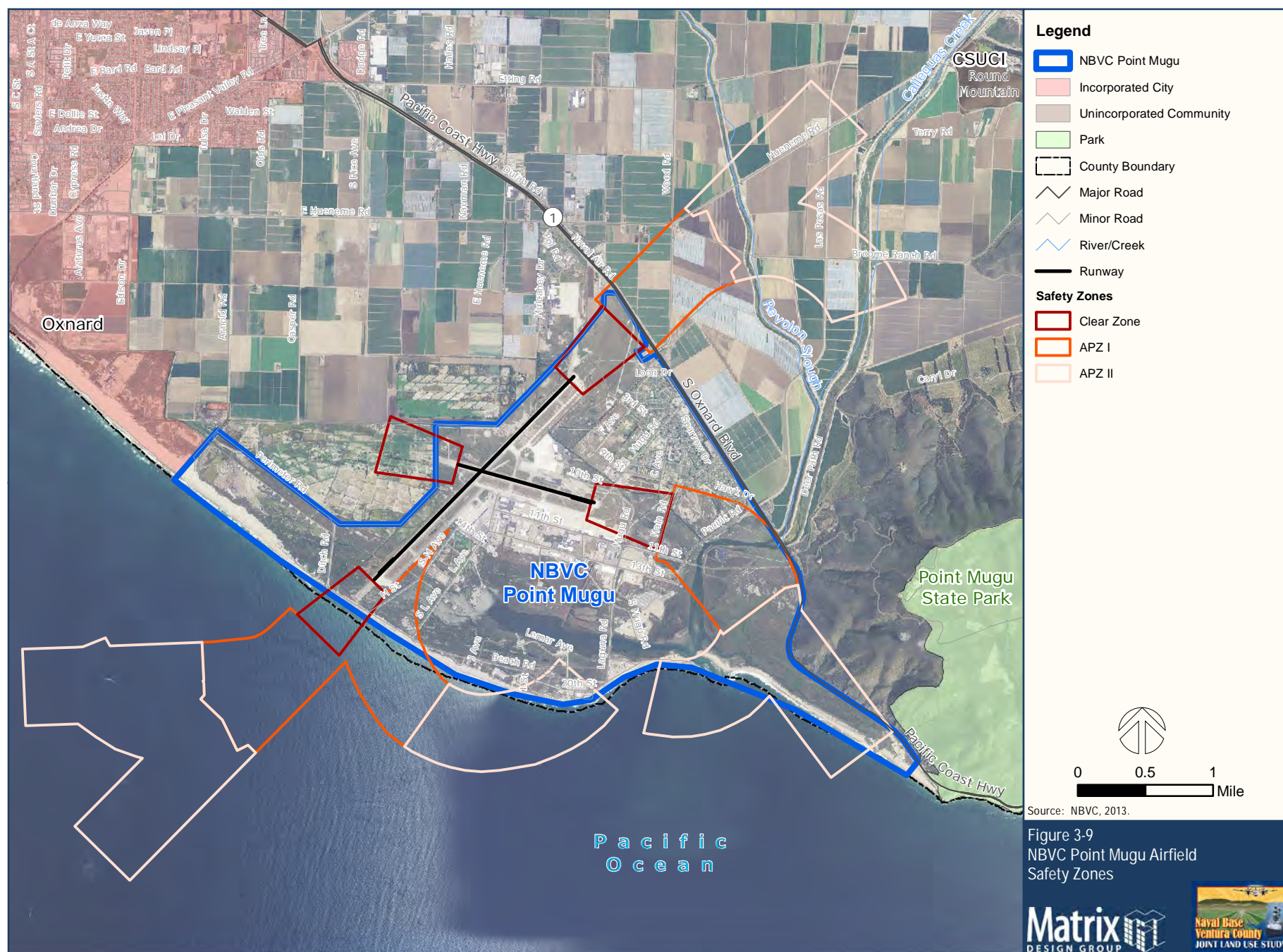
There are three safety zones that extend from the ends of all runways: Clear Zones (CZ) and APZ I and APZ II. These are illustrated on Figure 3-9.

The **Clear Zone** (CZ) begins at the end of each runway measuring 1,500 feet wide (the same width as the primary surface of the runway) and extending outward in a fan-shape to a length of 3,000 feet from the end of each runway. The fan-shape of this zone flares to a width of 2,284 feet wide at the end of the zone. This is the area has the highest potential of an aircraft incident (but again, a very low probability). As the name reflects, this area should be kept clear of all structures, including fences.

The **Accident Potential Zone I** (APZ I) is an area beginning at the end of each CZ and continuing out to a length of 5,000 feet long by 3,000 feet wide. APZ I follows a curved shape to reflect the predominant flight tracks, and can even split to reflect differences in standard approaches/departures and closed pattern tracks. This area has a lower potential for accidents and therefore has less restrictive development restrictions recommended.

The **Accident Potential Zone II** (APZ II) is an area that begins at the end of each APZ I and extends an additional 7,000 feet long by 3,000 feet wide. This APZ can also be curved as the flight tracks are considered in designating this APZ. Again, the accident potential in this area reduces further, and with this, some additional development types are allowed.

The NBVC Point Mugu AICUZ report provides a complete listing of the land uses that are not recommended for use in the CZ, APZ I and/or APZ II. In these recommendations, some land uses also have recommended limits on density and intensity of use. Communities are encouraged to incorporate these land use recommendations into their planning and regulatory documents, such as general plans, coastal management plans, specific plans and zoning codes. This helps to protect public health and safety and maintaining compatibility with continued operations at the military airfield.



Airfield Noise Contours

Aircraft noise can come from flight operations (overflight, take-offs, landings, touch-and-go operations) and engine maintenance run-ups. The Navy considers how its operations impact the local community by calculating an average-weighted noise level measured as an A-weighted decibel level (dBA). The NBVC AICUZ employs a contour system called the Community Noise Equivalent Level (CNEL). CNEL was developed for the State of California to provide average daily noise contours. Under this model, noise occurring during nighttime hours is penalized to reflect the higher potential for disturbance at night. The current NBVC AICUZ was completed in 1992 and does not reflect current operations. An update to the AICUZ is currently underway, with public release expected by Fall of 2015.

The contour lines developed in the model range from 60 CNEL to 80 CNEL, reported in 5 CNEL increments (60, 65, 70, etc.). The 80 CNEL is the "loudest" contour line computed and 60 CNEL is the "quietest." The CNEL measure has been determined to be a reliable measure of community sensitivity to aircraft noise and has become the standard metric used in California for aircraft noise. To assist the communities in land use decisions, the Navy groups the CNEL noise contour levels. The general definition of the noise zones are:

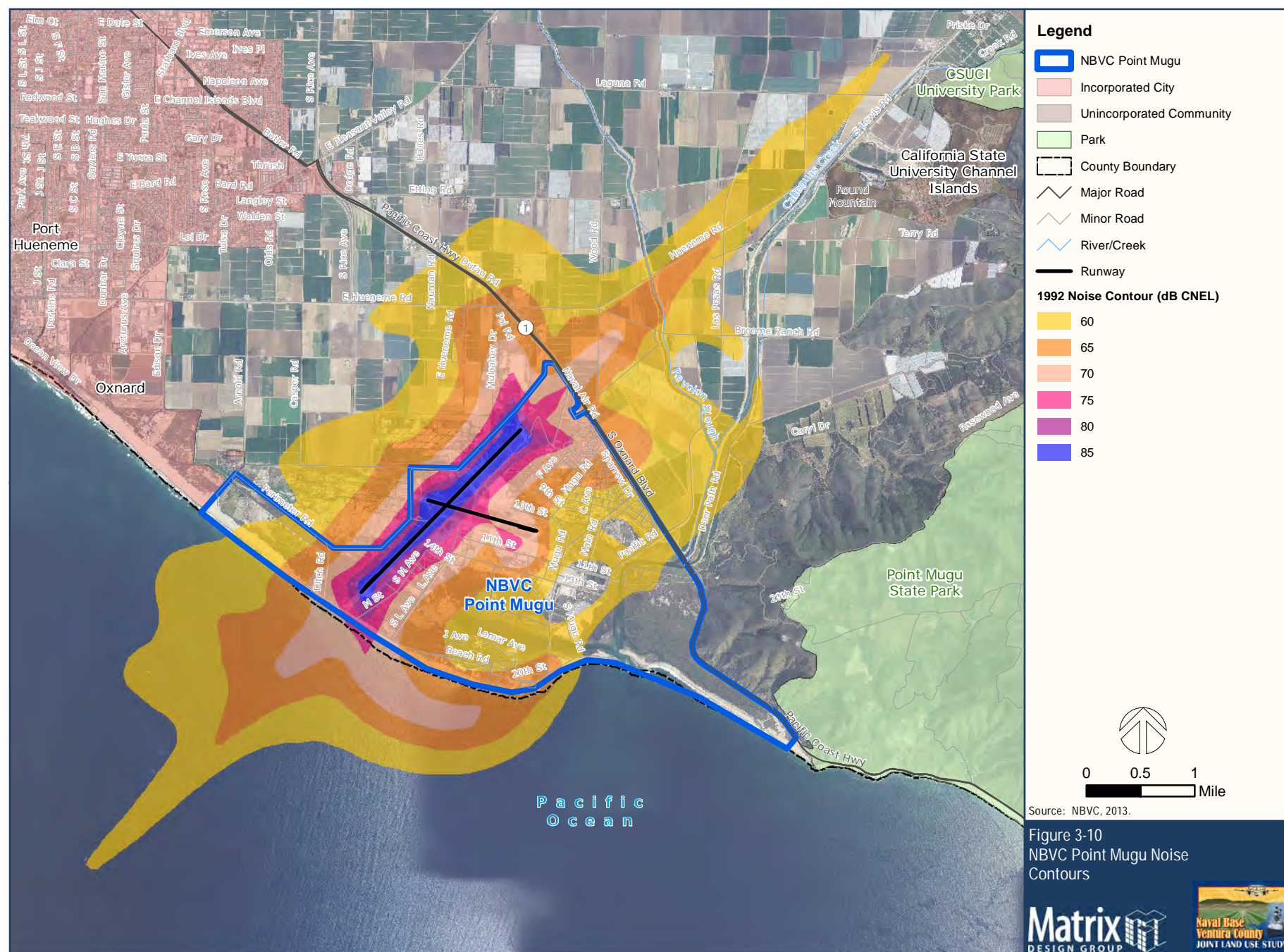
- **Noise Zone III** – This is an area around the source of noise in which the noise level is projected to be greater than 75 CNEL. This zone is considered an area of severe noise exposure and is deemed unacceptable for noise sensitive activities and land uses.
- **Noise Zone II** – This is an area where the noise level is between 65 CNEL and 75 CNEL. This zone is considered to have significant noise exposure and is normally unacceptable for noise sensitive land uses (like residential, hospitals, schools, and so forth).
- **Noise Zone I** – This is an area in which noise level is between 60 CNEL and 65 CNEL. This zone is considered to have minimal noise exposure but may be a noise nuisance to certain types of sensitive land uses and activities. Mitigation (such as noise attenuation) is often recommended for these uses.

NBVC Point Mugu is mostly surrounded by wetlands, open space, agricultural lands, and farmlands to the north, west, and east, and the Pacific Ocean to the south. However, the cities of Camarillo and Oxnard are located near the vicinity of the airfield. Figure 3-10 illustrates all the noise contours modeled for NBVC Point Mugu. As shown on the figure, the noise contours are mostly in unincorporated Ventura County. The very northern tip of the 60 CNEL extends over southern portions of the City of Camarillo, which can impact certain noise sensitive land uses considering the overflight tracks of military aircraft. The nearby CSUCI campus is outside of the 60 CNEL noise contour.

Noise exposure can also be a concern for certain sensitive biological resources that may be near the airfield. Aircraft operations have the ability to generate loud noises that can displace birds that may be nesting, allowing for a nest to be exposed to predators. Additional impacts may involve increased stress on the species conflicting with nesting areas and therefore limiting the success of reproduction. The Navy has made modifications to its operations to minimize known impacts to sensitive biological resources.

In reviewing noise contours, it should be noted that these are annual averages, and noise exposure at any given time will vary based on a number of factors, including weather.

Source: Naval Air Weapons Station Point Mugu AICUZ, 1992.



Airspace Control

Class D Airspace - NBVC Point Mugu

NBVC Point Mugu Class D Airspace encompasses an area within an approximate 4.5-mile radius of the center of the airfield that extends upward to 3,000 feet above mean sea level (MSL). The Class D airspace around NBVC Point Mugu is truncated on the north by the airspace for the Camarillo Airport and on the west by the airspace for the Oxnard Airport (see Figure 3-11).

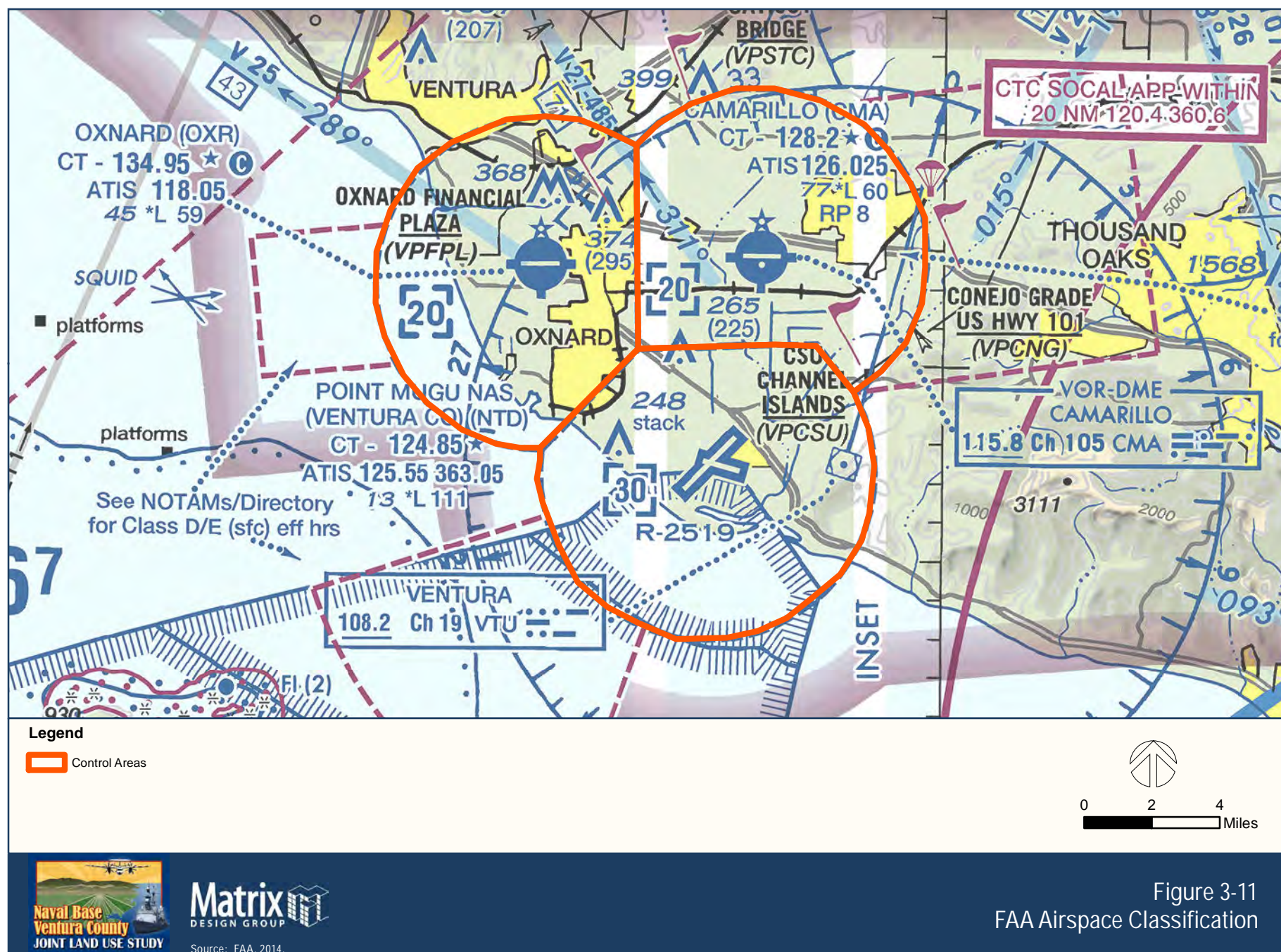
Use of Class D airspace requires the use of two-way communication with Air Traffic Control, which must be established prior to entering Class D airspace. No transponder is required. Visual Flight Rules (VFR) flights in Class D airspace must have three miles of visibility, and fly an altitude at least 500 feet below, 1,000 feet above, and 2,000 feet laterally from clouds.

NBVC Point Mugu is located within the control area boundaries of the Los Angeles Air Route Traffic Control Center (ARTCC). Responsibility for the air operations in the Point Mugu terminal area has been delegated by the Los Angeles ARTCC to the NBVC Point Mugu Radar Air Traffic Control Facility (RATCF). This facility, located on the station and staffed by the Department of the Navy, has responsibility for the control of all aircraft, civil and military, operating on an Instrument Flight Rules (IFR) air traffic control clearance within its delegated airspace.

Controlled Airspace Operations

The Oxnard Airport lies seven miles to the northwest of NBVC Point Mugu and Camarillo Airport is located about six miles to the north. Visual Flight Rules (VFR) operations at Oxnard Airport, Camarillo Airport, and NBVC Point Mugu operate independently and have not had any notable issues. Instrument Flight Rules (IFR) operations at NBVC Point Mugu and Oxnard

Airport can conflict under certain conditions. An aircraft on an instrument approach to NBVC Point Mugu will cross the Oxnard Airport final approach course at a point approximately 7.5 miles (6.5 nautical miles) from NBVC Point Mugu and 10.9 miles (9.5 nautical miles) from the Oxnard Airport. The vertical separation of the two approach paths at the crossing point is approximately 860 feet. As a result, a one-for-one sharing of the airspace, or circuitous routing, is required during IFR conditions.



Part 77 Vertical Obstruction Compliance

The Federal Aviation Act [Title 14 Code of Federal Regulations (CFR) Part 77] was enacted in 1958 to provide methods for overseeing and regulating civilian and military use of airspace over the United States. The Act requires the Secretary of Transportation to make long-range plans that formulate policy for the orderly development and use of navigable air space. The intent is to serve the needs of both civilian aeronautics and national defense, but it does not specifically address the needs of military agencies. The Federal Aviation Administration (FAA) was created as a result of the Act for a variety of purposes, including the management of airspace over the US.

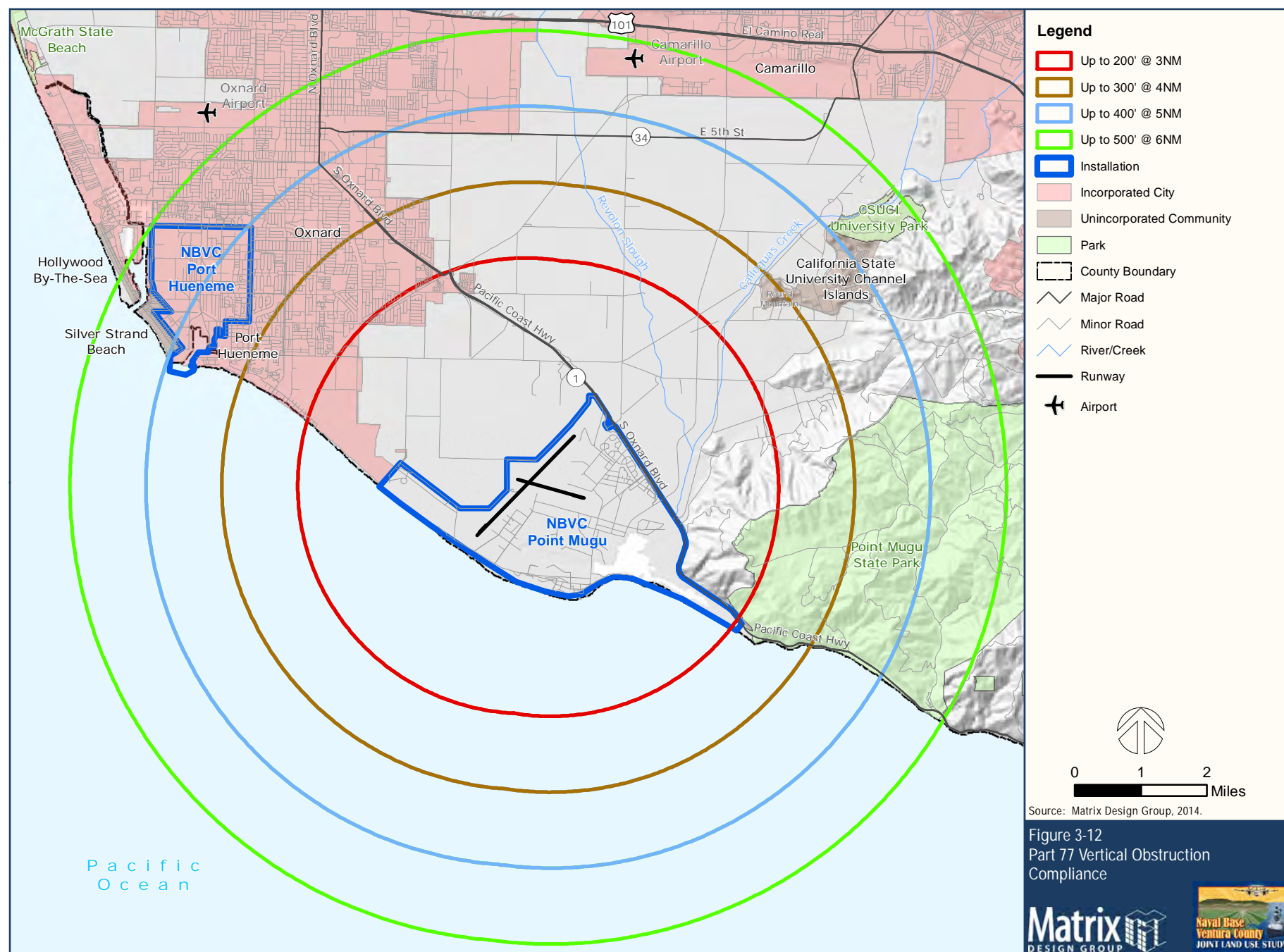
The 500-foot rule, promulgated by the FAA, states that every citizen of the United States has “a public right of freedom of transit in air commerce through the navigable air space of the United States.” The rule was formally announced in the 1963 Court of Claims ruling in *Aaron v. United States* and states that flights 500 feet or more AGL do not represent a compensable taking because flights 500 feet AGL enjoy a right of free passage without liability to the owners below.

Another important outcome of the Act is FAA Regulation Title 14 Part 77, commonly known as Part 77, which provides the basis for evaluation of vertical obstruction compatibility. This regulation provides information to evaluate the potential for a vertical obstruction based on the elevation of the airfield, the height and resulting elevation of the new structure or facility, and the location of the structure or facility relative to the airfield in question. This regulation determines compatibility based on the height of proposed structures or natural features relative to their distance from the ends of a runway. Using a distance formula from this regulation, local jurisdictions can easily assess the height restrictions near airfields. Additional information on Part 77 is located on the Federal Aviation Administration Internet site at <http://www.faa.gov/>.

As of January 29, 2013, the main focus of Part 77.17 is meant to establish standards to determine obstructions within navigable airspace, typically within a certain distance from an airport or airfield. It defines an obstruction to air navigation as an object that is of greater height than any of several measures. A key reference used for compatibility planning is the following:

- A height that is 200 feet AGL or above the established airport elevation, whichever is higher, within 3 nautical miles of the established reference point of an airport, excluding heliports, with its longest runway more than 3,200 feet in actual length. This height increases in the proportion of 100 feet for each additional nautical mile of distance from the airport up to a maximum of 499 feet.

Figure 3-12 provides an illustration of this measure of vertical obstruction. Note that this is in addition to, not a replacement of, the imaginary surface diagram presented earlier.



Bird/Animal Aircraft Strike Hazard

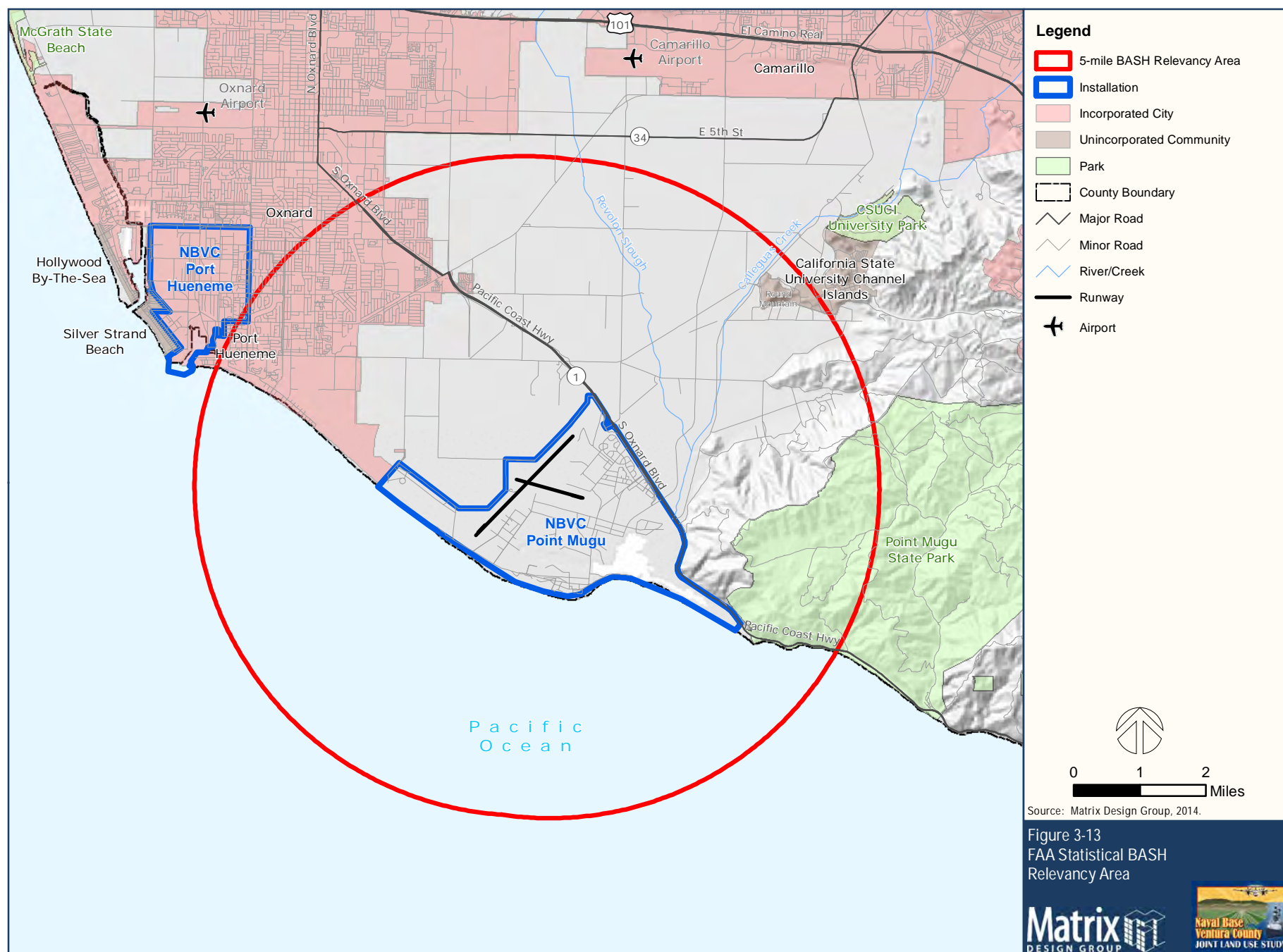
Birds and animals can present a significant hazard to military flight operations. While fatal accidents have been limited, impacts can be a safety concern and cause significant damage to aircraft. Bird or animal strikes since 1980 have approached approximately 20,000 events that have resulted in 2 deaths, 25 aircraft destroyed and over \$300 million in damage. At NBVC Point Mugu, since 1980, there have been seventeen damaging wildlife/aircraft strikes that resulted in damage.

Certain types of land uses attract birds and wildlife, such as open water areas, standing water, and other natural areas. The large number of birds that use Mugu Lagoon as a migratory stopover increases the dangers for aviation operations. The unique juxtaposition of NBVC Point Mugu Lagoon and the adjacent duck hunting club leaves both birds and aircraft at an enhanced risk of collision. Relative to compatibility, the control of attractions near the airfield is important.

A Bird/Animal Aircraft Strike Hazard (BASH) program has been adopted by NBVC to reduce the impact of birds on aircraft operations, and this is an issue that is assessed further in Chapter 5 of this JLUS. The 146th Channel Island Air National Guard Safety Department and Ventura County Federal Fire Department (Crash Crew) are also members of the Bird Hazard Working Group. USDA Wildlife Services provides contracted BASH ground support, for implementation of BASH management measures.

Relative to the look at the military footprint, Figure 3-13 illustrates a 5-mile area surrounding the NBVC Point Mugu airfield. Based on FAA statistical analysis, this is the primary area of concern for BASH incidents to occur, and the primary focus of compatibility planning for this issue.

Source: Draft Integrated Natural Resources Management Plan (INRMP) for Naval Base Ventura County Point Mugu and Special Areas, 2013



Point Mugu Sea Range / San Nicolas Island

The Point Mugu Sea Range and SNI Profile encompasses an area of 36,000 square miles in the Pacific Ocean and 17,427 acres on SNI. These profiles are specific to the operational footprints for RDT&E missions and commercial and military shipping and distribution of goods on the water.

Point Mugu Sea Range

The Point Mugu Sea Range is a 36,000 square-mile range located off the central Coast of California in the Pacific Ocean. The range extends as far north as Monterey County, CA. The area can be expanded up to 220,000 square miles for weapons testing and evaluation and air-to-sea maneuvering and fleet operations. This range provides the maritime and instrumented environment needed to meet the requirements of today's specialized missions.

Figure 3-14 illustrates the Point Mugu Sea Range in the Pacific Ocean associated with SNI.

Airspace

The military operating area (MOA) for the NBVC JLUS is exclusively over the Pacific Ocean. A MOA is the special use airspace (SUA) where military or defense-related aviation occurs for training and / or special operations. This designation of airspace assists other air traffic users in knowing there are airspace areas restricted from VFR and IFR for aviation and maritime exercises involving weapons systems testing and evaluation.

The MOAs are further defined by usage. For example, special operations or training where bombing exercises for NBVC occur is limited to a very small portion of the overall SUA. These special operations are typically performed under restricted airspace (R) that allows for ordnance and weapon firing to protect the general public from unnecessary impacts associated with these exercises.

Figure 3-14 illustrates the footprint of the SUA for the Sea Range of the NBVC training mission. There are 11 warning areas (W) and three restricted airspaces (R) that can create different impacts associated with the sea uses under this airspace. The impacts vary by location, aircraft, altitude and type of ordnance and training exercise. Table 3-3 identifies the various warning areas and restricted airspaces associated with the Sea Range.

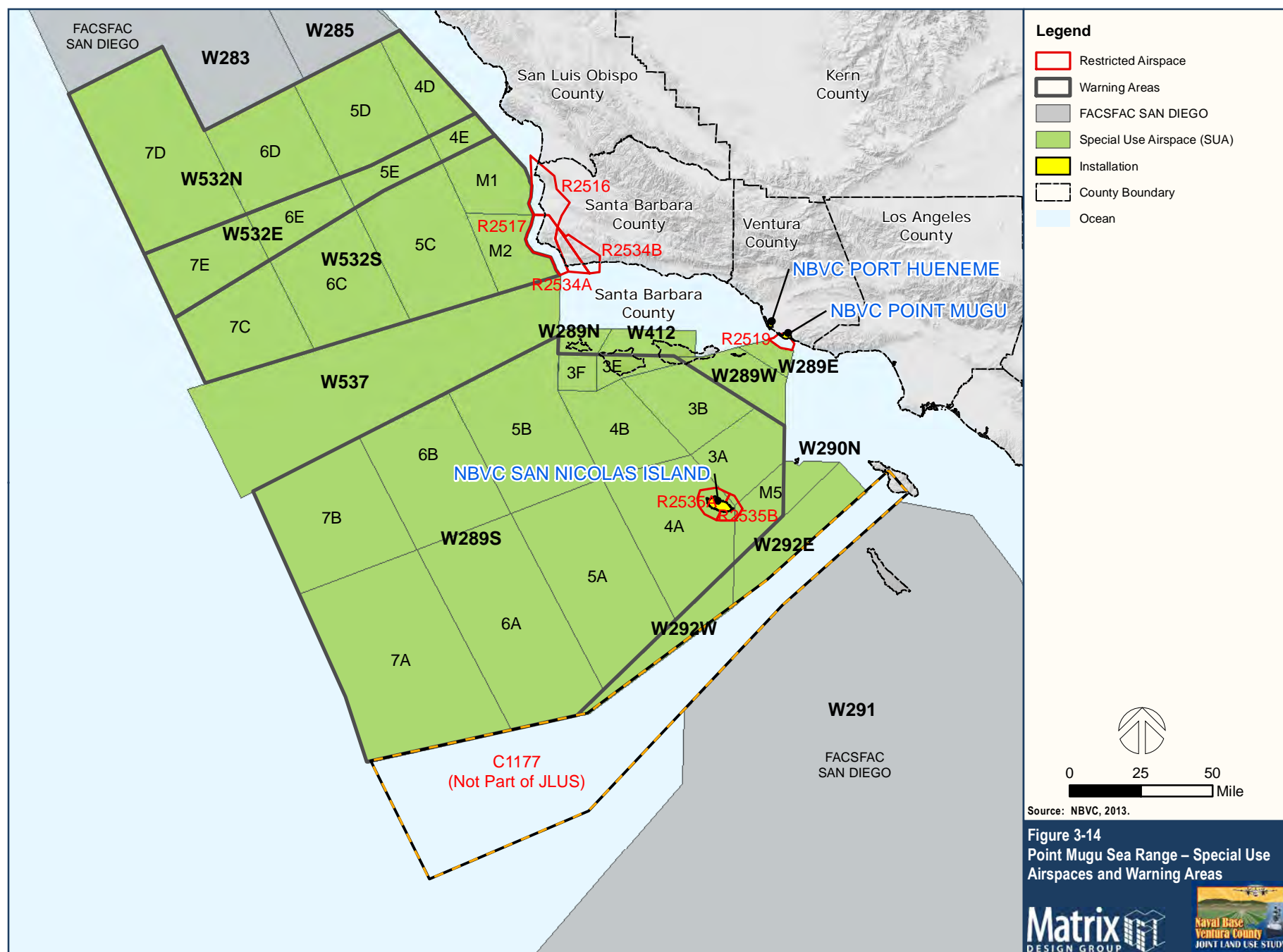


Table 3-3. Sea Range Air and Sea Spaces

| Warning Area / Restricted Airspace | Area Description |
|--|---|
| W-532N | The W-532N SUA is in the northern portion of the Sea Range, north of Santa Barbara County. This SUA has a surface floor extending up to an unlimited flight level. |
| W-532E | The W-532E SUA is in the northern portion of the Sea Range, adjacent to W532N and north of Santa Barbara County. This SUA has a surface floor extending up to an unlimited flight level. |
| W-532S | The W-532S SUA is in the northern-mid portion of the Sea Range, adjacent to W-532E off the shore of Santa Barbara County. This SUA has a surface floor extending up to an unlimited flight level. |
| W-537 | The W-537 SUA is in the mid-portion of the Sea Range, adjacent to W-532S off the shore of Santa Barbara County. This SUA has a required 24-hour notice to airmen (NOTAM). |
| W-289S | The W-289S SUA is in the southern portion of the Sea Range, adjacent to W-537 in the Pacific Ocean in the area of Ventura County. This SUA comprises the largest area of all the SUAs with a surface floor extending up to an unlimited flight level. |
| W-289E | The W-289E SUA is in the southern portion of the Sea Range, adjacent to W-289S immediately off the shore of Ventura County. This SUA has a surface floor extending up to an unlimited flight level. |
| W-289W | The W-289W SUA is in the southern portion of the Sea Range, adjacent to W-289E immediately off the shore of Ventura County. This SUA has a surface floor extending up to an unlimited flight level. |
| W-289N | The W-289N SUA is north of W-289W within the Sea Range, adjacent to W-537 and W-289S in the Pacific Ocean over San Miguel Island. This SUA has a total area of 105 NM and has a surface floor extending up to a flight level (FL) of 240. |
| W-290 | The W-290 SUA is located near the west side of Santa Catalina Island, south of Santa Barbara Island, and 15 NM north of Santa Cruz Island. The total area of this SUA encompasses 508 NM ² . |

| Warning Area / Restricted Airspace | Area Description |
|--|--|
| W-412 | The W-412 SUA is north of W289S within the Sea Range in the Pacific Ocean over portions of Santa Rosa and Santa Cruz Islands. This SUA has a surface floor extending up to 3,000 feet MSL. |
| W-292E | The W-292E SUA is the southernmost portion within the Sea Range, adjacent to W-289S in the Pacific Ocean. This SUA has a surface floor extending up to an unlimited flight level. |
| W-292W | The W-292W SUA is the southernmost portion within the Sea Range, adjacent to W-289S in the Pacific Ocean. This SUA has a surface floor extending up to an unlimited flight level. |
| R-2519 | The R-2519 is the airspace located right off the coast of NBVC Point Mugu and extends outward in a semi-fan-shape to the initial warning area (W-289E) of the Sea Range. This area has a surface to unlimited altitude where military operations may occur, and it is used to protect airspace and air traffic from hazardous operations associated with the NBVC mission. |
| R-2535A | The R-2535A is the airspace over the western half of SNI and surrounding areas. This area has an altitude beginning at the surface to 100,000 MSL and is used to protect the western half of the island. |
| R-2535B | The R-2535B is the airspace over the eastern half of SNI and surrounding areas. Although characterized as a separate airspace and labeled as "B", this airspace has the same altitude as R-2535A and is used to protect the eastern half of the island. |

Source: *Range Complex Management Plan Volume II Sea Range, 2011.*

Please see the next page.

NBVC Port Hueneme Profile

The NBVC Port Hueneme Profile covers the military operational components that comprise the portion of training and logistics support activities performed at NBVC Port Hueneme. This area includes the mobilization corridors outside the fence line of Port Hueneme and the Port Basin. As shown on Figure 3-15, this operational area not only interfaces with the surrounding community and can potentially impact daily activities but also interfaces with commercial shipping and port operations. It is important to understand their purpose and identify associated impacts to provide communities with appropriate tools to compatibility plan land uses adjacent and proximate to these operational areas.

Mobilization Corridors

NBVC uses local roadways for military mobilization of troops and equipment to and from the base to strategic locations throughout the US. The 2008 NBVC Encroachment Action Plan (EAP) identified three major corridors outside the fence that are strategic assets to the NBVC mobilization mission. Various segments of these corridors are publicly-owned by the cities and county. The three corridors are:

- Victoria Avenue to US Highway 101;
- South Patterson Road to East Wooley Road to US Highway 1; and
- East Port Hueneme Road to Lincoln Court to South Rice Avenue to US Highway 101.

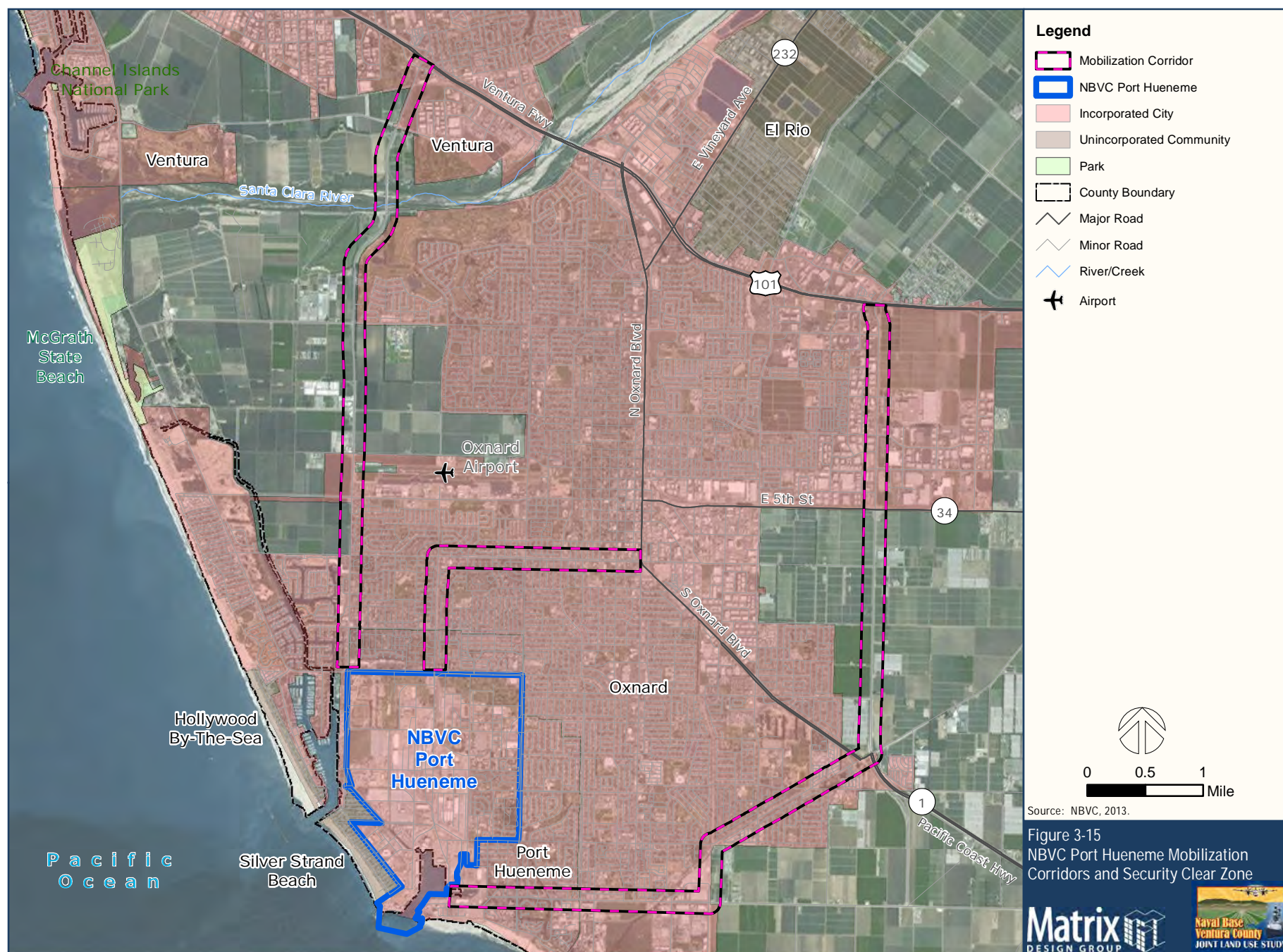
Additionally, the corridors are used to transport ordnance from NBVC Port Hueneme to NBVC Point Mugu for storage. Due to the multiple users of these roadways and for planning purposes, the Navy has recommended coordination with local jurisdictions to ensure adequate level of service during mobilization activities. Figure 3-15 illustrates the mobilization corridors and 500-foot buffer affecting NBVC Port Hueneme and NBVC Point Mugu. While some segments lie within unincorporated Ventura County, other segments are within the city limits of the cities of Oxnard and Port Hueneme where commercial traffic can impact military operations and vice versa.

Source: Naval Base Ventura County Encroachment Action Plan, 2008.

Force Protection Unobstructed Clear Zone

The Navy Instruction (OPNAVINST 5530.14E) recommends an unobstructed clear zone around facilities to provide for and comply with force protection / security regulations and purposes. This clear zone is established to prevent visual obstruction and circumvention of the installation fence line. This clear zone is a minimum of 20 feet from the fence line to any exterior structures or visual obstructions.

Source: OPNAV Instruction 5530.14E, 2009.



Port / Port Basin

The Port / Port Basin is a strategic asset and has a critical operational footprint within NBVC Port Hueneme. The Navy-owned portion of the port comprises approximately 200 acres on the southern end of the installation. The Navy owns seven wharves (Wharves 4, 5, 6, A, B, C and D), and has a joint use agreement with OHD for use of Wharf 3 in times of need and where not in conflict with mission need; this shared space consists of 25 acres. OHD owns and operates approximately 69 acres of land in the harbor area and eastern channel (Channel A), including wharves 1 and 2, with five berths used for deep-draft mooring and cargo transfer. See Figure 3-16 for locations.

NBVC Port Operations has complete control of all military vessels entering and exiting the harbor, and all internal movements. Commercial traffic in the eastern channel is controlled and organized by OHD in collaboration with NBVC Port Operations. Numerous commercial fishing boats enter and exit OHD as well.

Table 3-4 provides a brief summary of the capabilities of the wharves associated with NBVC Port Hueneme. NBVC Port Hueneme is also equipped with the following facilities to aid in the NBVC's primary mobilization mission:

- Surface craft berth;
- Tug-mooring dolphin;
- Launch slip;
- Landing, ship tank (LST) ramp;
- Booster ramp;
- SNI barge; and,
- Small craft marina (Wharf D).

Ship maintenance facilities do not exist at the Port, although minor maintenance is performed. The total berthing capacity at NBVC Port Hueneme is 4,278 linear feet of berthing, with the length of the channel into the port at 2,300 feet and a 330-foot width at its narrowest point. The depth of the harbor is 34.5 feet during mean lower low water.

Table 3-4. NBVC Wharf Capabilities

| Wharf | Capabilities Summary |
|-------|--|
| 3 | Primary transient berth for visiting fleet ships and cargo handling for government and commercial carriers. Handles the majority of vessel traffic. Wharf 3 has a 90-degree corner for stern array installation on T-AGOS ships. |
| 4 | Primary berth for home-ported ships; used for Marine Corps cargo handling exercises and as a research and development staging area. |
| 5 | Secondary berth for some fleet ships and used for berthing target vessels. Wharf 5 is designated as an ordnance-handling wharf and used for research and development staging. |
| 6 | Primary berth for home-ported ships and designated as an ordnance-handling wharf. This wharf also can handle research and development staging. |
| A | Landing, ship tank slip and primary berth for cargo barge operations and small transient vessel berthing. |
| B | Primary berth for the home-ported research vessel with the capability for research and development staging. |
| C | Primary berth for transient WFI targets, SL-120, Denny G and T-AGOS / research ships. This wharf is also used for small transient vessel berthing and research and development staging. |
| D | Wharf D is actually a small marina used for berthing of small craft. |

Source: *Naval Base Ventura County Activity Overview Plan, 2006.*

Some of the port facilities are shared and must be coordinated with OHD, making the balance between commercial and military needs and requirements essential for continued economic viability and sustainment of military readiness. Figure 3-16 illustrates the port facilities and the basin which both commercial and military vessels use.



Mobilization and Laydown Areas

The mobilization and laydown areas comprise approximately 473 acres of open land to conduct mission-specific activities and training. The laydown areas combined with the deep-water port and the railway make this facility an unparalleled asset in the Navy's defense inventory.

Approximately 95 acres of this laydown area is designated as Peace Time use; this is used for marshalling yards for the railway, open space storage, and vehicle circulation and parking associated with the 31st Seabee Readiness Group mission and NBVC. Approximately 10 acres of this laydown area is used for training to maintain mission readiness in the instances of mobilization. The other remaining acres provide the remaining space needed for a full mobilization. In a full mobilization two active duty construction battalions and six reserve construction battalions are required to mobilize. Each construction battalion comprises 150 containers of material and 250 pieces of heavy equipment and rolling stock, or vehicles for a train—railcars. Overall, the laydown area has sufficient space for over 1,600 containers and 2,300 pieces of rolling stock. Approximately 20 percent of mobilization equipment is received by rail making the port a strategic and critical NBVC mission asset.

Source Naval Base Ventura County Activity Overview Plan, 2006.



4. Existing Compatibility Tools

Please see the next page.



Existing Compatibility Tools

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There are a number of existing compatibility tools available to jurisdictions and the military that are either designed to address compatibility directly or indirectly through the topics they cover.

This chapter provides an overview of existing compatibility tools (plans and programs) that are currently utilized or applied to evaluate and address compatibility issues in the Naval Base Ventura County (NBVC) Joint Land Use Study (JLUS) area. Three types of planning tools are evaluated; permanent, semi-permanent, and conditional.

Permanent planning tools include acquisition programs, either fee simple purchase of property or the purchase of development rights. Semi-permanent tools include regulations and policies such as zoning ordinances, general plans, or adopted legislation. Conditional tools include memorandums of understanding (MOU), intergovernmental agreements (IGA), and other policy documents that can be modified.

Organized by level of government (Federal, State, Local), key plans and programs that have been prepared and or adopted at all levels of government are identified and discussed in this chapter. This chapter concludes with an overview of other resources

that may be consulted to assist the community concerning compatibility planning.

An overview of the programs undertaken by NBVC includes the 2013 Draft Integrated Natural Resources Management Plan (INRMP), 1992 Air Installations Compatible Use Zones (AICUZ) Report, 2011 NAVAIR Range Complex Management Plan, 2008 Encroachment Action Plan, 2006 Activity Overview Plan, and the plans associated with cultural and natural resources.

4.1. Federal Programs and Policies

Clean Air Act

The Clean Air Act (CAA) is the comprehensive federal law that regulates air emissions from stationary and mobile sources to control air pollution. Under the CAA, the U.S. Environmental Protection Agency (EPA) established limits on six criteria pollutants through the National Ambient Air Quality Standards (NAAQS). To protect public health and public welfare, the CAA also gives EPA the authority to limit emissions of air pollutants from sources like chemical plants, utilities, and steel mills. Individual states or tribes may have stronger air pollution laws, but they may not have weaker pollution limits than those set by EPA. Under the law, states as required develop State Implementation Plans (SIPs) that outline how each state will control air pollution under the CAA. The Ventura County Air Pollution Control District (APCD) administers the policies established by the CAA and the EPA relative to air quality in the JLUS Study Area. Ventura County APCD monitors air pollutants and manages and regulates air pollution standards for the County.



JLUS Relevancy

Air quality districts at non-attainment for primary pollutants may have to enact certain measures to bring the district back into attainment with air quality standards. This may restrict the level with which NBVC can perform mission-critical activities. More information on air quality impacts at NBVC can be found in Section 5.1, Air Quality.

Clean Water Act

The Clean Water Act (CWA) governs the management of water resources and addresses the control and monitoring of water pollution in the U.S. The CWA establishes the goals of eliminating the release of toxic substances and other sources of water pollution to ensure that surface waters meet high quality standards. In doing so, the CWA authorizes local governments to prevent the contamination of nearshore, underground, and surface water sources. All the agencies are required to comply with the CWA including NBVC, the Watershed Protection District (WPD), and local governments and community service districts.



JLUS Relevancy

Water quality is crucial to maintain adequate water supplies to the base for both potable water and maintaining water quality on the installation. More information on water quality can be found in Section 5.20, Scarce Natural Resources, and 5.22, Water Quality and Quantity.

Department of Defense Conservation Partnering Initiative

In 2003, Congress amended Title 10 U.S.C. Sections 2684a and 2692a (P.L. 107-314), the National Defense Authorization Act, to add authority for DOD to partner with other federal agencies, states, local governments, and conservation based non-governmental organizations (NGOs) to set aside lands near military bases for conservation purposes and to prevent incompatible development from encroaching on, and interfering with, military missions. This law provides an additional tool to support smart growth, conservation, and environmental stewardship for on and off military installations.



JLUS Relevancy

Implementation of the Conservation Partnering Initiative on land surrounding NBVC would protect the base from incompatible development. More information on land use can be found in Section 5.11, Land Use.

DOD Partners in Flight Program

The DOD Partners in Flight (PIF) program employs habitat-based management strategies to maintain healthy landscapes and training land. PIF representatives assist natural resource managers in improving the monitoring, management, and education programs involving birds and bird habitat. The PIF published a Strategic Plan which identifies actions that support mission activities while protecting bird populations.



JLUS Relevancy

PIF helps NBVC manage the bird population which inhabits Mugu Lagoon and surrounding wetlands. More information on bird related strike hazards and management can be found in Section 5.12, Land, Air, and Sea Space Competition, and Section 5.19, Safety.

Endangered Species Act

The Endangered Species Act (ESA) established a program for the conservation of threatened and endangered (T&E) plants and animals and their habitats. The US Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) are the lead implementing agencies of the ESA. The ESA requires federal agencies, in consultation with the USFWS and / or the NOAA Fisheries Service, to ensure that actions they “authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species.” The law also prohibits any action that causes a taking of any listed species of endangered plant, fish, or wildlife. ESA provides a platform for the protection of critical habitat and species that may be at risk of extinction.



JLUS Relevancy

The protection of T&E species and their habitats on and around NBVC can inhibit mission capabilities and flexibility. A close integration of ESA requirements into compatibility planning is critical for both existing listings and future potential listings. More information on sensitive biological resources can be found in Section 5.3, Biological Resources and 5.15, Marine Environments.

Federal Aviation Act

The Federal Aviation Act was passed in 1958 to provide methods for overseeing and regulating civilian and military use of airspace over the United States. The Act requires the Secretary of Transportation to make long-range plans that formulate policy for the orderly development and use of navigable air space. The intent is to serve the needs of both civilian aeronautics and

national defense, but does not specifically address the needs of military agencies. Military planning strives to work alongside local, state, and federal aviation law and policies but sometimes must supersede these and other levels of government due to national security interests. The Federal Aviation Administration (FAA) was created as a result of the Act for a variety of purposes, including the management of airspace over the U.S.

The 500-foot rule, promulgated by the FAA, states that every citizen of the United States has “a public right of freedom of transit in air commerce through the navigable air space of the United States.” The rule was formally announced in the 1963 Court of Claims ruling in *Aaron v. United States* and states that flights 500 feet or more above ground level (AGL) do not represent a compensable taking because flights 500 feet AGL enjoy a right of free passage without liability to the owners below.

Another important outcome of the Act is FAA Regulation Part 77, commonly known simply as Part 77, which provides the basis for evaluation of vertical obstruction compatibility. This regulation determines compatibility based on the height of proposed structures or natural features relative to their distance from the ends of a runway. Using a distance formula from this regulation, local jurisdictions can easily assess the height restrictions near airfields. Additional information on Part 77 is located on the FAA Internet site at: www.faa.gov/.

As of January 29, 2013, the main focus of Part 77.17 is to establish standards used to determine obstructions within navigable airspace, typically within a certain distance from an airport or airfield. Part 77.17 defines an obstruction to air navigation as an object that is of greater height than any of the following heights or surfaces in the following manner:

- A height of 499 feet AGL at the site of the object.
- A height that is 200 feet AGL or above the established airport elevation, whichever is higher, within 3 nautical miles of the established reference point of an airport, excluding heliports, with its longest runway more than 3,200 feet in actual length. This height

increases in the proportion of 100 feet for each additional nautical mile of distance from the airport up to a maximum of 499 feet.

- A height within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area, which would result in the vertical distance between any point on the object and an established minimum instrument flight altitude within that area or segment to be less than the required clearance.
- A height within an en route obstacle clearance area, including turn and termination areas, of a federal airway or approved off-airway route, that would increase the minimum obstacle clearance altitude.
- The surface of a takeoff and landing area of an airport or any imaginary surface established under 77.19, DOD: 77.21, and heliports: 77.23. However, no part of the takeoff or landing area itself will be considered an obstruction.



JLUS Relevancy

FAA Regulations Part 77 helps to prevent vertical obstructions that may inhibit aviation activity at NBVC. More information on vertical obstruction issues at NBVC can be found in Section 5.21, Vertical Obstruction.

Federal Land Policy and Management Act of 1976

The Federal Land Policy and Management Act (FLPMA) established the authority for public agencies that possess public lands to be managed and planned according to national and local interests. The law prescribes that public lands that have been identified for development shall uphold and protect scientific, scenic, historical, ecological, environmental, and other values that are unique to specific geographies. This law provides the impetus for the various resource management plans that have been developed and prepared for public agencies (e.g., Bureau of Land Management) including the Proposed Bakersfield RMP and FEIS. The Bakersfield RMP planning area encompasses eight counties including Ventura County. This plan provides the land use plan for this planning area for the Bureau of Land Management (BLM) land located in the study area.



JLUS Relevancy

FLPMA is a tool to help protect certain public lands from development. Considering the large amount of publically owned land in Ventura County, integration of compatibility planning tools into federal plans can help protect NBVC and its missions.

National Environmental Policy Act

The National Environmental Policy Act (NEPA) of 1969 is a federal regulation that established a U.S. national policy promoting the protection and enhancement of the environment and requires federal agencies to analyze and consider the potential environmental impact of their actions. The purpose of NEPA is to promote informed decision-making by federal agencies by making detailed information concerning significant environmental impacts available to both agency leaders and the public.

All projects receiving federal funding require NEPA compliance and documentation. NEPA is applicable to all federal agencies, including the military. Not all federal actions require a full EIS. In cases where an action may not cause a significant impact, only an Environmental Assessment (EA) is required.

A NEPA document can serve as a valuable planning tool for local planning officials. An EA or EIS can assist in the determination of potential impacts that may result from changing military actions or operations and their effect on municipal policies, plans, and programs and the surrounding community. An EA is used to determine if impacts are significant, in which case an EIS is required and a subsequent Record of Decision (ROD) is rendered.

An EA must include a form of public involvement; typically this is a 30-day public review and comment period for the Draft EA. If impacts are determined to be insignificant, then a Finding of No Significant Impact (FONSI) is prepared and a subsequent Decision Record (DR) is issued. If impacts are determined to be significant, then an EIS must be prepared. The information obtained by the EA/EIS is valuable in planning coordination and policy formation at the local government level.

NEPA mandates that the military analyze the impact of its actions and operations on the environment, including surrounding civilian communities. Inherent in this analysis is an exploration of methods to reduce any adverse environmental impact. The EIS is a public process that encourages participation by the community and all interested / affected stakeholders.



JLUS Relevancy

NEPA primary function is to inform the public and decision makers of potential environmental impacts associated with a proposed action. Ensuring NEPA documentation is easily accessible enables a better dialog concerning future plans and compatibility planning. This tool is used in Section 5.5, Coordination / Communication.

National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966 requires federal agencies to consider the effects of a proposed project on properties listed in, or eligible for listing in, the National Register of Historic Places. Because no specific action is being proposed as part of this planning process, the review of cultural resources is focused on the identification of existing resources and not potential effects that would result from a specific proposed action.



JLUS Relevancy

The location of cultural resources on or near NBVC may require avoidance or other mitigations to protect resources. Using this as a guide and based on public / committee inputs, no cultural resource issues were identified during the JLUS process.

National Pollutant Discharge Elimination System

Per the CWA, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into U.S. waters. Point sources are discrete conveyances such as pipes or man-made ditches. According to the law, individual homes that are connected to a municipal system, use a septic system, or do not have

a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.



JLUS Relevancy

Diminished water quality on base can cause certain areas to be closed for environmental restoration, which limits the area that NBVC can use for mission-critical activities. More information on water quality can be found in Section 5.20, Scarce Natural Resources, and Section 5.22, Water Quality and Quantity.

Noise Control Act of 1972

The Noise Control Act of 1972 determined that noise not adequately controlled has the potential of endangering the public health and welfare. It states that all Americans are entitled to an environment free from noise that can jeopardize their general health and quality of life. Along with state, local, and territorial governments, actions from the federal government were needed to ensure that the objectives of the Act were met.

Concurrently, military installations were experiencing the impacts from encroaching urban development locating adjacent to their boundaries and the resulting complaints regarding noise from military flight operations. The DOD responded by establishing the Installation Compatible Use Zone program (now AICUZ program).

The Noise Control Act and AICUZ program are important because encroaching development and increased population near military installations often creates compatibility issues. As communities grow, it is important that the military installation, developers, and the affected communities work together to mitigate the issue of noise and develop ways to coexist compatibly. Additionally, the State of California requires the local jurisdictions to address noise as a required element in their general plans.



JLUS Relevancy

Noise created by activity at NBVC may be heard by sensitive receptors in surrounding communities. Future development that factors in noise from military aviation operations is critical to long-term sustainability of the NBVC missions. More information on noise can be found in Section 5.16, Noise and Vibration.

Proposed Bakersfield Resource Management Plan and Environmental Impact Statement

The Proposed Bakersfield Resource Management Plan (RMP) and Final Environmental Impact Statement (FEIS) discuss various natural and cultural resources in the Bureau of Land Management (BLM) Bakersfield Field Office planning area. The plan outlines current preservation and mitigation practices and four alternative options for managing resources. The management plan area encompasses over 17 million acres of land in central California. BLM administers over 400,000 acres of surface estate and 1.2 million acres of subsurface federal mineral estate.

NBVC does not appear on maps produced by the BLM despite its location within the Bakersfield Field Office planning area. However, both NBVC and San Nicolas Island are located in other natural resource areas that should be considered for land use and compatibility planning including coastal, groundwater, and visual resources. SNI is owned by the Navy, as designated by the Presidential Executive Order, and is not withdrawn for public land use.

According to information and maps from the BLM, San Nicolas Island (SNI) is located in the California Rocks and Islands Wildlife Area of Critical Environmental Concern (ACEC) which means that the island "...possesses significant historic, cultural, or scenic values; fish or wildlife resources, including threatened and endangered species; or natural hazards. To meet the importance criterion, the resource must have substantial significance and value. This generally requires qualities of more than local significance and special worth, consequence, meaning, distinctiveness, or cause for concern." The BLM has a MOU with the California Department of Fish and Game (DFG) for management responsibility. Any new regulations and policies regarding

the relevant resource areas are to be considered for future land use plans so that the initial RMP can establish effective goals and management objectives.



JLUS Relevancy

As San Nicolas Island is considered an Area of Critical Environmental Concern, appropriate interagency coordination will ensure its continued and future use for military purposes.

Source: www.blm.gov/pgdata/etc/.../Appendix22_ACEC_Designation.pdf

Readiness and Environmental Protection Integration

To implement the authority provided by the DOD Conservation Partnering Initiative, the DOD established the Readiness Environmental Protection Integration (REPI). This initiative enables DOD to work with state and local governments, NGOs, and willing landowners to limit encroachment and incompatible land use. The REPI program enables NBVC to accomplish environmental (coastal resilience, habitat restoration, water quality and supply improvement, etc.) and encroachment prevention goals with its conservation partners.

REPI funds are used to support a variety of DOD partnerships that promote compatible land use. By relieving encroachment pressures, the military is able to test and train in a more effective and efficient manner. By preserving the land surrounding military installations, habitats for plant and animal species are conserved and protected.

NBVC has established and funded a REPI partnership with the Nature Conservancy and the Trust for Public Land, with the City of Oxnard currently in the process of joining the agreement. The California Coastal Conservancy, while not an official partner, works closely with NBVC. Additionally, NBVC has recently initiated real estate transactions.

The REPI website, www.repi.mil, has a wide variety of additional resources that can be used by military installations, local governments, and other entities to collaborate on potential REPI partnerships. These include:

- Collaborative Land Use Planning: A Guide for Military Installations and Local Governments
- Commander's Guide to Community Involvement
- Commander's Guide to Renewable Energy
- Commander's Guide to Understanding and Supporting Working Forests
- Working to Preserve Farm, Forest and Ranch Lands: A Guide for Military Installations
- Working with Conservation Districts: A Guide for Military Installations
- Working with Land Trusts: A Guide for Military Installations and Land Trusts
- Working with Local Governments: A Practical Guide for Installations
- Working with Regional Councils: A Guide for Installations
- Working with State Legislators: A Guide for Military Installations and State Legislators
- Collaborative Land Use Planning: A Guide for Military Installations and Local Governments



JLUS Relevancy

REPI helps to protect land surrounding NBVC from incompatible development. More information on land use can be found in Section 5.11, Land Use.

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) is the primary federal law that ensures the quality of drinking water in the United States. SDWA authorizes the EPA to establish national health-based drinking water standards to protect against both naturally-occurring and man-made water contaminants. SDWA applies to every public water system in the U.S. and requires all operators to comply with the primary standards.



JLUS Relevancy

Clean drinking water is important to maintain basic daily activities at NBVC. More information on water quality at NBVC can be found in Section 5.20, Scarce Natural Resources, and Section 5.22, Water Quality and Quantity.

The Sikes Act

The Sikes Act requires the DOD to develop and implement Integrated Natural Resources Management Plans (INRMPs) for military installations across the U.S. INRMPs are prepared in cooperation with the U.S. Fish and Wildlife Service (USFWS) and State fish and wildlife agencies to ensure proper consistency with public and military use in consideration of fish, wildlife, and habitat needs. The Sikes Act requires INRMPs to be reviewed at least every 5 years with the USFWS and States in which the installation is located.

The DOD Instruction 4715.3 and the Navy's Environmental and Natural Resources Program Manual (OPNAVINST 5090.1B, Change 2) guide the Navy's implementation of the Sikes Act.

NBVC recently completed their Draft INRMP in December 2013 which addresses natural resources management at NBVC Point Mugu and Special Areas such as Laguna Peak and islands in the Pacific Ocean including Santa Cruz. INRMPs were completed for NBVC Port Hueneme in 2012 and NBVC SNI in 2005.



JLUS Relevancy

The Sikes Act requires NBVC to create an INRMP for installation lands. By creating an INRMP, NBVC is better equipped to balance the needs of installation natural resources and the mission. More information on natural resources at NBVC can be found in Section 5.3, Biological Resources.

U.S. Avian Hazard Advisory System

The U.S. Avian Hazard Advisory System (USAHAS) is a geographic information system-based bird avoidance model developed by the U.S. Air Force used for "analysis and correlation of bird habitat, migration, and breeding characteristics, combined with key environmental and man-made geospatial data." The model provides up-to-date information – "near real-time" – about bird activity and movements to assist pilots and flight planners in the scheduling and use of flight routes. The model can also be used as a forecasting tool to estimate bird strike risk. Information from the North American Breeding Bird Survey, Audubon Christmas Bird Count, bird refuge databases, U.S. Air Force Bird-Aircraft Strike database, and public domain information regarding landfill locations is used to formulate the bird activity and movement data. The model is available for use by agencies and the general public, accessible from the USAHAS website at www.usahas.com.



JLUS Relevancy

The USAHAS helps to monitor the movement of birds within the vicinity of NBVC. This is designed to help limit costly BASH incidents. More information on bird strike hazards can be found in Section 5.19, Safety.

4.2. Installation Plans

Air Installations Compatible Use Zones

The foundation of an Air Installations Compatible Use Zones (AICUZ) program is an active local command effort to work with local, state, regional, and other federal agencies and community leaders to encourage compatible development of land adjacent to military airfields. One purpose of an AICUZ program is to protect the health, safety, and welfare of civilians and military personnel by encouraging land which is compatible with aircraft operations, while protecting the public investment in the installation. This program recommends compatibility measures for both the Navy and surrounding communities. The AICUZ program also recommends land uses that are compatible with elevated sound level, accident potential zones, and obstruction clearance criteria associated with military airfield operations.

The DOD issued Instruction No. 4165.57 on May 2, 2011, which updated previous instructions to the military services regarding the AICUZ program. U.S. Navy air installations adhere to the DOD Instruction and guidelines pursuant to OPNAVINST 11010.36C, dated October 9, 2008.

The current NBVC AICUZ was completed in 1992 and does not reflect current operations. An update to the AICUZ is currently underway, with public release expected by Fall of 2015. Upon completion of the AICUZ update, it is recommended that the current data be used and incorporated into local planning documents. The AICUZ program also provides recommendations to local government and other entities for actions they can take to further compatibility goals and objectives of their general plans, zoning ordinances, and other land use regulations.

Noise Zone Footprint

Noise is an essential component of the AICUZ program. Noise impacts for surrounding communities translate into 3 zones, which are categorized based on the Community Noise Equivalent Level (CNEL). Land use planning guides focus on the CNEL and are developed to protect the public and provide compatibility for surrounding communities:

- Zone I-noise that occurs in this area is compatible with most noise-sensitive land uses.
- Zone II-noise is usually incompatible with noise-sensitive land uses.
- Zone III-noise is incompatible with noise-sensitive land uses.



JLUS Relevancy

The AICUZ helps to establish the military footprint of NBVC. More information on the military footprint of NBVC can be found in Chapter 3, Military Profile.

Bird/Wildlife Aircraft Strike Hazard Plan

A Bird / Wildlife Aircraft Strike Hazard (BASH) plan is designed to minimize wildlife and bird strike damage to military aircraft. A BASH plan is designed to manage birds, alert aircrew and operations personnel, and provide increased levels of flight safety, especially during the critical phases of flight, take-off, and landing operations. Bird aircraft strike hazards are most likely to occur during winter months at NBVC. A BASH plan generally provides awareness and tools to use should a situation occur and is specifically designed to:

- Designate a Bird Hazard Warning Group (BHWG) and outline the members' responsibilities.
- Establish procedures to identify high hazard situations and establish aircraft and airfield operating procedures to avoid these situations.
- Ensure that all permanent and transient aircrews are aware of bird hazards and the procedures for avoidance.
- Develop guidelines to decrease the attractiveness of the airfield to birds and disperse the number of birds on the airfield.

In 2009, NBVC finalized the Environmental Assessment (EA) for its BASH program at NBVC Point Mugu. This plan is implemented at the base level, and is designed for all users of the base to be a part of identifying conditions and notifying the appropriate individual when BASH concerns are evident.

Currently, new BASH priorities are being implemented for land at NBVC Point Mugu, some of which have the potential to cause negative impacts, requiring further review. Additional management recommendations include the following efforts:

- Disperse wildlife by relocating birds and animals;
- Modify habitats through gate and drainage improvements;
- Monitor migratory bird surveys in order to reduce emerging birds;
- Require administrative actions, such as wildlife control specialists, in order to update and address changes in BASH and INRMP;
- Train personnel in order to identify and report procedures and protocols; and
- Establish communication efforts in order to collaborate on hazardous information to aircrew personnel.

All additional BASH measures are required to be consulted with USFWS in order to reduce future impacts.



JLUS Relevancy

The BASH Plan helps to reduce the risk of bird/aircraft strikes at NBVC. More information on bird aircraft strike hazards can be found in Section 5.19, Safety.

Final Environmental Assessment for the West Coast Home Basing of the MQ-4C Triton Unmanned Aircraft System at Naval Base Ventura County Point Mugu, California

The Final Environmental Assessment for the West Coast Home Basing of the MQ-4C Triton Unmanned Aircraft System at Naval Base Ventura County Point Mugu, California (EA Triton) is a study on the environmental impacts that would come as a byproduct of the implementation of the Triton unmanned aerial systems (UAS) program at NBVC Point Mugu. Under the proposed program, the Navy would house between four and eight Triton

UAS; establish a maintenance hub for the Triton UAS; conduct an average of five Triton UAS flight operations a day; construct, demolish, and renovate facilities and infrastructure at NBVC Point Mugu; and station up to 700 personnel, plus their family members, while supporting rotational deployments to and from outside the continental United States. Operations are estimated to begin in 2015. A Finding of No Significant Impact (FONSI) was associated with EA Triton.



JLUS Relevancy

Unmanned aerial systems at NBVC can economically benefit the Ventura County Region, but may also impact noise sensitive receptors in the area due to changes in flight operations or activity. More information on unmanned aerial systems at NBVC can be found in Section 5.5, Coordination / Communication, and Section 5.12, Land, Air, and Sea Space Competition.

Integrated Cultural Resources Management Plan

The Secretary of the Navy issued Instruction (SECNAVINST) 4000.35, *Department of the Navy Cultural Resources Program*, August 17, 1992, and the Chief of Naval Operations issued Instruction (OPNAVINST) 5090.1B: Chapter 23, *Historic and Archeological Resources Protection*, November 1, 1994, for the preparation of Integrated Cultural Resource Management Plans. Both of these instructions establish Navy policy for the protection of historic and archeological properties and assign Navy responsibilities pursuant to cultural resources laws and regulations. Corresponding DOD Instruction 4715.16 requires compliance with federal statutory and regulatory requirements for cultural resource management.



JLUS Relevancy

The Integrated Cultural Resources Management Plan helps to balance cultural resources on base and the needs of the military to carry out mission-critical activity.

Integrated Natural Resources Management Plan for Naval Base Ventura County Point Mugu and Special Areas and Port Hueneme

The Integrated Natural Resources Management Plan (INRMP) is a long-term planning document to guide the management and use of natural resources at NBVC Point Mugu, Port Hueneme, and San Nicolas Island. An INRMP is required by the Sikes Act to be implemented on all DOD installations that contain significant natural resources. Specific goals within the INRMP include:

- manage natural resources to ensure sustainability of all ecosystems within the installation;
- ensure no net loss of the capability of installation lands to support the DOD mission; conserve and rehabilitate natural resources on military installations;
- sustain multipurpose use of the resources and public access to military installations to facilitate the use of those resources;
- participate as appropriate, in regional ecosystem initiatives; and
- demonstrate conservation benefits for species listed under the Endangered Species Act.

The INRMP also specifically addresses compatibility and encroachment issues for current land uses and activities that take place at NBVC Point Mugu, Port Hueneme, and San Nicolas Island. The INRMP continues to establish management policies in order to mitigate these issues. NBVC Point Mugu, Port Hueneme, and San Nicolas Island have separate INRMP to guide decisions at each unique area of the base.



JLUS Relevancy

The INRMP helps to further the best use of biological resources affected by NBVC in the JLUS Study Area. More information on biological resources can be found in Section 5.3, Biological Resources.

Naval Base Ventura County Activity Overview Plan

The Naval Base Ventura County Activity Overview Plan (AOP) addresses regional land and facility requirements from a functional point-of-view and provides land use recommendations. The Plan identifies and provides guidance on infrastructure, resources, and base goals. These include:

- Identify ways to meet requirements, optimize resources, reduce costs, increase capabilities, and improve efficiency;
- Provide guidance for the maintenance and future development of the infrastructure at NBVC;
- Identify necessary NBVC military construction (MILCON) projects, special projects, and demolitions;
- Identify efficient utility systems and infrastructure to achieve energy conservation goals;
- Optimize land use allocation and siting and maximize the physical efficiency of facilities;
- Create an aesthetically pleasing living and working environment; and,
- Provide ecologically sustainable solutions.



JLUS Relevancy

The AOP helps to define the military footprint of NBVC. More information on the military footprint can be found in Chapter 3, Military Profile.

Naval Base Ventura County Encroachment Action Plan

The Encroachment Action Plan (EAP) identifies encroachment issues in the communities surrounding NBVC Point Mugu and NBVC Port Hueneme that may have an impact on mission-critical activity. The EAP identifies 14 encroachment challenges and 11 types of mission impacts that can affect NBVC. Some of the most important challenges at NBVC include:

- Urban Development
- Competition for Air, Land, and Sea Space
- Threatened and Endangered Species
- Safety Arcs and Footprints
- Water Quality

Depending on the encroachment challenges and associated impacts, the EAP suggests management strategies and actions to address current challenges and prevent future encroachment challenges from occurring.

Specific management practices include:

- Environmental coordination on urban development with NSWC-PHD PAO and the California Coastal Commission;
- Providing public access to coastal and ocean areas through communication with the City of Port Hueneme;
- Ensure compliance and monitoring of environmental standards by agencies such as the Public Works Department, Environmental Stewardship, and Readiness Support Branch of the Environmental Division;
- Identify easements to ensure compatibility with noise, ESQD, and clear zone criteria;
- Water quality efforts through DON cleanup and maintenance of water quality standards.

Although each jurisdiction is able to depict specific land uses that may be potentially incompatible with NBVC missions, NBVC Point Mugu and NBVC Port Hueneme have established constant coordination in order to ensure future land uses do not encroach onto the installations mission.



JLUS Relevancy

The EAP helps to reduce the amount and extent to which incompatible uses interact with the base. The EAP can inform the public of mission impacts to land uses adjacent and proximate to the base enabling more-informed land use decisions.

Range Complex Management Plan

Military ranges have seen increased pressure from encroachment, environmental regulations, and budget constraints. The Range Complex Management Plan (RCMP) provides guidance to address new regulations meant to reduce pressure on military ranges. The document is split into two volumes. Volume I contains policy-level information to address issues of management and operation of military ranges and protection of military ranges from issues that may impact viability. Volume II specifically addresses individual requirements of the Point Mugu Sea Range and IR-200.



JLUS Relevancy

The Range Complex Management Plan helps to establish a footprint for the NBVC range military influence area. More information on the military footprint on the JLUS Study Area can be found in Chapter 3, Military Profile.

4.3. State of California Legislation

California has a history of collaboration with the military; this section provides an overview of related legislation. At times, compatibility requires legislation to ensure notification, awareness, and review that are inherent in the development process. Compatible growth is related to military training and balanced growth.

Assembly Bill 1108 (2002)

California Assembly Bill (AB) 1108 (Chapter 638, Statutes of 2002) amends the California Environmental Quality Act (CEQA) to require CEQA lead agencies to notify military installations when a project meets certain criteria. The purpose of AB 1108 is to ensure military notification through the

CEQA process of proposed projects that could potentially impact military operations.

AB 1108 amends CEQA to provide military agencies with early notice of proposed projects within two miles of installations or underlying training routes and special use airspace. To obtain this information, a military installation such as NBVC, must provide local planning agencies within the critical operations areas (COA) within the installation, contact person, the relevant information such as impact areas, and boundaries of the installation's COAs. The local lead agency is required to give notice to military installations of any project within their boundaries if: (1) the project includes a general plan amendment; (2) the project is of statewide, regional, or area-wide significance; or (3) the project is required to be referred to the Advisory Land Use Committee (ALUC) or appropriately designated body. This notification provides the military installation with an opportunity for early input so potential conflicts can be evaluated and addressed proactively.



JLUS Relevancy

AB 1108 helps to decrease the chance that local jurisdictional projects will affect NBVC and its ability to carry out military missions. More information related to communication between local jurisdictions and NBVC can be found in Section 5.5, Coordination / Communication.

Assembly Bill 2641

The Native American Human Remains and Multiple Human Remains legislation (Chapter 863, Statutes of 2006) amends the Public Resources Code relating to burial grounds. The law authorizes the creation of a commission to prevent damage to Native American burial grounds or places of worship. The bill requires meaningful discussion between descendants of those whose remains are found and landowners so the Native American human remains are identified and considered during development activities. The commission must contact the most likely descendants in the event of notification from a county coroner upon Native American human remains discovery. Upon discovery, the landowner and Federal and State Governments must ensure that the surrounding area is not disturbed or damaged in the vicinity of the

discovery location until coordination has taken place with the descendants and their recommendations considered. To protect sites where remains have been identified, the landowner must: record the site with the commission; use an open space or conservation zoning designation or easement; or, record a document with the county in which the property is located.



JLUS Relevancy

NBVC's location near the ancestral home of the Chumash people increases the likelihood that Native American remains may be found in the installation vicinity.

Assembly Bill 2776 (2002)

The Aviation Noise Disclosure legislation (AB 2776, Chapter 496, Statutes of 2002) amends the real estate transfer disclosure statute (California Civil Code, Division 2 – Property, Part 4 – Acquisition of Property, Title 4, Chapter 2 – Transfer of Real Property) to require sellers or lessors to disclose airport proximity if a house is within an airport influence area. An airport influence area is defined as the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses. The intent of the legislation is to notify buyers of the potential noise, vibration, odor, annoyances, or other nuisances now or in the future as a result of the normal operation of an existing or proposed airport.



JLUS Relevancy

Aviation Noise Disclosure legislation helps limit sensitive receptors from unknowingly locating within a military noise contour area. For more information on noise, see Section 5.16, Noise and Vibration.

California Coastal Act

The California Coastal Act of 1976 established provisions for guiding and regulating land uses in and around a shoreline. The Act defined the goals and policies, set the boundaries of the State's coastal zone, and created the mechanisms such as the Coastal Commission, to implement the coastal management program and manage California's coastline.



JLUS Relevancy

While NBVC has authority over installation land, the Coastal Act applies to the coastline areas that surround NBVC. More information on land use can be found in Section 5.11, Land Use.

Source: California Coastal Commission, Coastal Management Program.

California Environmental Quality Act / National Environmental Protection Act

The California Environmental Quality Act (CEQA) was enacted in 1970 to protect the environment by requiring public agencies to analyze and disclose the potential environmental impacts of proposed land use decisions. CEQA is modeled after the federal National Environmental Policy Act (NEPA).

The purpose of CEQA is to inform agency decision-makers and the public about the potential environmental effects of proposed activities. Using this information, decision makers can identify ways that environmental impacts can be avoided or significantly reduced by requiring the mitigation of significant environmental effects, when feasible.



JLUS Relevancy

CEQA informs of environmental impacts of a proposed project but has no authority to prohibit projects that may impact the environment from being built. However, projects with significant environmental impacts may garner public opposition. CEQA has influence over Factor 1, Air Quality, Factor 3, Biological Resources, Factor 4, Climate Adaptation, Factor 11, Land Use, Factor 15, Marine Environments, Factor 20, Scarce Natural Resources, and Factor 22, Water Quality / Quantity.

McAteer-Petris Act

The McAteer-Petris Act was the second piece of legislation that enabled the Coastal Management Plan. The Act was passed in 1965 and authorized the establishment of the San Francisco Bay Conservation and Development Commission (SFBCDC) as a quasi-governmental agency. The intent of this law was to establish this commission to develop a Bay Plan to orderly guide and regulate land uses in and around the bay of San Francisco. This law was enacted largely due to the concern of indiscriminate filling of the bay.

The Act was later amended in 1969 and made the SFBCDC a permanent agency that was charged with the implementation of the Bay Plan.

Source: McAteer-Petris Act, California San Francisco Bay Conservation and Development Commission, 2010, www.bcdc.ca.gov/laws_plans/mcateer_petris.shtml.

Porter-Cologne Water Quality Act

Under this act, the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB) have broad authority to perform water quality regulatory oversight with the goal of preserving and enhancing all beneficial uses of the state's water.



JLUS Relevancy

Water quality is crucial to day-to-day operations of any organization. Lack of a steady water supply could inhibit full execution of mission-critical activities at NBVC.

Senate Bill 18 2004

California Senate Bill (SB) 18 (Chapter 904, Statutes 2004) established the Native American Heritage Commission to prevent severe and irreparable damage to a Native American sanctified cemetery, place of worship, religious or ceremonial site, or a sacred shrine located on public property. This legislation also provides for the maintenance of a contact list that includes federally-recognized California Native American tribes or non-federally recognized California Native American tribes who have the authority to acquire and hold conservation easements.

SB 18 requires all planning agencies to refer to and provide involvement opportunities to California Native American tribes on proposed actions affecting tribes. Prior to the adoption or amendment of a city or county general plan, the jurisdiction must consult with California Native American tribes to preserve specified places, features, and objects located within the jurisdiction.



JLUS Relevancy

Ventura County is the ancestral home of native Chumash people. It is likely that cultural resources could be located on or surrounding NBVC.

Senate Bill 1462 (2004)

SB 1462 (Chapter 906, Statutes of 2004) expanded the requirements for local governments to notify military installations of proposed development and planning activities. This statute states that “prior to action by a legislative body to adopt or substantially amend a general plan, the planning agency shall refer the proposed action to the branches of the Armed Forces when the proposed project is located within 1,000 feet of a military installation, beneath a low-level flight path, or within Special Use Airspace (SUA)...”.

The purpose of SB 1462 is to require public agencies to provide a complete copy of a development application of any proposed development located within 1,000 feet of a military installation, SUA, or a low-level flight path. It authorizes any branch of the United States Armed Forces “to request

consultation” to avoid potential conflict and to discuss “alternatives, mitigation measures, and the effects of the proposed project on military installations.” SB 1462 also requires military review of proposed actions that potentially impact installation operations and missions. This allows the military the opportunity to comment on proposed development and express concerns with potential impacts on the installation.



JLUS Relevancy

SB 1462 helps to foster communication between NBVC and local jurisdictions. For more information on communication and coordination between NBVC and local jurisdictions, see Section 5.5, Coordination / Communication.

Senate Bill 1468 (2002)

SB 1468 (Chapter 971, Statutes of 2002) requires State Office of Planning and Research (OPR) to include guidance concerning incorporating military installation compatibility into a general plan, and how a general plan should consider the impact of civilian growth on readiness activities at military bases, installations, and training areas. The statute includes the following methods to address military compatibility in a general plan:

“In the land use element, consider the impact of new growth on military readiness activities carried out on military bases, installations, and operating and training areas, when proposing zoning ordinances or designating land uses covered by the general plan for land or other territory adjacent to those military facilities, or underlying designated military aviation routes and airspace.

“In the open-space element, open-space land is defined to include areas adjacent to military installations, military training routes, and restricted airspace.

“In the circulation element, include the general location and extent of existing and proposed military airports and ports.”

SB 1468 is part of a state policy package to promote the development of a partnership between communities and the military that allows for collaboration on land use compatibility issues. OPR encourages local jurisdictions near military installations, and under military training routes or restricted airspace, to incorporate the above items into their general plans.

Local governments are not currently required by law, however, to incorporate the SB 1468 military compatibility guidance in their general plans. The bill specifies that if a funding agreement is reached between OPR and the military to support these efforts, the inclusion of military compatibility issues in a general plan will become mandatory.



JLUS Relevancy

OPR guidance to include military compatibility in general plans gives local government a tool that can help foster communication between NBVC and the individual jurisdictions in the JLUS Study Area. More information on communication between NBVC and local jurisdictions can be found in Section 5.5, Coordination / Communication.

4.4. State of California Plans and Programs

California Advisory Handbook for Community and Military Compatibility Planning

The requirement for a compatibility handbook was reflected in Government Code §65040.9, which directed OPR to prepare “an advisory planning handbook for use by local officials, planners, and builders that explains how to reduce land use conflicts between the effects of civilian development and military readiness activities...”.

The Handbook was completed in 2006 and designed to serve as a resource to help develop processes and plans that would sustain local economies, safeguard military readiness, and protect the health and safety of residents living near military bases. The handbook is a useful tool for development of a JLUS as it describes in detail the different compatibility issues that should be

explored and the types of compatibility tools available to address these identified issues. The handbook can be found at:
http://opr.ca.gov/docs/Complete_Advisory_Handbook_2006.pdf



JLUS Relevancy

The Advisory Handbook can help to foster better understanding of military needs by local jurisdictions in the JLUS Study Area. More information on communication between NBVC and local jurisdictions can be found in Section 5.5, Coordination / Communication.

California Coastal Management Program

The California Coastal Management Program is a combination of federal, state, and local planning and regulatory authorities who implement land use controls for land, air, and water resources along the coast. The California Coastal Management Program comprises three agencies:

- The California Coastal Commission;
- The San Francisco Bay Conservation and Development Commission; and,
- The California Coastal Conservancy.

These three agencies are responsible for the management, protection, restoration, and enhancement of the California coastal resources of various segments of the coastline. These agencies carry out these responsibilities through a variety of actions including planning, permitting, and non-regulatory measures.

Specifically, the California Coastal Commission manages development along the California coast, except in the San Francisco Bay Area which is managed by the San Francisco Bay Conservation and Development Commission. The California Coastal Conservancy purchases, protects, restores, and enhances coastal resources and provides access to the shore. The Coastal Program is governed primarily by the California Coastal Act, McAtteer-Petris Act, and Suisan Marsh Preservation Act. The California Coastal Commission's planning

area or coastal zone extends 1,000 yards or slightly more than half a mile inland from the mean high tide line. However in significant coastal estuary and recreational areas, the coastal zone can extend inland to the first major ridgeline or five miles from the mean high tide line, whichever is less. The coastal zone extends less than 1,000 yards or slightly less than half a mile in developed urban areas. For federal consistency, the Coastal Commission reviews activities that affect the coastal zone, regardless of their location.



JLUS Relevancy

NBVC has jurisdiction over installation lands but the Coastal Program affects the coastal land which surrounds the base. More information on land use can be found in Section 5.11, Land Use.

Source: www.coastal.ca.gov/fedcd/ccmp_description.pdf

California Endangered Species Act

The California Endangered Species Act (CESA) protects and preserves sensitive native species and their habitats. CESA allows for an incidental take of a listed endangered species or its habitat to a lawful development project. CESA is based in the foundations of early consultation to avoid adverse impacts to such species and their habitat and to develop mitigation planning in projects that will allow for the recovery of endangered species and essential habitats.

Coordination and a CESA Incidental Take Permit must be obtained from the DFW prior to construction.



JLUS Relevancy

CESA can limit NBVC from conducting or introducing certain missions if an endangered species is present on base and requires extensive management measures. More information on biological resources can be found in Section 5.3, Biological Resources.

Source: *California Department of Fish and Game, California Endangered Species Act (CESA), 2012.*
www.dfg.ca.gov/habcon/cesa/incidental/cesa_policy_law.html

California Farmland Conservancy Program

The California Farmland Conservancy Program (CFCP) of 1995, authorized by the California Code of Regulations Title 14, Division 2, Chapter 2, is a statewide grant program that supports and encourages local government agencies and eligible non-profit organizations to preserve California's leading industry, agriculture. The CFCP program enables local government agencies to preserve California's valuable land asset by placing farmlands into agricultural conservation easements. The easements are essentially deed restrictions that limit development from occurring on lands within the easement, while providing for the preservation of the natural environment either for scenic views or for commercial agriculture uses. These easements renew annually unless the landowner or the government agencies opt for non-renewal, making it a non-permanent conservation. There is no minimum number of years required to remain in the program and many do so in perpetuity; therefore, the land remains in the agriculture land use category even if the land changes ownership. An alternative option to this program is to place the land into a permanent agricultural conservation easement, in which the land will remain agricultural in perpetuity.



JLUS Relevancy

Farmland is generally a compatible land use around military installations. Conserving farmland in the vicinity of NBVC strengthens the agriculture industry in the county and promotes compatibility with the NBVC mission. More information on land use at NBVC can be found in Section 5.11, Land Use.

California Health and Safety Code (Section 7050.5) and California Public Resources Code (Section 5097.98)

California law requires that any time human remains are discovered, the relevant county coroner be contacted. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission.



JLUS Relevancy

NBVC's location is the ancestral home of the Chumash people. There is a possibility that Native American remains may be found in proximity to the installation.

California Historical Resources Information System (CHRIS)

The CHRIS is made up of twelve regional Information Centers and the State Historic Resources Inventory (SHRI). The SHRI is maintained by the California Office of Historic Preservation and includes information on historical resources that have been identified and evaluated through one of the programs that OHP administers. The ICs provide environmental about cultural and historical resources, including archaeological surveys and historic resource surveys.



JLUS Relevancy

The CHRIS can help NBVC determine if any cultural resources are located in areas significant to a mission.

California Land Conservation Act / Williamson Act

The California Land Conservation Act, or the Williamson Act, was enacted in 1965 under Governor Pat Brown with the aim of preserving and protecting California's leading agriculture industry. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of designating certain parcels of land for only agriculture use or open space. This designation results in lower property tax assessments to landowners and a state subsidy to local governments for foregone tax revenues associated with private landowner participation. A Land Conservation Agreement (LCA) through the Williamson Act allows for reduction in tax assessment during the period of time the agreement is in effect. It continues to run but is not a permanent solution as the property owner can request termination. The LCA values the property as agriculture rather than having a speculative value included as well. Instead of automatically renewing for another year, the agreement would then terminate in 10 years (earlier if findings are made and repayment of taxes are made). An alternative option to this program is to place the land into a permanent agricultural conservation easement, in which the land will remain agricultural in perpetuity.



JLUS Relevancy

The Williamson Act helps to protect farmland and open space. When Williamson Act contracts are created for parcels near NBVC, military compatibility is furthered by reducing the risk for incompatible urban uses. More information on land preservation in the Study Area can be found in Section 5.11, Land Use, Section 5.12, Land, Air, and Sea Space Competition, and Section 5.13, Legislative Initiatives.

Source: www.conservation.ca.gov/dlrp/Pages/index.aspx

California Military Land Use Compatibility Analyst

The California Military Land Use Compatibility Analyst (CMLUCA) was developed by OPR to assist the development community and local governments in determining if a project affects military training areas and airspace. The CMLUCA is a mapping tool that identifies where a project is relative to the nearest military installation. This mapping application enables users to determine compliance with state legislation requiring the

development community and local government agencies to notify the military of any project that may affect military readiness.



JLUS Relevancy

CMLUCA provides another means to enable better communication between local jurisdictions and NBVC. More information on communication between local jurisdictions and NBVC can be found in Section 5.5, Coordination / Communication.

California Department of Transportation Interregional Transportation Strategic Plan

The California Department of Transportation (Caltrans) Interregional Transportation Strategic Plan provides a strategic vision for the major routes within the state, with certain US and state Highways identified as High Emphasis Routes and Focus Routes. Caltrans has revalidated the initial set of Focus Routes to their continued importance, and considered if some or all portions of those routes should be dropped, and whether new routes should be added.



JLUS Relevancy

The Caltrans Interregional Transportation Strategic Plan can help to focus improvements on major roads leading to and from NBVC. More information on roadways in the JLUS Study Area can be found in Section 5.18, Roadway Capacity.

Source: www.dot.ca.gov/hq/tpp/offices/oasp/ITSP_document_FINAL.pdf

4.5. Local Jurisdictions – Growth Management

Guidelines for Orderly Development

The 1996 Guidelines for Orderly Development have been adopted by the County of Ventura, all cities within Ventura County and the Ventura County Local Agency Formation Commission (LAFCo). This version refines the guidelines originally adopted in 1969. The overall goal of these guidelines remains that urban development should be located within incorporated cities.

The intent of these Guidelines, as stated in the County's summary sheet, is to:

- Clarify the relationship between the Cities and the County with respect to urban planning.
- Facilitate a better understanding regarding development standards and fees.
- Identify the appropriate governmental agency responsible for making determinations on land use requests.

More information on these Guidelines is provided in Section 2.6.

SOAR

In 1995, Save Open Space and Agricultural Resources (SOAR), a non-profit group, was organized to protect the area's rich agricultural land from encroaching development. The group coordinated the SOAR initiative. The key features of SOAR are:

- Requires a countywide vote on amendments to the Ventura County General Plan land use designations from Agricultural, Open Space or Rural to more intense land use designations or weaken the land use policies protecting agricultural resources.
- Establishes City Urban Restriction Boundaries (CURBs) and requires a citywide vote to alter these lines.

- LAFCo has endorsed the use of city SOAR initiatives/ordinances in consideration of proposed amendments to city Spheres of Influence and city annexations.
- Reinforces existing greenbelts, city spheres of influence (SOI), Guidelines for Orderly Development, and Ventura County General Plan.

The General Policies of the SOAR initiative are also important to help cities manage growth. The General Policies include:

- Urban development should occur, whenever and wherever practical, within incorporated cities which exist to provide a full range of municipal services and are responsible for urban land use planning, and
- The Cities and the County should strive to produce general plans, ordinances and policies which will fulfill these Guidelines.

More information on SOAR (including a map of areas covered) is provided in Section 2.6, Growth Management.

Greenbelt Agreements

Greenbelts are established by agreements between Ventura County, the Ventura County LAFCo, and specific cities. These greenbelt agreements, and the greenbelts they establish, ensure that entities entering into these agreements will not annex land within the subject areas, resulting in the preservation of open space buffers between entities. Relative to the NBVC JLUS Study Area, the applicable greenbelt agreements are the Oxnard-Camarillo Greenbelt, the Santa Rosa Valley Greenbelt, and the Ventura-Oxnard Greenbelt.

- **Oxnard-Camarillo Greenbelt Agreement.** During the 1980s the City signed a joint resolution with the City of Camarillo and the County of Ventura to create the Oxnard-Camarillo Greenbelt Agreement. This agreement calls for the preservation of a large agricultural area (approximately 27,000 acres) between the cities of Oxnard and Camarillo.

- **Santa Rosa Valley Greenbelt Agreement.** The Santa Rosa Valley Greenbelt was established in 1985 through a joint resolution between the City of Camarillo and the County of Ventura. The greenbelt encompasses areas to the north and east of the City of Camarillo in order to protect lands within existing plans.
- **Ventura-Oxnard Greenbelt Agreement.** The Ventura-Oxnard Greenbelt Agreement was established through a joint resolution by the cities of San Buenaventura and Oxnard and the County of Ventura in 1994 and was added to in 2002. The greenbelt is located south of San Buenaventura and north and west of Oxnard. It includes 5,104 acres of unincorporated County land.

More information on greenbelts (including a map of locations) is provided in Section 2.6, Growth Management.

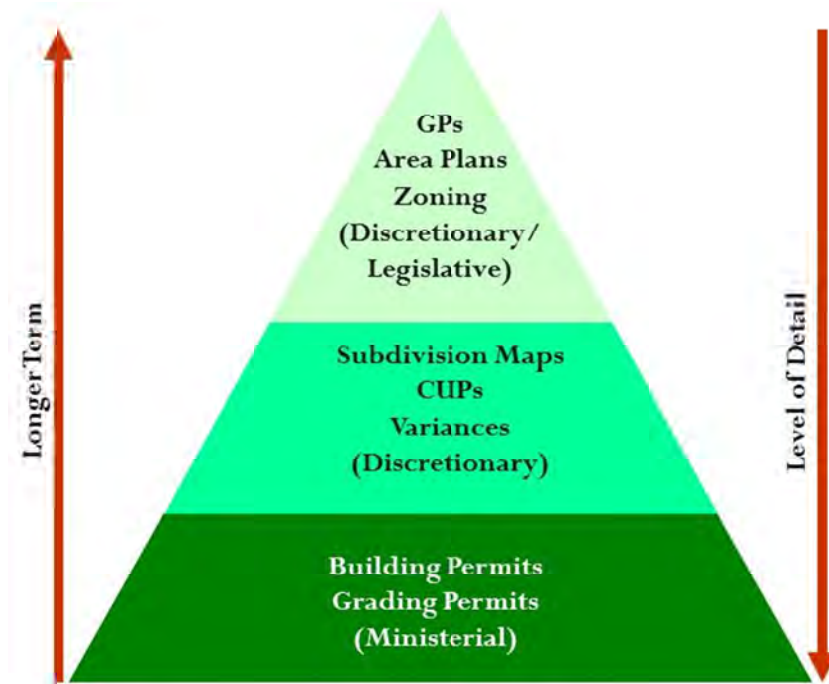


JLUS Relevancy

The various growth management techniques used in Ventura County have direct applicability to lands within the NBVC JLUS Study Area, and help to protect NBVC from encroachment by incompatible urban land uses.

4.6. Local Jurisdictions – General Plans

Local plans and programs can greatly influence compatibility planning. Of these, the general plan provides the foundational policy against which all local planning activities are guided (see diagram, below). California state law requires each city and county to adopt a general plan “for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning” (§65300). The general plan, as mandated by state law, must cover seven required elements (land use, circulation, housing, conservation, open space, noise, and safety) and identify the goals, policies, and programs the county will implement to manage future growth and land uses.



JLUS Relevancy

The general plans of the local jurisdictions in the NBVC JLUS Study Area are critical in that they can provide policy guidance on compatibility. As all planning actions in a jurisdiction need to be found consistent with their general plan, incorporation of specific policies on compatibility will be important in developing a robust approach to compatibility planning. While the existing general plans address a number of compatibility topics, others will be identified as part of the JLUS assessment (see Chapter 5 for more details).

Ventura County

The Ventura County General Plan provides countywide goals, policies, and programs organized into four chapters (Resources, Hazards, Land Use, and Public Facilities and Services) that cover the required components of the seven elements prescribed by State law. The General Plan also contains four appendices (Resources, Hazards, Land Use, and Public Facilities and Services) which provide background information and data.

The County's General Plan was adopted in May 1988 and last amended in June 2011. Amendments currently pending do not appear to address or affect military compatibility issues.

Source: Ventura County General Plan, 1988; last amended, 2011.

The County's General Plan also incorporates several Area Plans which contain specific goals, policies and programs for specific geographical areas of the county. The area plans that are relevant to the NBVC JLUS Study Area are the Coastal Area Plan and El Rio/Del Norte Area Plan. These area plans are elements of the General Plan that provide additional guidance (development standards / policies) for land use decision-making and other planning and resource protection matters in unincorporated areas of the county subject to urbanization or other special considerations such as coastal zone management, development pressure, or redevelopment.

Coastal Area Plan

The Coastal Area Plan (CAP) acts as the land use plan for the unincorporated coastal areas of Ventura County. The CAP along with the Coastal Zoning Ordinance makes up the Local Coastal Program (LCP). The LCP was mandated by the California Coastal Act of 1976 to manage the conservation and development of coastal resources. The coastal zone is divided into three sub-areas: North, Central, and South Coast, each with a different set of issues.

The CAP addresses topics such as environmentally sensitive habitats, archaeological resources, recreation and access, agriculture, hazards, beach erosion, energy and industrial facilities, public works, locating and planning of new development, and potential conflicts.

The Ventura County CAP was last amended in September 2008. The California Coastal Commission certified these amendments October 2008.

El Rio/Del Norte

Last amended in June 2011, the El Rio/Del Norte Area Plan encompasses approximately 6,984 acres of unincorporated land northeast of the city of Oxnard and within the city of Oxnard Sphere of Influence (SOI). The plan specifies the distribution, location, and types and intensity of land uses and provides specific policies concerning development in the subject area.

The plan provides for up to 20 dwelling units (du) per acre (ac) though current designations are mostly in the 4-6 du/ac range. Building intensities of 50-60% lot coverage are provided in the commercial, industrial, and institutional land use categories.

Source: www.ventura.org/rma/planning/plans/general-plan/area-plans.html

City of Camarillo

The City of Camarillo General Plan contains the following mandatory and optional elements (adoption dates are in parenthesis): Land Use (2003), Circulation (2005), Housing (2009), Open Space and Conservation (2007), Community Design (2012), Safety (1999), Noise (1996), CURB (1998), Scenic Highway (1984), and Recreation (2002). Each element contains community goals, objectives, planning principles, and planning standards (which are policy statements translatable into zoning and subdivision regulations). The City of Camarillo is currently in the process of updating the Noise Element.

Camarillo's General Plan includes language that helps to foster compatibility between NBVC and the City. For instance:

- the Noise Element includes policy for close coordination with Point Mugu regarding operations and noise;
- the General Plan also supports use of open space to protect the mission of the military installations in the area, military training routes, and restricted airspace;

- includes policy on reducing light and glare impacts from development.

Source: *City of Camarillo General Plan, 2004; General Plan Annual Report for Year 2011, City of Camarillo.*

City of Oxnard

The Oxnard General Plan is the guide to future development within the city through the year 2030. A major update of the entire General Plan was adopted in October 2011. The General Plan includes the seven state-mandated elements and optional components consolidated into seven elements (Sustainable Community, Community Development, Infrastructure and Community Service, Environmental Resources, Safety and Hazards, Military Compatibility, and Housing).

The General Plan is unique in that it includes a Military Compatibility Element, designed to address some of the topics covered by this JLUS. This element includes:

- policy for enhanced development coordination and communications;
- controls on vertical obstructions, and cooperation in the preservation; and
- enhancement of the extensive wetlands of the Mugu Lagoon.

The City of Oxnard also maintains a Coastal Land Use Plan (February 1982) which contains the land use designations for the coastal zone of the city and is incorporated into the General Plan. The coastal zone consists of four areas, McGrath-Mandalay, Oxnard Shores, Channel Islands, and Ormond Beach. The Coastal Land Use Plan consists of several land use categories including: energy facility, existing residential area, industrial, mobile home park, public facilities and recreation, residential designation, resource protection, and visitor-service commercial. The coastal land use plan includes the local coastal policies for agriculture, urban development, habitat areas, diking, dredging, filling, and shoreline structures, and other topics including hazards.

Source: *Oxnard General Plan, 2011; Oxnard Coastal Plan, 1982.*

City of Port Hueneme

The Port Hueneme General Plan covers the seven state mandated elements plus additional focus on infrastructure. Elements are: Land Use, Circulation/Infrastructure, Housing, Conservation/Open Space/Environmental Resources, Noise, and Public Safety and Facilities. The General Plan includes an optional Economic Development Element as well as the State mandated Local Coastal Program (LCP). The majority of the elements in the Port Hueneme General Plan were last updated in 1998, except for the Housing Element which was updated in 2010.

According to the General Plan, NBVC Port Hueneme encompasses 57 percent of the city land area and employees 13,000 people, making it the “most significant enterprise within Port Hueneme”. The General Plan includes:

- a key object that promotes “stronger ties and ongoing linkages between the City, the Port, and the Military”;
- guidance on incorporation of sound attenuation into new construction; and
- close coordination with the Navy and Port District to ensure adequate circulation improvements area planned.

The LCP carries out the State’s coastal objectives and policies as laid out in the California Coastal Act of 1976. The LCP is divided into a land use plan and zoning ordinance. The Land Use Plan divides Port Hueneme into various districts within the LCP area and describes the land uses and development policies.

Sources: Port Hueneme General Plan, 1998; The California Planner’s Book of Lists, 2011, State Office of Planning and Research.

4.7. Local Jurisdictions – Zoning

The zoning ordinance (also referred to as a zoning or development code) is used to regulate the types of land use within a jurisdiction. The zoning ordinance is the principal tool used to implement the general plan. While the general plan provides broad policy direction on land use, the zoning ordinance provides the specific rules under which land can be developed and used. This includes standards for building setbacks, height restrictions, lot coverage, and design requirements. Adoption of the zoning ordinance, zoning changes, or amendments requires review at a public hearing.



JLUS Relevancy

Zoning is a key tool in guiding development, and will be an important part of enhancing compatibility planning in the Study Area, especially as it relates to land use types, density/intensity, vertical height, light and glare controls, and conditional and conditional use permit (CUP) requirements. More information on land regulations and compatibility in the Study Area can be found in Section 5.11, Land Use.

Ventura County

Since 1983, Ventura County has employed two types of zoning based on location: non-coastal and coastal.

Non-Coastal Zoning

Non-coastal zoning, or inland zoning, is codified as Division 8, Chapter 1 of the Ventura County Ordinance Code, and was last amended in March 2014. It broadly categorizes the unincorporated portions of the county into categories (opens space/agriculture, rural residential, urban residential, commercial, industrial, special purpose, and overlay). Within these categories, there are 17 zones (districts) and three overlay zones.

Coastal Zoning

Coastal zoning is codified as Division 8, Chapter 1.1 of the Ventura County Ordinance Code and was last amended in December 2012, last certified by the California Coastal Commission in February 2013, and became effective

March 2013. The coastal zoning ordinance establishes 12 zones for the unincorporated coastal portions of the county.

City of Camarillo

The Camarillo zoning regulations are codified in the City's municipal code under Title 19, Zoning. The regulations list 13 (Chap 19.06) (and 17 in Chap. 19.10-34) zoning districts (zones) and various subzones which further regulate residential development. The zones are related to one of the five General Plan land use element descriptions and list the allowable uses, those requiring a CUP, and other development standards.

City of Oxnard

The City of Oxnard Zoning Ordinance is codified in Chapter 16 of the City's Code of Ordinances. Coastal zoning is codified in Chapter 17. The zoning ordinance includes 17 zones and an airport hazard overlay zone, which classify and govern the use of property through "bulk" development regulations. The coastal zoning is intended to integrate the Coastal Land Use Plan with the General Plan and the zoning ordinance. The Coastal Zoning Ordinance contains 16 zone designations.

City of Port Hueneme

The zoning regulations for Port Hueneme are adopted pursuant to Government Code Section 65100 et seq. and are codified in the City's code of ordinances in Article X. The zoning regulations are the minimum standards for the promotion of the health, safety, and welfare of the City's residents. The zoning regulations establish district (zone) requirements for permissible and conditional land use, minimum lot sizes, and dimensions as well as building height, mass, and other bulk regulations. The regulations detail the procedures for approvals and the conditions under which variances may be obtained. There are 11 zones and two overlay zones.

4.8. Local Jurisdictions – Subdivision Regulations

Subdivision regulations control the division of property and detail the location of individual parcels/lots, road rights-of-way, and easements. Local jurisdictions will typically have a subdivision ordinance that guides the review and approval of new subdivisions based on the State's Subdivision Map Act (commencing at Government Code Section 66410).

Basically, there are two types of subdivisions: parcel maps, which are limited to divisions resulting in fewer than five lots (with certain exceptions); and subdivision maps/tract maps, which create five or more lots.



JLUS Relevancy

Relative to compatibility, subdivision regulations can be used as another method to extend disclosure about a nearby military installation or use area. This is accomplished by the recordation of a notice when the property is divided. The City of Camarillo currently requires this notification. See more on this application in Section 5.5, Coordination / Communications.

Ventura County

Ventura County Subdivision Ordinance is codified as Division 8, Chapter 2 of the Ventura County Ordinance Code and was last amended June 2011.

City of Camarillo

Subdivisions are required to be consistent with the General Plan and any associated specific plan that may have been approved. The subdivision regulations are codified in Chapter 18 of the City's municipal code. The code also specifies the submittal and procedural requirements, and design standards for subdivisions.

A unique requirement in Camarillo's regulations is the requirement for tentative maps to show any applicable 60, 65, and 70 decibel community noise equivalent level (dB CNEL) contours. This provides a notification to future buyers of the potential exposure to higher noise levels.

City of Oxnard

The subdivision regulations are codified in Chapter 15 of the City's Code of Ordinances.

City of Port Hueneme

Subdivision regulations are codified in the City's Code of Ordinances in Article IX.

4.9. Local Jurisdictions – Building Codes

Building codes are ordinances / regulations controlling the design, construction process, materials, alteration, and occupancy of any structure to insure human safety and welfare. They include both technical and functional standards for the variety of structures.



JLUS Relevancy

Relative to compatibility, building codes can be used to address changes in structure requirements to enhance compatibility. An example of this is additional construction standards that define how to mitigate exposure to high noise levels that may be associated with areas near airfield operations.

Ventura County

The Ventura County Building Code (VCBC) 2010 edition is adopted by Ordinance No. 4422. It is administered by the Ventura County Resource Management Agency, Division of Building and Safety. The VCBC is a compilation of a number of ordinances dating back to June of 1986 including the following:

- California Building Standards Codes (Title 24, Parts 2, 2.5, 3, 4, 5, 6, 10, 11) and other model codes by reference
- California Residential Code 2009
- California Building Code 2009
- California Electrical Code (National Electric Code 2008)
- California Mechanical Code 2009

- California Plumbing Code 2009
- Uniform Housing Code 1997
- Uniform Code for the Abatement of Dangerous Buildings 1997
- International Existing Building Code 2009
- Appendix Chapter 1a of the California Existing Building Code

City of Camarillo

Chapter 16, Building and Construction of the Camarillo Municipal Code identifies the various building codes and latest editions adopted by reference with amendments and deletions. The adoption of these building codes is consistent with Government Code Section 50022.1. The codes adopted by reference are:

- The California Building Code (CBC), Volumes 1 and 2, and Appendices B, C, I and J
- International Property Maintenance Code (IPMC)
- The California Electrical Code (CEC)
- The California Plumbing Code (CPC)
- The California Mechanical Code (CMC)
- The California Energy Code
- The California Administrative Code
- The California Reference Standards
- The California Existing Building Code (CEBC)
- The California Residential Code (CRC)
- The California Green Buildings Standard Code (CGBSC), and Appendices A4 and A5

The Camarillo Building Codes require a 45 dB interior noise level for habitable rooms which helps to reduce the risk of noise related nuisances to noise sensitive receptors.

City of Oxnard

In 2014, the City of Oxnard adopted the following building codes by reference:

- California Code of Regulations, Title 24, Part 2 (California Building Code), 2013 edition, Appendices C, H, J, with amendments
- California Code of Regulations, Title 24, Part 2.5 (California Residential Code), 2013 edition, with amendments
- California Code of Regulations, Title 24, Part 2.5 (California Green Building Standards Code), 2013 edition, Appendices 1, C, H, I, J
- International Property Maintenance Code, 2006 edition
- Uniform Code for Abatement of Dangerous Buildings, 1997 edition
- California Code of Regulations, Title 24, Part 8 (California Historic Building Code), 2013 edition, Appendix A
- California Code of Regulations, Title 24, Part 3 (California Electric Code), 2013 edition with amendments
- California Code of Regulations, Title 24, Part 4 (California Mechanical Code), 2013 edition, Appendices A-D, with amendments
- California Code of Regulations, Title 24, Part 5 (California Plumbing Code), 2013 edition, Appendices A, B, D, I, K with amendments
- California Fire Code, 2013 edition, Appendices Chapter 4, B, D, F, H with amendments

The Oxnard Building Codes require a 45 dB interior noise level for habitable rooms which helps to reduce the risk of noise related nuisances to noise sensitive receptors.

City of Port Hueneme

The adopted building codes for the City of Port Hueneme are codified in the City's Code of Ordinances as follows:

- California Building Code, 2013 edition, part 2, Title 24, California Code of Regulations
- California Residential Code, 2013 edition, part 2.5, Title 24, California Code of Regulations

- California Green Building Standards Code, 2013 edition, part 11, Title 24, California Code of Regulations
- Uniform Code for the Abatement of Dangerous Buildings, 1997 edition
- Uniform Housing Code, 1997 edition
- California Electric Code, 2013 edition, part 3, Title 24, California Code of Regulations
- California Plumbing Code, 2013 edition, part 5, Title 24, California Code of Regulations
- California Mechanical Code, 2013 edition, part 4, Title 24, California Code of Regulations

The Port Hueneme Building Codes currently requires a 45 dB interior noise level for habitable rooms which helps to reduce the risk of noise related nuisances to noise sensitive receptors.

4.10. Local Jurisdictions – Other

While there are a number of other local jurisdiction plans and programs, the following two items, administered by Ventura County, are significant to furthering compatibility planning goals.

The Right-to-Farm Ordinance

This Ordinance is intended to protect the farming community from developments that may inhibit their ability to continue agricultural production. Agricultural wind machines, odors, dust, noise, and so forth can be the subject of nuisance complaints by adjoining property owners. The Right-to-Farm ordinance consists of two components. The first component includes the enforcement sections of the Coastal and Non-Coastal Zoning Ordinances and is administered by the Planning Division's Zoning Enforcement Section (Sec. 8183-4.1 and Sec. 8114-2.1.1, respectively) which protect farmers engaged in agricultural activity from public nuisance claims. The second component is administered by the agriculture commissioner and requires mandatory disclosure to neighboring property owners of the potential noise, odors, dust, and spraying that may result from farming detail procedures for mediation of disputes that may arise. The intent is to properly inform and set realistic expectations for new residents and occupants of buildings located adjacent to farming operations. This section of the

“Right-to-Farm” Ordinance puts a new purchaser of property on notice that existing agricultural operations inherently have noise, odor, and other potentially nuisance activities that are associated with accepted agricultural operations.

Source: www.ventura.org/rma/planning/ordinances/other-ordinances.html



JLUS Relevancy

The right to farm ordinance conveys the importance of agricultural lands in the JLUS Study Area. The local desire to maintain agricultural land around NBVC can help further military compatibility as well. More information on land use can be found in Section 5.11, Land Use.

Airport Comprehensive Land Use Plan for Ventura County

In July 2000, the Airport Comprehensive Land Use Plan (ACLUP) was adopted for all the airports within Ventura County. The Ventura County Transportation Commission (VCTC) administers this plan for the County and as such serves as the Airport Land Use Commission (ALUC).

The ACLUP identifies the various airports including NBVC Point Mugu and explains the plan’s relationship to local jurisdictions and their plans, policies and procedures of the ALUC, geographical area of concern, types of airport impacts, types of actions and development projects reviewed, supporting compatibility criteria for noise, safety, and airspace protection and overflight. The plan also provides individual airport policies, aircraft accident characteristics, safety compatibility policies, noise characteristics and compatibility policies, and implementation strategies for local jurisdictions.



JLUS Relevancy

The ACLUP is used to guide development near the airfields in the county to ensure compatible land uses near airfields. The ACLUP is over 10 years old, and will be evaluated in this JLUS for currency relative to current mission operations and needs.

4.11. Local Agencies – Master / Area Plans

Other agencies such as the California State University Channel Islands (CSUCI) use master plans to provide the foundational policy and overarching plan for the organization’s land use planning. The CSUCI uses its master plan to provide the overall policy, direction, and long-range vision for the campus.

California State University Channel Islands

Since 1998 when California State University (CSU) took possession of the 634-acre site, the CSU used the master planning process to develop a plan that would guide the development and sustainability of the CSU Channel Islands campus (CSUCI).

2007 Master Plan

The 2007 CSUCI Master Plan provides the vision for the development of CSUCI campus. The CSU System, through a collaborative public planning effort, commissioned this master plan to create a vision for the CSUCI campus for a 20-year planning horizon. There were various public outreach opportunities that were used to assist the University’s contractor to identify the important elements of the master plan. The following major elements were included in the plan:

- Architecture, Historic preservation,
- Circulation,
- Open spaces,
- Lighting,
- Wayfinding, and
- Sustainability.

These elements, among others were determined to be important for this campus. Thus these are the guiding elements for the plan and the development of the CSUCI campus. The zoning for the plan has been carried out by the county through the public process.

Community Development Area Specific Reuse Plan

The CSUCI Community Development Area Specific Reuse Plan is a plan that defines the goals, objectives, policies, and design guidelines for two portions of the CSUCI campus. The two portions are the residential area and the research and development area. The plan establishes design guidelines for the two land acquisitions—one for the residential area, an 83-acre site and the research and development area, a 23-acre site.

The Site Authority is the organization that was established by the State of California and the CSU to develop the CSUCI campus. The Site Authority has all the powers of a jurisdiction to carry out the development of the site.

The Site Authority uses this Area Plan to guide the development of these specific areas on the CSUCI campus to ensure the new campus development maintains the core elements that the CSUCI Master Plan prescribed in the Master Plan.



JLUS Relevancy

The CSUCI Master Plan and Specific Reuse Plan are important to the JLUS process because the plans establish the guiding framework for land use planning and future development for the CSUCI campus. It is important to assess these plans for compatibility as there are military flight tracks that traverse the campus which should be considered in land use planning, especially with noise sensitive land uses such as residential uses.

4.12. Other References

Resources

In the interest of land use compatibility between the military and the local community, the DOD Office of Economic Adjustment (OEA) and other public interest groups, such as the National Association of Counties (NACo), have prepared educational documents and videos that educate and inform the public about encroachment issues and methods that can be used to address existing or future compatibility concerns. Five resources that have been

published to inform the public on land use compatibility are identified as follows:

Guides

The Airport Land Use Planning Handbook, Caltrans

Prepared by the Caltrans Division of Aeronautics in 2002, supports implementation of the State Aeronautics Act (California Public Utilities Code, Section 21670 et seq.), which established statewide requirements for the conduct of airport land use compatibility planning. The Handbook can be found at:
www.dot.ca.gov/hq/planning/aeronaut/documents/alucp/AirportLandUsePlanningHandbook.pdf

The Practical Guide to Compatible Civilian Development near Military Installations (July 2007), OEA

This guide offers general information on community development and civilian encroachment issues. The guide can be found at: www.oea.gov

Joint Land Use Study Program Guidance Manual (November 2006)

This manual provides guidance on the JLUS program, process, and identifies efforts to support compatible development. This manual can be obtained on the OEA internet site at the following address: www.oea.gov

Encouraging Compatible Land Use Between Local Governments and Military Installations: A Best Practices Guide (April 2007), NACo

This guidebook presents case studies of best practices between the military and communities through communication, regulatory approaches, and Joint Land Use Studies. The guide can be accessed on the NACo internet site at the following address: www.naco.org

Videos

The Base Next Door: Community Planning and the Joint Land Use Study Program, OEA

This informative video discusses the issue of encroachment near military installations as urban development occurs within the vicinity.

Managing Growth, Communities Respond, OEA

This video highlights the lessons learned from three communities (Kitsap Naval Base in Bangor, Washington; Fort Drum in Jefferson County, New York; and Fort Leonard Wood in Pulaski County, Missouri) that have successful programs for managing growth near their respective military installations.

Please see next page.



5. Compatibility Assessment

Please see the next page.



Compatibility Assessment

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Compatibility, in relation to military readiness, can be defined as the balance or compromise between community needs and interests and military needs and interests. The goal of compatibility planning is to promote an environment where both community and military can coexist successfully.

A number of factors influence whether community and military plans, programs, and activities are compatible or in conflict. To provide a comprehensive assessment of potential compatibility issues, this JLUS process looked at 25 compatibility factors (topics). This set of factors, listed on Figure 5.0-1 was used to help characterize compatibility concerns.

This chapter provides an assessment of the relevant compatibility factors and identified issues. This assessment provides the framework for the recommended strategies presented in the JLUS Report.

Figure 5.0-1 Compatibility Factors

| COMPATIBILITY FACTORS | | | |
|-----------------------|---|------------|--------------------------|
| AQ | Air Quality | LAS | Land / Air / Sea Spaces |
| AT | Anti-Terrorism / Force Protection | LU | Land Use |
| BIO | Biological Resources | LEG | Legislative Initiatives |
| CA | Climate Adaptation | LG | Light and Glare |
| COM | Coordination / Communication | MAR | Marine Environments |
| CR | Cultural Resources | NOI | Noise |
| DSS | Dust / Smoke / Steam | PT | Public Trespassing |
| ED | Energy Development | RC | Roadway Capacity |
| FSC | Frequency Spectrum Capacity | SA | Safety Zones |
| FSI | Frequency Spectrum Impedance / Interference | SNR | Scarce Natural Resources |
| LHA | Local Housing Availability | VO | Vertical Obstructions |
| IE | Infrastructure Extensions | V | Vibration |
| | | WQQ | Water Quality / Quantity |

Methodology and Evaluation

During the preparation of the Naval Base Ventura County (NBVC) JLUS, the public, the Policy Committee (PC), and the Technical / Advisory Committee (TAC) provided assistance in the identification of compatibility issues to be addressed in the JLUS using the list of 25 compatibility factors. Input on issues was derived from the following meetings and workshops (more detail on the committees and the meetings / workshops held can be found in Chapter 1).

- **Committee Meeting #1** (Joint Meeting of PC and TAC) held on March 13, 2013. This meeting developed an initial set of issues.
- **TAC Meeting #2 / PC Meeting #2** held on May 23, 2013. Committee members helped to refine a comprehensive set of compatibility issues.
- **Public Workshop #1**, September 10, 2013. The public provided their input on the issues they wanted addressed in the JLUS.
- **TAC Meeting #3 / PC Meeting #3** held on September 11, 2013. Review of public input on issues and revision of issue statements (first half of issues).
- **TAC Meeting #4 / PC Meeting #4** held on November 20, 2013. Review of public input on issues and revision of issue statements (first half of issues).
- **Public Workshop #2**, November 21, 2013. The public was invited to review and comment on the issue statements developed and to provide input on the priority level for addressing each issue.

The issue statements identified by the above process formed the structure of the compatibility assessment in this chapter. The following chapter is divided into sections covering each compatibility factor, and under each factor are one or more compatibility issues.

For each factor, the chapter starts with a set of key terms that are useful for understanding the discussion presented. For some factors that are more technical in nature, like Noise and Vibration (Section 5.16), there is a section

titled Technical Background that provides a brief overview of the general concept (for instance, what is noise and how is it measured).

Following Key Terms and Technical Background is the discussion of the issues identified. For each issue, there is presented a general background on the issue, the key findings from the assessment, and the current planning tools that apply to this issue. The intent is to provide an adequate context for the discussion of issues and to ultimately develop recommended strategies to address each issue. As such, it is not designed or intended to be used as an exhaustive technical evaluation of existing or future conditions within the study area.

When reviewing this information, it is important to note the following:

- Of the 25 standard compatibility factors, there were two factors determined not to have identified compatibility issues: Cultural Resources and Frequency Spectrum Capacity.
- Noise and Vibration issues were consolidated in Section 5.16 as these factors have a strong correlation in relation to activities at NBVC.

Please see the next page.

5.1. Air Quality

Air quality is defined by numerous components that are regulated at the federal and state level. For compatibility, the primary concerns are pollutants that limit visibility (such as particulates, ozone, etc.) and potential non-attainment of air quality standards that may limit future changes in operations at the installation or in the area.

Key Terms

Attainment Area. An attainment area is a geographic area that meets the National Ambient Air Quality Standards for a criteria pollutant.

Criteria Pollutants. The criteria pollutants are the six principle pollutants harmful to public health and the environment for which the Environmental Protection Agency has set National Ambient Air Quality Standards (NAAQS). The pollutants are: carbon monoxide (CO), lead, nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), and sulfur dioxide (SO₂).

Exceedance. An exceedance occurs when a measured air pollution level exceeds criteria prescribed by the Environmental Protection agency or the California Air Resources Board.

National Ambient Air Quality Standards. The National Ambient Air Quality Standards (NAAQS) are standards for outdoor air pollutants established by the Environmental Protection agency under authority of the Clean Air Act.

Nonattainment Area. A nonattainment area is a geographic area where air pollution levels persistently exceeds National Ambient Air Quality Standards, or that contributes to ambient air quality in a nearby area that fails to meet standards. Designating an area as nonattainment is a formal rulemaking process made by the Environmental Protection Agency, typically only after air quality standards have been exceeded for several consecutive years.

Ozone (O₃). Ozone is a pungent, colorless, toxic gas with direct health effects on humans, including respiratory and eye irritation and possible changes in lung functions. Ozone is created when hydrocarbons and nitrogen oxides released from vehicles and industrial sources react in the presence of sunlight. Because ozone requires sunlight to form, it occurs in concentrations considered serious primarily between the months of April and October.

Particulate Matter (PM). Particulate matter consists of fine metal, smoke, soot, and dust particles suspended in the air. Particulate Matter is measured by two sizes: Course particles (PM₁₀), or particles between 2.5 and 10 micrometers in diameter in size, and fine particles (PM_{2.5}), or particles less than 2.5 micrometers in diameter.

Issues Assessment

| | |
|-----------------------------|--|
| Issue AQ-1 | Air Quality Limitations on Operations <i>Associated with: NBVC Port Hueneme and NBVC Point Mugu</i> Current air quality conditions and regulations can impact operations at NBVC and NBVC's operations may impact air quality in surrounding communities. |
|-----------------------------|--|

A number of factors can influence air quality in a region. These include a variety of sources and types of pollutants, topographic conditions, weather, and other factors. For areas with criteria pollutants that exceed federal or state air quality standards, being in a non-attainment area can potentially cause delays or impede or reduce military operations and community activities due to the quality of air and its impact on health and the environment. Community sources of dust and air pollutants can also limit the opportunities for new military missions to be realigned at NBVC. Permits and funding for important infrastructure can be delayed or denied in non-attainment areas, or perhaps be issued subject to mitigation measures that increase the costs of project implementation.

While PM10 is often thought of as dust, it is measuring all fine particulates (less than or equal to 10 micrometers in size) that can result from a range of activities from ground disturbance to the burning of fossil fuels to use of aerosols (like paint).

Currently, Ventura County meets federal standards for PM10, but it exceeds state standards for these particulates (see Table 5.1-1).

Ozone is a secondary pollutant that is formed in the atmosphere based on other chemical precursors. These precursors are primarily the result of emissions from the combustion of fossil fuels. Ozone, even at low levels, can impact the respiratory system, and is therefore a key measure of overall air quality in an area. For ozone, the area was in non-attainment as recently as 2010, but 2013 monitoring shows the area to meet both federal and state standards (see Table 5.1-1).

Table 5.1-1 Air Quality Information for Study Area

| Year | PM10 | | | | Ozone | | |
|----------|---|---|--|--------------------------------------|---|--|--|
| | State Maximum 24-Hour PM10 Average PM10 Level (µg/m3) | State Annual Average PM10 Level (µg/m3) | # Days Exceeding Federal PM10 Standard | # Days Exceeding State PM10 Standard | Highest Measured 8-hour Ozone Level (State) (ppm) | Days Exceeding Federal Ozone 8-hour Standard | # Days Exceeding State 8-hour Ozone Standard |
| Standard | 50.0 µg/m3 | 20.0 µg/m3 | 50 µg/m3 | 50 µg/m3 | 0.070 ppm | 0.075 ppm | 0.070 ppm |
| 2013 | 58.4 | 24.3 | 0 | 0 | 0.063 | 0 | 0 |
| 2012 | 62.9 | 21.0 | 0 | 5.7 | 0.065 | 0 | 0 |
| 2011 | 76.4 | 22.2 | 0 | 5.7 | 0.069 | 0 | 0 |
| 2010 | 87.1 | 21.7 | 0 | 6.0 | 0.073 | 0 | 1 |
| 2009 | 99.9 | 25.6 | 0 | 12.2 | 0.077 | 1 | 1 |

Source: California Air Resources Board, Air Quality Data Statistics: <http://www.arb.ca.gov/adam/index.html>

All data from El Rio-Rio Mesa School #2 Air Monitoring Station (Rio Mesa High School)

The Environmental Protection Agency (EPA) is the principal federal agency responsible for air quality management in the United States (U.S.). Under the Clean Air Act, the EPA sets ambient air quality standards and oversees related planning, permitting, compliance and enforcement. Sections 110(a)(1) and (2) of the federal Clean Air Act (CAA), 42 U.S.C. § 7410(a)(1) require states and delegated local agencies to submit an implementation plan to the U. S. EPA demonstrating their ability and authority to implement, maintain, and enforce each NAAQS.

The California Air Resources Board (CARB) is the state board that provides oversight and direction to local air pollution control districts (APCDs) through informational, technical, and financial assistance. Its advisory and technical assistance comprises information on numerous air quality topics including but not limited to air pollution and health, air pollution sources, effects and ways to control. In addition, the agency offers financial assistance to the local APCDs. These financial programs are in partnership with the local APCDs, which implements the programs.

Locally, the Ventura County Air Pollution Control District (VCAPCD) is the agency that monitors local air pollutants in the county. The VCAPCD is the local air quality authority and rulemaking body for the county. Its charge is to reduce air pollutants from existing and future local sources such as painting, incineration, asphalt paving, and fuel burning by designing and implementing rules that protect the public health.

Findings

- The study area is not in state compliance relative to PM10, which could have implications on obtaining and maintaining air permits for activities associated with NBVC.
- The VCAQMP recognizes the military operations by identifying the percentage of air pollution emissions from the various vessels (commercial and military) and military aircraft operating in the Ventura County Coastal jurisdiction; however, the plan does not recognize the potential adverse impacts the new regulations could have on the military operations that occur in the Sea Range.

- While the VCAQMP has established some measures that control further degradation of the air quality in Ventura County, the plan does not establish controls for commercial shipping and the use of cleaner fuels outside the 24-nautical mile boundary, which is discussed further in Issue AQ-2.

Existing Tools

California Environmental Quality Act (CEQA)

California Environmental Quality Act (CEQA) provides local governments and the public with information about potential environmental impacts of proposed projects. Local jurisdictions and state and local agencies utilize this tool for their projects. This tool is a useful for informing project applicants of potential issues in a proposed plan and how to mitigate significant adverse effects on the environment. However, this tool is utilized late in the planning process, which can cause costly revisions of plans later. There is more discussion about the use of this tool and notifying the applicant, governmental agencies, and the public in issue discussion COM-3.

National Environmental Protection Act (NEPA)

Similar to CEQA, NEPA is used to inform the public and decision makers of the environmental implications of a proposed action. As a federal entity, most actions considered by NBVC go through a NEPA process, while some items that tie to a State permit (like air quality regulations) are addressed under CEQA. See the discussion under COM-3 for information on enhanced coordination.

Ventura County Air Quality Management Plan

The 2007 Ventura County Air Quality Management Plan (VCAQMP) was developed to address attainment status for the 8-hour federal ozone standard for the county. In addition, the VCAQMP was designed to show attainment demonstration for the federal 8-hour ozone standard, further progress demonstration for the federal 8-hour ozone standard, and transportation conformity relative to emissions.

The VCAQMP establishes various control measures including stationary source control measures, transportation control measures, conformity, and incentive programs to ensure the county attains the federal 8-hour ozone standard. These control measures are implemented by the VCAPCD and the state and the federal government through the CARB and EPA. Specifically, the CARB regulates on-road motor vehicles, some off-road mobile sources, consumer products and sets motor vehicle fuel specifications. The EPA regulates emissions from aircraft, locomotives, heavy-trucks used for interstate commerce, and some off-road mobile sources. State and federal laws prohibit local APCDs from regulating mobile sources.

The New Source Review (NSR) is a permitting program required by the Clean Air Act Amendments to help ensure that new or modified equipment or facilities do not further degrade the air quality or slow the progress towards clean air. NSR permits are legally binding and stipulate what can be constructed, the emissions limits that must be met, and the operation of emission sources. The NSR uses the best available control technology and emission offsets to best control emissions from these new sources.

Some transportation control measures include trip elimination, vehicle substitution; vehicle miles traveled reduction, and technological improvements. In general terms, these include ridesharing, carpooling, telecommuting, flexible work schedules, Smart Growth / Sustainable Community Projects, Mixed Use Developments, and other Transit Measures such as Passenger Rail Stations.

Ventura County Air Quality Control Board Air Toxics “Hot Spots” 2010 Annual Report

The Ventura County Air Quality Control Board (VCAQCB) releases an annual report that notifies the public of facilities that have routine and predictable emissions of toxic air pollutants that may pose a significant health risk to nearby residents and workers. These facilities are required to prepare emission inventories using criteria and guidelines developed by the CARB. Every four years, AQCB staff review information submitted to determine if there is a need to update the emission inventory.

Facilities that have routine and predictable emissions of toxic air are prioritized as high, medium, and low. High priority facilities are required to prepare a health risk assessment. The health risk assessment is prepared to the methods and standards of the state’s Office of Environmental Health Hazard Assessment (OEHHA). The assessment is then reviewed and approved by the APCD and the OEHHA staff. Facilities that are designated as an intermediate priority facility are exempt from further program requirements until the next four-year cycle begins. Low priority facilities are exempt from any further requirements unless new information suggests the need to re-evaluate the facility. The purpose of these “Hot Spots” reports is to efficiently notify the public of potential health risks associated with air pollutants. For Ventura County, the report stated “For Ventura County, a significant health risk for purposes of providing public notice under the ‘Hot Spots’ program has been defined as a lifetime excess cancer risk of greater than or equal to 10 in a million or an acute or chronic non-cancer total hazard index exceeding 1.”

According to the report, there were three locations on NBVC classified as intermediate priority facilities in the 2009 inventory year:

- Naval Base Ventura County, Point Mugu Site;
- Air National Guard-Channel Islands, Port Hueneme; and
- Naval Base Ventura County, Naval Construction Battalion Center, Port Hueneme.

These classifications were updated to reflect the mitigation actions taken by NBVC from the previous inventory years where these sites had approved health risk assessments.

In inventory years 1990 and 1996, these sites were designated as “hot spots” and had to prepare health risk assessments. The assessments indicated that the major air pollutant was hexavalent chromium used in paints at the auto hobby shop for aircraft coating and unconfined abrasive blasting. In accordance with the APCD guidelines, the public was notified and a community meeting was held for all sites.

In the 2000 inventory year, the NBVC had new health risk assessments prepared and completed indicating that the incidence of hexavalent chromium had been reduced to below the significance level due to NBVC no longer allowing hexavalent chromium paint at the auto hobby shop and the abrasive blasting operations had been enclosed and controlled.

Therefore in this case, the impacts to military operations were minimal and the air quality issues were resolved.

Ventura County Triennial Assessment and Update

The California Clean Air Act requires states to assess progress towards attaining state clean air standards every three years. The most recent document is compiled from data collected between 2009 and 2011. CARB recommends local air quality districts assess one-hour ozone standards by expected peak day concentration (EPDC) levels. Ozone at ground level contributes to air pollution by reacting with sunlight to create smog.

Ventura County has seen peak day ozone concentration significantly decline between the report study timeline of 1988 to 2011. In parts of the JLUS study area, concentrations are now less than the state ozone standard. The closest monitoring site to the JLUS study area at El Rio (an unincorporated community on Oxnard's northern border) had a reduction of approximately 43 percent in peak day 1-hour and 8-hour ozone exposure. This is a reduction from .139 ppm to .079 ppm and .120 ppm to .068 ppm respectively. This trend can also be seen in the number of days exceeding ozone standards. In 1988, Ventura County had 135 days over the state one-hour standard and 173 days over the eight-hour ozone standard. However, in 2011, there were only 4 days over the one-hour standard and 17 days over the eight hour standard. These decreases have all taken place despite a 29 percent increase in Ventura County's population since 1988. Other harmful air pollutants including reactive organic gases and nitrogen oxide are also decreasing and are expected to decline by 52.7 percent and 70.1 percent by 2020, respective to 1990 levels.

Issue AQ-2

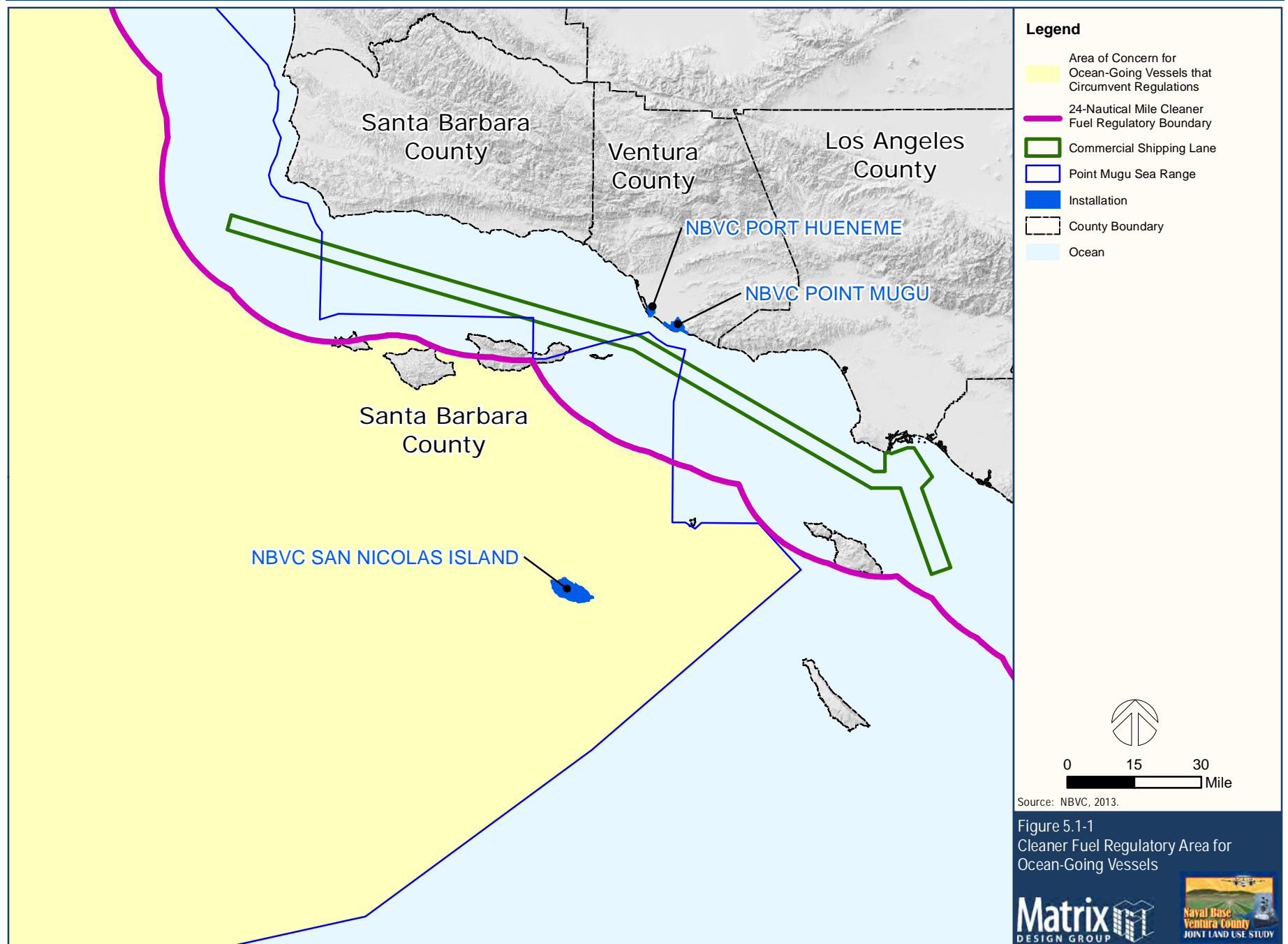
Fuel Emissions from Commercial Shipping Activities

Associated with: NBVC Point Mugu and NBVC San Nicolas Island

New fuel emission regulations have caused an increase in commercial ships traversing the NAVAIR Point Mugu Sea Range. This increases the potential for conflict with military operations in the Sea Range.

Large ships such as tankers, cruise ships, and container ships are major contributors to air pollution in many of the nation's cities and ports. There are two types of diesel engines for these types of ships: main propulsion engines and auxiliary engines. Most engines on these large ships are main propulsion engines which are categorized as a Category 3 engine. It was determined through a state-federal atmospheric research study that these engines emit significant amounts of pollutants in the air, including sulfur dioxide.

The EPA published a rule in April of 2010 (13 CCR, Section 2299.2) that adopted standards for Category 3 engines. The rule was implemented in steps, referred to as Tiers 1 through 3. The final step, Tier 3, requires all ocean-going vessels with Category 3 engines to operate with the cleaner burning diesel fuel within 24 nautical miles of the coast, as regulated by CARB (see Figure 5-1.1). This EPA rule also established the International Convention for the Prevention of Marine Pollution from Ships Annex VI or MARPOL, discussed further in the existing tools section of this issue.



Findings

- Relative to compatibility, there is a concern that the new rules will encourage ocean-going ships to stay outside the 24 nautical mile limit longer, allowing them to burn cheaper grades of fuel. This would potentially cause more commercial ships to traverse the Point Mugu Sea Range and not the existing commercial ship lanes (as illustrated on Figure 5.1-1). Thus, this ultimately could affect the overall capability of NBVC accomplishing its mission and effectively preparing sailors and aviators in various mission components.
- The VCAQMP is dated 2007, which does not incorporate the new regulations established in 2010 for ocean-going vessels to use cleaner fuels when operating in the territorial waters of California.
- These regulations do not apply to vessels operating for government business, but the vessels are strongly encouraged to comply.

Existing Tools

Final Regulation Order: Fuel Sulfur and Other Operational Requirements for Ocean-Going Vessels within California Waters and 24 Nautical Miles of the California Baseline (13 CCR, Section 2299.2)

The Final Regulation Order for cleaner fuels for ocean-going vessels established regulations for operators, owners, and lessors of ocean-going vessels to use cleaner fuels in California waters. The general purpose of this regulation is to reduce emissions of particulate matter (PM), diesel PM, and nitrogen and sulfur oxides from the use of various types of engines installed in ocean-going vessels including but not limited to main propulsion engines and auxiliary engines.

The Order established the locations as to where this regulation applies, generally though, the regulations apply to all waters within the 24-nautical mile boundary from the low-water line of the California coastline (baseline) that is officially marked and recognize by the state. Additionally, this regulation applies to all vessels operating in these areas that are not conducting governmental business.

This regulation establishes content limits for pollutants of the various types of engines such as limiting auxiliary engines operating in Regulated California Waters with either Marine Gas Oil (MGO) with a maximum percent by weight of sulfur of 1.5 or marine diesel oil (MDO) with a maximum percent by weight of sulfur of 0.5.

International Convention for the Prevention of Marine Pollution from Ships (MARPOL) Annex VI

MARPOL Annex VI is a global treaty to reduce fuel emissions from shipping vessels. The treaty does the following:

- Sets limits on sulfur dioxide (SO_x) and nitrogen oxide (NO_x) emissions from ships and prohibits the international emission of ozone-depleting substances.
- Sets a global limit on the maximum allowable sulfur content of fuel oil used in shipping and calls for the International Maritime Organization (IMO) to monitor the worldwide average sulfur content of shipping fuel.
- Establishes specific “Emission Control Areas” with more stringent controls on SO_x emissions.
- Prohibits on-board incineration for ships carrying certain products.
- Conducts mid-ocean ballast water exchange further than 200 nm from any shore prior to entering U.S. waters or use an AMS.

As stated above, Emission Control Areas (ECA) have the most stringent emissions standards set by MARPOL Annex VI. The North American EMC was established in March of 2010 and became enforceable in August of 2012. This area includes waters adjacent to the Pacific, Atlantic, and Gulf Coasts and the eight main Hawaiian Islands.

As a result of the ECA implementation, emissions of NO_x, sulfur oxides SO_x, and fine particulate matter (PM 2.5) is expected to drop by 23, 74, and 86 percent respectively. This will greatly improve air quality in the surrounding areas. Therefore, the current tools address the issue statement and no further research is needed.

Please see the next page.

5.2. Anti-Terrorism / Force Protection

Anti-Terrorism/Force Protection (AT/FP) relates to the safety of personnel, facilities, and information on an installation from outside threats.

Security concerns and trespassing can present immediate compatibility concerns to installations. Due to current world conditions and recent events, military installations are required to meet more restrictive standards to address AT/FP issues. These standards include increased security checks at installation gates and physical changes (such as new gate / entry designs). Additional emphasis on credential and vehicle checks can create capacity and queuing issues with entrance gates that are inadequate to support the high volume of vehicles requiring access to the installation on a daily basis. The reduced processing throughput time at the gates can create circulation issues and general safety concerns external to the installation and within local communities.

Key Terms

Clear Zones. Clear zones are areas established around the fence to provide and unobstructed view to enhance detection and assessment around fences. This is different than the term “clear zone” used to describe suggested land use protections around an airfield (see Section 5.19, Safety).

Fence Line. The term fence line in this section refers to the exterior fence around the NBVC operating facilities (NBVC Port Hueneme and NBVC Point Mugu). Fence lines are often inset from a property line if possible.

Sight-lines (lines-of-sight). This refers to the angles of lines-of-sight from off-installation structures to on-installation structures and vice versa. Lines-of-sight are necessary to maintain an unobstructed view of the installation and to ensure that visual access to the installation does not occur where inappropriate and occurs where appropriate such as for communications and frequencies.

Issues Assessment

Issue AT-1

Parking Enforcement

Associated with: NBVC Port Hueneme

Parking adjacent to NBVC fencelines, including, but not limited to, locations along Island View Avenue, Panama Drive, and Sawtelle Avenue, creates potential security issues with NBVC mission. Additionally, there is no consistency in traffic and parking enforcement because some areas are under California Highway Patrol and some areas are under Ventura County Sheriff's Office.

Silver Strand Beach is an unincorporated residential community situated between the Channel Islands Harbor and the Port of Hueneme. Silver Strand is a residential community with minor neighborhood commercial uses. Due to the density of development in this area, both street parking and on-site parking are limited. This relative shortage of parking has resulted in residents and visitors alike parking adjacent to the fence line at NBVC Port Hueneme.

During the summer months vehicle parking is worsened by visitors recreating at Silver Strand State Beach. Though parking lots exist at both ends of the beach, additional community parking occurs along the streets adjacent to NBVC Port Hueneme, in particular Island View Avenue, and Panama Drive.

The parking of automobiles along the NBVC Port Hueneme fence line can pose an AT/FP issue for NBVC. Per AT/FP guidelines in the Unified Facilities Criteria 4-022-03 Manual, Security Fences and Gates and in the OPNAVINST 5530.14B, DON Physical Security and Loss and Prevention Manual, the DOD recommends installations establish a minimum of 20 feet force protection clear zone (CZ) around installations. The CZ is established to prevent visual obstruction and circumvention of the installation fence line.

Figures 5.2-1a through 5.2-1i illustrate the various segments of the three roadways where the vehicle parking is within the 20-foot CZ. The maps also illustrate the installation fence line, the installation boundary, and the parked vehicles along the NBVC fence line. The parking that occurs near the installation's fence line, in this case, is within 20 feet of the installation and in some cases within a foot or less of the installation fence line, which clearly causes visual obstructions and enables ease of circumvention of the installation fence.



Vehicles parked along fence on Island View Avenue (top) and Panama Drive.

Findings

- There are significant areas along the NBVC Port Hueneme fence line that are used for public parking.
- Some abandoned vehicles appear to be parked along the fence line.
- While the County's Coastal Area Plan identifies the parking issue in the Silver Strand community and suggests design modifications and changes to locations for parking areas, the plan does not recommend strategies in the interim such as identification and enforcement of no parking zones.
- Posting for no parking along the fence does not currently exist.

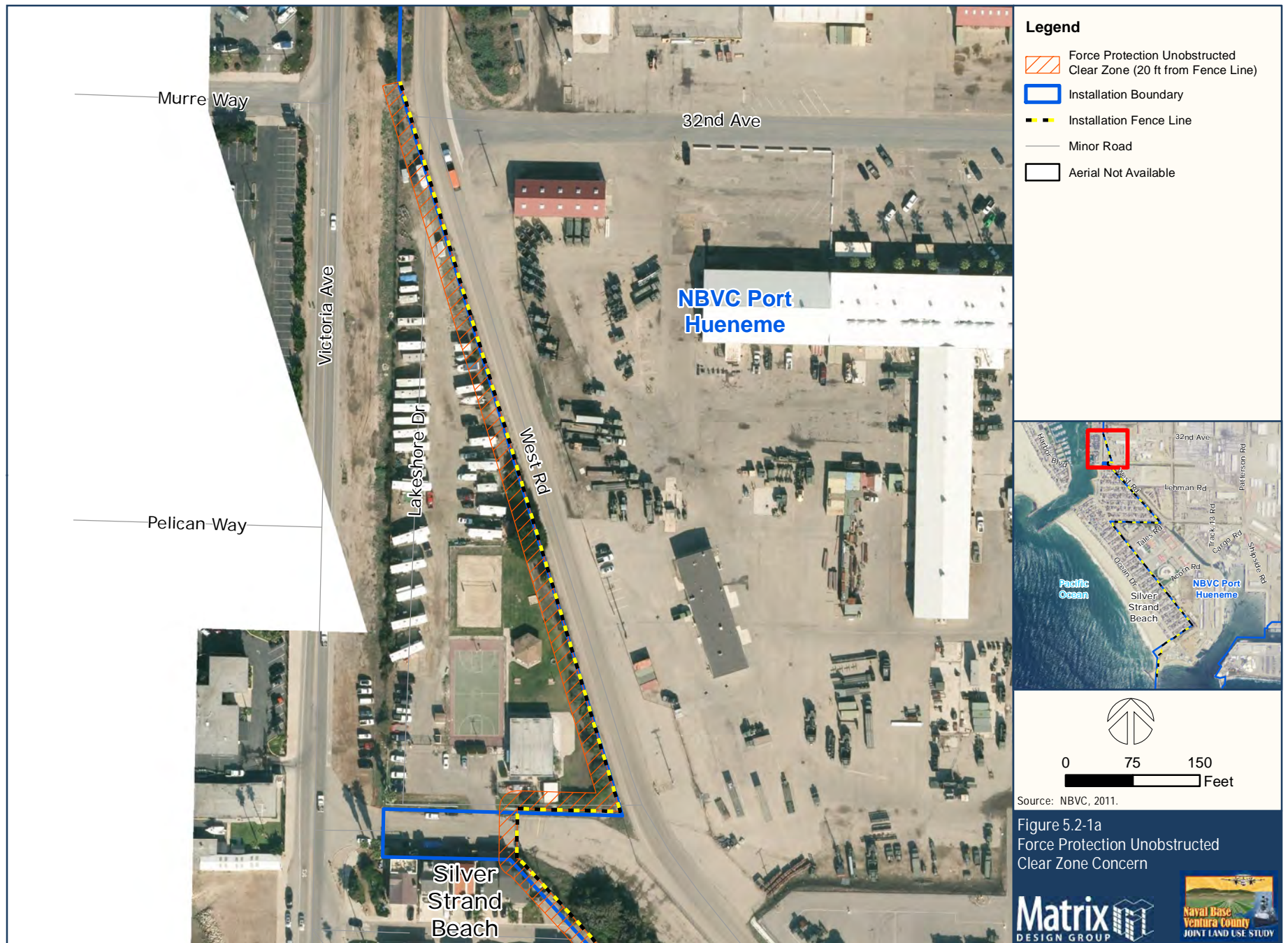
Existing Tools

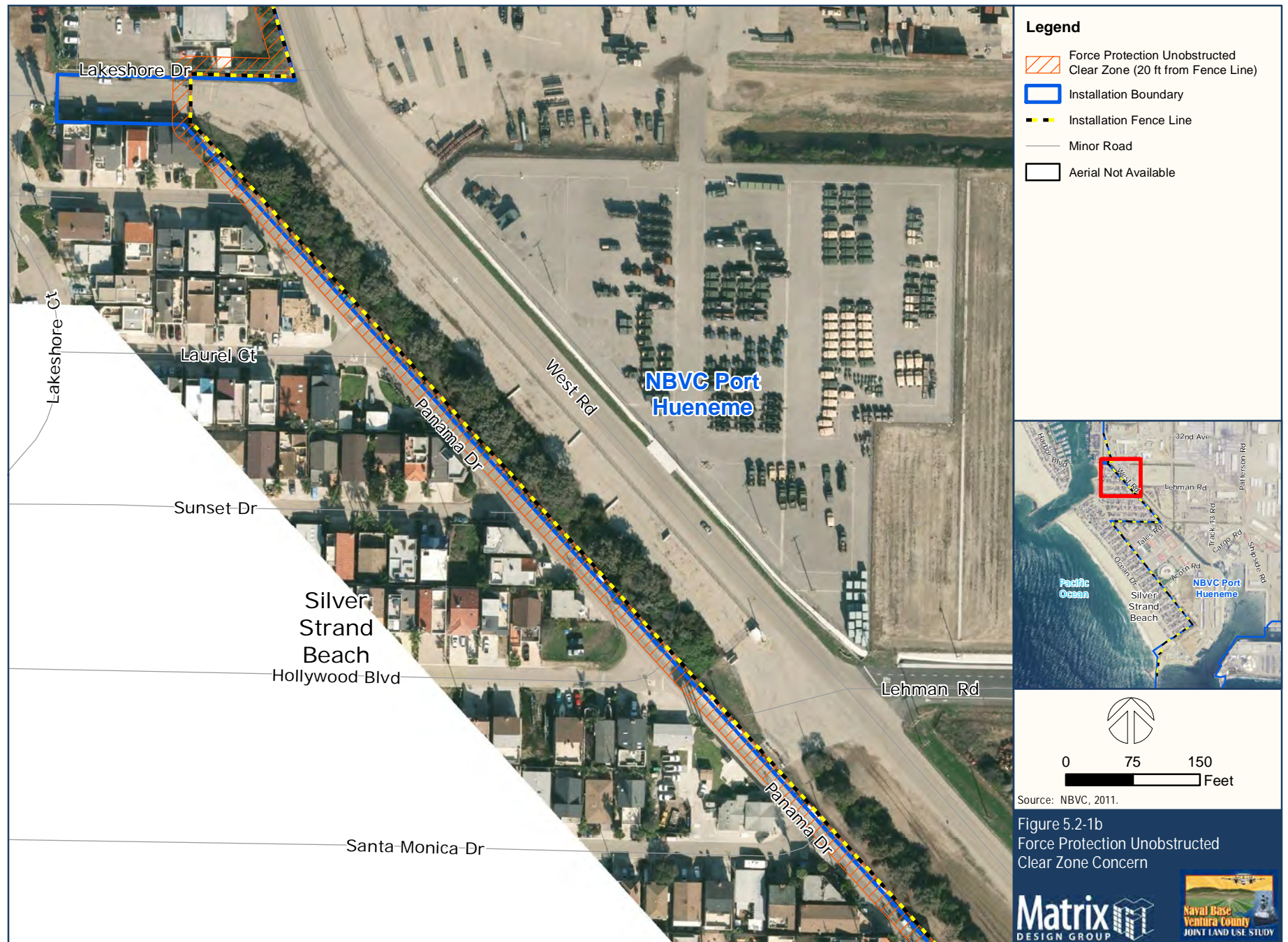
Unified Facilities Criteria: Security Fences and Gates – UFC 4-022-03

The Unified Facilities Criteria (UFC): Security Fences and Gates (UFC 4-022-03) establishes clear zones (CZs) inside and outside fences to provide an unobstructed view for the installation so as to detect and assess security issues proactively. When these CZs are required, the dimensions of the CZs can vary depending on the asset that is being protected and the current level of protection needed.

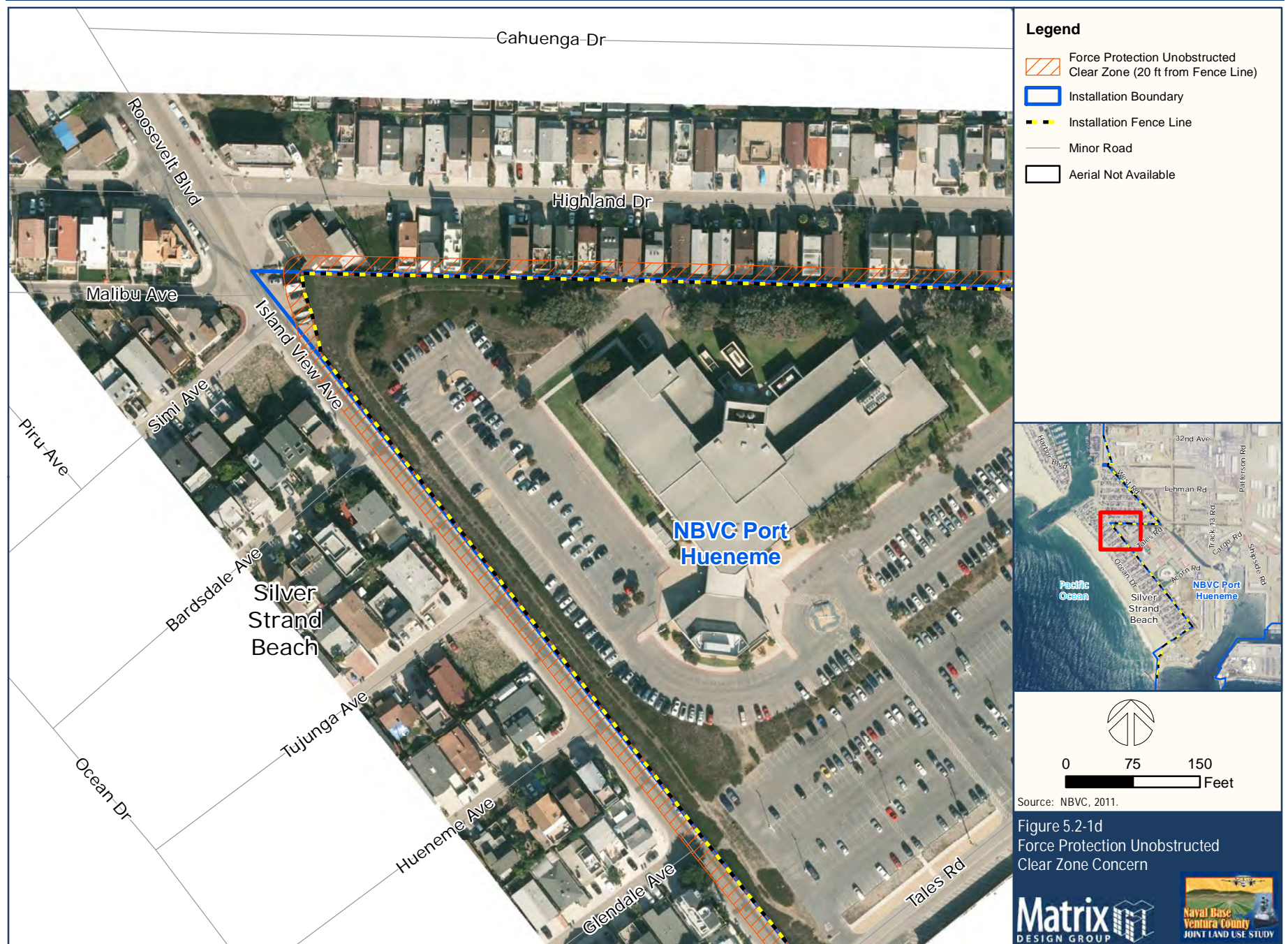
Ventura County Coastal Area Plan

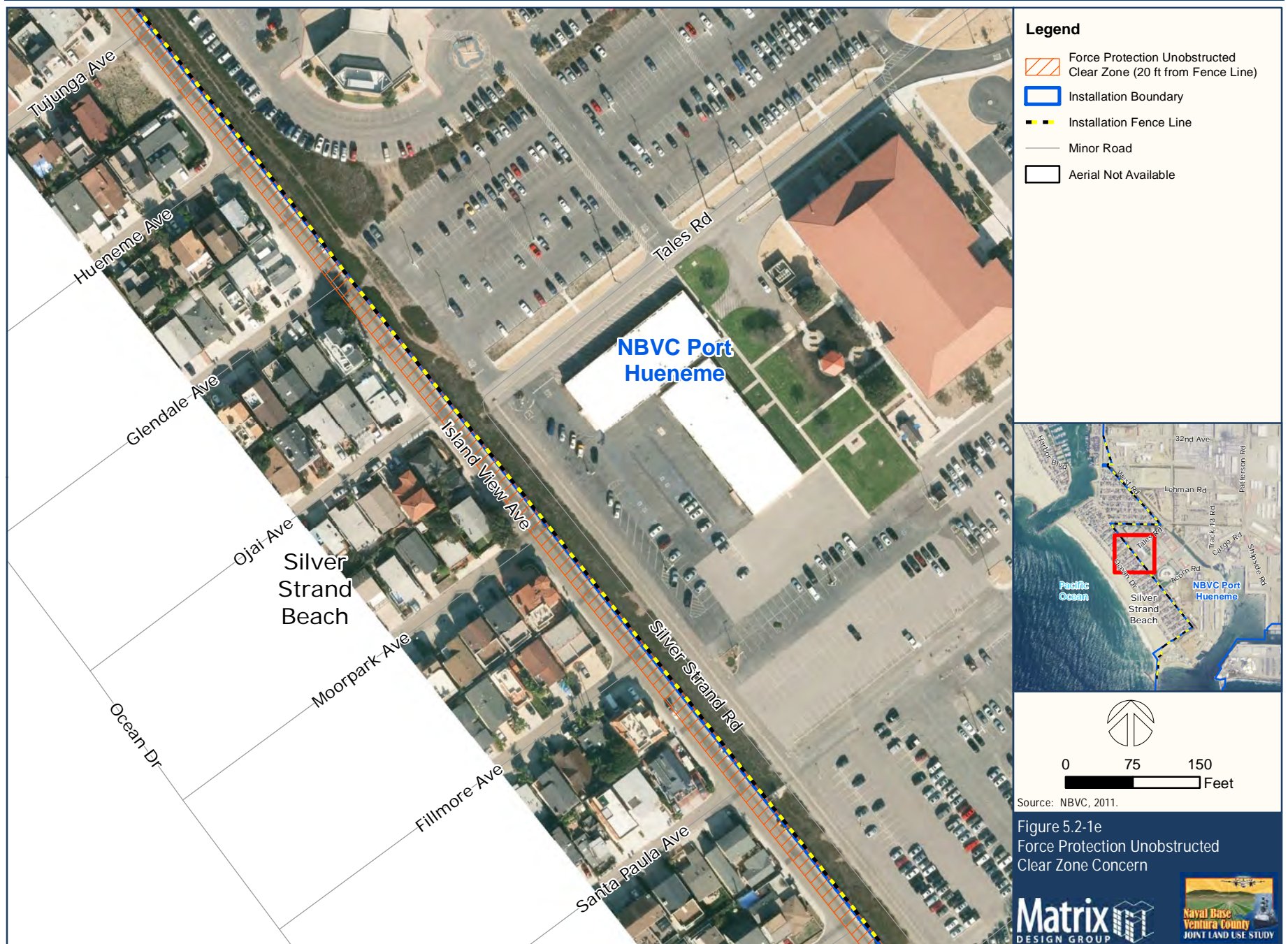
The Coast Area Plan encompasses the unincorporated areas of the Ventura County coast. The Coastal Area Plan identifies and seeks to address issues in the Silver Strand community including the lack of parking at Silver Strand. One of the general objectives from the Recreation and Access section of the Central Coast Chapter of the Coastal Area Plan is to alleviate traffic and circulation problems by coordinating with appropriate agencies and providing additional parking. In addition, the objective identified that additional parking should be located outside of residential areas due to limited space and narrow roadways, which causes conflicts with community / residential circulation in this particular area.



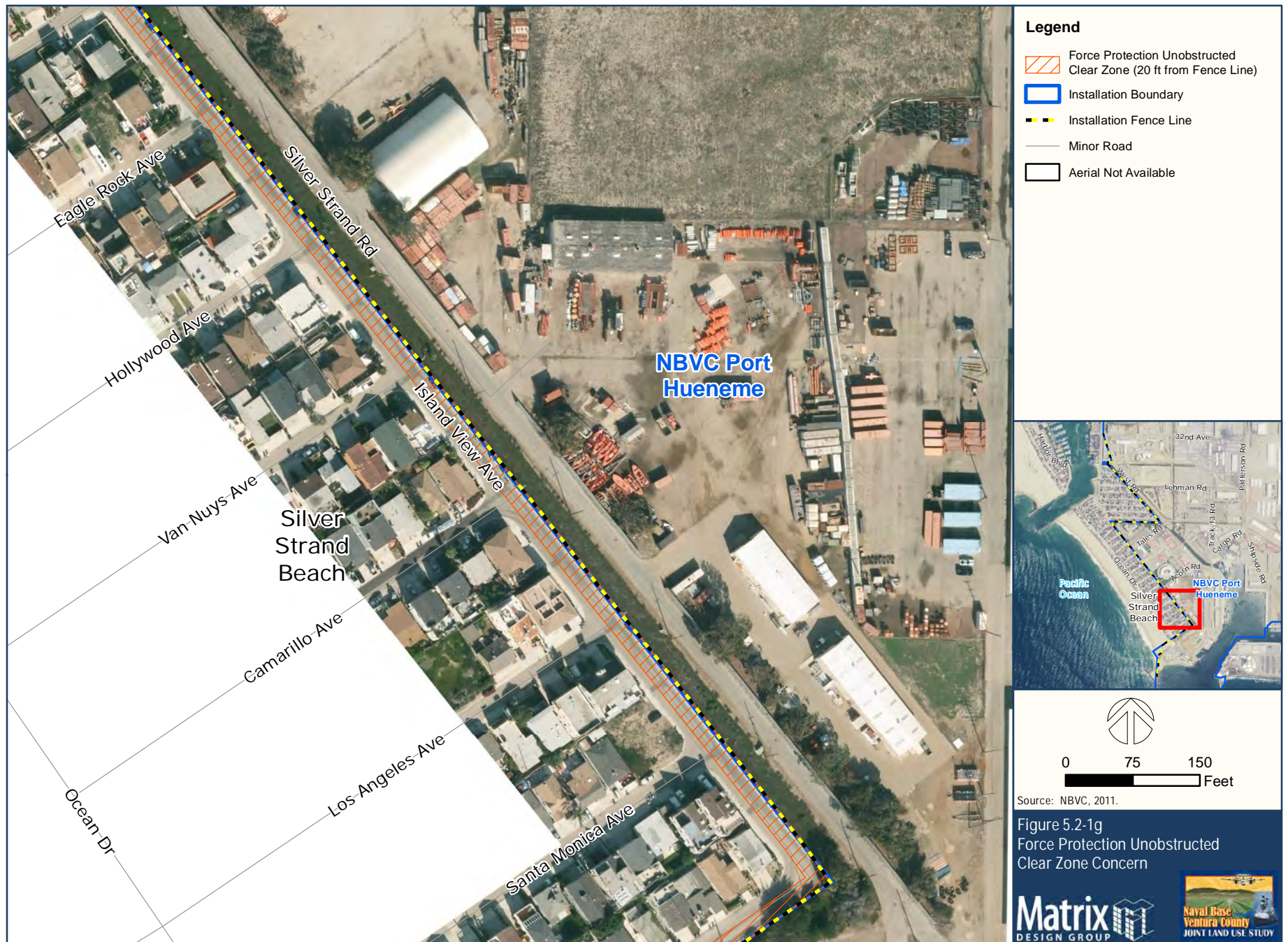
















By identifying areas for additional parking outside of the residential areas that border the installation, the County through the Coastal Area Plan is aware of the issue and trying to address this parking issue, not only in this area but in other areas of the county along the coastline.

While this plan identifies a potential solution for alleviating parking issues in the Silver Strand community, the plan does not identify or discuss the issue of parking along Island View Avenue or Panama Drive, which can pose a visual obstruction and / or trespassing issue for the Navy. The plan also does not discuss enforcement or monitoring of this area to ensure there are no security issues in this area.

| | |
|-----------------------|--|
| Issue AT-2 | Waterside Security for Port Hueneme <i>Associated with: NBVC Port Hueneme</i> There are concerns on the adequacy of and responsibility for waterside security for NBVC Port Hueneme which may increase the vulnerability for security issues. |
|-----------------------|--|

Waterside security is a critical issue for ports. Ports can be major trade, transport, and mobilization areas for international trade and military purposes. The Port of Hueneme is a joint-use facility and serves as a commercial port under the management of Oxnard Harbor District (OHD) and a military port for NBVC. The Port of Hueneme is the only deep water port between San Francisco and Los Angeles and is the U.S. Port of Entry for the California Central Coast. The Port of Hueneme is also the only Navy controlled port between San Diego and the Puget Sound.

The dual status of the Port of Hueneme as a military and commercial port contributes to its defensive and economic importance for Ventura County and the U.S. It is necessary to ensure the Port of Hueneme has adequate waterside security to ensure regional longevity. While Ventura County Sheriff's Office (for Port of Hueneme) and NBVC Security Forces (for Navy areas) provide landside security, the waterside security (i.e., the waterway

itself) is protected by the U.S. Coast Guard and to some degree the Ventura County Sheriff's Office. As the Coast Guard is not located in the Port, there is not active patrol activity and any waterside incidents may require response from a Coast Guard vessel in the general area.

Findings

- Detailed security plans are not appropriate for public release.
- Waterside security is under the jurisdiction of the Coast Guard and the Ventura County Sheriff's Office. Given they do not have facilities, equipment, or personnel stationed in Port Hueneme, response time is extended.
- NBVC is currently developing a new Strategic Plan.

Existing Tools

Code of Federal Regulations Title 33, Chapter 1, Subchapter A, Part 6, Subpart 6.19 – Responsibility for Security of Vessels and Waterfront Facilities

This subpart in the Code of Federal Regulations (CFR) establishes waterfront security as the primary responsibility for all masters, owners, operators, and agents of vessels and waterfront facilities. Thus, this regulation does not alleviate the responsibility for either of the Navy and the OHD to provide adequate waterside security for Port to ensure the protection and security of vessels and facilities.

Sec. 2847. Modification of Authority for Oxnard Harbor District, Port Hueneme, California to Use Certain Navy Property. (Joint-Use Agreement)

While the joint-use agreement between the Navy and OHD establishes authority of the Navy and the OHD in various operational components of the Port, there are no policies or rules regarding the identification of responsibility and implementation of waterside security. There is delineation of responsibility for landside security of the joint-use facility. In Article 19 Security and Fire Services of this agreement, the OHD is

responsible for providing security for the Wharf 2/3 gate during OHD use and operations.

Code of Federal Regulations Title 33, Chapter 1, Subchapter A, Part 6, Subpart 6.14 – Security of Waterfront Facilities and Vessels in Port

This subpart of the CFR in Part 6 grants the authority to the Commandant to initiate and prescribe conditions or restrictions to achieve the safety of the vessels and waterfront facilities in Port. The Commandant may use safety measures including but not limited to inspection, operation, maintenance, guarding, and fire-prevention measures for vessels and waterfront facilities.

In addition, the Captain of the Port may suspend or prevent mooring of any vessel at a waterfront structure, i.e. wharf, dock if conditions of the vessel or waterfront facility present a safety issue. Such conditions include but are not limited to insufficient lighting, internal disturbance, and unsatisfactory operation.

Despite the authority that has been established for both the Navy and the Port, the plans for both agencies do not contain references to responsibility and resources for the Port’s waterside security. This can lead to further AT/FP issues for both agencies.

**Issue
AT-3**

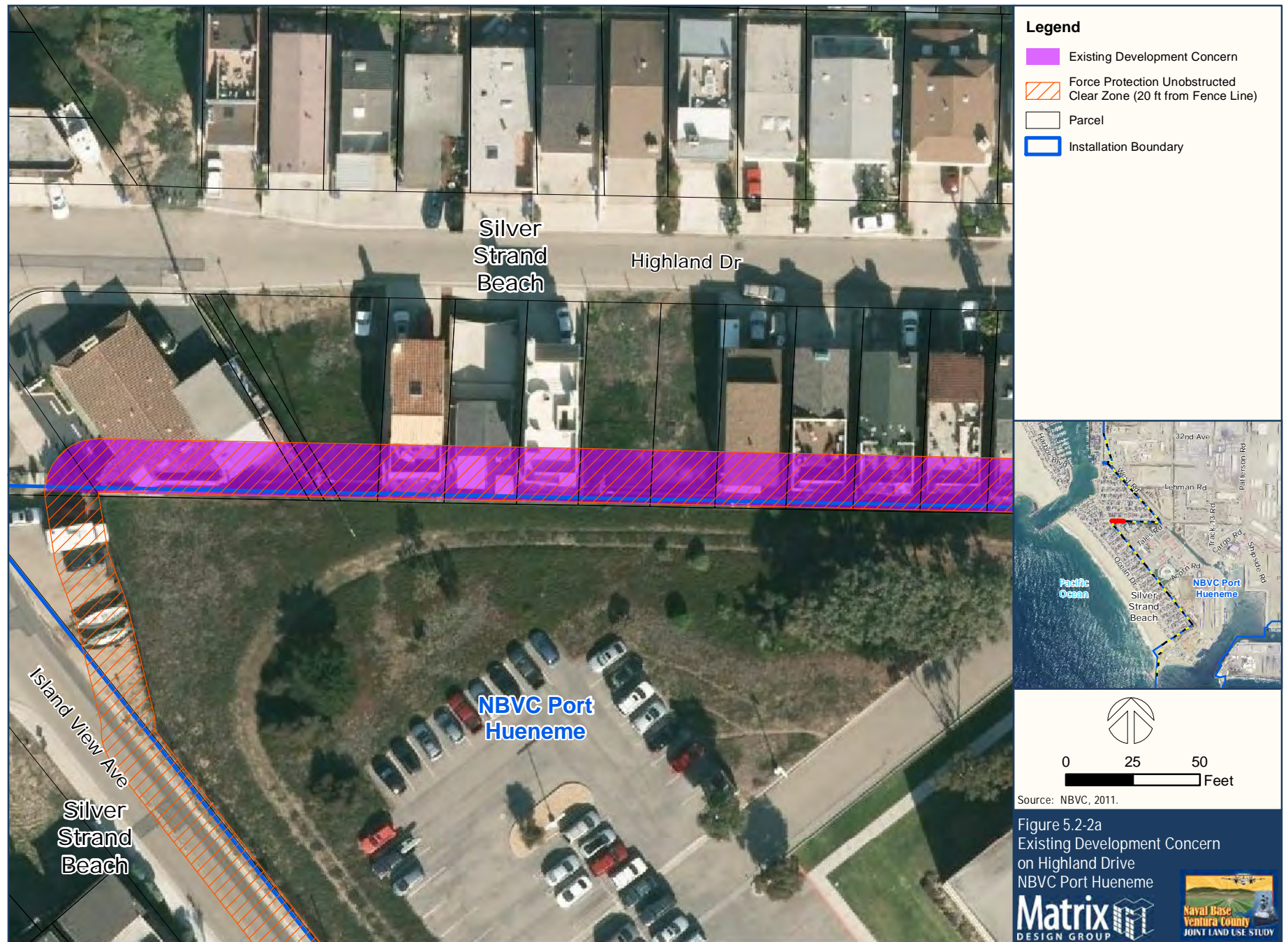
Development Adjacent to Base Fence Line

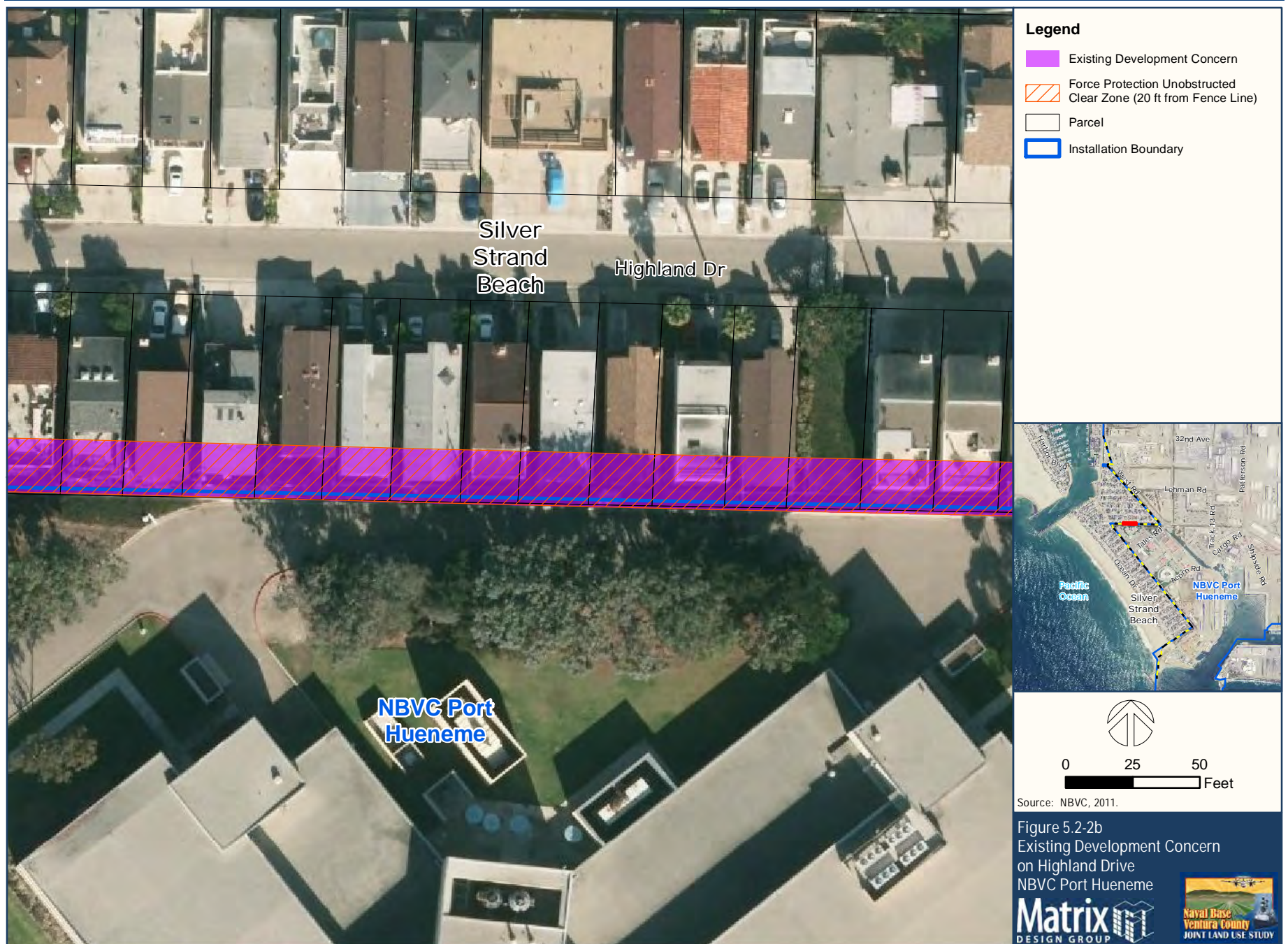
Associated with: NBVC

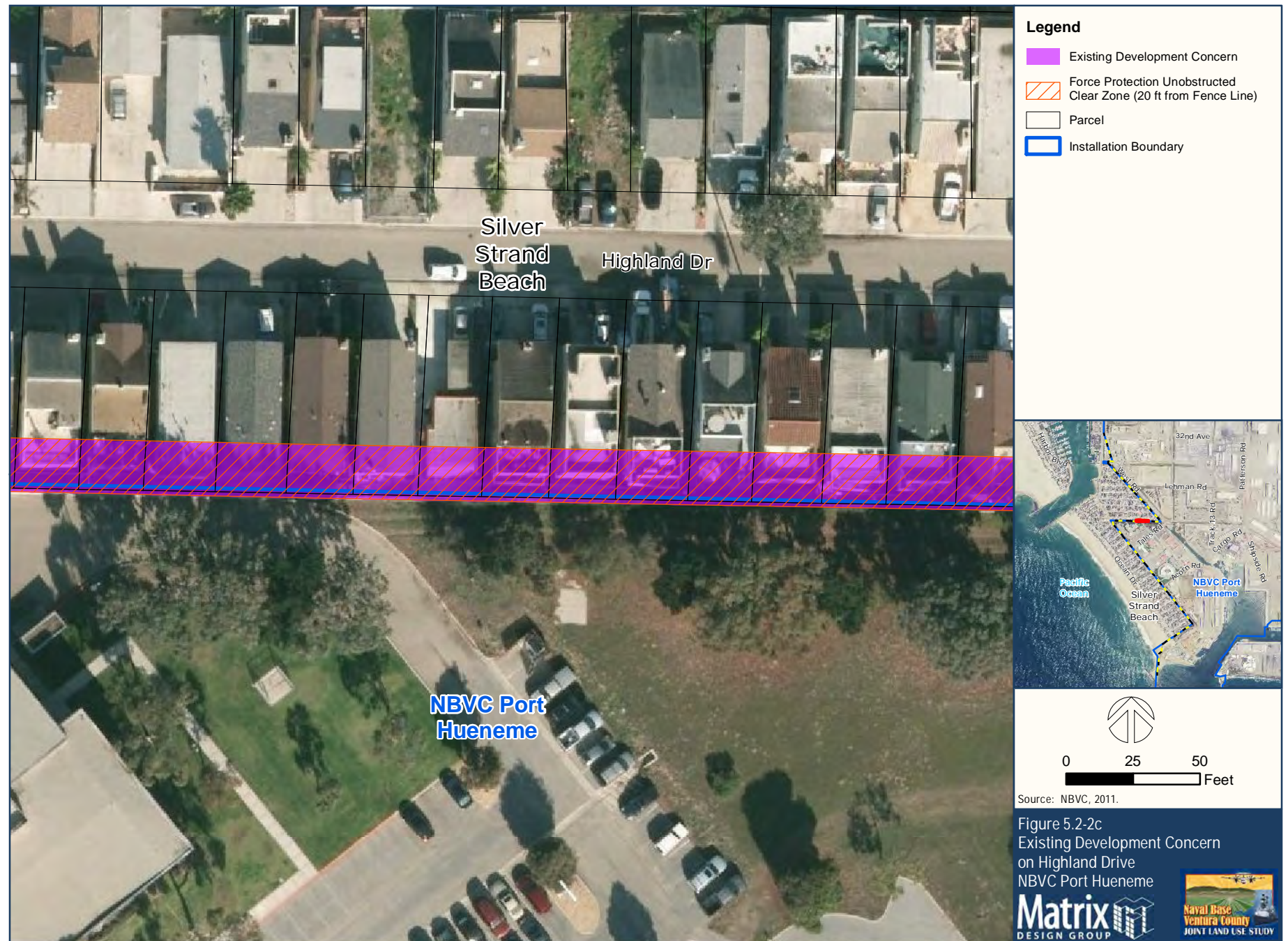
The base is required to comply with the Anti-Terrorism Force Protection (ATFP) guidelines including boundary fence line setbacks to maintain a clear view. However, similar guidelines do not exist for adjacent jurisdictions and thus the potential for development to be constructed close to the base fence line exists.

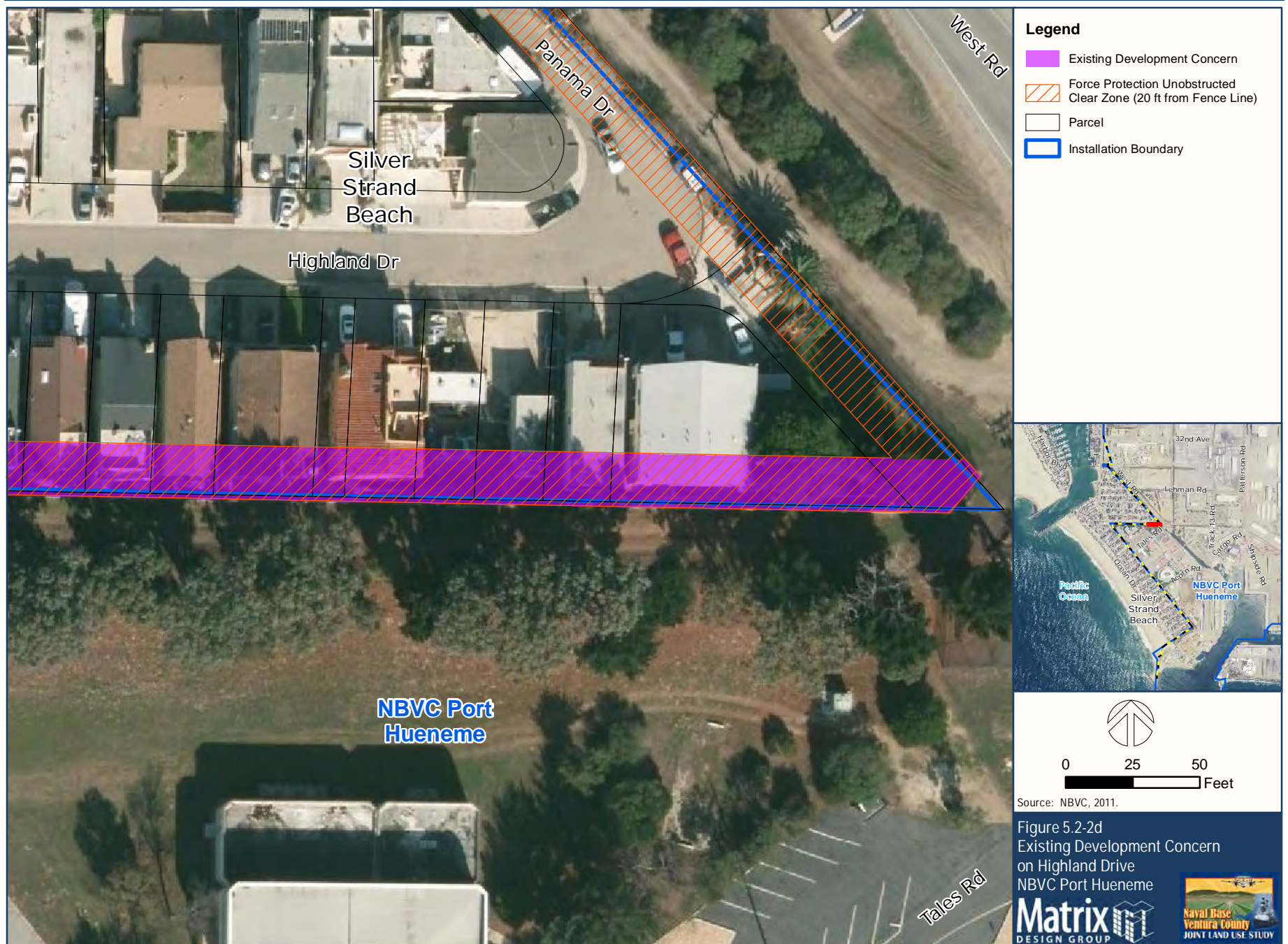
Boundary setbacks help to maintain a security perimeter around NBVC. The base is required to address AT/FP setbacks and secure buffers around the installation to ensure the safety of the installation assets and its people. NBVC Point Mugu and NBVC Port Hueneme both present unique challenges related to their respective boundary setbacks.

For NBVC Port Hueneme, there are two areas of concern. One is related to homes along the south side of Highland Drive. These homes a) have potential issues relative to their proximity to the fence line and within the clear zone and b) the potential for overlap of property boundaries. The second issue is the potential for redevelopment around the NBVC operating facilities that could exceed two stories in height. As illustrated on Figures 5.2-2a through 5.2-2d, Highland Drive has numerous multi-story houses are immediately adjacent to the fence line, and some that perhaps overhang the NBVC Port Hueneme installation property line. The figures do clearly illustrate homes within the 20 foot Force Protection Unobstructed CZ that separates Silver Strand from NBVC Port Hueneme. These areas clearly create visual obstructions, and the potential for accessory structures on some lots could further this issue.









The figures also show the surveyed property line provided by NBVC (blue line) and the parcel lines provided by Ventura County. These are not a survey grade comparison, but there is some potential for property line confusion in this area.

Relative to the second issue, the concern is regarding the potential for new construction (or redevelopment of properties) that could create structures of three or more stories that have enhanced views into NBVC Port Hueneme or NBVC Point Mugu.

Findings

- Along Highland Drive, there are residential properties in very close proximity to the property line and fence line of NBVC Port Hueneme. Some overlap of property lines may exist in the area (see Figures 5.2-2a - d).
- The lands surrounding NBVC Port Hueneme have the potential for development or redevelopment into more intense uses that could exceed two stories in height (with approval of a Special Use Permit or Conditional Use Permit). The coordination area shown on Figure 5.2-3a should provide adequate notice and coordination relative to this issue.
- The lands surrounding NBVC Point Mugu have not yet been developed and are primarily zoned for agriculture-related uses; therefore concern about potential urban development in this area is minimal. The coordination area shown on Figure 5.2-3b should provide adequate notice and coordination relative to this issue.
- The cities of Oxnard and Port Hueneme, and the County of Ventura have not adopted the Military Influence Area (MIA) to ensure development coordination occurs within the MIA. An MIA could help define expectations for the development of areas around NBVC operating facilities.
- There are no policies in the City of Port Hueneme and County of Ventura General Plans that address the AT/FP concerns and notification procedures for proposed development adjacent to the NBVC operating facilities.

Existing Tools

Senate Bill 1462

The California Senate Bill 1462 requires local jurisdictions to notify military installations of proposed development that occurs within 1,000 feet of the installation boundary. This tool not only requires local jurisdictions of proposed development, but it also requires notification from jurisdictions to military installations if proposed development will occur within 1,000 feet of special use airspace, and / or a low-level flight path. Figures 5.2-3a and 3b illustrates the 1,000 foot area from the installation boundaries of both NBVC Port Hueneme and NBVC Point Mugu.

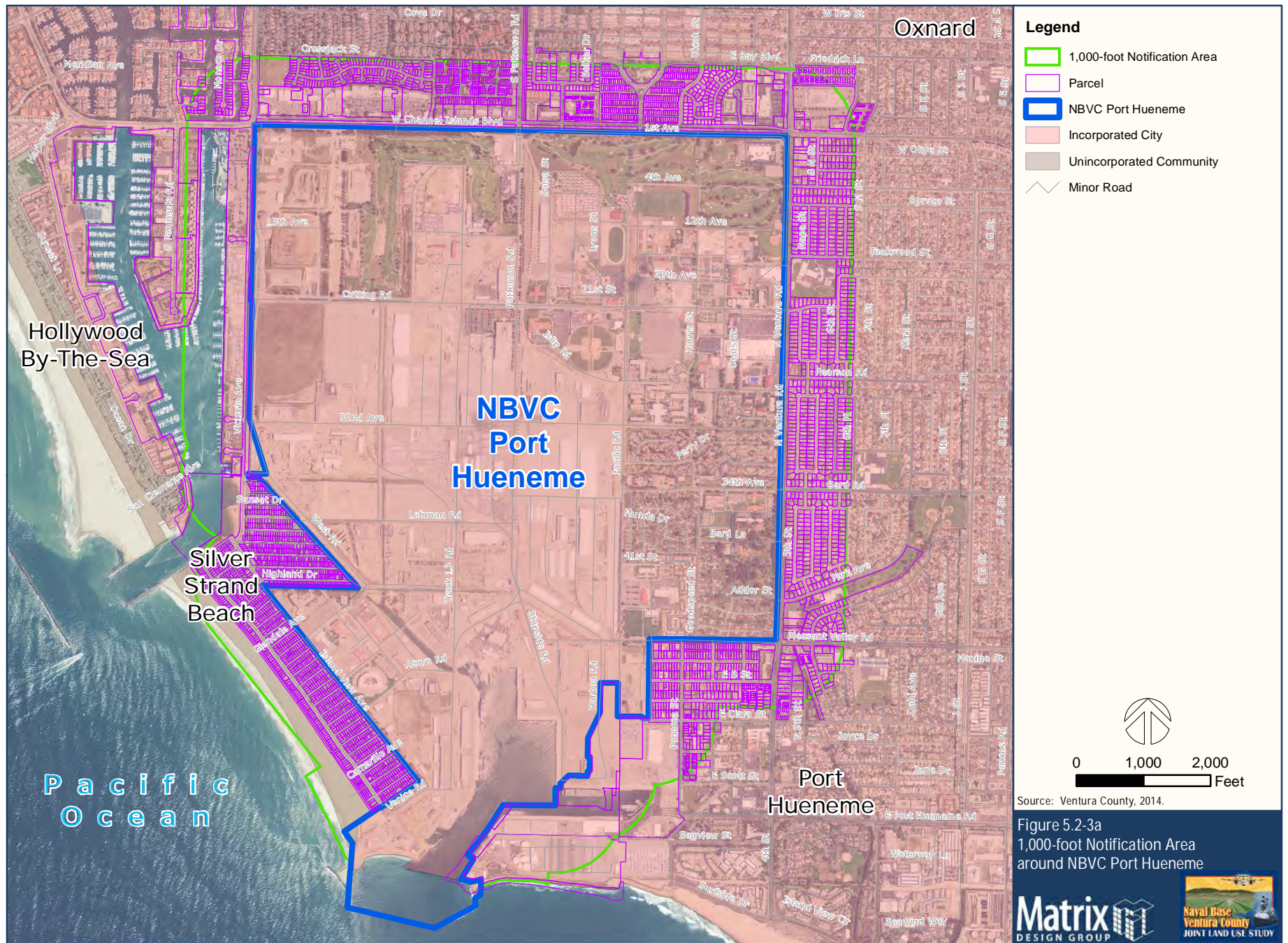
This tool addresses the coordination and notification of the military in the instances of development adjacent to the fence line of NBVC Point Mugu and NBVC Port Hueneme.

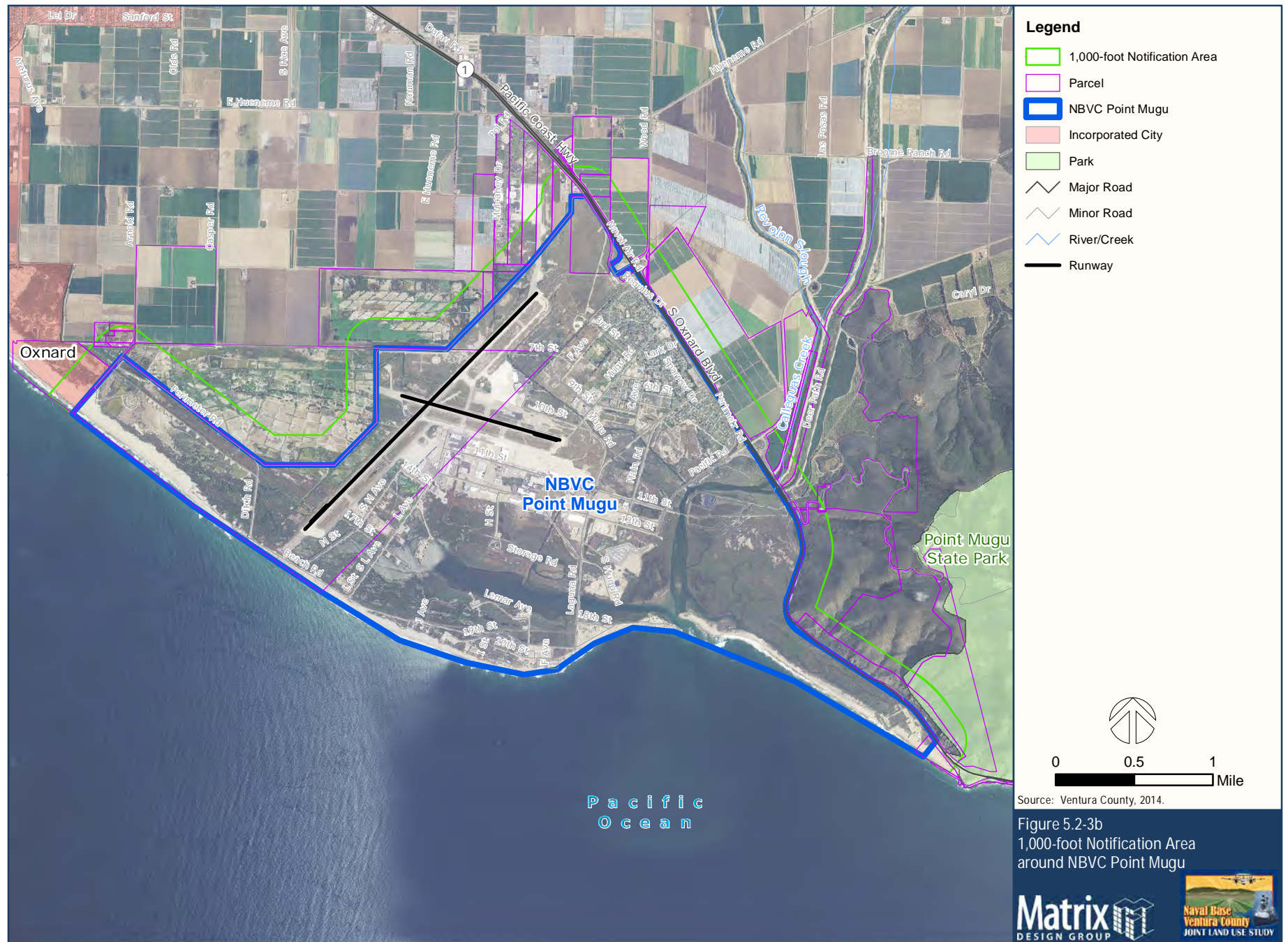
Ventura County Non-Coastal Zoning Ordinance

The land surrounding NBVC Point Mugu is governed by the Ventura County Non-Coastal Zoning Ordinance (NCZO) and is designated as OS and AE zoning. The minimum required setbacks for uses and structures in the OS and AE zones are set at 20 foot front yard setback, 15 foot rear yard setback, and 10-20 foot side yard setback. Maximum height in the OS and AE zones is 25 feet with an exception for additional height to 35 feet. These setbacks and allowable heights do not pose an existing incompatibility with the land around NBVC Point Mugu.

Ventura County Coastal Zoning Ordinance

The Ventura County Coastal Zoning Ordinance includes the area south of NBVC Port Hueneme at Silver Strand Beach. The areas immediately bordering the base are zoned Residential Beach Harbor (RBH) and have the following setbacks front, rear, and side setbacks of twenty, six, and three to five feet, respectively. Maximum height in the RBH zone is 25 feet.





Due to the dense concentration of units in the Silver Strand area and relatively narrow streets, this neighborhood poses a more pressing issue to encroachment. The very minimal setback standards coupled with maximum height have an increased chance of incompatibility with NBVC Port Hueneme.

City of Oxnard Coastal Zoning Ordinance

The Oxnard Coastal Zoning Ordinance governs land use along Victoria Avenue between NBVC Port Hueneme and the Channel Islands Harbor. The land is zoned Coastal Dependent Industry (CDI) and Harbor-Channel Islands (HCI). The CDI zone requires a 20 foot front yard setback and no rear yard setback. Maximum height in the CDI zone is 55 feet but can be increased by conditional use permit. The HCI zone requires 10 foot front and rear yard setbacks. Maximum height in the HCI zone is 25 feet. Both of these zones front Victoria Avenue which has an approximate 90 foot right-of-way. With the additional setbacks included in the development standards, the stretch of development along Victoria Avenue should not pose a threat to fence line encroachment. However, height standards for the CDI zone are potentially incompatible with NBVC Port Hueneme visual access and the potential conditional permitting of increased heights cause concern for NBVC.

City of Oxnard Non-Coastal Zoning Ordinance

The City of Oxnard Non-Coastal Zoning Ordinance governs land use along Ventura Road between Channel Islands Boulevard and Teakwood Street. The land is zoned single family residential (R1) and General Commercial Planned Development (C2PD). The R1 zone requires front yard setbacks at 20 feet, a rear yard not less than 25 percent of the depth of the lot (not to exceed 25 feet), and side yards of between 3 and 5 feet. Height limits in the R1 zone limit development to 25 feet. The C2PD zone requires front yard setbacks of no less than 10 feet, rear yard setbacks of 15 feet for buildings over 16 feet in height, and side yard of no less than five feet unless the parcel abuts a similarly zoned lot. Height limits in the C2 zone limit development to 35 feet but allow for increased height with a conditional use permit.

Due to the fact that the residential and commercially zoned properties are separated from the base by an approximate 90 foot right-of-way of Ventura Road and have additional setbacks, the likelihood of further encroachment is low. However, conditional permitting for increased heights, especially when there is no maximum height set for a conditional use permit, in the C2 zone, may pose sight-line concerns for NBVC.

City of Port Hueneme Zoning Ordinance

The Port Hueneme Zoning Ordinance governs land use in Port Hueneme that borders NBVC Port Hueneme. Zoning categories include: Single Family (R-1), Limited Multi-Family (R-2), Multi-Family (R-3), Mixed Use (R-4), Transitional Residential/Coastal-Related Industry (R-5), and Commercial (C-1) zones.

R-1 zones that border NBVC Point Mugu are located along Ventura Road and are rear facing. Rear setbacks for the R-1 zone are 15 feet and maximum permitted height is 30 feet. R-2 and R-3 zones are located along Channel Islands Boulevard and front yard setbacks of at least 20 feet. Maximum height in the R-2 zone is 30 feet and maximum height in the R-3 zone is 40 feet. R-4 zones are located along Pleasant Valley Road and do not require front yard setback except to conform to off-street parking and landscape standards. R-4 zones have a maximum permitted height of up to 60 feet if 1/3 of the building's square footage is devoted to residential activities. R-5 zones are located along San Pedro Street and have a 20 foot front yard setback and maximum permitted height of 30 feet. C-1 zones are located along Channel Islands Boulevard and Ventura Road and do not require front yard setback except to conform to off-street parking and landscape standards. C-1 zones have a maximum permitted height of 35 feet.

Uses along Ventura Road and Channel Islands Boulevard are separated from NBVC by roadways which measure approximately 90 and 150 feet, respectively. The threat of encroachment from zones along these roads is low. For uses along Pleasant Valley Road, the lack of required setback coupled with height standards could create encroachment issues for NBVC Port Hueneme. Along San Pedro Street, required 20-foot setbacks decrease the risk of encroachment but a small right of way and height standards could still cause concern.

Please see the next page.

5.3. Biological Resources

Biological resources include federal and state listed species (threatened and endangered species) and the habitats they exist in or utilize. These resources may also include areas such as wetlands and migratory corridors that are critical to the overall ecosystem. The presence of biological resources may require special development considerations and should be included early in the planning process.

Key Terms

Candidate Species. Species eligible for endangered or threatened status per the Endangered Species Act (ESA) but which are not listed due to higher priority listing activities.

Critical Habitat. Specific areas found to be essential to the conservation of a threatened or endangered species and which may require special considerations or protection. Under this designation, the U.S. Fish and Wildlife Service (USFWS) must review all federal government activities within a designated critical habitat area to ensure that threatened and endangered species are protected.

Endangered Species. Plant or animal species that have a very small population and are at greater risk of becoming extinct. The presence of threatened and endangered species may require special development considerations, could halt development, and could impact the performance of military missions.

End-of-pipe treatment is a control measure to treat water at the end of a pipe rather than at the source of the contaminants. This can lessen the adverse impacts downstream.

Federal Endangered Species Act (FESA). FESA provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found. The lead federal agencies for implementing FESA are the USFWS and the U.S. National Oceanic and Atmospheric Administration (NOAA) Fisheries Service. Species include birds, insects, fish, reptiles, mammals, crustaceans, flowers, grasses, and trees.

Riparian. Riparian refers to the habitat and/or area relating to, or situated on the banks of a river.

Special-Status Species. According to the ESA, a special-status species is any species that is a listed, candidate, sensitive, or species of concern.

Take. Under the ESA, “take” is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct.” The ESA makes it illegal for any person to take any species listed as threatened or endangered without authorization. Take prohibitions also apply to the habitat a listed species requires for its survival.

Threatened Species. According to the ESA a threatened species is “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Issues Assessment

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| Issue BIO-1 | Wetland / Marsh Impacts <i>Associated with: NBVC Point Mugu</i> Development upstream may create impacts on wetland and marsh areas on or near NBVC Point Mugu. |
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The wetland and marsh areas of Mugu Lagoon are a sensitive habitat for species and waterfowl. The tidal lagoon is one of the last of its kind in Southern California and an important habitat for many species of wildlife. The lagoon’s natural character has diminished over time due to levee and drainage systems as well as early development of the area by the military.

Man-made development upstream has also increased pressures on the lagoon. This development includes development that affects the Calleguas Creek Watershed Management Area (CCWMA). The Calleguas Creek Watershed is the storm drain outlet for the cities of Camarillo, Moorpark, Simi Valley, and Thousand Oaks. Urban land uses in

these communities greatly increase impacts to downstream ecological areas such as Mugu Lagoon.

Land use practices that occur upstream such as:

- Changes in agricultural techniques can increase sediment load on downstream environmentally sensitive areas.
- Increases in impervious cover from urban development upstream can also increase sediment loads, which could impact the Lagoon / Marsh at Point Mugu.
- Land use activities such as construction and grading upstream can also increase sediment load and impact downstream ecologies.
- Inadequate drainage and storm water facilities can increase downstream impacts to environmental aquatic and terrestrial areas.

These types of land use and drainage activities upstream in the CCWMA as well as other land use activities that are not mentioned here, can impact sensitive environmental areas and ecologies downstream that could place additional burdens on NBVC to manage sensitive biological / ecological areas. These burdens could result in more rigid management measures that could impact the progress of mission activities including construction, mobilization, and training activities.

Findings

- The Watershed Management Strategy Study and Watershed Management Plan have identified various upstream measures to implement to minimize the adverse impacts to downstream water bodies.
- While the Ventura County General Plan indicates that flood control facilities will be adequate and appropriate, it does not identify low-impact development practices as a possible action.
- There are new runoff restrictions as part of the Municipal Separate Storm Sewer System (MS-4) that require all runoff be captured on-site.

Existing Tools

Draft Upper Calleguas Creek Watershed Management Strategy Study

The Draft Upper Calleguas Creek Watershed Management Strategy Study (WMSS) focuses on watershed management for the Upper Calleguas Creek Watershed which is located in the cities of Simi Valley and Thousand Oaks. The cities have a combined population of upwards of 300,000 people and are heavily suburbanized. Though both towns are outside of the JLUS study area, activities in town have an effect on the Calleguas Watershed which has an effect on Mugu Lagoon. Due to the heavy suburbanization of the communities, private automobile plays a major role in daily transportation activities. Private automobiles require excessive amounts of infrastructure for mobility and storage needs. Private automobiles also emit byproducts on these roadways and infrastructure in the form of harsh chemicals. During a large storm event, stormwater quickly flows across infrastructure delivering the byproducts into the watershed.

The WMSS is very focused on flood management but includes strategies that can also help water quality of the watershed. These strategies include but are not limited to invasive species removal, increasing greenways and trails in the watershed area, end-of-pipe treatment, and public outreach and education about watershed management including low-impact development designed to reduce the impact of watershed impacts by practicing low-impact development practices.

Calleguas Creek Watershed Management Plan

The Calleguas Creek Watershed Management Plan (WMP) was developed to ensure the health of the Calleguas Creek Watershed by proposing projects to help accomplish improved water quality of the creek. Some of these projects are proposed for upstream and are designed to have an improved effect on the water that flows downstream; therefore, potentially reducing the impact to the lagoon and to NBVC for its management. See the Water Quality Section for a complete discussion of water quality and existing tools that are addressing the water quality issue within the JLUS study area.

Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems within the Ventura County Watershed Protection District

This 2010 report, also known as Order R4-2010-0108, details the waste discharge requirements for the Ventura County MS-4 permit, which is an important tool for the mitigation of stormwater runoff in the county. The report identifies the findings and nature of stormwater discharge from the Municipal Separate Storm Sewer Systems (MS-4) as well as many federal, state and regional regulations regarding the discharge of stormwater. The report also identifies prohibited non-stormwater discharges and receiving water limitations.

Within the report are several actions and / or special studies required of the Calleguas MS-4 permittees, most of which are pertaining to pollutants within stormwater discharge. These actions include:

- Together with Calleguas POTW permittees, Calleguas Agricultural Dischargers, and the Point Mugu Naval Base, submit a work plan to quantify sedimentation in the Calleguas Creek Watershed and evaluate management methods to control siltation and contaminated sediment transport to Calleguas Creek.
- Together with Calleguas POTW permittees, Calleguas Agricultural Dischargers, and the Point Mugu Naval Base, examine the attainability of wasteload and load allocations in the Calleguas Creek Watershed.

Additionally, one of the most important stipulations as part of the MS-4 permit requirements are runoff restrictions that require all runoff associated with construction, development and operations be captured on-site.

Please see the next page.

5.4. Climate Change

Climate change is the gradual shift of global weather patterns and temperature resulting from natural factors and human activities (e.g. burning of fossil fuels) that produce long-term impacts on atmospheric conditions. The effects of climate change vary and may include fluctuations in sea levels, alterations of ecosystems, variations in weather patterns, and natural resource availability issues. The results of climate change, i.e. ozone depletion and inefficiencies in land use, can present operational and planning challenges for the military and communities as resources are depleted and environments altered.

Key Terms

Climate Change. Climate change refers to any significant change in the measures of climate lasting for an extended period of time. In other words, climate change includes major changes in temperature, precipitation, or wind patterns, among other effects, that occur over several decades or longer.

Global Warming. Global warming refers to the recent and ongoing rise in global average temperature near Earth's surface. It is caused mostly by increasing concentrations of greenhouse gases in the atmosphere. Global warming is causing climate patterns to change. However, global warming itself represents only one aspect of climate change.

Source: US Environmental Protection Agency

Issues Assessment

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| Issue CC-1 | Impacts of Climate Change. <i>Associated with: NBVC</i> Potential implications of climate change such as sea level rise, storm intensity, wild fires and associated impacts to the NBVC mission. |
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The elevations of NBVC Point Mugu and NBVC Port Hueneme are 13 feet and 12 feet, or 4 meters, above sea level, respectively. Generally, these two military facilities are located in the low lying coastal areas of the Oxnard Plain, which has an elevation of 52 feet, approximately 16 meters. While this area is above sea level, it is prone to upland and coastal flooding both from winter storm rains in Northern Ventura County around the mountainous areas near the cities of Fillmore, Ojai, Piru, and Santa Paula and coastal flooding from tidal flooding including tsunamis and other severe coastal weather conditions.

The coastal or tidal flooding occurs due to the county's geographical location on the Pacific Coast. Ventura County has a 43-mile coastline that experiences tidal flooding, storm surge, and wave action usually during the winter months. Coastal flooding is also increased due to beach and bluff erosion from wave action throughout the year.

Source: Draft Report: Flood Mitigation Plan for Ventura County, California, 2004.

As global climate change further impacts Southern California, local sea level is expected to rise by approximately 16 inches, or one foot and four inches, by the year 2050 and approximately 55 inches, or nearly five feet, by the year 2100. An increase in sea level rise will most likely increase the magnitude of flooding resulting from severe coastal storms.

Source: State of California Sea-Level Rise Interim Guidance Document, 2010.

Sea level rise and other climate change activities can have potential adverse effects on facility and training operations at NBVC Point Mugu and NBVC Port Hueneme. Such effects can include but are not limited to the potential increased inundation, erosion, and flooding damage in this area, disruption of and competition for reliable energy and fresh water supplies, and increased ecosystem, wetland, and sensitive species management challenges. All these and others not mentioned here can have detrimental effects on military operations and readiness for NBVC.

Source: Department of Defense, 2014 Climate Change Adaptation Roadmap.

Findings

- While there is newly developed guidance for installations and communities to assess the impacts of climate change on their facilities, this is still fairly new topic which makes it difficult to accurately assess impacts and identify workable solutions.
- Further data is needed to assess this issue further and conclude additional findings.
- The Department of Defense, 2014 Climate Change Adaptation Roadmap identified interagency collaboration as essential for this issue.
- The Nature Conservancy Coastal Resilience Ventura Project evaluated the affected/interviewed areas current plans, updates, land use regulations, etc.

Existing Tools

Department of Defense 2014 Climate Change Adaptation Roadmap

The DOD's 2014 Climate Change Adaptation Roadmap identifies four goals for the entire DOD to strive for in the challenge of sustaining excellent military operations and readiness for the nation's defense, as a whole. The goals include identifying and assessing the climate change impacts and vulnerabilities on an installation-level and department-level including the assessment of the acquisition and supply chain, which can potentially effect civilian contractors and vendors, integrating climate change considerations and managing the risks across the entire department, and finally,

collaborating with both internal and external stakeholders on climate change challenges. This document is designed to provide the guiding framework for the DOD and its installations in responding to the inevitable climate change impacts. It provides high-level actions and references the identification of the local-installations impacts as well. This document complements the 2010 Quadrennial Review (QDR) where climate change was initially introduced as an ever-growing and ever-changing challenge for the DOD. In this review, climate impact assessments for over 30 installations were identified as a key element in addressing the military concerns and planning considerations relative to this issue. This QDR also identified that strategic internal and external partnerships would be key in developing workable solutions on the installation level, regional level, and worldwide.

The Nature Conservancy's Coastal Resilience Ventura Project

The Nature Conservancy and its partners have established an advanced global network in order to support decisions for adaptation planning and post-storm redevelopment. The project also helps determine natural solutions in order to mitigate risks of climate change and disaster events. The purpose of the project includes:

- Evaluate the economic benefits and costs of various sea level rise mitigation strategies.
- Meet the needs and requirements of the stakeholders for informed decision making.
- Evaluate current conditions of sea level rising in the area to in order to determine appropriate sea-level rise adaptations and defensive structure development.

In order to determine proper management efforts, the City of Oxnard, Ventura, and Port Hueneme, as well as the County of Ventura, Coastal Commission and NBVC were interviewed. Key coastal and floodplain properties were then identified and acquisitioned. Currently, the project is working with stakeholders, such as NBVC, to determine solutions for sea-level rise impacts.

5.5. Coordination / Communication

This discussion refers to the programs and plans that promote interagency coordination. Interagency communication serves the general welfare by promoting a more comprehensive planning process inclusive of all affected stakeholders. Interagency coordination also seeks to develop and include mutually beneficial policies for both communities and the military in local planning documents such as general plans.

Key Terms

No unique terms are used in this section.

Issues Assessment

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| Issue COM-1 | Communication between NBVC and Multiple Agencies and the Community <i>Associated with: NBVC</i> Communications with the community is challenging due to the multiple number of agencies with responsibilities in the area, which can create delays and conflicts for addressing issues associated with NBVC. |
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The NBVC JLUS study area encompasses a vast land mass with multiple governmental and quasi-governmental agencies that possess certain land use or resources authority. The multi-agency authority and responsibility in this area can be cumbersome to deal with when managing resources and issues when they occur. Within the JLUS study area, there are approximately 10 agencies that have land use or resources authority, they include:

- Ventura County
- City of Camarillo
- City of Oxnard
- City of Port Hueneme

- Oxnard Harbor District
- Channel Islands National Park
- California State University Channel Islands
- California Coastal Commission
- Community of Silver Strand
- California State Parks

Each of these agencies has a variety of responsibilities and manages different levels of the resources that are found in this area off the California South-Central Coast. These multi-agency, multi-level authorities can represent lengthy processes when managing military – community compatibility issues such as coastal land development relative to the approach and departure zone of the NBVC Point Mugu airfield.

If lengthy development review processes or response times occurs whether they are response times for law enforcement or emergency management personnel—fire or flood, then the military mission at NBVC can potentially be adversely impacted by such delays or long local and state processes. Components of the mission could be ordered to cease, delaying valuable training from occurring or could potentially realign other missions from NBVC to other locations in the U.S.

More importantly to this area is environmental protection. There are several agencies in the area whose common goal is to preserve and protect the natural environments along the Ventura County coastline. With a multitude of agencies operating from unique individual mission statements, this can cause lost opportunity for sharing of resources ultimately resolving any compatibility issues. This common goal overlap among environmental agencies can also cause training delays for NBVC missions.

Findings

- While there are various individual tools that require coordination and communication relative to specific circumstances, there is no regional guide for coordination and communication with the agencies in this study area to ensure timely and comprehensive notification and coordination.

Existing Tools

There are several good existing tools for the sharing of resources in times of crisis such as civil unrest or a major natural disaster and other intergovernmental coordination such as the Ventura County Air Pollution Control District coordinating with agencies and businesses regarding air quality and control. Some of these tools exist in the county's general plan and the cities of Camarillo and Oxnard general plans.

However, there is no formal protocol for identifying and disseminating information to all those jurisdictions or agencies that may be impacted by non-emergency events, such as environmental protection other than what is required by NEPA and CEQA, especially in this study area. In addition, a reference guide like the Mutual Aid Quick Reference Guide, delineating a brief process description and flowchart, regional contacts, and how the overall emergency management mutual aid system in the state of California is enacted and operated, does not exist for the multiple agencies that have land use and resource authority in the NBVC JLUS study area.

Issue COM-2

Early Development Review Coordination

Associated with: NBVC Port Hueneme and NBVC Point Mugu

Some of the JLUS communities do not have an early, coordinated process with NBVC regarding development review of new or expanded infrastructure planning and long-range planning between NBVC and local / regional agencies.

Notification of development proposals is a cornerstone of public planning. Early notification is an invaluable asset to public planning processes as it allows for modifications of plans earlier in the process where opportunities for cost and operational efficiencies can be realized by agencies and the development community.

During the discovery portion of this study, NBVC and local jurisdictions identified the NEPA and CEQA processes for notifying pertinent stakeholders of projects. While the NEPA / CEQA processes are valuable tools and ensure public notification of various activities, this process occurs later in the planning phase. This notification later in the planning process is exactly what can cause, at times, cost prohibitive changes to plans. If there is a communication procedure in place to discuss the potential opportunities and issues of a project in the early phases of planning, then there is an increased likelihood that plans can be modified early on in the planning process that would still be economically beneficial for both the developer and the local and federal agencies involved. Thus, this type of collaborative planning process would create a compatible and sustainable environment for both the military and the community.

Findings

- Senate Bill 1462 only requires notification of the military prior to action by a legislative body to adopt or substantially amend a general plan that affects areas within 1,000 feet of an installation. The law falls short of a more comprehensive coordination on projects and to include the military in an early consultation.
- The cities of Camarillo and Port Hueneme do not currently have guiding policy relative to military coordination. All jurisdictions do not have policy that establishes formal, early coordination with the military for proposed projects that may impact the NBVC mission.
- While a framework of sharing information about state and federal facilities is established in the Ventura County General Plan, it does not establish parameters for sharing information such as timeframes and it does not define what is meant by facilities, if it includes public roadways or not.

Existing Tools

Senate Bill 1462

SB 1462 (Chapter 906, Statutes of 2004) expanded the requirements for local government to notify military installations of significant general plan updates. The Bill states that “prior to action by a legislative body to adopt or

substantially amend a general plan, the planning agency shall refer the proposed action to the branches of the Armed Forces when the proposed project is located within 1,000 feet of a military installation, within special use airspace, or beneath a low-level flight path..." The Bill also authorizes any branch of the United States Armed Forces "to request consultation" to avoid potential conflict and to discuss "alternatives, mitigation measures, and the effects of the proposed project on military installations."

While this tool establishes the precedent for notification of the military of proposed projects in the specific areas it identifies, it does not provide specific parameters on when the notification should occur other than to say, "prior to action by a legislative body to adopt or amend...". By this time, there has been considerable work on the project potentially without the knowledge of all impacted stakeholders.

California Military Land Use Compatibility Analyst

The California Military Land Use Compatibility Analyst (CMLUCA) is a mapping tool that identifies where a project is located relative to military installations, use areas or special use airspace. This enables quick compliance with state legislation that requires local planning agencies to notify the military of any project that may affect military readiness. Specifically, the legislation requires local planning agencies to notify the military when a project meets any one of the following criteria:

- Located within 1,000 feet of a military installation,
- Located within special use airspace, or
- Located beneath a low-level flight path.

This tool can be useful for developers, planners, and land use management agencies to make a general assessment about a proposed project's compatibility with adjacent military land uses, especially in the vicinity of a military installation. However, there is no evidence that this tool is utilized as it is not referenced on any local jurisdiction websites or military websites.

Source: CMLUCA, 2010. <http://cmluca.projects.atlas.ca.gov/>

City of Camarillo General Plan

The City of Camarillo General Plan Noise Element includes a transportation system noise control measure that seeks to coordinate with U.S. Navy authorities on matters related to noise impacts and reporting issues to the proper authorities. This measure only relates to noise impacts and does not discuss general coordination with the Navy on other planning matters such as proposed development actions. Additionally, the city's general plan does not contain any policies that directly address the requirement to comply with Senate Bill 1462.

City of Oxnard General Plan

The City of Oxnard General Plan has a dedicated chapter to military compatibility. The most applicable goals and policies related to this early development notification are:

Goal MC-2: Participation of NBVC personnel and their dependents and Oxnard government and residents in planning and development decision-making processes that may impact NBVC and/or, conversely, the City and its residents.

Policy MC-2.3 Development Permitting Process: Implement Government Code Section 65940 by requiring development applicants to identify whether a proposed project meets one or more of the following criteria:

- Located within 1,000 feet of NBVC
- Beneath a low-level flight path
- Within special use airspace (SUA) as defined by Section 21098 of the Public Resources Code.

If the proposed project meets one of the above, the City shall distribute the complete application as provided in Government Code Section 65944 (d)(I).

Policy MC-2.4 Information Exchange: Designate a military liaison function within the City government and/or EDCO to exchange

information between the City and NBVC on issues of mutual concern including, but not limited to:

- *Early notification of development projects near the installation*
- *Early notification by NBVC to the City of potential changes in aircraft operations (flight patterns, operational tempo, etc.)*
- *Housing, recreation, and other issues related to Navy personnel and their dependents living in Oxnard.*

MC-2.6 Coordinate Military Compatibility Planning with Ventura County: Maintain close contact with planning counterparts in Ventura County to coordinate military compatibility planning and management activities within unincorporated areas adjacent to the City.

Goal MC-2 and corresponding policy is a very proactive approach to ensuring early development review coordination. As seen in Policy MC-2.3, the City has adopted ways to notify the military about development slated for areas near the vicinity of the installation. Policy MC-2.6 also relates to military compatibility planning but further includes coordination with Ventura County Government. Policy MC-2.4 is also proactive and goes beyond simply adopting state mandates. By setting the need for a military liaison, the City of Oxnard has already taken proactive steps to ensuring military compatibility through greater jurisdictional coordination.

City of Port Hueneme General Plan

While the city's general plan has recognized that there have been numerous city and military improvement projects and requests for recreational projects to which the City, the Port, and the military have collaborated on dating back to 1987, the general plan does not have any policy framework that addresses compliance with Senate Bill 1462 nor does it have formal policies and objectives that establish early notification and coordination of proposed development actions to all potentially impacted stakeholders.

While the informal precedent of collaboration between the City of Port Hueneme and NBVC are a good starting point for future communication, the coordination must evolve further to ensure compliance with state law and compatible and sustainable development occurs between the three agencies.

County of Ventura General Plan

The County of Ventura General Plan includes goals to ensure continuing, cooperative planning and working relationships between the County of Ventura and State and Federal agencies to share information relative to existing and proposed State and Federal facilities. The most relevant goal reads as follows:

Goal 4.11.1 Goals:

- *Ensure a continuing, cooperative planning and working relationship between the County of Ventura and the respective State and Federal Government Agencies in sharing information relative to existing and proposed State and Federal Facilities.*
- *Ensure that Federal and State facility planners are adequately informed of applicable County regulations, standards and land use policies in order to minimize conflicts with the County Planning Programs.*

While these goals provide some guiding framework for coordination with federal and state agencies, the goals do not provide standards to gauge performance such as timeframes to notify a state or federal facility of a proposed planning project. Additionally, these guiding goals do not define state and federal facilities—structures, roadways, or other infrastructure.

Issue COM-3

NBVC Formal Communication Procedures

Associated with: NBVC

There may be inadequate communication procedures for NBVC to inform the public about mission activities and training exercises including, but not limited to, the following topics:

- Changes in scheduled aircraft operations (such as eastern Camarillo area) that result in operations that are notably different from standard operations.
- Special training and RDTE activities.
- Commercial deliveries to the base.
- Other significant changes in operations.

During the initial discovery phase of the NBVC JLUS, the public and stakeholders mentioned the issue about communication from the base regarding training activities and operations. The primary concern with this communication is there may be insufficient time to prepare and adequately mitigate associated impacts with the military mission operations and training activities.

The JLUS process discovered that the NBVC uses various social media outlets such as Facebook and Twitter and the National Environmental Protection Act (NEPA) / California Environmental Quality Act (CEQA) process to inform the public of activities and other actions that may require public input. However, the social media outlets do not always reach the target audience that is concerned with the NBVC operations and training activities. In addition, the NEPA / CEQA process, in some situations, may come too late in the notification process as mentioned in the last issue discussion. This issue of potentially not reaching all the pertinent stakeholders or reaching the stakeholders too late in the process can cause issues with proposed developments and / or noise complaints that can eventually become a major issue for NBVC due to potential mission realignments because of too many

noise complaints from the community or because of incompatible development that occurs in a mission-critical area.

Findings

- While the Navy utilizes various media tools, it is difficult to assess if these platforms are providing the notification to the greatest number of impacted persons in a timely manner. Members of the public expressed desire to have further public outreach about changes in mission or operations at NBVC.
- Official notification processes, like posting in the Federal Register, are good starts, but should not be the only public notification.

Existing Tools

Naval Base Ventura County Facebook Page, <https://www.facebook.com/NavalBaseVenturaCounty>

After evaluation of the NBVC Facebook page, the information posted consists of community and ceremonial events, and posts about operations and activities that occur on-base. While the posts mention possible impacts and when impacts can be expected, i.e. not in the evening hours, the posts do not include a point-of-contact or information about what to do or who to call relative to the impacts that may occur. An example of one post about potential impacts and the timeliness of the notification given is:

Posted on October 23, 2013

Airmen from Carrier Air Wing Nine (CVW-9) home based at Naval Air Station Lemoore, Calif., will be at Naval Base Ventura County (NBVC) Point Mugu from Thursday, Oct. 24 to Friday, Oct. 25 to conduct training in the Sea Test Range off the coast of NBVC Point Mugu.

The general public in the Camarillo/Oxnard area may experience increased jet activity and noise during this time. The extra jet activity will be limited and will not occur in the evening hours.

While this platform is good for notifying community stakeholders, this was only posted to the NBVC Facebook page a day in advance. Furthermore while 18 Facebook persons who liked the page liked the comment and two persons commented on the post, it is uncertain how many residents in the cities of Camarillo and Oxnard were aware of the increased activity for the two days in late October. Although, there are 4,532 Facebook accounts that have indicated they like the NBVC Facebook page, it is uncertain as to the effect this notification platform has on outlying areas such as Camarillo and Oxnard.

The Facebook page was a good tool during the recent government shutdown by providing contact information for emergencies related to housing issues and informing Facebook patrons about the offices that would be closed and still operating on-base. While the use of social media such as Facebook captures a specific audience, there are no performance measures that track the number of persons that may not be Facebook patrons to ensure the notifications are reaching that section of the population in the Camarillo and Oxnard areas.

**Naval Base Ventura County Twitter Page,
<https://twitter.com/NBVCCalifornia>**

After an evaluation of the NBVC Twitter page, this social media platform has 215 followers and is limited by the capability of the tool—posts are allowed 140 characters. The same information as is posted to the NBVC Facebook page is posted to this webpage in an abbreviated format. However, the aforementioned Facebook post on October 23, 2013 does not appear on the NBVC Twitter page.

While this tool can be used to enhance notification to a specific population cross-section, the tool is limited to the 140 character rule and appears to not be as widely used or perhaps known based on the number of followers of this page.

**Issue
COM-4**

Unmanned Aerial Systems (UASs) Public Information

Associated with: NBVC

Lack of information about military and civilian use of UASs / UAVs in Ventura County.

The Federal Aviation Administration (FAA) Modernization and Reform Act (FMRA) of 2012 authorized the integration of unmanned aerial systems (UASs) into national airspace by December 2015. The intent of the integration of UASs is to serve in capacities such as search and rescue events, disaster relief, humanitarian efforts, and for security purposes.

The primary concern about the UASs in this JLUS is the lack of information available and accessible to the public regarding the intent and use of UASs in the NBVC JLUS study area. The concern is focused on the protection of privacy and security for residents in Ventura County. There is concern with the introduction of civil and commercial users of UASs in the national airspace system that such users will operate UASs in a manner that obstructs personal privacy and safety. However, the FAA has set provisions and regulations for the safe and appropriate use of UASs for public and civil operators of UASs as well as model aircraft users. Furthermore, other states across the nation have enacted legislation that protects the privacy and safety of UASs non-users according to the Fourth Amendment of the United States Constitution.

Findings

- There are various sources available to the public about the use of public and civil uses of UASs as provided for in this document. While regulatory sources exist, a simple brochure or component of the NBVC website on UASs use is not available.
- These publicly available sources are constantly developing new materials as this issue and plans to address this issue are still developing at the federal level.

Existing Tools

FAA Modernization and Reform Act

The FMRA stipulates that UASs are only allowed to operate if the user has been issued a certificate of authorization (COA) or waiver or a certificate of special airworthiness. This limits the users of these UASs to those who have gone through the FAA application process. COAs are issued to public agencies who utilize public aircraft for research and testing and even military training, and the certificates of special airworthiness are issued to companies who are developing and testing civil UASs. Public agencies that currently possess COAs for UASs include the U.S. Navy, the U.S. Air Force, the Department of Homeland Security, the Department of Agriculture for the Agricultural Research Service, and municipal governments. The operations performed by the UASs under the COA of a municipal agency typically consist of law enforcement, disaster relief, military training, and other governmental mission operations.

In addition to the COAs, the FAA has issued certificates of special airworthiness to civil operators of UAS. Operations of civil UAS include development, research, and testing. Such civil operators include defense-related companies such as General Atomics Aero Systems, Inc., Raytheon Company, and Honeywell International.

Source: Federal Aviation Administration, 2013. Fact Sheet Unmanned Aerial System.

Regarding the issue of privacy, current regulations as stipulated by the FMRA requires civil and public UAS operation to occur by visual line-of-sight. UAS technology has not adequately developed enough to enable the UAS to “see and avoid” should something or another aircraft be in the path of the UAS that is operating. Due to this immature technology, UAS operators must operate the aircraft through a direct visual line-of-sight either by the operator or by a chase plane in visual contact with the UAS. The UAS operator must be able to clearly see the aircraft when operating it. Therefore, if a UAS operator is operating the UAS and cannot see the aircraft due to housing nearby or its general location relative to the terrain, then the operator and UAS are in violation of the provisions set forth by the FMRA.

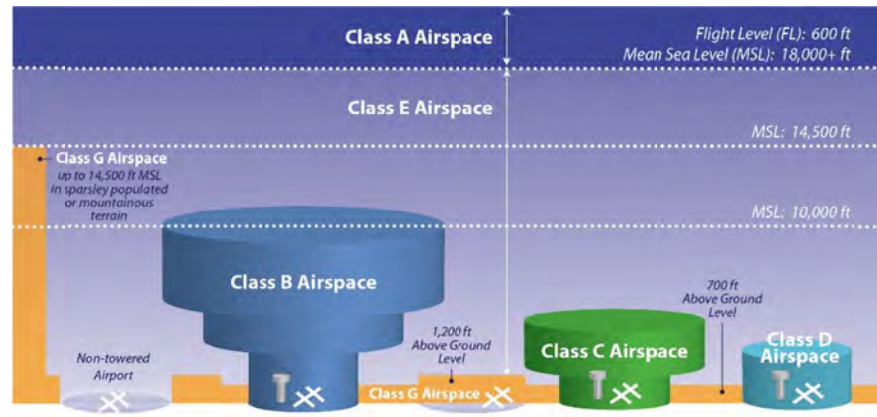
The FMRA also authorized that public safety agencies can perform operations using small UASs that are approximately 4.4 pounds or less during daylight hours only, 400 feet above ground level (AGL), and in Class G airspace and more than five statute miles from an airport or any other location that conducts aviation operations.

Class G airspace is an uncontrolled airspace that is located at a flight level of 600 (FL600); this is typically about 1,200 feet AGL. There are no requirements for entry or clearance into this airspace regardless of operations including instrument flight rule (IFR) operations, and there are no radio communications in this airspace. In addition, the altitude of the Class G airspace can vary depending on terrain and elevation. There are rules for visibility within this airspace, i.e. 1 mile during the day.

According to the FAA UAS Fact Sheet, currently UAS are not permitted to operate in a Class B Airspace. This airspace is typically located over urban areas and contains the highest number of manned aircraft. Class B airspace is located over the busiest airports depending upon the IFR operations and passengers served. This airspace does require clearance from the air traffic control tower before entry can be made. Aircraft must be equipped with two-radio communications systems.

Figure 5.5-1 illustrates the various airspaces in the national airspace system. This graphic also identifies the altitudes of the airspaces. This graphic serves as a pictorial reference to inform the public about the various airspaces and their altitudes so the public has a better understanding of airspaces within the national airspace system. The discussion of the B and G is relevant to this JLUS; therefore, discussion of other airspaces is not warranted for the purposes of this study.

Figure 5.5-1 Airspace Classification



In addition, the FAA and its partners including the Department of Defense (DOD) and Department of Homeland Security (DHS) are working together to develop operations and certification standards and guidelines for the safe integration of UASs into the national airspace system. According to the FMRA, the FAA has until September 30, 2015 to develop a sound, comprehensive plan to allow civil UAS to safely integrate into the national airspace system. In addition, the FAA has until December 31, 2015 to develop sound standards for operations and certifications guidelines for public UASs.

Despite the deadlines for the federal government to develop a plan and standards for operations and certifications for the public use of UAS, some states have enacted legislation to protect the privacy and welfare of their residents. Several states have enacted legislation to protect the public against the potential abusive, intentional, or unintentional impacts associated with UAS operations, the states are:

- Florida
- Idaho
- Illinois
- Montana
- Nevada
- North Carolina
- North Dakota
- Oregon
- Tennessee
- Virginia

In addition to the states that have enacted legislation to protect the public against impacts associated with UAS operations, there are several states that have proposed additional legislation. These are:

- Arizona
- California
- New Mexico
- Washington

Source: *National Conference of State Legislatures, 2013.*
<http://www.ncsl.org/research/civil-and-criminal-justice/unmanned-aerial-vehicles.aspx>

Internet Resources

There are several resources available on the internet to learn, educate, and inform the public about the integration of UASs into the national airspace system. The resources include the law that authorized such actions, the process for public agencies and companies to apply to use and operate UASs, and other facts about UASs. Resources include the following:

- Code of Federal Regulations, Title 14 Part 91 (14 CFR 91), Aeronautics and Space,
<http://www.ecfr.gov/cgi-bin/textidx?SID=2e82fe1ef5e49e0790ad40338e0fe2c3&node=14:2.0.1.3.10&rgn=div5#14:2.0.1.3.10.2.4.19>
- FAA Fact Sheet on Unmanned Aerial Systems,
http://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=14153
- FAA Modernization and Reform Act of 2012,
<http://www.gpo.gov/fdsys/pkg/CRPT-112hrpt381/pdf/CRPT-112hrpt381.pdf>
- Federal Advisory Circular for Model Aircraft Operating Standards,
http://www.faa.gov/documentLibrary/media/Advisory_Circular/91-57.pdf

- National Conference of State Legislatures, 2013 Unmanned Aerial Systems Legislation, <http://www.ncsl.org/research/civil-and-criminal-justice/unmanned-aerial-vehicles.aspx>

Issue COM-5

Notification to Local Law Enforcement

Associated with: NBVC Port Hueneme

There can be a lack of advance notice to local law enforcement to assist in traffic control and queuing during on-base activities / special events. These events tend to impact traffic off-base creating congestion and stacking of vehicles at gate access points.

Traffic management in communities is very important to the overall quality of life that a city can offer to its residents and visitors. Unnecessary levels of traffic reduce overall mobility and increase levels of air and noise pollution. Events such as ceremonial or holiday observance activities can cause congestion due to these events only happening during certain time periods of the day such as morning and evening peak traffic flow times and / or seasonal times when key additional traffic or security personnel are off and thus creating more constraints to an already constrained mobility system.

These events cause congestion and / or long wait periods to access roadways and other facilities for both the community and military. These long wait periods and stacked cars on roadways can cause additional concerns for the military in the issue of security.

NBVC has existing law enforcement memorandums of understanding with the City of Port Hueneme, US Coast Guard, Ventura County Sheriff, and California Highway Patrol. A memorandum of understanding is currently being drafted for the City of Oxnard.

Findings

- There is no public outreach plan or public outreach website in association with NBVC that refers to communication regarding special events or circumstances, including ceremonial events.
- No interagency coordination between NBVC and local law enforcement is recognized by the City of Oxnard, City of Port Hueneme or Ventura County police departments, and no interagency coordination plans have been prepared thus far. The Ventura County Planning Division does refer to interagency activities, but they are outdated and involve the Resource Management Agency and environmental resources.

Existing Tools

During various phases of this planning study, NBVC identified that they provide notification to local law enforcement of special or ceremonial events that will occur on the base in which they need additional assistance. Also, NBVC does maintain a Facebook page notifying all patrons of the Facebook page about information regarding special events and other relevant information that the public would care to know.

Though the cities of Oxnard and Port Hueneme General Plans discuss communication with the military, the discussion is in regards to topics other than scenarios where additional enforcement is needed to secure the cities and the military.

DOD Directive 5525.5

DOD directive details DOD cooperation with civilian law enforcement officials including policies, responsibilities and procedures to support them. The applicable policies found within this directive include:

It is DOD policy to cooperate with civilian law enforcement officials to the extent practical. The implementation of this policy shall be consistent with the needs of national security and military preparedness, the historic tradition of limiting direct military involvement in civilian law enforcement activities, and the requirements of applicable law.

5.1.1. Coordinate with civilian law enforcement agencies on long range policies to further DOD cooperation with civilian law enforcement officials.

This directive provides the authority to the military to coordinate with the local law enforcement on matters that require additional assistance. However, there is no evidence of formal coordination protocol between NBVC and local law enforcement.

Range Complex Management Plan, Volume II

Chapter 8 of the RCMP, Volume II is concentrated on outreach, specifically outreach management and coordination with local agencies. While the Point Mugu Sea Range has no public outreach plan, they have conducted successful outreach for many years and the RCMP recommends the future preparation of a Sea Range public outreach plan.

One of the Sea Range's main outreach tools utilized is the media, coordinating with the Public Affairs Office on releasing notifications regarding events. Additionally, it states that NBVC Point Mugu is the primary shareholder to interact with local communities within Ventura County, allocating the task of coordination with local law enforcement to them. One of the current public outreach efforts focuses on providing advanced notice to local communities of major or special events that have the potential to create noise or other impacts.

Issue COM-6

Poor Signage for Base Commercial Truck Traffic

Associated with: NBVC Port Hueneme

Commercial freight trucks sometimes miss entrances to the base and enter surrounding local roads not designed for heavy commercial trucks.

In the past, commercial delivery was isolated to the Victoria Avenue gate; however, the route to this gate was not adequately signed to enable reliable, successful routing of commercial delivery freight trucks to the base. This issue was identified by the public and stakeholders during the initial phases of this study due to the resulting nuisance that the freight trucks were causing to nearby communities and residents.

Due to poor signage on Victoria Avenue, freight trucks entered the community of Silver Strand where the roadways are already constrained by available space. In addition, the trucks that entered the community would mean they would have to turn around using the community roadways in order to proceed back to the Victoria Avenue Access Point (gate) of NBVC. This use of roadways by freight trucks caused excess noise and concern about roadway maintenance as well as mobility for the residents of the community. While exact frequency numbers of this event that occurred is unavailable, it was reported that it happens on a regular basis impacting traffic and mobility.

This not only caused delays in deliveries to the base of important supplies and commodities, but also caused issues for the community relative to the noise and congestion associated with the commercial trucks and roadway maintenance issues due to the heavier weight of freight trucks.

NBVC recently closed the Victoria Gate to personal vehicles and opened the Patterson Gate to alleviate traffic issues at Victoria Gate. Ventura County has installed new signs along Victoria Boulevard to also help the problem. NBVC has contacted GPS companies to ensure that current mapping reflects the fenceline and does not send traffic heading to NBVC through

Silver Strand. NBVC is initiating a traffic study for the Victoria Gate to develop a long-term physical solution.

Findings

- Commercial Gate Signage is not well located or sized to ensure the commercial gate is not missed by truck traffic making deliveries to the NBVC Port Hueneme.
- The NBVC website does not provide navigation aids for commercial delivery drivers nor does the website provide a phone number for a driver to call and get directions.

Existing Tools

Roadway Signage

There are roadway signs providing information and direction for commercial deliveries along Victoria Avenue. However, there are two signs right before the commercial gate—one located on the far right side where the commercial vendor must look over two lanes of traffic to view the sign. In addition, there is another sign on the fence on the left side, but it is not highly visible from the lane of traffic from which the freight trucks operate. It is not until a vehicle is upon the sign that the sign is clearly visible. In addition, the background color of both signs is white, which does not draw the motorist's attention to the sign.

Naval Base Ventura County Website

The NBVC website provides the information for commercial access to the base. The Victoria Gate is the access point designated for commercial vehicle inspection. The website also provides the operating hours information for the access point, which it operates from 7 a.m. to 2:30 p.m. Mondays through Fridays. The commercial access gate is closed on holidays.

While identifying the gate location as to where commercial deliveries are conducted and the hours this gate operates is a good step in providing some information to commercial freight truckers, the website does not have a phone number associated with the gate to contact should a contractor or vendor need to reach the location and ask for directions. In addition, the

website does not contain a map of the location of the gates to assist commercial vendors in locating the gate on the base.

Issue COM-7

Land Required for Staging to Support NBVC Mission

Associated with: NBVC Port Hueneme

There is a perception that NBVC has underutilized lands, which has led to multiple proposals to use NBVC Port Hueneme property for non-DOD purposes, including:

- Commercial / shipping purposes.
- Community parking along the fenceline at Silver Strand Beach

Part of the base mission is to provide staging area for troop and equipment mobilization. Mobilization and lay down areas appear vacant, but serve current mission requirements.

During the initial discovery phase of this planning study, stakeholders identified an issue about underutilized lands available on NBVC Port Hueneme. However, the base's mission as a mobilization and deployment center requires adequate space to perform its mission and maintain military readiness in times of conflict and peace. NBVC land and facility assets enable the installation to serve as one of the most effective and efficient mobilization centers on the west coast. To be effective at mobilization, the NBVC Port Hueneme through the Construction Battalion Center Seabees must meet time efficiencies as prescribed by the Office of the Chief Naval Operations. These time efficiencies are referred to as Time Phased Force Deployment Data timelines. Moreover, the land assets at NBVC serve mobilization requirements not only for the U.S. Navy, but also for the U.S. Army and U.S. Marines.

There are over 473 acres of land on NBVC available for mobilization exercises and events to maintain the NBVC Port Hueneme mission. Approximately 10 acres of this land is specifically designated for mobilization exercise, which is used annually to enhance military training and readiness. In addition to the 10 acres used for mobilization training, there is approximately 95 additional acres used annually to support the mobilization exercises and maintain the mission readiness.

Approximately 368 acres are available for full mobilization. In full-scale mobilization, this land supports the capability to unload, stage, store, and ship over 1,600 naval construction force containers and 2,300 pieces of rolling stock out of the port in a short amount of time. So this land is required for U.S. Navy to maintain military mission readiness for NBVC.

Over the years, the land has been subject to multiple proposals for use of the land by commercial industry. However, the land must be maintained under Navy administration to enable immediate military readiness. While it appears that this property, approximately 473 acres, is vacant and not being used at times, some of the land is actually in a real estate outlease program authorized by Congress.

The outlease program enables the U.S. Navy to lease the land to commercial industry, while maintaining ownership. The U.S. Navy receives compensation for the use of the land by commercial industry. At times, the land does not appear to be used as the lessors of the land are not utilizing the land for their business. However, this land is essential to the NBVC mission and provides ample space for mobilization and equipment laydown space during various situations including emergency situations.

Findings

- The tools and information presented adequately address the issue.

Existing Tools

United States Code, Title 10 Section 2667 (*Title 10 USC 2667*)

The Title 10 USC 2667 authorizes the Secretary of the concerned department and / or defense agency to lease lands that are not in excess to willing lessees. The lease may not continue for a period longer than five years unless the Secretary of the department determines that a longer lease period is in the best interest of national defense or public interest. In addition, the Secretary of the department may revoke the lease agreement at any time in the best interest of the nation's defense or public interest.

Relative to compensation, the agreement may stipulate a monetary allocation or an in-kind allocation to the department. The monetary allocation should not be less than fair market value of the interest in the land used. In-kind compensation can include construction of new facilities for the department, provision or payment of utility services for the department, and provision of real property maintenance services.

The monies received from lease agreements will be used in the improvement of the installation and be appropriated by the typical appropriation Acts for national defense. However, a minimum of 50 percent of the money allocation received from the lease agreement must be available for improvement or enhancement activities at the installation for which the allocation was derived. The following types of activities may occur with the use of appropriated funds from lease agreements with commercial industry for use of non-excess military property:

- Maintenance, protection, alteration, repair, improvement, or restoration (including environmental restoration) of property or facilities;
- Construction or acquisition of new facilities;
- Lease of facilities;
- Payment of utility services; and,
- Real property maintenance services.

This tool is a means to provide dual benefit for both commercial and defense industries as well as generate revenue for the state and local economies. This regulation enables the state and local governments to tax, which generates revenue for the local and state governments.

Naval Base Ventura County Activity Overview Plan

NBVC initiated leasing parcels in the mid-1970s. Thus, the largest lessors are Mazda and Global Automobile Processing Services (GAPS). These are vehicle manufacturers who use the non-excess property provided by NBVC for vehicle in-processing and out-processing. The agreement is contingent upon the need of the space for national defense. Hence, all vehicles will be removed within 24 hours if a mobilization event occurs.

The current annual lease amount is valued at \$3 million. These funds are used for improvements and enhancements to both NBVC Point Mugu and NBVC Port Hueneme. As authorized by Title 10 USC 2667, the lessees also provide a benefit to NBVC by assisting in improvement projects associated with their parcels. Such improvement projects include traffic studies, pavement resurfacing, lighting, and landscaping. These improvement projects are currently valued in excess of \$24 million. Additionally, NBVC Port Hueneme is working on making additional parcels available for lease to bring the annual lease value up to \$5 million.

The current tools discussed in this issue address compatibility. Therefore, no further assessment is required for this issue.

Issue COM-8

Notification of Emergency Events on Base

Associated with: NBVC Point Mugu, NBVC Port Hueneme

Public concerned about notification of emergency events or hazards that may occur on base that could affect areas off-base.

A military base performs and conducts various activities to ensure the overall mission is accomplished; such activities include but are not limited to aviation operations, mobilization exercises, storage and maintenance of explosives and other hazardous materials including jet fuel. While NBVC Point Mugu is set further away from large concentrations of people, NBVC Port Hueneme is surrounded by dense urban development. The proximity of the City of Port Hueneme and the dense land uses characterizing the city can create opportunities of increased risk for the city when an on-base emergency occurs. This potential emergency event causes concern for the public near NBVC Port Hueneme.

NBVC has an Emergency Operations Center (EOC) to manage disaster response and recovery.

Findings

- Due to tools not provided and not found, findings were unable to be concluded for this issue.

**Issue
COM-9**

Long-term Coordination / Communications of Port Operations

Associated with: NBVC Port Hueneme

Potential need for enhanced coordination and communications as they pertain to seaside operations to ensure optimal use of Port facilities considering available infrastructure.

The Port of Hueneme is the only deep-water port between Los Angeles and San Francisco, making it a strategic asset for both the Navy and commercial operations conducted by the Oxnard Harbor District (OHD). As shown on Figure 3-17, the Navy and OHD manage different portions of the water areas, shoreside facilities, and adjacent lands in the port area. The Navy and OHD also have agreements on the shared use of some lands and facilities. The OHD leases land areas from the Navy to conduct commercial operations on land, and has a joint use agreement with the Navy for use of Wharf 3.

As a facility in high demand for both military and commercial uses, and with a small water and land area footprint, flexibility in the use of space is paramount. Continuing open lines of communication and looking into options for future shared use and/or leases is an important dialog that will need to continue and evolve.

Findings

- Current Joint Use Agreement stipulates that coordination meetings are to occur on a regular basis, which involves both Navy and OHD personnel.
- Ability to look into options for future shared use and/or leases are an important dialog that will need to continue and evolve.

Existing Tools

Joint Use Agreement for Joint Use of Government-Owned Facilities at Naval Base Ventura County, Port Hueneme

There is a Joint Use Agreement between the OHD and the federal government regarding shared use of Wharf 3 and associated real property comprising up to 25 acres at the Port of Hueneme. The property includes Wharf 3 and adjacent apron comprising approximately four acres and an additional approximately 21 acres of industrial land.

Article 2 of the Joint Use Agreement establishes weekly coordination meetings between officials from NBVC and OHD to convene and establish priority for the various seaside and port facilities relative to the operations schedule that has been approved. The following is excerpted from the joint use agreement.

Article 2. Scheduling Use of Parcels

- A. *Subject to the terms and conditions of this Agreement, the District shall have the right to use the Parcels for loading, unloading and the storage of vehicles/cargo in a manner consistent with Navy operations.*
 - 1) *There will be a weekly Coordination Meeting at which designated representatives from the Government and District shall be required to attend to determine priority as defined in Article 4D of this agreement and the scheduled use of the facilities of the Parcels*
 - 2) *The weekly Coordination Meeting will be conducted at the time and place as mutually agreed upon by Navy port operations personnel and District operations personnel.*

3) *During the weekly Coordination Meeting, a Monthly Schedule of anticipated arrival and departure times of vessels to use the Primary Parcel shall be established, revised, if necessary, and approved by the respective representatives of the Government and the District. In the event that an unforeseen Navy vessel emergency or military contingency operation is revealed during the weekly Coordination Meeting where Government facilities previously arranged for the District can no longer be used, the Government and the District will make all reasonable attempts to arrange for alternate facilities under separate License Agreement. Nothing in this Article or in Article 4 shall be deemed to modify the Navy's right to require suspension under the provisions of Article 20.*

These established coordination procedures discuss coordination of port operations and allow for an alternative to be discussed and agreed upon through a separate lease agreement. This tool enables an open forum where both sides (OHD and Navy) can ensure optimal utilization of port facilities, while entertaining possibilities for alternatives utilizing other facilities. The joint use agreement acts as an adequate compatibility tool and there is no need for further research.

Please see the next page.

5.6. Dust, Smoke, and Steam

Dust results from the suspension of particulate matter in the air. Dust (and smoke) can be created by fire (controlled burns, agricultural burning), ground disturbance (agricultural activities, military operations, grading), industrial activities, or other similar processes. Dust, smoke and steam are compatibility issues if sufficient in quantity to impact flight operations (such as reduced visibility or cause equipment damage).

Particles of dust and other materials that are found in the air are referred to as particulate matter. At certain concentrations, this particulate matter can be harmful to humans and animals if it is inhaled, as it can cause strain on the heart and lungs which provide oxygen to the body. Particulates can be caused by many activities, including driving on unpaved roads and surfaces, wind erosion from unpaved vacant lots, disruption of land from vehicle maneuvers, explosions, aircraft operations, and other earth-moving activities such as construction, demolition, and grading. Its primary source is typically the exhaust emitted by vehicles, wood burning, and industrial processes.

The primary dust, smoke, and steam-related issues in this JLUS are associated with agricultural operations. Agriculture burning and cultivation activities can issue dust into the air near the NBVC Point Mugu airfield as the majority of land uses around the airfield are agriculture. These dust plumes can potentially rise far enough into the airspace near the airfield especially near the approach and departure corridor, which is a critical low-level, low-speed area for approaching and departing aircraft. This dust plume, if high enough in altitude, can potentially cause a visual impairment to pilots in the area, which can increase the risk to pilots and damage to federal equipment.

Key Terms

Particulate Matter (PM). Particulate matter consists of fine metal, smoke, soot, and dust particles suspended in the air. Particulate Matter is measured by two sizes: Course particles (PM10), or particles between 2.5 and 10 micrometers in diameter in size, and fine particles (PM2.5), or particles less than 2.5 micrometers in diameter.

Issue DS-1

Dust / Smoke from Agricultural Operations

Associated with: NBVC Point Mugu

Dust generated from cultivation and/or agricultural burning on nearby agricultural lands can potentially represent a visual impairment to pilots performing aviation operations in the vicinity of the NBVC Point Mugu Airfield.

Ventura County is one of the most productive agriculture producing counties in California. This helps the military because numerous agricultural protection laws help to maintain the low population densities which help foster the military-mission at NBVC Point Mugu. However, there is a concern that agricultural activities will create dust and smoke plumes that may conflict with military aviation operations in the area. Dust clouds caused by typical agricultural activities and smoke clouds caused by open burning can create visual impairments for pilots performing take-off and landing operations at NBVC Point Mugu.

Findings

- While the VCAPCD attempts to mitigate smoke plumes through air quality regulations, the SMP does not define smoke sensitive areas.
- As Rule 55 allows on-field agricultural uses to create dust without regulation, Rule 55 does not act as a satisfactory planning compatibility tool to address this issue.

Existing Tools

Ventura County APCD Smoke Management Plan

APCD priority is to maintain air quality in Ventura County. Smoke from agricultural burns has the potential to harm air quality and the Smoke Management Plan (SMP) looks to regulate when and where agricultural burns can occur. APCD permits approximately 100 to 180 Burn Days a year. Burn Days allow burn permit holders to legally burn up to 300 tons of agricultural material. “No Burn Days” are called when burning would cause adverse impacts on regional air quality.

There are two burn periods per burn day. A morning period runs from 7:00 a.m. until noon, and the afternoon period runs from noon until 4:00 p.m. Ignition of burn material is allowed during these times. Outside of these times, a permit holder may stir and tend to the fires to maintain burning and reduce smoke production but may not add additional material or ignite additional piles.

Following the completion of an agricultural burn, a permit holder must contact APCD to close out the burn permit. The permit is then removed from the active file, allowing APCD to keep track of all active agricultural burns in the county.

When approving burn permits, special attention is given to the location in the county, and whether the burn will be upwind from smoke sensitive areas. This is important because a burn located upwind from NBVC Point Mugu could have adverse impacts on the military mission. However, the SMP does not define what are considered smoke sensitive areas. Additionally, the SMP does not reference coordination and communication with the military and certain aviation operations to ensure comprehensive interagency coordination and communication occurs.

Rule 55 – Fugitive Dust

Fugitive Dust is regulated by Regulation IV – Prohibitions, Rule 55 of the Ventura County Air Pollution Control District Rules and Regulations. Rule 55 attempts to regulate fugitive dust sources that extend beyond the property line and cause twenty (20) percent opacity or greater. However the rule does not apply to on-field agricultural operations. Additionally, Ventura County has a Right-to-Farm Ordinance to encourage and enhance agricultural operations in the county, and dust creation is included as part of typical agricultural operation.

5.7. Energy Development

Development of energy sources, including alternative energy sources (such as solar, wind, geothermal or biofuels) could pose compatibility issues related to glare (solar energy), or vertical obstruction (wind generation), or water quality / quantity.

The moving blades of a wind turbine create a Doppler effect that can interfere with radio transmissions and radar systems. The impacts to radar are increased with the height of the turbines and the number and clustering of wind turbines; however, the greatest impact is caused by their location in proximity to the radar system. Although research is still being conducted, it is not fully known how tall, large, or how many wind turbines must be present to interfere since a radar system may be severely impacted by even a minor interference.

Relative to renewable solar energy, solar facilities could cause substantial amounts of glare depending on their type, location, angle and direction, resulting in a reduction of a pilot's view, even at a very high altitude.

Key Terms

Alternative Energy. The term alternative energy is applied broadly to energy derived from nontraditional sources (e.g., solar, hydroelectric, wind).

Issue ED-1

Alternative Energy Development

Associated with: NBVC

The Potential for alternative energy development (e.g. tidal, solar, wind, etc.) and their associated impacts on the NBVC mission. Impacts may include radar / communications interference, vertical obstruction, and glare.

California has very progressive renewable energy standards in place. By 2020, California looks to have 1/3 of energy production from wind, solar, and other renewable sources. As California continues to build its renewable energies future, Ventura County may be tapped as a potential site for production facilities.

There is a concern that energy production could be incompatible with aviation and communications activities at NBVC Point Mugu. Solar power facilities could produce glare that temporarily blinds pilots especially during crucial moments at take-off and landing. Wind turbines can cause vertical obstruction issues which disturb flight paths and the ability of pilots to freely maneuver. Unregulated renewable energy facilities could lead to increased encroachment at NBVC that could impede mission-critical activities.

Numerous local climate change policies and plans have been in effect in order to reduce the emissions on a city and county wide level in order to improve the citizens' quality of life.

Renewable energy facilities are not allowed uses in the incorporated cities of the study area (Camarillo, Oxnard, and Port Hueneme). Therefore, research will focus on renewable energy facility standards for Ventura County only.

Findings

- While the National Renewable Energy Laboratory (NREL) indicated that there is no real potential now for large-scale wind energy farms in Ventura County, there are no policies for monitoring the renewable energy development activity and ensure proper notification to all potentially affected stakeholders in the area.
- The Ventura County Non-Coastal Zoning Ordinance (NCZO) establishes some regulation of renewable energy development, but there is still potential for incompatible development of this type as military compatibility is not a component and some terminology that would be important to NBVC is not adequately defined.

Existing Tools

National Renewable Energy Laboratory (NREL) Wind and Solar Potential Maps

The National Renewable Energy Laboratory creates maps that illustrate the potential for renewable energy across the United States. According to NREL, Ventura County is not considered adequate for large scale solar energy production facilities. However, parts of Ventura County are considered adequate for wind energy production facilities. Areas immediately surrounding NBVC Point Mugu are considered to have low wind resource potential.

Currently neither designation puts NBVC Point Mugu at any immediate risk. Due to the agricultural uses that surround NBVC, even small scale solar panels placed on accessory residential uses will not have any adverse effects on aviation activity at the base. Similarly, Ventura County is designated as having low wind resource potential. This means that slower wind speeds do not provide ideal conditions for wind energy production. However, this will need to be monitored for the future potential; especially as technological advances occur in wind energy may create a situation where lower wind speeds can adequately produce the energy needed to provide power for certain situations or devices.

Ventura County Non-Coastal Zoning Ordinance (NCZO)

The Ventura County NCZO allows for energy production from renewable resources in Open Space (OS), Agricultural Exclusive (AE), and Rural Agriculture (RA) zone by way of a Planning Commission Conditional Use Permit. The following standards must be met for approval of a conditional use permit:

- The proposed development is consistent with the intent and provisions of the County's General Plan and of Division 8, Chapters 1 [Zoning] and 2 [Subdivisions], of the Ventura County Ordinance Code;
- The proposed development is compatible with the character of surrounding, legally established development;
- The proposed development would not be obnoxious or harmful, or impair the utility of neighboring property uses;
- The proposed development would not be detrimental to the public interest, health, safety, convenience, or welfare;
- The proposed development, if allowed by a Conditional Use Permit, is compatible with existing and potential land uses in the general area where the development is to be located; and
- The proposed development will occur on a legal lot.

These conditions of approval establish good planning compatibility tools. By implementing the compatibility tools with properties adjacent to the installation, it is more likely that NBVC mission activities will be considered. However, the vague designation of "neighboring property uses" is just that, undefined and potentially creates opportunities for oversight by local decision making bodies. Secondly, the ordinance does not include guidance for any military notification or review of projects that may affect mission-critical activity.

Navy Alternative Energy Development Projects

According to NBVC, it is important to note the following projects: NBVC is currently developing alternative energy projects to meet the Department of the Navy's (DoN) 2020 Energy Goals. Some of these projects include

photovoltaic at Port Hueneme and wind turbines on San Nicolas Island. NAVFAC Southwest is also conducting a Business Case Analysis (BCA) to determine a location within the county for a Biomass Converter Plant to be used in partnership with local jurisdictions. DoN energy goals can be retrieved at http://www.navy.mil/features/Navy_EnergySecurity.pdf.

Southern California Climate Action Progress Report

The action plan assesses all local climate action plans for southern California and provides entities with guidance on other city planning initiatives. It discusses the steps local governments have implemented in order to reduce greenhouse gas emissions. This report is generally a useful tool for local jurisdictions to use as a resource for additional actions to address climate change properly.

The President's Climate Change Plan

Established in 2013, the plan states the president's initiative is to reduce the U.S. greenhouse gas emissions by 17 percent. There are three goals that the plan discusses, which include:

- cutting carbon pollution;
- prepping for climate change impacts; and
- developing international efforts against climate change impacts.

In order to support the reduction in greenhouse gas emissions, the plan states to double wind, solar, and geothermal energy sources throughout the U.S. To ensure the development of alternative energy, the plan states to support and protect communities by establishing a task force comprising of state, local, and tribal officials in order to provide better assistance to local efforts.

Executive Order 13423

Section 11 of the Executive Order established new goals and efforts in order to support continued growth in energy development. The order provides new provisions for energy and environmental management. These efforts will permit federal agencies to improve energy efficiency in order to reduce greenhouse gas emissions. The following are goals stated within the executive order:

- (a) *improve energy efficiency and reduce greenhouse gas emissions of the agency, through reduction of energy intensity by (i) 3 percent annually through the end of fiscal year 2015, or (ii) 30 percent by the end of fiscal year 2015, relative to the baseline of the agency's energy use in fiscal year 2003;*
- (b) *ensure that (i) at least half of the statutorily required renewable energy consumed by the agency in a fiscal year comes from new renewable sources, and (ii) to the extent feasible, the agency implements renewable energy generation projects on agency property for agency use;*
- (c) *beginning in FY 2008, reduce water consumption intensity, relative to the baseline of the agency's water consumption in fiscal year 2007, through life-cycle cost-effective measures by 2 percent annually through the end of fiscal year 2015 or 16 percent by the end of fiscal year 2015;*
- (d) *require in agency acquisitions of goods and services (i) use of sustainable environmental practices, including acquisition of biobased, environmentally preferable, energy-efficient, water-efficient, and recycled-content products, and (ii) use of paper of at least 30 percent post-consumer fiber content;*
- (e) *ensure that the agency (i) reduces the quantity of toxic and hazardous chemicals and materials acquired, used, or disposed of by the agency, (ii) increases diversion of solid waste as appropriate, and (iii) maintains cost effective waste prevention and recycling programs in its facilities;*
- (f) *ensure that (i) new construction and major renovation of agency buildings comply with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings set forth in the Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (2006), and (ii) 15 percent of the existing Federal capital asset building inventory of the agency as of the end of fiscal year 2015 incorporates the sustainable practices in the Guiding Principles;*
- (g) *ensure that, if the agency operates a fleet of at least 20 motor vehicles, the agency, relative to agency baselines for fiscal year*

2005, (i) reduces the fleet's total consumption of petroleum products by 2 percent annually through the end of fiscal year 2015, (ii) increases the total fuel consumption that is non-petroleum-based by 10 percent annually, and (iii) uses plugin hybrid (PIH) vehicles when PIH vehicles are commercially available at mstockstill on PROD1PC62 with PROPOSALS5 VerDate Aug2005 15:32 Jan 25, 2007 Jkt 211001 PO 00000 Frm 00003 Fmt 4705 Sfmt 4790 E:\FR\FM\26JAE0.SGM 26JAE0 3920 Federal Register / Vol. 72, No. 17 / Friday, January 26, 2007 / Presidential Documents a cost reasonably comparable, on the basis of life-cycle cost, to non-PIH vehicles; and

- (h) ensure that the agency (i) when acquiring an electronic product to meet its requirements, meets at least 95 percent of those requirements with an Electronic Product Environmental Assessment Tool (EPEAT)-registered electronic product, unless there is no EPEAT standard for such product, (ii) enables the Energy Star feature on agency computers and monitors, (iii) establishes and implements policies to extend the useful life of agency electronic equipment, and (iv) uses environmentally sound practices with respect to disposition of agency electronic equipment that has reached the end of its useful life.

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| Issue ED-2 | <p>Off-shore Energy Facilities Associated with: NBVC Point Mugu</p> <p>The potential for future energy development / facilities in the sea lanes along the coast may interfere with military operations.</p> |
|-----------------------|---|

The waters off the Central California coast have the potential for numerous types of energy development. Currently this area is an active oil extraction field. High off-shore wind speeds also create favorable conditions for wind energy production. Figure 5.7-1 shows the main areas of concern for energy development within the Sea Range and commercial shipping lanes.

Table 5.7-1 shows the total area of each area of concern within the Sea Range.

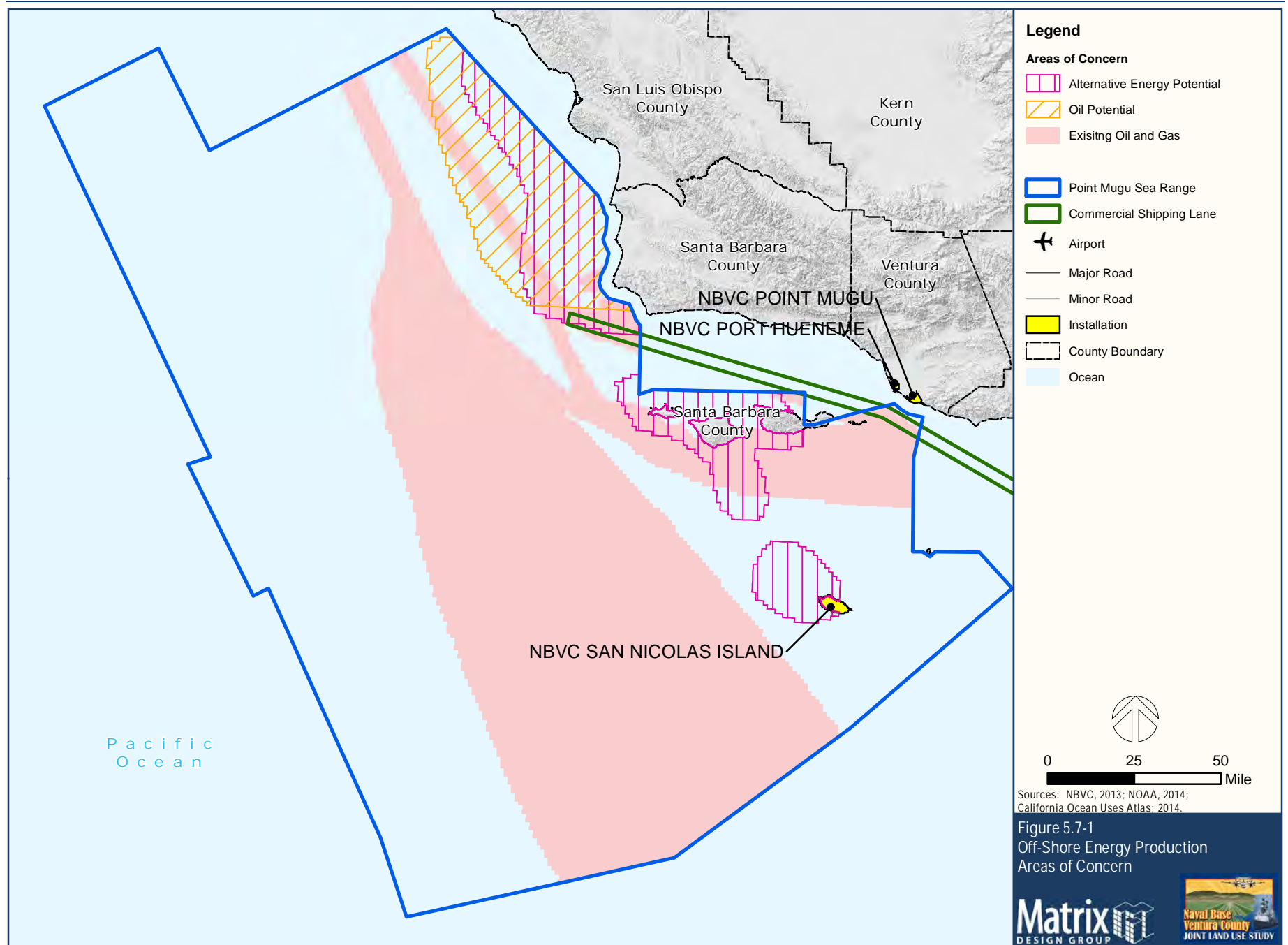
The Obama Administration has placed a moratorium on new oil and gas leases off the California Coast through 2017. However, there are no restrictions on alternative energy development.

Table 5.7-1 Area of Concern within Sea Range

| Area of Concern | Area |
|---|--------------|
| Within Sea Range | |
| Oil Potential | 2,280 sq mi |
| Alternative Energy | 2,767 sq mi |
| Existing Oil and Gas | 14,848 sq mi |
| Within Sea Range and Commercial Shipping Lanes | |
| Alternative Energy | 42 sq mi |
| Existing Oil and Gas | 120 sq mi |
| Total Area of Concern ¹ | 17,598 sq mi |
| Sea Range | 36,374 sq mi |
| Percent Area of Concern | 48% |

¹Total area of concern is less than sum of all areas of concern to prevent double counting of overlapping areas of concern.

Source: NBVC, 2013; NOAA 2014; California Ocean Users Atlas, 2014



Despite the current moratorium on new oil and gas energy production, future permissions may allow for new leases within the Sea Range and commercial shipping lanes. Similarly, as the United States continues to focus on alternative energy as a major source of new commercial energy production, the risk for alternative energy development in the Sea Range and commercial shipping lanes could increase. Not only could these events create incompatible uses within a large part of the Sea Range, but could also cause vessels in the commercial shipping lane to choose alternative routes that may traverse further into the Sea Range.

Although alternative energy is located in smaller areas across the Sea Range, a large area is designated directly west of NBVC San Nicolas Island. Alternative energy development in this location could pose a significant threat to mission critical activity conducted on the island.

Findings

- Current legislation, processes and tools do not provide adequate guidance on permitting processes for alternative energy development that provides for military coordination or consideration of military compatibility in the permitting process. Early coordination is not addressed.

Existing Tools

Solar Rights Act AB 2473

The Solar Rights Act was originally established in 1978 and provided guidance for solar access and initiatives for limiting local governments from preventing the installation of these solar systems. In 2005, the amended AB 2473 went into effect. The purpose of the law is for *“local agencies not adopt ordinances that create unreasonable barriers to the installation of solar energy systems, including, but not limited to, design review for aesthetic purposes”*. This law requires local governments to review and approve solar installations; however, the installment can only be restricted if found to impact the health or safety of an area. This benefits aircraft operations and further protects the safety of the aircraft at NBVC.

Outer Continental Shelf Lands Act

Federal off-shore oil and gas production is regulated by the Department of the Interior (DOI) and Bureau of Ocean Energy Management (BOEM) by the Outer Continental Shelf Lands Act (OCSLA). OCSLA has a four-step approval process for oil and gas projects:

- Five-Year Lease Plans analyze the Country’s needs, supplies, and options for new oil and gas leasing
- Lease sales: Areas identified in the Five-Year Lease Plan may be sold to a private company through a bidding process. Leases are valid for a length of time between five and ten years. Purchase of a lease does not guarantee a right to development but allows the leaser the exclusive right to apply for exploration and development permits
- Exploration Plans: The buyer of a lease develops a plan to explore the area for development potential. Exploration activity usually has environmental impacts and thus, must abide by all environmental law.
- Development and Production Plans: Following successful exploration, a company may apply for permission to develop a lease. Development includes both construction and operational impacts. Once commercial production begins, a lease has no date of termination.

While OCSLA includes specific direction on oil and gas energy development, it does not have the same specificities for alternative energy development. Court cases have agreed that OCSLA has the authority to allow the USACE to issue permits for construction of all types of structures on the outer continental shelf, not just oil and gas energy development (see *Alliance to Protect Nantucket Sound v. United States Army Corps of Engineers*). This lack of a set permitting process could become detrimental to military activity in the Sea Range. Lack of permitting may exclude the military from providing feedback in development review for alternative energy, which could potentially create incompatible uses for the military training activities in the Sea Range.

Range Complex Management Plan Phase II (Sea Range)

Chapter 7 of the Range Complex Management Plan Phase II (RCMP II), discusses encroachment issues for the Sea Range. Liquid and natural gas terminals and transfer sites have been proposed for areas around the Sea Range. Activities at these terminals and transfer sites would create stationary and mobile avoidance areas for Sea Range operations. As a solution to this encroachment problem, the following is proposed:

Continue working with NRSW [Naval Region Southwest] to closely monitor and comment on proposals submitted to the state for the development [of] oil wells and liquid natural gas terminals within the Sea Range warning Areas (EAP).

While, this is very important wording that protects the Sea Range from any oil and liquid natural gas development, there is no additional language that will ensure review of alternative energy development.

Please see the next page.

5.8. Frequency Spectrum Interference / Impedance

The frequency spectrum is the entire range of electromagnetic frequencies used for communications and other transmissions, which includes communication channels used for radio, cellular phones, and television. In the performance of typical operations, the military relies on a range of frequencies for communications and support systems. Similarly, public and private users rely on a range of frequencies in the use of cellular telephones and other wireless devices used on a daily basis.

The military's use of frequency spectrum allows for safe operations and the effective delivery of weapons on target without interference. The military's frequency spectrum needs for testing, evaluation, and training is constantly increasing, while the spectrum available for DOD use is decreasing. The National Telecommunications and Information Administration (NTIA) Office of Spectrum Management explains that:

...almost every agency of the Federal Government uses the spectrum in performing mandated missions. The DOD uses the spectrum extensively for tactical uses and non-tactical uses. In the United States tactical uses are generally limited to a number of specific testing sites and training facilities, but DOD's non-tactical applications are extensive and include aircraft command and control, mobile communication in and around military bases, and air fields and long distance communications using satellites.

Frequency interference is related to other transmission sources. Interference can result from a number of factors, including:

- Using a new transmission frequency that is near an existing frequency;
- Location of communications facilities relative to other communications facilities, i.e. military communications facilities;
- Reducing the distance between two antennas transmitting on a similar frequency;
- Increasing the power of a similar transmission signal;

- Using poorly adjusted transmission devices that transmit outside their assigned frequency or produce an electromagnetic signal that interferes with a signal transmission; and
- Existing electronic sources and uses created by portable systems affecting entire communities utilizing Wi-Fi broadband systems and industrial sources that produce electronic noise by-product.

In order to successfully complete its operational activities within the installation and its training areas, the military relies on a range of frequencies for communications and support systems. Since 1993, Congress has been selling federal spectrum bands for reallocation to the private sector, promoting the development of new telecommunications technologies, products and services. The expanding public and commercial use of the frequency spectrum from wireless transmitters to consumer electronics can encroach on the military's use of the frequency spectrum. Increasing community and DOD demands for this important resource can create conflicts for all users.

Key Terms

Frequency Spectrum. The frequency spectrum is the entire range of electromagnetic frequencies used for communications and other transmissions, which includes communication channels used for radio, cellular phones, and television. In the performance of typical operations, the military relies on a range of frequencies for communications and support systems. Similarly, public and private users rely on a range of frequencies in the use of cellular telephones and other wireless devices used on a daily basis.

Impedance. Impedance is the interruption of electronic signals due to the existence of a structure or object between the source of the signal and its destination (receptor). Certain structures have the potential to block, or impede, the transmission of signals from antennas, satellite dishes, or other transmission / reception devices affected by line-of-sight requirements.

Interference. Interference is the inability to effectively distribute or receive a particular frequency because of similar frequency competition. As the use of the frequency spectrum increases (such as the rapid increase in cellular phone technology over the last decade) and as development expands near military installations and operational areas, the potential for frequency spectrum interference increases.

Issues Assessment

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| Issue FRQ-1 | Wireless Communications / Radio Interference near NBVC Facilities and the Sea Range <i>Associated with: NBVC</i> As the demand for wireless communications facilities and other commercial uses of the RF spectrum increase, there is the potential for interference of the commercial RF with the NBVC mission communications. |
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Commercial transmission facilities which help to power civilian devices can have negative effects on Navy mission communications. Due to the increasing demand for commercial telecommunications facilities and the federal initiative to give rural America the opportunity to have wireless communications and access to the Internet, the competition for bandwidth is expected to increase and potentially threaten the viability of the communications missions at NBVC. The overall, uncoordinated expansion of commercial transmission facilities can jeopardize the NBVC mission.

Findings

- The military has the authority to require a proven, harmful outside frequency operator to cease and desist operations.
- While the military has the authority to require a harmful frequency operator to stop its operations, identifying the origin of frequency interference can be difficult.

Existing Tools

Title 47, Chapter 1, Part 15.5, Code of Federal Regulations

Title 47 – Telecommunications, Chapter 1 – Federal Communications Commission (FCC), Part 15.5 – General Conditions of Operation of the CFR stipulates that for operators (radiators) who cause harmful interference “shall not be deemed to have any vested or recognizable right to continued use of any given frequency by virtue of prior registration or certification of equipment, or, for power line carrier systems, on the basis of prior notification of use,” that “operation of an intentional, unintentional, or incidental radiator is subject to the conditions that no harmful interference is caused,” and that the “operator of a radio frequency device shall be required to cease operating the device upon notification by a Commission representative that the device is causing harmful interference. Operation shall not resume until the condition causing the harmful interference has been corrected.”

This regulation establishes the authority for the military through the FCC to require a user of frequency that is interfering with the military-critical mission to cease and desist. However, it is sometimes difficult to identify the owner and operators of such communications frequencies. This can result in critical training delays.

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| Issue FRQ-2 | Potential for Frequency Spectrum Interference Affecting Navy Operations <i>Associated with: NBVC Point Mugu</i> Potential for unauthorized use of radio frequencies to cause interference with NBVC FTS Missile Signal. |
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Ham Radio, also called amateur radio, can cause the unauthorized use of radio frequencies for private recreation, wireless experimentation and training and sometimes, for emergency communications. Due to the fact that NBVC relies on a range of radio frequencies for communication and

training, any use of adjacent portable, poorly adjusted or overpowering transmission sources proximate to NBVC Point Mugu could cause interference with the Flight Termination System (FTS) Missile Signal, which could in turn create safety and other compatibility issues with the NBVC mission. Flight Termination Systems are applied to cruise missiles in order to remotely command the vehicle to self-destruct to prevent the vehicle from traveling outside the prescribed safety zone.

One of NBVC's critical research and testing missions includes in-service support for guided missiles, free-fall weapons and electronic warfare. Naval Air Warfare Center, Weapons Division (NAWC-WD) located at Point Mugu has conducted and supported the test and evaluation of more than 500 weapons systems since 1946, many of which were missiles such as the Tomahawk Cruise missile and the Sparrow missile. Missile tracking instrumentation facilities are located at NBVC San Nicolas Island and Point Mugu special area Laguna Peak. Both locations also contain significant radio transmission and communication infrastructure and could both be adversely affected by proximate unauthorized use of frequencies or ham radio transmissions.

Uninterrupted signal transmission and minimal frequency interference are crucial to the future of testing and evaluation of missiles at NBVC Point Mugu. These are equally important to the public health and safety of people and wildlife living on or adjacent to the installation that can tentatively be affected by distorted missile signals or misguided missiles caused by FTS signal interference.

Findings

- No known visual representation or maps for the Radio Frequency Interference Free Zones (RFI FZs) exist, nor has the zones' success at mitigating RFI been evaluated.
- No local policy indicates compliance with these FZs as not much information is available to local jurisdictions regarding the FZs or their boundaries.

- While amateur radio operators are a potential issue for frequency and signal interference that may provoke testing and evaluation problems, it is evident that NBVC and SNTC have been attempting to address compatibility issues they may cause.
- It is unclear whether the Sea Range has utilized or documented any frequency needs to mitigate frequency loss via the IFDS and so far, radio frequency interference assessments have not been conducted for Point Mugu nor has a frequency monitoring van been purchased.
- While each respective zoning code helps regulate antennae height and possible signal interference, no mention of buffer zones or regulations on Ham/ amateur radio frequency use exists.
- No community or internal military impacts from possible radio frequency interference are noted or evaluated, and no military notification of proximate ham radio use is required by any jurisdiction which can lead to military incompatibility.

Existing Tools

Naval Base Ventura County Activity Overview Plan Final Report, 2006

RFI FZs are established at NBVC Point Mugu to protect the sensitive Transmitting Antenna Field north of Runway 9/27 and the Communications Antenna Field and facilities located in the south central area of the base. The zones are maintained to avoid signal distortion and interference with reception, such as increases in outside radio frequencies.

While the base established these zones to decrease frequency interference related to mission use of the frequency, the plan does not identify the overall footprint of the zones and their potential impact on proximate land uses. However, the plan does identify that development must be closely monitored on a case-by-case basis near these areas to consider magnetic fields and their strength, orientation and distance.

FAA Western Frequency Management Office, Los Angeles

RFI can quickly become a hazard to NBVC airspace and testing operations. The Navy coordinates with the FAA Regional Frequency Management Office (RFMO) located in nearby Los Angeles to ensure multiple frequency uses are de-conflicted as much as possible. The frequency management office's most important duty is the quick resolution of RFI. Each RFMO assists in RFI issues regarding public and private frequencies and public or private users. The Navy coordinates with the Western RFMO to ensure compatibility and minimize impacts of military use of radio frequency on private users.

Since RFI can become a hazard to national airspace operations as well as local airspace operations, entities or users experiencing RFI are encouraged to contact their RFMO if radar, radio or "phantom" controller interference is detected. Air Traffic Control Spectrum Engineers have the capability to track down and identify sources of interference, although it is unclear how case-by-case issues are resolved.

Range Complex Management Plan, Volume II Sea Range

Many issues related to frequency spectrum are noted within the RCMP section on encroachment impacts to range capability factors. Issues 40 and 41 provide detailed expansion of wireless device usage on and around NBVC. These issue details how wireless and other frequency users, such as ham radio operators, can have adverse impacts on test and training operations and how the absence of accessible frequencies can reduce the operational readiness of the Sea Range, mostly with target launches.

As mentioned before, frequency monitoring and spectrum management exists at NBVC, and if a signal impedes on an authorized frequency, the offending transmitters can be located and Sea Range can report the source to the authorities. Amateur radio operators are specifically called out here, as it states even though they may transmit on Sea Range frequencies, they are required to operate on a not-to-interfere basis and can be ordered to terminate transmitting in certain frequencies. One recommendation for these issues noted in the RCMP is for NBVC to purchase a mobile frequency monitoring van for use at Point Mugu, due to the fact that the NAWCWD

mobile frequency van used to identify outside frequency encroachment is usually located at NAWS China Lake.

Several other solutions have been called out in the RCMP in regards to frequency interference including the continuation of a proactive approach to protecting the remaining military frequencies and exploring additional options to address the issue of a depleting military spectrum. Another solution detailed documentation of Sea Range frequency needs to protect the systems against frequency loss, using the Integrated Frequency Deconfliction System (IFDS), a web-based tool used by DOD to schedule, deconflict, and coordinate daily spectrum usage.

The encroachment assessment matrix located at the end of the RCMP states that although amateur radio has the potential to interfere with the System for Naval Target Control (SNTC), SNTC has the ability to switch to an alternate frequency need be.

Ventura County Coastal Zoning Ordinance

Ventura County Coastal Zoning Ordinance details regulations for construction and use of many accessory structures, and within Section 8175-4 Exceptions to Lot, Setback and Height Requirements is the exceptions for Antennas. It states citizen band and amateur radio transmitting and receiving antennas, intended for private noncommercial uses may be erected above the height limits for structures, up to a maximum height of 75 feet.

Under Section 8175-5 Standards and conditions for uses, antenna regulations are provided for home occupation use and in general. Citizen band and amateur radio antennas are permitted only as an accessory use to a dwelling, and only for noncommercial use. The standards and conditions for the antennas not pertaining to the exception to height requirements mentioned in Section 8175-4 include the following:

- Home Occupations: The use of electrical or mechanical equipment that would create visible or audible interference in radio or television receivers is prohibited.

(1) The crank-up type of ham radio antennas should be used.

(2) The most unobtrusive location for the antenna should be used.

As per the coastal zoning ordinance, communications facilities are only permitted in three zoning districts, COS, CA and CM, with commission approved conditional use permits. Large tracts of Ventura County land in areas surrounding Point Mugu are zoned for open space and agriculture, which are not land uses that permit these communications structures. Therefore, this tool addresses this issue for the Ventura County Coast.

Ventura County Non Coastal Zoning Ordinance

Similar provisions are mentioned in the Non Coastal Zoning Ordinance for the standards and conditions of uses related to antennas such as encouraging screening, height maximums and the use of the crank-up ham radio antennas. Again the use of electrical or mechanical equipment that would create visible or audible interference in radio or television receivers is prohibited at home occupations.

As for permitted uses in zoning districts, communication facilities are allowed in every zoning district with a Planning Director approved conditional use permit. Zoning districts adjacent to Point Mugu includes Open Space and Agricultural zones. This could pose tentative testing conflict and frequency interference issues if amateur radio transmission facilities or similar infrastructure are conditionally approved in these underdeveloped zoning districts proximate to Point Mugu communications facilities at Laguna Peak. Adverse impacts to the installation and communities could include health and safety concerns associated with testing conflicts that may arise.

City of Oxnard Zoning Code

Several regulations in regards to possible frequency and radio interference are provided throughout the City of Oxnard Zoning Code. Section 16-211 Electricity and Radioactivity specifically prohibits any activity which causes electrical disturbances affecting the operation of any equipment located beyond the property line of such activity. The section also states how radio and television transmitters shall be operated at the regularly assigned wave lengths as assigned by the appropriate governmental agency. This helps prohibits unauthorized frequency users and similar unauthorized use of frequencies.

This zoning code also restricts citizens band or amateur radio antennas to a maximum of 75 feet. It furthermore restricts activities creating radio or television interference at home occupations. As per the ordinance, communication facilities are only permitted uses in M-L and M-1 zones.

Wireless communications facilities, as per the code, shall meet or exceed current standards and regulations of the FAA, the FCC, and any other agency of the State or federal government with the authority to regulate wireless communications facilities. Before a special use permit can be approved for a wireless communication facility, a report prepared by a radio frequency engineer approved by the manager, showing that radio frequency radiation/electromagnetic frequency emitted by the proposed wireless communications facility will conform to the safety standards adopted by the FCC is required. This is a positive example of land use compatibility and may help regulate the conditional approval of these communication facilities adjacent to or nearby NBVC.

One provision to note in the Oxnard Zoning Code is under Section 16-491 Health and Safety. It states that new or existing wireless communications facilities shall not interfere with public safety telecommunications or private use telecommunications. While a broad statement, it attempts to prohibit frequency interference at all levels.

Provisions in the City of Oxnard Coastal Zoning Ordinance are the same as the ones described here aside from wireless communication facilities being prohibited within the Coastal Resource Protection (RP) and Coastal

Recreation (RC) zone districts, unless it can be demonstrated that there is no other feasible location that would avoid the need for wireless communication facilities to be located in these zone districts. The Coastal RP zone is adjacent to the northern boundary of Point Mugu where ordnance testing occurs; not permitting these wireless communication facilities in that zone is a good example of military compatibility.

City of Port Hueneme Zoning Regulations

The City of Port Hueneme Zoning Regulations detail similar height provisions for radio antennae to ones detailed in the other jurisdictions proximate to NBVC. In this zoning code, height criteria for residential zones specifically states that ground mounted freestanding citizens band and amateur radio transmitting and receiving antennas, intended for private, noncommercial use accessory to the dwelling shall not exceed an overall height of fifty (50) feet. This applies to all districts, many of which are located adjacent to Port Hueneme. Again performance standards for uses at home occupations details television or radio interference as a violation or offensive condition.

In retrospect, overriding considerations includes this provision:

- Pursuant to Section 10352(F) applications for broadcast antennas and microwave relays shall be considered in light of their horizontal and vertical dimensions, mass, nature of materials, design, location in relation to setback lines and adjacent properties, the presence of screening structures or landscaping and the visual impact of the antenna on adjacent properties and public rights-of-way, ability to mitigate radio frequency and television interference, and levels of non-ionizing electromagnetic radiation (NIER) released.

While a height limit of 50 feet is low, the possibility of interference of these facilities with Port Hueneme safety zones and possibility of frequency interference does exist due to proximity of the City to NBVC.

City of Camarillo Zoning Code

As per the Camarillo Zoning Code, general communications facilities are permitted uses only within the P-O and L-M zoning districts, neither of which is adjacent to the Point Mugu area of Laguna Peak. Radio or television transmitters are also allowed within all other zones, with approved conditional use permits. According to regulations for all zoning districts in which they are permitted, antennas shall not exceed an overall height of seventy-five feet above grade when fully extended.

Section 19.30.220 Nuisance control prohibits uses or processes within the M-1 zones which creates objectionable radioactivity or electrical disturbances. Also stated in regards to radioactivity, is the requirement of radio and television transmitters to be operated at the regularly assigned wave lengths as assigned by the appropriate governmental agency.

5.9. Local Housing Availability

Local housing availability addresses the supply and demand for housing in the region, the competition for housing that may result from changes in the number of military personnel, and the supply of military family housing provided by the installation.

Key Terms

Basic Allowance for Housing. The basic allowance for housing (BAH) is a United States military entitlement given to eligible military members to cover reasonable housing costs in a region. Eligible military members are those military personnel eligible for basic pay. The BAH is determined based on the following factors: personnel rank, geographic location, fair and market housing costs, and number of dependents.

Issues Assessment

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| Issue LHA-1 | Local Housing Supply for Navy Personnel <i>Associated with: NBVC</i> Long-term provision of housing that meets the needs of Navy personnel. |
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Housing for military personnel is an important part of the military quality of life standards for its service men and women. According to the Office of the Deputy Undersecretary of Defense, Installations and Environment Division, there has been a decrease in military housing conditions, increase in length of deployment and family separations, and increase in out-of-pocket expenses for service members living in private housing. This is putting a strain on servicemen and women and could have adverse impacts on military morale and readiness.

The military seeks to provide the housing needed to ensure proper support of military men and women and their families. NBVC currently has a mix of on and off-base bachelor and family housing located at both NBVC

Point Mugu and NBVC Port Hueneme. NBVC currently has approximately 2,124 rooms and 2,800 beds for bachelor housing and 1,781 units of family housing. According to an issues analysis in the Activity Overview Plan (AOP), there are approximately one-third of the bachelor barracks at NBVC Point Mugu that do not meet current military occupancy standards. There is also a shortage of on-base bachelor housing and transient quarters. Future goals include renovations of all bachelors housing to meet current occupational standards, however, no future plans are included to address a shortage of bachelor housing.

According to the 2014 NBVC Housing Requirements Market Analysis, the projected total number of NBVC permanent party families that will require housing by 2019 is 2,834 and the number of unaccompanied permanent party personnel requiring housing is 1,887 military members. Based on seniority assignments and family sizes, 1,090 families are entitled to two-bedroom homes, 1,262 families are entitled to three-bedroom homes, and 482 families are entitled to homes with at least four bedrooms. There will also be 73 voluntarily separated personnel (marries personnel who do not have family members living with the in the local area) requiring housing of various types. Some of these personnel and families will live in base-provided housing, but some will require housing in the local communities.

Increases in the BAH eliminated a projected family housing deficit. Conditions of family housing facilities are considered good and facilities at NBVC Point Mugu and in Camarillo have undergone recent renovation. The Navy has worked with Camarillo to provide military housing to military personnel. The development in Camarillo is called Catalina Heights/Lincoln Housing; it provides about 315 apartments to the enlisted ranks.

The analysis also considers future use of Military Housing Privatization Initiative (MHPI) and public-private ventures as a means to obtain needed future housing. University Glen residential community at CSUCI provides affordable housing on a prioritization system which includes local military personnel.

Source: Naval Base Ventura County Activity Overview Plan Final Report, September 2006; 2014 NBVC Housing Requirements Market Analysis (Commander, Navy Installations Command, 2014)

Findings

- The numbers presented do not consider current occupancy rates or numbers of personnel and family members that are on waiting lists.
- Local Housing Elements are mixed in their level of assessment of military housing needs. The City of Camarillo's provides detailed data on housing for the military. Other elements consider the diverse needs of the population as it relates to housing needs, but there is no direct reference to the military as a special interest group.

Existing Tools

Military Housing Privatization initiative

The MHPI was part of the National Defense Authorization Act that was signed in 1996. The MHPI gave DOD the power to work with the private sector to build, renovate, and sustain military housing. Repair and construction of military housing by military standards would take an estimated 20 years and cost \$16 billion in taxpayer dollars. By turning to private sector development, the military has the chance to obtain private capital to leverage government dollars, make efficient use of limited resources, and use a variety of private-sector approaches to build and renovate military housing faster and cheaper.

The MHPI gives the DOD the authority to obtain private-sector financing by means of loan or rental guarantees, conveyance or leasing of existing properties and facilities, differential lease payments, investments in nongovernmental entities involved in the acquisition or construction of family housing or supporting facilities, or direct loans.

City of Camarillo 2013-2021 Housing Element

The recently adopted Housing Element Update for the City of Camarillo identifies that the new Triton Unmanned Aerial System (UAS) mission at NBVC Point Mugu will bring up to 700 military personnel and approximately 2,380 dependents would accompany these personnel in a phased relocation between the years 2014 to 2020. This relocation of personnel and their dependents is expected to be at an average of 2.4 family members per military personnel. These military personnel and dependents will have the opportunity to choose on-base or off-base housing. The housing element identifies that there are 2,156 barrack slots for single enlisted personnel and 1,633 family units available on-base. These families units include 380 two-

bedroom units, 878 three-bedroom units, 371 four-bedroom units, three five-bedroom units, and one seven-bedroom unit. While there is seemingly adequate units on-base, these numbers do not consider current occupancy rates. With that said, there are current and most likely will be future waiting periods for the relocated personnel and family members. The waiting periods associated with these on-base units range from two to six months and others a maximum wait period can be up to a year.

To complement the on-base housing situation and alleviate some wait periods, the Ventura County community has developed and supported the military by providing military-quality housing units within the community of Camarillo. Overall, there are 1,221 homes within the communities available to military personnel and their families. As mentioned earlier, there are 315 apartments / townhomes in Catalina Heights in Camarillo. There are a mix of three and four-bedroom townhomes for the enlisted ranks and three and four bedroom detached homes for the officers. The number of on-base housing units complemented by the number of off-base housing units would ideally be sufficient for this increase in military personnel and family members; however, these numbers do not account for the existing occupancy rates for all these units.

City of Oxnard 2006-2014 Housing Element

The 2006-2014 Oxnard Housing Element identifies and analyzes the current and future housing needs of residents within the City of Oxnard (City) and establishes housing goals, policies, and programs to meet the needs. The planning period is January 1, 2006 to June 30, 2014. The element provides extensive information on housing needs and provision in the community, but does not look at the military as a special needs group relative to the assessment of housing.

Ventura County Land Use Appendix

The Ventura County Land Use Appendix includes the Housing Element within the document. While Ventura County has established goals and policies for providing Diversity Housing to all income levels and needs including the needs of the elderly, mentally ill, large families, and transient farm workers, this document does not directly reference military as a potential target audience to consider in planning for housing within the county.

5.10. Infrastructure Extensions

Public facilities and services should be appropriate for the type of urban or rural development they serve, but also limited to the existing and planned needs and requirements of the area. For example, the provision of a safe transportation system, including all modes of transportation (automobile, mass transit, railway, highway, bicycle, pedestrian, air, water, etc.), is an important infrastructure component. Adequate transportation infrastructure contributes to local, regional, and state accessibility.

Infrastructure plays an important role in land use compatibility. Infrastructure can enhance the operations of an installation and community by providing needed services, such as sanitary sewer treatment and transportation systems. Conversely, infrastructure can create encroachment issues if expanded without consideration of the consequences of future development. The extension or expansion of community infrastructure to a military installation or areas proximate to an installation has the potential to induce growth, potentially resulting in incompatible uses and conflicts between a military mission and communities. Within comprehensive planning, infrastructure extensions can serve as a mechanism to guide development into appropriate areas, protect sensitive land uses, and improve opportunities for compatibility between community land uses and military missions.

Key Terms

Sphere of Influence (SOI). As described by California Government Code Section 56076, the SOI is to be "a plan for the probable physical boundaries and service area of a local government agency." These boundaries include future physical boundaries for cities but also define service areas for other government agencies. The SOI is important because it defines the primary area within which urban development is to be encouraged (Sections 56377(b) and 56841).

Impervious Cover. This term is used to describe any surface or subsurface including, but not limited to, roadways, sidewalks, parking areas, buildings, pools, driveways, and any other impermeable construction that does not

readily absorb water and has the effect of increasing storm water runoff flow rates and / or runoff volume.

Infrastructure. In a broad sense, the word infrastructure in this section refers to public facilities and services such as sewers, water, electric, and roadways that are required to support development (existing and proposed).

Issues Assessment

| Issue IE-1 | Potential Extension of Infrastructure <i>Associated with: NBVC</i> |
|---------------|--|
| | The extension of additional / new services to areas near the installation to supplement (i.e., add redundant capacity or access) or replace current facilities could extend infrastructure into undeveloped areas, creating the potential for incompatible growth near the base. |

As NBVC continues to grow with new missions such as the Triton UAS mission, new facilities may be constructed to accommodate new growth. New facilities such as housing or other amenities may require an extension of water, sewer, electric, or roadway utilities. Similarly, large residential and commercial developments require extension of public utilities for development.

If uncoordinated, extension of utilities to NBVC could create opportunities for other connections to stem from those extensions and potentially result in incompatible development near NBVC. As previously mentioned, infrastructure extensions or adding additional capacity can spur growth and direct growth in less than optimal locations. It is this uncoordinated and potential inducement of incompatible growth that raises concern for the military. Additional growth in locations under flight paths and near the airfields or near important mobilization corridors can cause increased noise complaints or congestion and mobility issues along roadways. Congestion

and mobility issues could adversely impact not only the military but the quality of life of the residents of the nearby communities.

Findings

- The County's Guidelines for Orderly Development encourages development to be located within the incorporated cities and the cities' spheres of influence. Should development be proposed for outside the city limits, it is encouraged that the proposed area for development be annexed by the city to ensure the effective provision of municipal services.
- While the SOAR ordinances have expiration dates, this measure provides a level of protection against uncoordinated infrastructure extensions and does not allow for extensions beyond the SOIs of the cities.
- While Ventura County's SOAR includes no changes of agricultural, open space, and rural designations of land during the effective date of this ordinance, the ordinance does not address specific infrastructure extensions for these designations or other intense designations.

Existing Tools

Guidelines for Orderly Development, Ventura County

Ventura County's Guidelines for Orderly Development provide a strong measure of protection for development occurring outside the incorporated cities within the county. The guidelines encourage proposed development to locate within incorporated cities. If the development is proposed for outside the city limits within the sphere of influence, then it is desired that the city annex the land prior to development to ensure the effective provision of municipal services. If however, the development is proposed for outside the incorporated city, the city's sphere of influence, and within the unincorporated area, then the proposed development is encouraged to locate near an area that has an area plan and the county is responsible for providing municipal services. With all these various options, the proposed development should be consistent with the general plan's land use goals, objectives, and policies—either the city's general plan or the county's general plan depending upon the location of the proposed development.

These guidelines promote and provide for a dual benefit for this area—orderly development relative to providing cost effective city or county municipal services depending on location, controlling urban sprawl, and providing an unintended benefit to the military by minimizing potential land use encroachment.

Save Open Space and Agricultural Resources (SOAR)

SOAR is a voter initiative which helps to limit the adverse effects of urban sprawl in Ventura County. SOAR was approved by voters in unincorporated Ventura County and all incorporated cities except Ojai. By passing SOAR initiatives, cities are required to obtain a simple majority vote of city residents to develop land outside of city urban reserve boundaries (CURB). As well, SOAR ordinances from Camarillo and Oxnard prohibit the extension of public sewer systems outside of their respective CURB. Although the Ventura County Local Agency Formation Commission (LAFCo) can make a determination about a change in a city's SOI, SOAR prohibition of land use change outside of CURB puts further protection on agricultural and open space lands bordering a city. Although, there is no prohibition against extending individual CURB, the cities of Ventura County have mostly maintained boundary lines since their inception in the late 1990s and early 2000s.

While the Ventura County's SOAR does not specifically call attention to the extension of public utilities, the ordinance covers lands designated for agricultural, open space, and rural. Additionally, these lands are to remain designated as such until a majority vote of the people is accomplished or until December 31, 2020. This provides that protection against more intense uses near mission critical areas of NBVC that are not within any of the cities that have adopted their own SOAR ordinances.

SOAR is a useful tool in slowing rapid development of undeveloped and agricultural lands. Though SOAR does not stop development, it adds an extra level of protection to decrease the adverse impacts of sprawl development by requiring a majority approved votes by city residents for major changes in general plan designations.

SOAR is not an infinite protection of open space and agricultural lands. SOAR measures will expire by 2020 for Ventura County and the cities of Camarillo and Oxnard, and leave open space and agricultural lands open to less scrutinized development. Currently, SOAR organizers are preparing a campaign to have SOAR measures extended to the year 2050. If voters approve extensions of SOAR measures, there will be greater protection against the chance of incompatible development and uncoordinated infrastructure extension in the JLUS study area.

Ventura County Local Agency Formation Commission Municipal Service Review Guidelines

The Ventura County LAFCo is responsible for making determinations to modify spheres of influence (SOI). SOIs are independent of city limit boundaries and SOAR CURB though they can be similar. Prior to modifying a city's SOI, the LAFCo has to assess the city's growth and various other elements, these include but are not limited to Infrastructure needs and deficiencies, Growth and population projections for the affected area, Financing constraints and opportunities, and evaluation of management efficiencies. This assessment assists the LAFCo in making a determination about the city's ability to provide public services in a cost effective manner to potential extended SOI boundaries. Therefore no city can extend their SOI or public services beyond their SOI without the determination from the Ventura County LAFCo and the vote of the people in the community. This provides another level of protection to prevent uncoordinated infrastructure extensions.

County of Ventura Public Works Agency 2012-2017 Five-Year Capital Projects Programs

After a review of the capital improvement program for Ventura County, the projects that were identified in this timeframe were designed to enhance mobility of both vehicular traffic and bicycles in the various areas of the county. Such projects were widening roadways and making intersection enhancements to provide for enhanced public safety. While there were some upgrades to water system infrastructure and connections identified, the projects were in locations that would not have an impact on NBVC or its missions.

Issue IE-2

Inadequate Stormwater Facilities Upstream

Associated with: NBVC

Stormwater facilities in the basin contribute to drainage and flood control issues at NBVC. Improvements upstream need to be coordinated with improvements to move water through or around NBVC.

NBVC Point Mugu is located on the Mugu Lagoon at the outlet of the Calleguas Creek watershed. The Calleguas Creek watershed drains approximately 343 square miles of Ventura County land area. Though Southern California is generally dry, Southern California's Mediterranean climate includes the risk of heavy rain in the winter months.

Agricultural and urban development in the Oxnard Plain prompted the creation of the Calleguas Creek to lessen flooding impacts. As known with increased development, there is a risk for increased impervious cover (built environment over natural terrain), which can add to the capacity for which stormwater facilities were designed to handle. Increased impervious cover also decreases the area's natural drainage flow of the water through the watershed, consequently adding more stress to natural barriers to prevent flooding.

The creation of a channelized creek directed water flows of the watershed directly to Mugu Lagoon. This has become more of an issue for the military due to the increased development upstream and constraints that development places on stormwater and drainage facilities. Moreover, NBVC Point Mugu is located adjacent and shares land, wetlands, and marsh with Mugu Lagoon. It is important to note that the mean elevation change between the lagoon and the base is 13 feet. Parts of the base lying closer to the lagoon have an elevation close to, if not at, sea level.

Due to the base location at the outlet of the Calleguas Creek watershed (see Figure 5.10-1), the upstream development and increased impervious cover, the surrounding low lying coastal wetlands, and seasonal rain, the facility can potentially be adversely affected by flooding and inundation. Although there are new runoff restrictions as part of the Municipal Separate Storm Sewer System (MS-4) that require runoff to be captured on-site, excessive flows leading to flooding are still likely on the base. This flooding can adversely impact the base and its operations. The airfield has been known to flood, which can cause delays in aviation operations and can present safety hazards. All this can adversely affect military readiness.

Findings

- There seems to be a larger focus on water pollution and desalination than on stormwater in the Calleguas Municipal Water District.
- Ventura County Public Works and the City of Camarillo both have Capital Improvement Projects in place or underway that will help to improve the efficiency of the stormwater facilities upstream in the Calleguas Creek Watershed. These projects should assist in mitigating associated drainage and flood control issues downstream near NBVC.

Existing Tools

Calleguas Creek Watershed Management Plan

The Calleguas Creek Watershed Management Plan is a joint study by California Department of Water Resources and the State Water Resources Control Board, which included numerous stakeholders including Ventura County and NBVC. The watershed includes approximately 278 acres of military land. However, the military ownership is a somewhat larger due to the categorization of Mugu Lagoon as Bureau of Land Management, Federal, and U.S. Forest Service. Mugu Lagoon covers majority of the area identified as the NBVC Point Mugu facility.

The plan recommends various strategies and actions to improve stormwater facilities across the watershed. High priority action recommendations include:

- Evaluating stormwater retention and detention systems; studying effectiveness of retention and detention systems throughout the Watershed in preventing flooding and trapping sediments;
- Determining feasibility and functionality of a Watershed-wide flood protection and sediment control mitigation banking system; and
- Conducting further research into the past, present, and future implications of hydrologic modifications in the Watershed as they relate to the evaluation of potential positive and negative impacts to flood control.

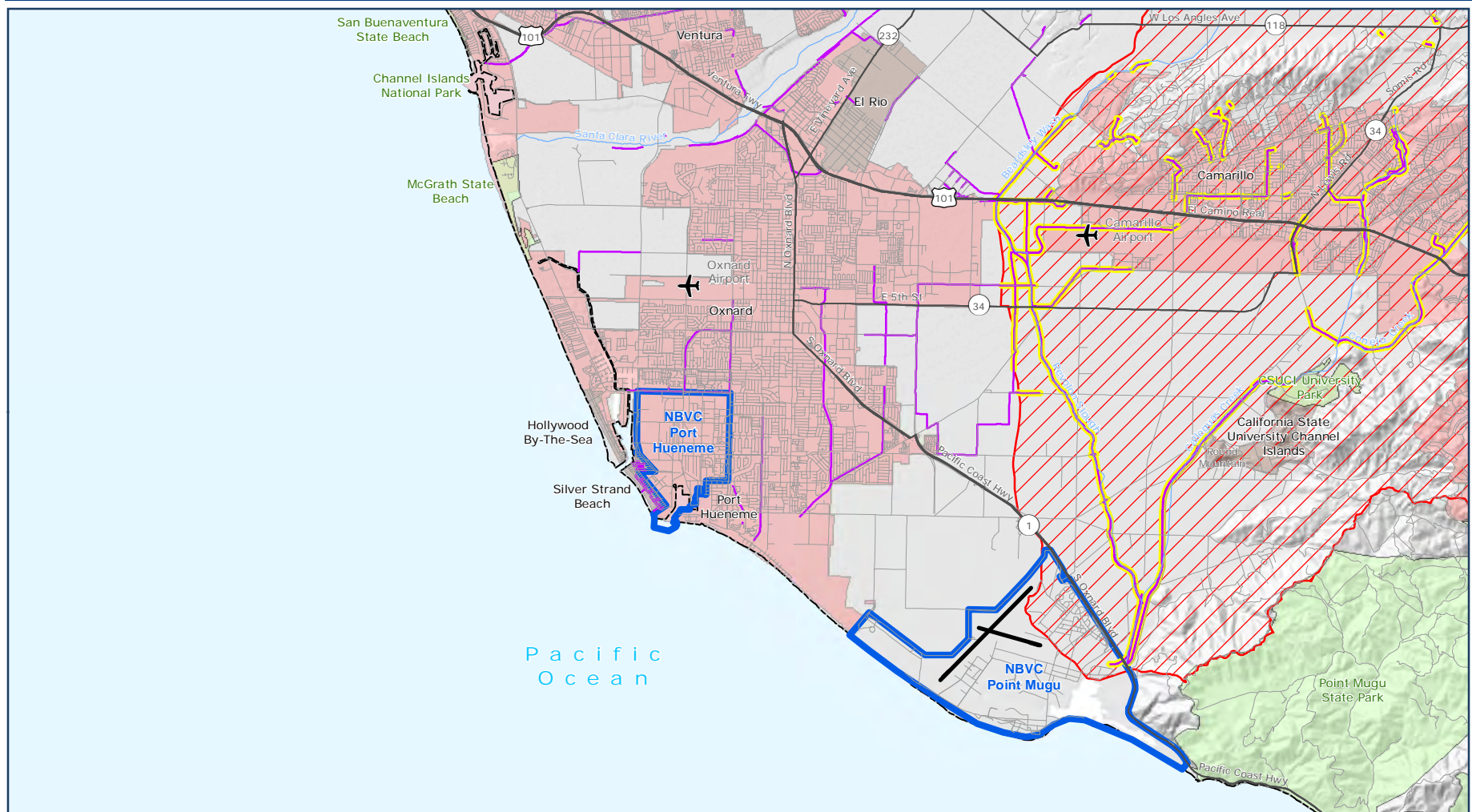
The document also contains an implementation section with proposed projects and the project relationship to management strategies. Two projects (Conejo Creek North Fork – Wildwood Park Water Management Enhancement Project and Calleguas Creek Watershed Arundo/Tamarisk Programmatic EIR/EA, Permits and Pilot Removal Project) directly relate to flood management strategies.

The Conejo Creek Enhancement Project will restore the channel to natural conditions allowing flood waters to spread out and infiltrate surrounding land to help reducing the risk of flooding. The project would also reintroduce native plants to better filter stormwater and improve erosion control, further decreasing the risk of flooding. Similar conditions will exist at Calleguas Creek, where reintroduction of native species will help to decrease the risk of flooding.

While this document is dated June 2005 and does not necessarily reflect current information, the process and plan including the NBVC to ensure military concerns and issues were included in this plan.

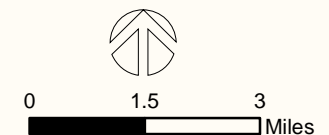
Watersheds Coalition of Ventura County Integrated Regional Water Management Plan, Appendix A

The Integrated Regional Water Management Plan (IRWMP) was updated in 2014 under the direction of the Watersheds Coalition of Ventura County (WCVC) and reflects the intricate water resource needs of Ventura County which encompasses several major watersheds, many cities and a large agricultural economy. The IRWMP addresses many regionally significant



Legend

- | | | | |
|---------------------------------|--------------------------|-------------|---------|
| Facilities Improvements Concern | Incorporated City | Major Road | Runway |
| Stormwater Facilities | Unincorporated Community | Minor Road | Airport |
| Calleguas Creek Watershed | Park | River/Creek | |
| Installation | County Boundary | | |



Matrix
DESIGN GROUP

Source: Ventura County Watershed Protection District, 2014.

Figure 5.10-1
Improvement Concerns for Stormwater Facilities Upstream of NBVC

water issues and related management practices, and supports the development of individual watershed management plans for all of the major watersheds, including Calleguas Creek. A sub-section which contains more detail about the Calleguas Creek Watershed was included in the IRWMP as Appendix A.

Within Appendix A of the 2014 WVCV IRWMP, several issues were identified by the Calleguas Creek Steering Committee for the Calleguas Creek Watershed. Some of the issues identified include:

- *Urban runoff, irrigation return flows, and wastewater discharges have established perennial stream flows from the City of Thousand Oaks to Mugu Lagoon and from the City of Simi Valley to Somis. The conversion of a seasonal drainage basin to a perennial water system has affected the characterization of surface water quality impairments;*
- *The urbanization of the upper watershed has increased stormwater runoff and sediment transport while the pace of urbanization has complicated floodplain management; and*
- *Surface and groundwater interaction has been affected by imported water return flows, filling unconfined groundwater basins in the upper reaches of the watershed which in turn have affected groundwater quality and led to concentrations of stranded salts.*

Appendix A also contains several goals that were included as part of the IRWMP, many of which pertain to the Calleguas Creek Watershed and its associated issues. One of the goals is centered on protecting people, property and the environment from adverse flooding impacts. This goal has supporting objectives that include identifying cost-effective and environmentally friendly programmatic solutions and identifying a system of concepts and scenarios that address flooding and sedimentation problems.

Additionally, the Appendix contains several resource management strategies that are being implemented within the Calleguas Creek Watershed. One of these strategies is the Stormwater Quality Program which includes managing urban runoff and preventing pollution through the issuance of Municipal

Separate Storm Sewer System (MS-4) permits. Other recent pursuits to address water issues on the Calleguas Creek Watershed include potential implementation of additional stormwater quality programs and stormwater capture measures. The programs and capture measures will help with the efficiency of the water facilities within the Calleguas Creek Watershed Protection District and help assist with mitigating associated flooding issues.

Ventura County Ordinance Code, Division 6, Chapter 9: Stormwater Quality Management

Division 6, Chapter 9 of the Ventura County Ordinance Code, also known as Ordinance number 4142, is relating to stormwater quality management and applies to all water districts and watersheds within Ventura County.

Article V of this chapter details the requirements for the control of urban runoff primarily for construction and development purposes. This part of the ordinance states that construction and development within the county shall be in accordance with any conditions and requirements established by the NPDES permit and of other permits related to the reduction or elimination of pollutants in stormwater, which would include the MS-4 permit. Additionally, this section requires that all construction and development within the county be in accordance with any conditions or requirements established by the county departments to protect specific watersheds or drainage basins, which would include the Calleguas Creek Watershed. While this may not describe or have direct impact on stormwater facilities within the Calleguas Creek Watershed, the county ordinance requires that developers follow stormwater regulations as part of the MS-4 permit.

Ventura County Public Works Five Year Capital Projects Programs

Within the Ventura County Public Works Agency Five Year Planned Capital Projects report for years 2012-2017 is a comprehensive listing of capital improvement projects for transportation, water and sanitation services, and for watershed protection. The watershed protection projects are divided up by different zones, for which the Calleguas Creek Watershed falls under zone 3. A listing of projects and associated costs are given for the zone 3 watershed protection district, which provides an estimated total cost of

projects from year 2012 to 2017 to be \$24,455,200. Many of the projects deal with improving stormwater facilities and their efficiency within the district, particularly within the City of Camarillo and other nearby areas within the Calleguas Creek Watershed. Some of the projects and their locations upstream within the watershed protection district include:

- Bus Canyon RCB Repair at Confluence with Arroyo (City of Simi Valley)
- Calleguas Creek - Pleasant Valley to Hwy 101 East Bank Channel Improvements (City of Camarillo)
- Calleguas Creek - Pleasant Valley to Hwy 101- West Bank (City of Camarillo)
- Calleguas Creek Levee (CC-2) Rehab and Certification (Somis Drain)
- Camarillo Hills Drain - Lantana St. to Carmen Drive (City of Camarillo)
- Camarillo Hills Drain Repairs (Carmen Drive to Mobil Avenue)
- CMP Repairs, Zone 3 (Various facilities thru out the Calleguas Creek/Arroyo Simi Watershed)
- Concrete Channel Invert and Wall Repairs (Zone 3 Various facilities thru out the Calleguas Creek/Arroyo Simi Watershed)
- Ferro Ditch Channel Improvements (West of the City of Camarillo)
- Pipe Infiltration Repairs (Zone 3 Various facilities thru out the Calleguas Creek/Arroyo Simi Watershed)
- Sycamore Canyon Debris/Detention Basin Retrofit (City of Simi Valley)

While many of these projects are slated to begin between 2014 and 2017, they will all help with the efficiency of the water facilities upstream within the Calleguas Creek Watershed Protection District and help assist with mitigating associated flooding issues downstream and near NBVC.

City of Camarillo Public Works Capital Improvement Projects

The City of Camarillo Public Works department has a listing of capital improvement projects on their website, some of which are relative to stormwater facilities and the Calleguas Creek Watershed Protection District. One of the major capital improvement projects for the city is the Calleguas Creek Widening Project, which is a collaboration with the Ventura County Watershed Protection District (VCWPD).

The project construction which widened a 90 foot section of Calleguas Creek between U.S.-101 and Pleasant Valley Road was completed as of April 2014. The project allows for more water flow in the creek when potential flooding may occur and it took almost 900 homes out of the flood zone which lowered or eliminated flood insurance requirements for families within the watershed area. Additionally, the VCWPD is now working with the Federal Emergency Management Agency (FEMA) to approve map revisions to change the flood maps and to attempt to remove homes from the 100-year flood zone.

Please see the next page.

5.11. Land Use

The basis of land use planning and regulation relates to the government's role in protecting the public's health, safety, and welfare. Local jurisdictions' general plans and zoning ordinances can be the most effective tools for avoiding or resolving land use compatibility issues. These tools ensure the separation of land uses that differ significantly in character. Land use separation also applies to properties where the use of one property may adversely impact the use of another. For instance, industrial uses are often separated from residential uses to avoid impacts related to noise, odors, lighting, and so forth.

Land use planning around military installations is similar to the process used to evaluate other types of land uses. For instance, local jurisdictions already consider compatibility factors such as noise when locating residential developments near commercial or industrial areas. As the land between local municipalities is sold or developed, many facets of both entities are affected. New residents, tenants, or building owners are typically not fully aware of the implications of locating in close proximity to an active military installation and training area.

Key Terms

Beach Erosion. This refers to the removal of beach or dune sediments by water flows, high winds, wave action, and tidal currents.

Bursage. A bursage is a plant of the *Franseria* genus characterized by a low spiny shrub that has dense leaves covered with whitish hairs. The plant is widely found in the Southwest and in Mexico.

Land Use Planning. Land use planning stems from the Supreme Court decision of *Euclid vs. Ambler* which enabled jurisdictions to regulate land use through zoning land in order to protect the public's health, safety, morals, and welfare. Zoning is a land use regulation tool used by local jurisdictions that generally controls for use, density, intensity, building heights, and setbacks on a parcel or lot. Most states, like California, enacted enabling legislation for local jurisdictions to also create and adopt general or comprehensive plans which are land use documents that broadly establish a

vision, goals, policies, and implementation activities for a jurisdiction over a long range period of time, typically ten to twenty years, to promote compatible land use, guide growth and logical development.

Local jurisdictions' general plans and zoning ordinances are the most effective tools to avoid and resolve land use compatibility issues. These tools ensure similar and compatible land uses are properly located and can co-exist while separating land uses that differ significantly in use and potential nuisance.

Sensitive Land Uses. In terms of compatibility assessment, sensitive land uses are uses that are susceptible to, and effected by, nuisances such as noise, dust and air pollution. Sensitive land uses typically include residential areas, hospitals, convalescent homes and facilities, schools, libraries, churches, recreational areas, and other similar land uses.

Sphere of Influence (SOI). A sphere of influence (in this section's context) is a planning boundary outside a city's defined city limits that designates the probable future jurisdiction's boundary and service area. It represents the area within which the jurisdiction is expected to grow. The boundary promotes orderly land use and service planning among agencies and provides guidance when, and if a broader range or higher level of services is required.

Issues Assessment

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|-----------------------|--|
| Issue LU-1 | Beach Erosion Control <i>Associated with: NBVC Port Hueneme</i> Sand moving from Navy side blows over to community areas in Silver Strand area creating a build-up of sand in parking lots and community beach areas. |
|-----------------------|--|

The California Coastline has a history of beach erosion due to seasonal weather patterns. More specifically, the Silver Strand Community is situated between the Pacific Ocean and NBVC Port Hueneme. The dense residential neighborhood is home to minor community commercial development and a popular beach for visitors. This area is open meaning that there are no natural or man-made features that prevent or even minimally control beach erosion. This area is adjacent to NBVC Port Hueneme of which there is sand and a parking area for Navy employees and is also characterized by a county park, La Jenelle Park.

During seasonal weather conditions and major gusts of wind, sand is blown from the Navy side to the community side, which causes a build-up of sand in both parking areas available to beach goers and the community beach.

The primary focus of this issue is largely due to the impacts the sand has on the community by impeding parking in community lots and causing the community to have to maintain the parking and beach areas in order to use them effectively.

Findings

- There are no control measures or structures in place that prevent sand blowing from the Navy side to the community side or vice-versa. This is a natural event that is not modified by any Navy actions or facilities and does not appear to be a compatibility issue that results from the interaction of the community and the Navy.

Existing Tools

Integrated Natural Resource Management Plan (INRMP)

The Port Hueneme INRMP identifies La Jenelle Park as a special interest natural area for sand verbena-beach bursage and various animal species. The La Jenelle Park site is planned for habitat enhancement and restoration. This will include removal of exotic plant species in favor of those that are more native. By introducing native species back to the landscape, the plants will help to maintain the sand dunes and reduce excess sand migration. By reintroducing native species and restricting access to the site, sand movement should decrease to more normal levels.

| | |
|-----------------------|--|
| Issue LU-2 | Airport Land Use Plan <i>Associated with: NBVC</i> The Ventura County Airport Comprehensive Land Use Plan (ACLUP) that addresses NBVC Point Mugu is dated and may not provide adequate guidance on compatibility. |
|-----------------------|--|

Airport Land Use Plans are meant to protect and promote the safety and welfare of residents and airport users near military and public airports, while promoting continuous, safe airport operations. Airport Land Use Plans specifically seek to protect the public and provide for the orderly growth of the airport and the areas surrounding the airfield.

The Ventura County Airport Land Use Commission (ALUC) prepared the Ventura County Airport Comprehensive Land Use Plan (ACLUP). It is important to note that in Ventura County, the Ventura County Transportation Commission acts as the ALUC. The ACLUP was first adopted in 1991 and updated in 2000. The ACLUP provides an assessment of the various airports within Ventura County including NBVC Point Mugu, formerly NAWS Point Mugu, and identifies the areas most impacted by noise, overflight, and other potential impacts such as aircraft accidents. The frequency of these impacts, time of day, type of aircraft and operations

performed at each airfield, and other such variables are also considered in the area identification. Once those areas are identified then certain land uses are determined to be safe and compatible with respect to the operations ongoing at each airfield.

Findings

- The ACLUP is over 14 years old (published in 2000), and while very detailed in the discussion of aviation compatibility, the data upon which this study is based is out-of-date.

Existing Tools

Ventura County Airport Comprehensive Land Use Plan (ACLUP)

The information in the document is currently 14 years old and cites references which may no longer provide adequate compatibility guidance. As aircraft have evolved including the addition of UASs in the area and mission parameters have changed, noise contours may have grown smaller or larger in relation. Though the operations for the Camarillo and Oxnard airports have relatively stayed the same over the past 14 years, this document does not account for changes in the airports operations including the NBVC Point Mugu airfield. Information related to various general plans also may provide inadequate guidance. The City of Oxnard 2030 General Plan has a military compatibility element, which would provide new insight for compatibility measures with the ACLUP.

The document is very thorough and appropriately addresses major compatibility factors between NBVC and surrounding communities, but the details of the Navy operations and flight tracks most likely are not the same as they were in 2000 and prior.

Issue LU-3

Mobile Home Park within Noise Contours

Associated with: NBVC Point Mugu

Mobile homes are considered sensitive land uses due to their occupancy and construction materials. These dwelling units cannot adequately mitigate for noise through sound attenuation.

Mobile homes are not constructed with sound mitigating materials; therefore, noise can impact mobile homes and the inhabitants of such dwellings greater than what would be experienced by traditional single-family dwellings. As noise travels outward from a source, the noise lessens due to several variables including weather, natural barriers, and the nature of the aviation operations moving away from the airfield at different points within a single aviation operation.

A mobile home park is located off the north side of Runway 21 at NBVC Point Mugu. According to the 1992 AICUZ, the mobile home park is located within the 65 – 75 CNEL noise contour. Due to the date of the publication, it is possible that new aircraft in use at NBVC Point Mugu have put the mobile home park within an even higher CNEL contour.

The mobile home park is located in an Agriculture Exclusive (AE) zone within unincorporated Ventura County. Within this zone, “mobile home park” is not an allowed use. Therefore, the mobile home park is considered a nonconforming use. For more information on nonconforming uses within the Study Area, see issue LU-7.

Findings

- In addition to the findings identified for LU-7, while the nonconforming use regulations do not allow for upgrades, the tool does not resolve the issue of this mobile home park located in a high impact noise area.

Existing Tools

Since this issue is associated with nonconforming uses in the county, the tools for this issue are discussed in detail for Issue LU-7, Nonconforming Uses.

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| Issue LU-4 | CSUCI Master Plan <i>Associated with: NBVC Point Mugu</i> A primary flight track traverses the area over California State University Channel Islands (CSUCI) campus. Noise may be an issue that needs to be addressed in the CSUCI Master Plan. |
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Universities are centers of activity for numerous people. Universities provide employment opportunities for a wide variety of skilled individuals and provide housing options for students who enroll at the university. Depending on campus setting, these factors could create a densely-populated center similar to a small town or city.

CSUCI is the newest addition to the California State University System. Since its inception in 2002, the campus has steadily grown and in 2014 had a headcount enrollment of 5,909 students, with a full time equivalent of 5,189 students, and 720 employees. CSUCI has a projected buildout enrollment of 15,000 students. CSUCI provides housing options on campus. Student housing options include approximately 202 units in resident halls, which house approximately 808 students. Faculty / staff housing options include 658 units of apartments, townhomes, and single family residences for rent or sale.

Future growth at CSUCI has the potential to locate development in areas that may be incompatible with mission-critical activities. Flight paths departing from NBVC Point Mugu pass to the west of the CSUCI campus. Future development that increases density and full-time occupation of the campus by staff or students within this area could create compatibility issues with NBVC mission activities.

Findings

- Currently, there are no compatibility issues with the proposed plans for sensitive land uses on campus (residential accommodations); however, if future housing is designated for areas under NBVC Point Mugu flight tracks, there could land use compatibility issues related to noise exposure.

Existing Tools

CSUCI Master Plan

According to the CSUCI Master Plan, full build-out of the campus is planned for 15,000 full-time equivalent (FTE) students. According to 2009/2010 CSU Capital Improvement Program, 11,750 FTE are to be accommodated on campus. The Master Plan identifies various land uses within the college land area. All student residential uses are proposed on the southeast end of campus, surrounded by existing residential uses outside of the decibel range and pose no compatibility issues. The area closest to the flight path between Lewis Road and campus proper is proposed to be parking lots and poses no compatibility issue.

Future faculty / staff housing at University Glen is situated at the northeast corner of the college area. This area is located near existing housing but closer to the flight path than other development. Because these uses are a majority of single family residences, the density is most likely not an issue. If future proposed housing is designated as apartments or attached townhomes in or near this area, then that type of development could pose an incompatibility for NBVC aviation activities relative to noise impacts. High density or multi-family housing can pose potential threats to installations due to the large concentrations of people which tend to be vulnerable and/or sensitive to military operations.

**Issue
LU-5****Victoria Avenue Ownership***Associated with: NBVC Port Hueneme*

A recent survey of Navy land revealed that the Navy and the adjoining jurisdictions (County of Ventura, City of Oxnard, and City of Port Hueneme) own portions of Victoria Avenue, a public roadway.

Victoria Avenue connects Silver Strand and Channel Island Beach to Oxnard. A recent land survey by NBVC Port Hueneme discovered that the western property line of the base extends onto Victoria Avenue thus splitting the ownership of the road between the City of Oxnard and the Base. The location of the Victoria Avenue gate, the commercial delivery access gate, and the issue of providing for appropriate setbacks relative to AT/FP standards causes concern for the Navy in the ownership of this roadway.

An additional concern for the military is the overall responsibility for public improvements to the roadway. In addition, Victoria Avenue is designated as port-related trucking route that receives high traffic levels, which can increase demands for roadway improvements.

These concerns can cause potential delays in deliveries to the base, funding for maintenance and repairs to the roadways, and security and liability issues for the base. All of which can generally delay military mission readiness.

NBVC is currently planning a project to provide a truck inspection area to reduce the queue. However some local residents are already seeing a reduction in trucks in the Silver Strand neighborhood due to new signage posted.

Findings

- Roadway improvements scheduled for Victoria Avenue are covered by proposed funding sources allocated by the City of Oxnard; however,

this covers the entire roadway and does not account for the portion of the roadway that is owned by the Navy.

- There may be issued in the future about roadway maintenance and responsibility based on new surveys of land ownership.

Existing Tools**City of Oxnard Capital Improvements Program**

The approved Oxnard CIP details several infrastructure and roadway improvement projects for Victoria Avenue through FY 2017-2018, including street lights, raised medians and street resurfacing. All of the detailed improvements have been proposed with allocated City of Oxnard infrastructure funding, yet none of the improvements lie on the section of Victoria Avenue that is adjacent to NBVC Port Hueneme.

**Issue
LU-6****Future Annexations / Changes to SOI***Associated with: NBVC*

In the evaluation of future changes to SOI and/or annexation proposals in the vicinity of NBVC, LAFCo criteria do not currently address military compatibility issues.

When a city is assessing their boundaries to extend municipal services outside of its boundaries, the city must obtain authorization from LAFCo. LAFCo is the agency responsible for allowing changes in a city's SOI or city limits. Camarillo and Oxnard have already built out to their respective SOI relative to military influence areas of NBVC. If LAFCo does not address military compatibility issues, there is a possibility that new SOI and voter approval of land use changes could affect military compatibility.

Findings

- Based on an independent assessment, the LAFCo Municipal Service Review (MSR) process does not include criteria that address military compatibility.

Existing Tools

LAFCo Municipal Service Review Guidelines

LAFCo has nine MSR determinations that need to be studied before an annexation or change in SOI can be made. These determinations include: infrastructure needs and deficiencies; growth and population projections for the affected area; financing constraints and opportunities; cost avoidance opportunities; opportunities for rate restructuring; opportunities for shared facilities; government structure operations; evaluation of management efficiencies; and local accountability and governance. Each determination in the MSR Guidelines includes items that may be addressed by LAFCo related to the topic.

The Current LAFCo MSR determinations do not directly discuss military compatibility as an item to be addressed during review. However, infrastructure needs and deficiencies, and growth and population projections for the affected area both can address nearby existing uses and compatibility with other local agency plans. This is very broad and can lead to oversight if left as is. However, this language could lead to enhanced wording that helps to protect military interests from encroaching development.

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| Issue LU-7 | Nonconforming Land Uses <i>Associated with: NBVC Point Mugu</i> Existing regulations may not address nonconforming land uses relative to compatibility. |
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A nonconforming use is a use, which complied with applicable standards when built but no longer meets requirements for the zone. Nonconforming uses associated with permanent structures tend to have protections in the zoning code that allow them to remain as a nonconforming use but without the right to expand or modify the business or structure at that location. Nonconforming uses can allow certain heights to remain or authorized uses

to continue to remain, even though the uses may not be compatible with nearby uses, e.g., the mobile home park adjacent to the airfield at NBVC Point Mugu discussed in Issue LU-3. This mobile home park is designated as a nonconforming use. Not only the density is questionable in this area near the airfield, but the construction materials of mobile homes are not adequate to sufficiently mitigate for an interior noise level of 45 CNEL to protect the welfare of its inhabitants. This causes concern for the military due to an increase in noise complaints and the overall safety concern for the public.

Amortization allows cities to apply time frames in which a nonconforming use must cease operation. This time frame varies but is generally seen as the time in which a nonconforming use can make a reasonable return on the investment.

Findings

- While amortization is a tool for the evaluation of nonconforming uses and safety of the public, it can generate controversy between the public and local governments. However, it can be used in the best interest of the public by protecting the public from unnecessary impacts such as loud, frequent noise and potential aircraft accidents.
- Relative to residential uses, Ventura County does not set a timeframe on ending the nonconforming use. The County does restrict nonconforming uses from conducting major expansions or renovations.

Existing Tools

City of Camarillo Zoning Regulations

The City of Camarillo Zoning Regulations are codified in Title 19 of the City Municipal Code. Camarillo Section IV Chapter 19.58 describes nonconforming uses. Nonconforming uses in a conforming building are to be discontinued five years after such a use becomes nonconforming. The use of nonconforming buildings or structures is permitted to continue so long as no additions or enlargements are made to the building except as required by law or by regulation for the zone in which the building is located.

While this does not currently affect the NBVC mission, it is important to note generally in this study to ensure a comprehensive assessment.

City of Oxnard Zoning Code

City of Oxnard Zoning Code is codified in Chapter 16 of the City Municipal Code. Article VI describes nonconforming uses. Nonconforming structures in the City of Oxnard may be continued and maintained provided that there is no physical change other than necessary maintenance and repair to such building. Nonconforming buildings that are only nonconforming due to noncompliance with setback and parking requirements are allowed to be structurally altered as long as the new altered structure complies with the zoning codes, does not create the need for more parking spaces, does not remove any required parking spaces, and does not increase a nonconforming setback.

Oxnard City Council has the authority to order nonconforming uses completely removed or altered and converted within a certain timeframe. The Council will set a date by estimating the reasonable unamortized value of the nonconforming use and determine the time in which the owner would have realized such a value. The Zoning Code does not state any specific amortization time periods. While there is an understanding that this can be on a case-by-case basis, not identifying amortization timeframes directly can lead to oversight and subjectivity in the evaluation of such uses.

City of Port Hueneme Zoning Code

The City of Port Hueneme Zoning Code is codified in Article X of the City Municipal Code. Section 10202E describes nonconforming uses. Nonconforming uses in Port Hueneme are declared as detrimental to public health, safety, convenience, and general welfare of persons and property. Nonconforming uses are allowed to remain but must discontinue if there is a change in use or intensity of use. Port Hueneme has a three year time frame for termination of use for structures that do not require a building permit, structures that contain less than 100 square feet, and structures that contain outdoor advertising.

Ventura County Zoning Ordinance

Ventura County Zoning Code is codified in Division 8, Chapter 1 of the Ventura County Ordinance Code. Article 13, Section 8113-5.2 describes amortization of structures. According to the section, all nonconforming commercial and industrial uses in the Residential, Open Space, or Agricultural zones are amortized from the effective date of the chapter. Timeframe for discontinuation of use varies depending on the overall size of the building with a maximum time of 60 years from effective date of the chapter. During the time frame, the business is not allowed to expand or construct additions unless required by law. Businesses can get a Continuation Permit to allow for additional time stay in business if special circumstances apply to the site that do not generally apply to other uses and structures in the same vicinity and zone.

All other uses not identified in Section 8113-5.2 are allowed to continue but are not allowed to expand or construct additions except as required by law. All other nonconforming uses may be changed to a similar use if parking requirements are the same or less for the new use. Nonconforming uses may not be changed to a use that requires a conditional use permit.

Though amortization is a possible way to remove nonconforming uses, it can be highly controversial. The larger a nonconforming use, the longer it may take for a landholder to make a reasonable return on their investment. However, should a future issue arise with particular nonconforming uses; a jurisdiction can utilize amortization if general welfare is threatened by the placement of the nonconforming use.

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| Issue LU-8 | Undeveloped / Agricultural Lands <i>Associated with: NBVC</i> Potential for undeveloped / agricultural land near NBVC operations will be developed with potentially incompatible uses with the NBVC mission. |
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Undeveloped, vacant, and agricultural land is typically a compatible use with military missions. Military bases perform exercises and activities and use machinery that has the potential to be loud or cause other nuisances such as vibrations. Undeveloped, agricultural, and rural land that are typically low density (no more than 1 or 2 dwelling units per acre) provide a buffer between military uses and sensitive land uses. Sensitive land uses are locations that are susceptible to various impacts and nuisances such as noise, odor, and vibrations.

NBVC Point Mugu is surrounded by vast areas of undeveloped and agricultural land. Immediately east is the Santa Monica Mountains National Recreation Area. To the west and north lie game preserves and agricultural fields. The vast areas of open space help to protect the viability of mission-critical activities at NBVC Point Mugu by preventing incompatible development, such as high-density housing, in the area. The threat of encroachment by incompatible land uses could increase complaints of NBVC activities and threaten the viability of future missions.

Findings

- While there are good policies and regulations that discourage urban sprawl and the development of agricultural, rural, and open spaces in Ventura County, the policies and regulations do not refer to military land uses as an adjacent land use that should be considered in potential applications.
- SOAR exemptions for low income housing and schools outside the CURB lines could allow development in an area that is not compatible with NBVC Point Mugu operations.

Existing Tools

County of Ventura General Plan

The Ventura County General Plan has two chapters dedicated to preserving undeveloped and agricultural lands. Chapters 1.6, Farmland Resources, and 1.7, Scenic Resources, both describe the importance of open space within Ventura County. The most relevant goal and policies from both chapters are included as follows:

1.6.1 Goals:

1. *Preserve and protect irrigated agricultural lands as nonrenewable resource to assure that continued availability of such lands for the production of food, fiber, and ornamentals.*

1.6.2 Policies

1. *Discretionary development located on land designated as agricultural (see Land Use Chapter) and identified as Prime Farmland or Farmland of Statewide Importance on the State's Important Farmland Inventory, shall be planned and designed to remove as little land as possible from potential agricultural production and to minimize impacts on topsoil*
5. *The County shall preserve agricultural land by retaining and expanding the existing Greenbelt Agreements and encouraging the formation of additional Greenbelt Agreements.*
6. *Discretionary development adjacent to Agricultural-designated lands shall not conflict with agricultural use of those lands.*

1.7.2 Policies

1. *Notwithstanding Policy 1.7.2-2, discretionary development which would significantly degrade visual resources or significantly alter or obscure public views of visual resources shall be prohibited unless no feasible mitigation measures are available and the decision-making body determines there are no overriding considerations.*

Chapter Six and Seven both take proactive steps to protect agricultural and undeveloped land. Chapter Six seeks to protect agricultural land by designating prime farmland and farmland of statewide importance. Greenbelt agreements are also identified as part of Chapter Six to further curb rapid development. Policies of Chapter Seven ensure that discretionary development does not negatively affect surroundings.

The Ventura County General Plan is an adequate tool that ensures undeveloped and agricultural lands within the county are not unnecessarily developed. However, while these goals and policies protect agricultural uses and scenic viewsheds, there is no direct reference to discretionary development shall not be in conflict with other uses near agricultural uses such as military uses.

County of Ventura Zoning Ordinance

The lands surrounding NBVC Point Mugu are primarily zoned Open Space and Agricultural exclusive. The Ventura County Non-Coastal Zoning Ordinance (NCZO) includes established purposes for the Open Space zone which include formation of cohesive communities and prevention of urban sprawl as well as support of the mission of military installations that comprise adjacent areas. The purpose of the agricultural zone is stated to preserve and maintain agriculture as a major industry and to protect against encroachment by nonrelated uses.

However, some uses that Ventura County allows in these zones may not be compatible with military activities. Housing types including single-family dwellings and farmworker housing are allowed with appropriate review and permits. Regulations also permit structures that exceed height limits with

acquisition of appropriate permits. The NCZO does not contain any reference to military notification regarding development in military influence areas. By not notifying the military of projects in vicinity of NBVC Point Mugu, oversight can potentially cause incompatible uses between the base and its surroundings.

Save Open Space and Agricultural Resources (SOAR)

Save Open Space and Agricultural Resources (SOAR) is a voter approved mandate that creates Urban Restriction Boundaries (URB) around Ventura County city borders. Ventura County and the cities of Camarillo and Oxnard approved SOAR boundaries in 1998, which are set to expire on December 31, 2020. Port Hueneme, being entirely surrounded by Oxnard, did not adopt SOAR boundaries. SOAR prevents development from occurring outside of URB unless approved by a majority of voters. A change of Open Space or Agricultural designation to a more intense designation within the County requires a majority vote of county residents. Within incorporated cities, a change in URB and extension of utilities outside of the URB requires a majority vote of city residents. SOAR is an invaluable asset to this county and the military. Though it has an expiration date, it prevents uncontrolled urban sprawl by enabling a public vote on the proposed changes. This is a good compatibility tool and establishes another level of protection and control to agricultural, rural, and open spaces in Ventura County.

**Issue
LU-9**

Military Compatibility Policy within General Plans and Local Coastal Plans

Associated with: NBVC

Local jurisdictions may need to update general plans and/or local coastal plans to address military compatibility.

Military installations and communities have a mutual beneficial relationship—communities benefit from the direct and indirect investment by the federal government including the numerous jobs associated with an installation, while military personnel benefit from the local and regional communities through housing, retail, and social/cultural amenities. Despite the mutual relationship that bases and cities share, it is often the case that various community policies and regulations do not protect the installation from various forms of encroachment such light and glare or high densities in aircraft accident prone areas.

While Ventura County and the City of Camarillo have policies and regulations that partially address some encroachment factors, there are not a comprehensive set of policies dedicated to both protect the military installation and provide for the safety and sustainable, compatible community growth. The City of Oxnard has a very thorough Military Element in its General Plan that addresses several encroachment factors in order to protect the NBVC mission as well as providing the opportunity for continued, compatible community growth.

Findings

- While the City of Oxnard has an entire dedicated Military Element in its General Plan that addresses several compatibility issues, the cities of Camarillo and Port Hueneme and Ventura County do not have a comprehensive policy framework to guide development in consideration with military compatibility.

Existing Tools

City of Camarillo General Plan

In the City of Camarillo Open Space Element, the city defines open space purposes and recognizes open space as a benefit to the military when the city can preserve open space. Open space can act as an additional buffer to a military installation in areas that are adjacent to the installation, near military training routes (MTRs), and even underlying restricted airspace. While the Open Space Element defines and identifies the benefits of open space near a military installation or near a mission-critical area used by the military to accomplish the mission, the Open Space Element does not go further in establishing a vision for this community by setting a policy for this definition.

Another way the City of Camarillo General Plan establishes policies that assist in protecting the base is by establishing interagency communication and coordination as it relates to noise impacts generated from military aircraft that train in the area. The Camarillo Noise Element describes a measure to set up a navy liaison to enhance communications regarding noise impacts. The measure reads as follows:

Measure 9. The City shall establish and maintain close liaison with U.S. Navy authorities (and any successors) responsible for operations at PMTC Point Mugu. While the City has no control over Point Mugu or its operations, concerns regarding noise impacts due to flight operations should be communicated to the proper authorities.

Beyond these measures, the Camarillo General Plan does not further establish a guiding framework for military compatibility.

City of Oxnard General Plan

The City of Oxnard General Plan was updated in 2011 and includes a chapter dedicated to military compatibility. The purpose of the chapter is stated:

“to demonstrate [Oxnard’s] commitment to and support of current and future missions at NBVC, especially as related to noise generated by aircraft operations mobilization routes, and facility perimeter security.”

The element sets goals and established policies that consider the impact of Oxnard’s development decisions on military activities. Some of the most goals include but are not limited to General Mission Support, Communications and Coordination, and Mitigating Military Compatibility Issues.

Oxnard’s General Plan is a very proactive plan and is an excellent compatibility tool to ensure military compatibility within the General Plan.

City of Port Hueneme General Plan

Port Hueneme General Plan Land Use Element includes a focus to establish stronger interagency coordination and communication. The focus reads as follows:

The Military and the Port: An important objective of the General Plan is the establishment of stronger ties and ongoing linkages between the City, the Port, and the Military. The 1987 Agreement between the City and Port, and numerous city/military improvements around the perimeter of the CBC have established a strong precedent for continued cooperation between the three primary jurisdictions in Port Hueneme.

While discussions have occurred between the City of Port Hueneme and NBVC regarding use of lands along the sandspit and within NBVC Port Hueneme, the document does not establish a comprehensive policy framework that directly reflects military compatibility.

County of Ventura General Plan

The County of Ventura Public Facilities & Services Chapter includes goals related to military compatibility only in that the county desires to share county information with state and federal facilities to ensure those levels of governments are aware of county government activities. This encourages

interagency coordination and communication, but does not address how the communication and coordination should occur or for what types of activities warrant notification to state and federal entities.

There is no further discussion of collaboration with federal or military agencies. The goals can be loosely interpreted to relate to the military but without direct language and corresponding policy, the Ventura County General Plan does not reflect adequate, comprehensive military compatibility goals and policies.

City of Oxnard Coastal Land Use Plan

The Oxnard Coastal Land Use Plan does not discuss military compatibility directly but addresses military security needs by way of public access. The City of Oxnard is in favor of public access to and along shorelines. However, the following language states the exception to the rule:

Exceptions may be made when access would be inconsistent with public safety, military security, the protection of fragile coastal resources, or when agriculture would be adversely affected.

This is the only place in the Plan where the military is identified. Nonetheless, the policy is a good starting point for the Oxnard Coastal Land Use Plan to continue building military compatibility into the Coastal Land Use Plan.

City of Port Hueneme Local Coastal Plan

The City of Port Hueneme Local Coastal Plan does not specifically discuss or reflect a policy framework that promotes military compatibility.

County of Ventura Coastal Area Plan

The County of Ventura Coastal Area Plan, much like Oxnard Coastal Land Use Plan, does not specifically reflect military compatibility but does discuss it through protection of military security. Shoreline Access §30212 states the following:

“public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or (3) agriculture would be adversely affected...”

The Coastal Plan also describes Navy activities to maintain and enhance Mugu Lagoon. Policy 5 under Environmentally Sensitive Habitats E states:

The County supports the work already done, and any future plans the navy may propose to maintain and enhance the productivity of the Mugu Lagoon Consistent with the Local Coastal Program.

This is the extent of military compatibility discussed within the Coastal Area Plan of the county.

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| Issue LU-10 | Conditional Use Permits <i>Associated with: NBVC</i> CUP regulations do not specifically address NBVC compatibility factors in the review process. |
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Conditional use permits (CUPs) and special use permits (SUPs) attach conditions of use to a project’s approval to which the use must adhere. CUPs can attach a range of conditions to a project approval including required landscaping, noise mitigation, or hours of operation. Most zoning regulations include a broad set of conditions within CUP chapters.

Conditional use permits are important regarding military compatibility because CUPs require another level of oversight that can prevent incompatible development in mission-critical or military influence areas. NBVC and corresponding influence areas are surrounded by numerous

general plan and zoning regulation land use designations. The potential for incompatible development must be recognized and observed.

Findings

- While the cities have standards for their CUPs and SUPs that can be used to promote military compatibility, the standards do not currently specifically consider military compatibility.
- All communities have various levels of approvals (City Council, Planning Commission, or Development Committee) for CUPs and SUPs, which provides for additional oversight to ensure CUPs and SUPs are appropriate for a site, which could facilitate military inputs.

Existing Tools

City of Camarillo Zoning Regulations

Camarillo Zoning Regulations address CUPs in chapter 19.62 of the City Municipal Code. All CUPs are reviewed by the Planning Commission. The Chapter sets forth a set of regulations that requires certain conditions for a CUP to be approved including but not limited to the use for which the CUP is needed should meet the size requirements for such a use and should not come in conflict with adjacent or proximate uses.

The zoning districts underneath NBVC Point Mugu flight paths include a majority of Rural Exclusive (RE) and Residential Planned Development (RPD). There are several conditional uses permitted in these zoning districts that are potentially incompatible with military missions, they include but are not limited to churches; day care facilities with more children than typically permitted; mobile home parks, buildings containing a height greater than thirty-five feet with a maximum height of seventy-five feet; and bed and breakfasts.

City of Oxnard Zoning Code

The Oxnard Zoning Code addresses special use permit in Article VII Division 3. All special use permits are reviewed by the Planning Commission, which provides another level of oversight to ensure military compatibility is considered. The Zoning Code includes required findings similar to the City of

Camarillo's Zoning Regulations such as ensuring that uses adjacent will not be in conflict with the SUP use, the site shall be able to be served by highways as well as adequate utilities.

No findings specifically consider military compatibility though a condition under section 16-532L specifies height limitations that protect the general welfare. While this requirement does not specifically reference military compatibility, height limitations promote compatible development with military aviation operations.

City of Port Hueneme Zoning Code

The Port Hueneme Zoning Code is codified in Article X of the City Municipal Code. Part B Section 10352 and 10353 describe Development and Administrative Permits. Development and Administrative permits in Port Hueneme go before the Development Review Committee. Administrative permits are approved by the Development Review Committee. Development permit approval goes before the City Council. The Port Hueneme Zoning Code contains no set findings for permit approval.

By allowing City Council to decide applicable findings, a situation is created where acceptable findings could shift from council to council. This means a loss of institutional knowledge or mutual understanding could be lost as council members retire or are voted out of office. If the definition of "acceptable" finding is constantly changing, NBVC has no guarantee that the wellbeing of the mission will be preserved when approving CUPs in the City of Port Hueneme.

County of Ventura Non-Coastal Zoning Ordinance

The Ventura County NCZO describes discretionary entitlements, including CUPs, under Section 8111-1.2. CUPs are reviewed by the Planning Commission. Ventura County has set permit approval standards similar to the cities of Camarillo and Oxnard; however, consideration of military compatibility is not directly reflected in the CUP regulations.

The Zoning Ordinance also has additional standards for the Agriculture Exclusive Zone. As NBVC Point Mugu is surrounded by land zoned as Agriculture Exclusive, it is important to note that the regulations for

Agriculture Exclusive CUPs do not reflect military compatibility as a standard of approval. CUPs in the AE zone allow for numerous uses that could adversely affect NBVC including:

- Wineries with Public Tasting Rooms
- Accessory Agricultural Structures which exceed the height limit
- Farmworker Dwelling Units
- Boarding Houses and Bed-and-Breakfast Inns
- Communications Facilities
- Accessory Dwelling Units which exceed the height of the main structure
- Ground Mounted Antennas greater than 40 feet
- Energy Production from Renewable Resources
- Festivals, Animal Shows, and Similar Events, Temporary Outdoor
- Government Buildings
- Fire Stations
- Parks

Please see the next page.

5.12. Land, Air, and Sea Space Competition

The military manages or uses land and air space to accomplish testing, training, and operational missions. These resources must be available and of a sufficient size, cohesiveness, and quality to accommodate effective training and testing. Military and civilian air and sea operations can compete for limited air and sea space, especially when the usage areas are in close proximity to each other. Use of this shared resource can impact future growth in operations for all users.

The land, air, and sea spaces used by the military can be owned by the DOD, designated for DOD use by a federal or state agency, provided through easements or other agreements with public or private entities, or maintained as a historic usage right. Public and private requests to share or assume some of these resources may have a negative impact on military training and test objectives.

Key Terms

General Aviation. General aviation is defined as aviation activity that is not commercial or military in character. This term typically covers all civil aviation operations other than scheduled air services and non-scheduled air transport operations for hire.

Port Basin. A port basin is the enclosed area within the port designed so that the water level remains unaffected by tidal changes.

Port Capacity. This term looks at the overall availability of the Port of Hueneme to perform existing and potential future operations by utilizing facilities and equipment to an optimal utilization rate.

Unmanned Aerial Vehicles (UAVs). UAVs are aircraft that are capable of operating without an internal pilot; are tethered by a radio control link; and can be preprogrammed for both flight and payload operations prior to launch.

Technical Background

The military manages or uses land, air, and sea space to accomplish testing, training, and operational missions. These resources (land, air, and sea space) must be available and of a sufficient size, cohesiveness, and quality to accommodate effective training and testing. The demands of extended operational reach, both in terms of breadth and depth, make the military installation, training area, airspace, and sea space of the region, and interconnected collaboration between the military training and test installations, more important as requirements and capabilities of weapons and command and control systems continue to improve.

The land, air, and sea spaces used by the military can be owned by the DOD, designated for DOD use by a federal or state agency, provided through easements or other agreements with public or private entities, or maintained as a historic usage right. Public and private requests to share or take over some of these resources may have a negative impact on military training and test objectives.

Controlled and Uncontrolled Airspace Descriptions

To help air traffic controllers and pilots deal with varying traffic conditions in the sky, United States airspace is been divided into six different classes (A, B, C, D, E, and G). These classes each have different requirements for entry into the airspace, pilot qualifications, radio and transponder equipment, and Visual Flight Rules (VFR) weather minimums.

Class D Airspace. All three airports in the Study Area (Oxnard, Camarillo, and NBVC Point Mugu) have Class D airspace surrounding them. Class D airspace typically encompasses an area within a 4.5-mile radius of the center of the airfield that extends upward to 2,500 feet mean sea level (MSL). Given the close proximity of the three airfields, there is not enough space to provide the full 4.5-mile radius, thus the airspace is reduced to provide equal coverage from the airfields. Use of Class D airspace requires the use of two-way communication with Air Traffic Control, which must be established prior to entering Class D airspace. No transponder is required. VFR flights in Class D airspace must have three miles of visibility, and fly an altitude at least 500 feet below, 1,000 feet above, and 2,000 feet laterally from clouds.

Issues Assessment

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| Issue LSA-1 | Port Capacity for Military Operations <i>Associated with: NBVC Port Hueneme</i> Oxnard Harbor District use of Wharf 3 is approved by the Navy on a “not to interfere” basis. Military mission has priority for use. |
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The Oxnard Harbor District (OHD) leases additional space at the Port of Hueneme from NBVC relative to Wharf 3 and some land areas. There is a general concern that the OHD commercial uses may encroach on NBVC Port Hueneme and affect military readiness activities should these facilities be needed in a national emergency. Commercial activities take up approximately 25 acres at NBVC Port Hueneme.

Findings

- The Joint Use Agreement (JUA) clearly states that commercial port operations may not interfere with Navy readiness activities. According to the JUA, OHD must immediately suspend its use of Wharf 3 upon notification by the commanding officer of NBVC that it is needed to support mission essential naval vessel requirements or Navy contingency operations, including, but not limited to, combat missions, natural disasters, and humanitarian missions.

Existing Tools

Joint Use Agreement between the United States of America and Oxnard Harbor District

The OHD uses Wharf 3 of the Port of Hueneme by a JUA with NBVC. The JUA was edited per the National Defense Authorization Act for Fiscal Year 2001 to require restrictions on use of the Port. The restrictions may be applied when the commanding officer of the Navy has provided notification indicating the property is needed for support of mission-essential operations to include operations for combat missions, natural disasters, and

humanitarian missions. Additionally, the JUA requires that the OHD use the covered facilities under the agreement in a manner consistent with Navy operations and assist the Navy in meeting its throughput requirements for rapid movement of military equipment and cargo. Moreover, the JUA establishes the authority granted to the commanding officer of the Navy to have the OHD remove any personal property from the shared facilities if it is determined to impede military operations at the Port. If the OHD cannot remove its property, then the Navy can have it removed for the District at the District’s expense.

This guidance within the JUA ensures that the military can prioritize national security over commercial operations at the port. The issue is adequately addressed by existing tools and needs no further research.

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| Issue LSA-2 | Limited Access to Port Basin <i>Associated with: NBVC Port Hueneme</i> The turn between Wharves 3 and 4 has a width of 1,200 feet, which limits the capability of larger ships in turning within the basin. When multiple ships are docked, the maneuverability among vessels to enter and exit the port is challenging and can potentially cause delays in operations. |
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The Port of Hueneme is shared between the OHD and NBVC by the JUA, described in the previous issue discussion. The JUA allows the OHD to utilize Wharf 3 for processing commercial cargo including produce and automobiles. According to the Naval Base Ventura County Activity Overview Plan (AOP), Final Report, September 2006, the width of the port is inadequate to accommodate vessels during wartime. The current wharves limit quick turnaround. This affects military readiness when Navy vessels need quick access to port docks.

Findings

- Currently, there are no tools including capital improvement programs that address this issue.

Existing Tools

Naval Base Ventura County Activity Overview Plan, Final Report, September 2006

As stated earlier, the AOP does identify undersized port facilities as an issue of Port Operations.

Undersized Port Facilities: Port Facilities are undersized, and ships must be nested during wartime, reducing efficiency and timing of ship berthing. Wharves B and C are deteriorated and have limited capability.

However, no planned actions are included in the AOP that would help to solve the issue of undersized port facilities. Therefore, existing tools do not adequately address the issue.

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| Issue LSA-3 | UAS Development and Use. <i>Associated with: NBVC</i> There may be increased use of Unmanned Aerial Systems (UAS) by military, other federal agencies, commercial, civilian operators that may have impacts on civilian and military airspace use. |
|------------------------|---|

Technological advances in aviation have made it possible to introduce UAS into national airspace. UAS could be commercial or personal and for instance, might be used to monitor storms or assist in rescue operations. There is a general concern that UAS in the skies over Ventura County could interfere with civilian and military airspace use.

Additional aerial vehicles within NBVC airspace could increase the potential for mid-air collisions. The potential for collisions is heightened because UAS cannot yet sense other objects within their vicinity.

Camarillo Airport submitted a proposal to the FAA to research and test UAS in Ventura County. In making their decision, the FAA considered geography, climate, and the location of ground infrastructure, research needs, airspace use, safety, aviation experience, and risk. Ultimately, the Camarillo Airport site was not selected as a test site. Therefore, immediate encroachment by UAS is unlikely.

Findings

- The FAA Modernization and Reform Act of 2012 and the NBVC Air Operations Manual establish provisions and regulations for the operations of UAS. NBVC or the jurisdictions in Ventura County are not in conflict with aviation operations in the area.
- With the current purpose and use of UAS in Ventura County, the tools are adequate to address this issue.

Existing Tools

FAA Modernization and Reform Act of 2012

As part of the FAA Modernization and Reform Act of 2012 the FAA is developing a comprehensive plan to safely integrate UAS into the national airspace system. The contents of the plan are as follows:

- (A) *The rulemaking to be conducted under subsection (b), with specific recommendations on how the rulemaking will -*
- *Define the acceptable standards for operation and certification of civil unmanned aircraft systems*
 - *Ensure that any civil unmanned aircraft system includes a sense and avoid capability; and*
 - *Establish standards and requirements for the operator and pilot of a civil unmanned aircraft system including standards and requirements for registration and licensing;*

- (B) *The best methods to enhance the technologies and subsystems necessary to achieve the safe and routine operations of civil unmanned aircraft systems in the national airspace system*
- (C) *A phased-in approach to the integration of civil unmanned aircraft into the national airspace system;*
- (D) *A timeline for the phased-in approach described under subparagraph (C);*
- (E) *Creation of a safe airspace designation for cooperative manned and unmanned flight operations in the national airspace system;*
- (F) *Establishment of a process to develop certification, flight standards, and air traffic requirements for civil unmanned aircraft systems at test ranges where such systems are subject to testing;*
- (G) *The best methods to ensure the safe operation of civil unmanned aircraft systems and public unmanned aircraft systems and public unmanned aircraft systems simultaneously in the national airspace system; and*
- (H) *Incorporation of the plan into the annual NextGen Implementation Plan document (or any successor document) of the Federal Aviation Administration.*

These regulations are due out sometime in 2015. Until that point in time, it will not be clear what impacts UAS will have on civilian and military airspace in Ventura County. However, the FAA Modernization and Reform Act of 2012 identifies that consideration of the safe integration of UAS into national airspace systems is paramount.

NBVC Instruction 3710.1E Air Operations Manual

The NBVC Air Operations Manual dedicates a chapter to the operation of UAS around NBVC Point Mugu. UAS operations that do not have a permanent approved operational site are required to submit a site approval package to the NBVC Public Works Planning branch and submit an airfield safety waiver package to NAVAIR and the Public Works Planning branch before a UAS can be flown.

Issue LSA-4

Ground Control Approach.

Associated with: NBVC Point Mugu

Potential aviation impacts associated with the interface between military and commercial aviation operations in the approach area to NBVC Point Mugu.

NBVC Point Mugu is located in the Greater Los Angeles region which is one of the largest metropolitan areas in the country. While Ventura County has taken steps to preserve its agricultural and rural heritage, it can be assumed that Ventura County will continue to grow. This growth will bring with it increased demand for scheduled commercial service and general aviation use. Two airports currently exist in the study area: Camarillo Airport and Oxnard Airport. Both airports are owned by Ventura County but neither have commercial air service at the time of this writing. Oxnard Airport most recently had passenger service in 2010 until United Express discontinued operations. Currently, the closest major airports with scheduled commercial service are Santa Barbara Airport (~47 miles), Bob Hope / Burbank Airport (~53 miles), and Los Angeles International Airport (~61 miles).

Both Oxnard and Camarillo Airports have runways oriented generally in an east-west direction. Oxnard's runway is designated as 07/25, which shows the runway runs at a 70° / 250° orientation. Camarillo's runway is designated as 08/26, which shows the runway runs at an 80° / 260° orientation. NBVC Point Mugu has two runways. The primary runway is 03/21, which shows the runway runs at a 30° / 210° orientation. The other runway is designated as 06/27, which shows the runway runs at a 60° and 270° orientation.

Relative to compatibility, aircraft approaching from the west and landing on Runway 25 at Oxnard or Runway 26 at Camarillo will cross the approach used by military aircraft coming from the north (over Camarillo) to NBVC Point Mugu's primary Runway 21. The area that they cross, located east of the Camarillo Airport, is referred to as "the weave."

All three airfields have their own Class D airspace assigned by the FAA, but approach control for all three airfields is provided by NBVC Point Mugu's tower. That is, the NBVC Point Mugu tower provides air traffic control service for arriving and departing VFR/IFR aircraft and, on occasion, en route aircraft. This single point of control allows better control in avoid potential flight conflicts.

While controlled by the NBVC Point Mugu tower, there is still concern that civil, commercial, and military aviation operations in the vicinity of NBVC Point Mugu have an increased potential for conflict (although extremely small) due to the crossing flight paths and potential for increasing traffic. In addition, as the area is heavily used for agriculture, there is the potential for crop dusting aircraft in the flight corridors.

Findings

- Primary approaches for the Oxnard and Camarillo airports cross with the primary approach from the north to NBVC Point Mugu. The conflict point between these approaches, referred to as the "weave" is controlled by the tower at NBVC Point Mugu.
- While the Camarillo Airport Draft Master Plan identifies the growth potential for commercial aviation operations, the plan does not consider growth impacts as it relates to military aviation in the area.
- In addition to conflicts at "the weave", there is also concern about crop dusting activities in the area.

Existing Tools

NBVC Instruction 3710 Air Operations Manual

The NBVC Instruction 3710 Air Operations (AirOps) Manual gives instructions for landing procedures. However, there is very little information regarding potential aviation impacts between existing and future military and commercial aviation operations.

2011 Camarillo Airport Master Plan

The 2011 Camarillo Airport Master Plan evaluates the capability and role of the airport regarding future aviation demand. The Master Plan assumes that

Camarillo Airport will remain a general aviation airport through the document planning period.

Even though the document does focus on general aviation operations and not commercial operations, there are some important points to note. According to the document, Camarillo Airport is the only Ventura County airport that has the ability to expand to meet growing general aviation demand. In the future, market demand could drive local officials to seek commercial service at the airport. Room exists to reinstate abandoned sections of the Camarillo Airport runway, which would allow a variety of aircraft to use the facilities, including commercial airliners.

According to the Master Plan, total operations at Camarillo Airport are expected to grow by 56,782 or approximately 40 percent by 2028. According to the document, Camarillo Airport is the only Ventura County airport that has the ability to expand to meet growing general aviation demand.

Oxnard Airport Master Plan Executive Summary

Oxnard Airport Master Plan Executive Summary (2004) provides an overview of future operations at the Oxnard Airport. According to the Executive Summary, long term aviation demand planning horizons place total operations at 115,200 aircraft. Note that Oxnard uses general planning horizons instead of specific dates to determine long term demand.

2004 Oxnard Airport Master Plan

The 2004 Oxnard Airport Master Plan evaluates the capability and role of the airport regarding future aviation demand. While this plan is currently 10 years dated and does not reflect current aviation operations, the plan indicated that general aviation services and operations would continue to increase. This increase includes a forecasted growth by 10,700 operations for general itinerant aviation operations from the period of 2010 to 2025, based on FAA reports. In addition, local operations for general aviation were forecasted to grow by only 2,200 operations from 2010 to 2025.

The Plan also identifies air taxi and military operations in their operational forecast; however, these operations remain minimal. With this information, the Oxnard Airport operations are expected to grow throughout the years,

but this growth will be minimal and will not likely include commercial airline service.

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| Issue LSA-5 | Preservation of Instrument Route-200 (IR-200) <i>Associated with: NBVC Point Mugu</i> Urban development under the missile corridor could risk the loss of the corridor designation and sustainability for military use. |
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The IR-200 missile corridor connects the Point Mugu Sea Range and the NAWS China Lake. The corridor spans four counties-Santa Barbara, Ventura, Los Angeles, and Kern. IR-200 is used by the Navy in conjunction with the Sea Range for cruise missile testing. The IR-200 is the only corridor for this purpose on the west coast. The significance of cruise missile testing is that cruise missiles afford the military to deliver large warheads over long distances with superb accuracy; it does not perform reconnaissance operations. The testing that occurs within the IR-200 corridor can include the missiles traveling at supersonic and subsonic speeds and at extremely low altitudes. The particular concern is that urban development within the area of the corridor could threaten these mission-critical testing and evaluation operations.

The IR-200 corridor is located primarily over rural land. A sizable percentage of the corridor, and its entirety within Ventura County, is located over the Los Padres National Forest and is therefore, protected from urban development. However, areas in Santa Barbara County, Los Angeles County, and Kern County are more susceptible to potential development which may be incompatible with the military operations.

In Santa Barbara County, the IR-200 corridor traverses the Santa Ynez Valley. The Santa Ynez Valley is primarily agricultural with various towns and communities scattered throughout the area. The IR-200 also traverses the

rural western reaches of the more suburban Antelope Valley within Los Angeles and Kern Counties.

Findings

- Currently, the Ventura County Non-Coastal Zoning Ordinance (NCZO) does not identify the IR-200 as a military mission footprint and thus does not consider military compatibility relevant to this issue.
- While this issue may not be directly relevant to operations at NBVC, the Kern County Zoning Code details a good model for military review requirements of heights of structures located within IR-200.

Existing Tools

Kern County Zoning Code

Within the Kern County Zoning Code Chapter 19.08 Interpretations and General Standards, is a subsection titled 19.08.160 Height of Structures which details provisions for height regulations in regards to required military review. An associated map, Figure 19.08.160 is provided in the section which portrays different areas that require military review for structures over 100 feet, 200 feet or 500 feet respectively. The figure additionally portrays areas where military review is required for wind turbines and communication towers over 80 feet. The military review requirements in this section are in conjunction with Edwards Air Force Base, NAWS China Lake and IR-200 military footprints, and are written as follows:

- Notwithstanding any other provisions in this title, within the area depicted in Figure 19.08.160, no zone modification or zone variance may be approved, and no building permit may be issued where a zone modification or zone variance is not required, for any structure or building that exceeds the maximum permitted heights shown in Figure 19.08.160 unless the military authority responsible for operations in that flight area first provides the Planning Director with written concurrence that the height of the proposed structure or building would create no significant military mission impacts.

- In instances where the required written concurrence from the military is requested by not received within a reasonable period of time. The required zone modification or zone variance may be considered by the Board of Supervisors. A variation to the height-related Development Standard in B.1 above may be approved by the Board of Supervisors generally following the zone variance procedures set forth in Chapter 19.106 and payment of related fees, upon a finding that the benefits of the requested height deviation outweigh the potential impacts on military flight operations.

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| Issue LSA-6 | Increased Civilian Air Operations <i>Associated with: NBVC</i> Potential increase in civilian operations at nearby airports may impact NBVC Point Mugu aviation operations. |
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Civilian air operations at local airports have the potential to conflict with military air operations when the two uses are located in close proximity. The Camarillo and Oxnard Airports are both located within the JLUS Study Area and in close proximity to NBVC Point Mugu. As discussed in issue LSA-4, the Camarillo airport has commercial aviation operations, but the airport is used for general aviation operations.

There is concern that an increase in civilian operations at the Oxnard and Camarillo Airports could impede military operations or increase accident potential.

Findings

- See LSA-4.

Existing Tools

See information under Issue LSA-4.

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| Issue LSA-7 | Port Hueneme Commercial Operations <i>Associated with: NBVC Port Hueneme</i> If commercial operations increase, the potential impacts to the military mission at NBVC Port Hueneme may also increase. |
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The OHD and NBVC have a joint use agreement for the use of the Port of Hueneme for both commercial and naval purposes. The OHD currently occupies 25 acres of port land for shipping related commercial purposes.

This expansion has the potential to threaten mission-critical activities. While the Oxnard Harbor District classifies some NBVC land as “underutilized”, NBVC classifies the land as necessary preparation areas in case of emergency. The expansion of commercial uses of the Port of Hueneme could prevent the military from performing critical operations.

Findings

- Existing tools address the issue and no further research is needed.

Existing Tools

NBVC-Oxnard Harbor District Joint Use Agreement

The Joint Use Agreement was edited per the National Defense Authorization Act for Fiscal Year 2001 to include the following language:

Restrictions on Use. The District’s use of the property covered by an agreement under subsection (a) is subject to the following conditions:

The District shall suspend operations under the agreement upon notification by the commanding officer of the Center that the property is needed to support mission essential naval vessel support requirements or Navy contingency operations, including combat missions, natural disasters, and humanitarian missions.

The District shall use the property covered by the agreement in a manner consistent with Navy operations at the Center, including cooperating with the Navy for the purpose of assisting the Navy to meet its through-put requirements at the Center for the expeditious movement of military cargo.

The commanding officer of the Center may require the District to remove any of its personal property at the Center that the commanding officer determines may interfere with military operations at the Center. If the District cannot expeditiously remove the property, the commanding officer may provide for the removal of the property at District expense.

Consideration.--Subsection (d) of such section is amended to read as follows:

Consideration. As consideration for the use of the property covered by an agreement under subsection (a), the District shall pay to the Navy an amount that is mutually agreeable to the parties to the agreement, taking into account the nature and extent of the District's use of the property.

The Secretary may accept in-kind consideration under paragraph (I), including consideration in the form of--

the District's maintenance, preservation, improvement, protection, repair, or restoration of all or any portion of the property covered by the agreement; the construction of new facilities, the modification of existing facilities, or the replacement of facilities vacated by the Navy on account of the agreement; and covering the cost of relocation of the operations of the Navy from the vacated facilities to the replacement facilities.

All cash consideration received under paragraph (1) shall be deposited in the special account in the Treasury established for the Navy under section 2667(d) of title 10, United States Code. The amounts deposited in the special account pursuant to this paragraph

shall be available, as provided in appropriation Acts, for general supervision, administration, overhead expenses, and Center operations and for the maintenance preservation, improvement, protection, repair, or restoration of property at the Center.

Conforming Amendments.--Such section is further amended by striking subsection (f); and by redesignating subsections (g) and (h) as subsections (f) and (g), respectively.

This language ensures that if commercial development increases at the port that it will not impact military missions at NBVC Port Hueneme.

**Issue
LSA-8**

Appropriate and Safe Access to Wetlands and Environmental Sites at NBVC.

Associated with: NBVC Point Mugu

Ability to maintain public access to environmental lands, including wetlands and sensitive habitats, for bird watching and other recreational activities in the future.

The natural areas surrounding NBVC Point Mugu allow for many recreational activities. The wetlands of Mugu Lagoon and environs are a habitat for various bird and animal species. Game reserves are located to the west of NBVC Point Mugu and provide grounds for duck hunting. Also to the west of NBVC is the Santa Monica Mountain National Recreation Area which provides camping and hiking amenities.

There is a general concern that if missions expand or NBVC receives more missions that recreationalists and wildlife enthusiasts will still have the same access to the wetlands and other coastal resources in this area.

Findings

- While the INRMP recognizes and encourages recreationalists and enthusiasts to engage in bird-watching and other activities, the INRMP establishes provisions that these recreational activities may not conflict with military mission security. However, military security is not defined.
- While access to waterways on and near NBVC Point Mugu and Port Hueneme are possible, publically available information on where and how to access areas is difficult to obtain and difficult to post.
- The cities of Oxnard and Port Hueneme also encourage development to extend public roadways and access ways to the coastal resources in this area as long as it does not conflict with military security. Again, these plans do not define military security.

Existing Tools

Integrated Natural Resource Management Plan

The INRMP for NBVC Point Mugu was updated in 2013. The document states that recreational use on base is permitted when such uses do not conflict with military security. According to Chapter 6.9, Recreation & Public Access, on-base recreational activities such as beaches, duck hunting ranges, etc. are for active and retired military personnel, civilian employees, and contractors. The base is aware of its ideal location for bird-watching and supports policies to allow for bird watching tours on base when such tours do not conflict with military security, mission, or environmental protection standards.

Please see the next page.

5.13. Legislative Initiatives

Legislative initiatives include those existing and proposed federal, state, and local laws and regulations that may have a direct or indirect effect on a military installation to achieve its current or future mission.

Federal, state, and local legislative initiatives are important regulatory tools to guide the actions of both local jurisdictions and the military installation. This legislation is not mutually exclusive, and as such, it fosters both parties to work together in partnership to improve operational and community sustainability objectives.

Key Terms

No unique terms are used in this section.

Issues Assessment

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| Issue LI-1 | SOAR Ordinance Expiration <i>Associated with: NBVC</i> The Save Open-Space and Agricultural Resources (SOAR) ordinance expires in 2020 for Ventura County and the cities of Camarillo and Oxnard and are up for public vote to continue the ordinance. These ordinances provide a measure of protection against encroachment to NBVC. |
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Open Space and agricultural lands make up a significant portion of the land in Ventura County; this characterization also sets the county apart from other proximate counties. Agriculture provides the county with about \$2 billion in economic impact, comparable to what the Navy provides to the county. The SOAR initiative serves in dual role by protecting valuable land resources in the county from urban sprawl; this in turn adds a level of protection for NBVC against incompatible development and encroachment.

The SOAR Ordinance provides a secure strategy to promote open space and agricultural lands and prevent higher densities and intense land uses near

NBVC. SOAR Ordinances were adopted by the communities in Ventura County (excluding Ojai) and Ventura County to create City Urban Reserve Lines (CURB) to limit sprawl and uncontrolled development. This ordinance requires a majority vote from voters to extend utilities and other such development outside the CURB boundaries. In other words, this adds that level of protection by the voters of the community to ensure the development or extension is in the best interest of the community, county, and the residents involved in the vote.

Findings

- The SOAR initiative, Ventura County General Plan, and Non-Coastal Zoning Ordinance provides measures to protect agricultural uses and open space land, but these documents do not reference the benefit these types of uses have on the military by protecting the other major economic industry in the county—the NBVC.

Existing Tools

SOAR Open Space and Farmland At-Risk Report

The SOAR is the organization that supported the original SOAR ordinances adopted by the various communities of Ventura County and the County. SOAR produced the At-Risk Report to illustrate the current conditions of open space and agricultural resource preservation in the County. Most relevant to this issue is a section of the document related to strategies to protect Open Space and Farmland.

Though strategies included in this section include renewing and defending SOAR Boundaries, other strategies focus on alternative ways of saving open space and agricultural resources including, permanently protecting open space and farmlands by way of conservation easements; increasing minimum parcel sizes for agricultural lands; supporting local farmers; and investing in better transportation. The At-Risk Report remains a multifaceted and living tool for the communities of Ventura County and the County as it provides several alternative solutions besides SOAR boundaries.

County of Ventura General Plan

Ventura County General Plan, Chapters 1.6, Farmland Resources, and 1.7, Scenic Resources, both describe the importance of open space within Ventura County. Specific policies of Chapter 1.6 require discretionary development adjacent to agricultural-designated land to not conflict with agricultural uses. The County is also very supportive of agricultural and open space easements to solidify the greenbelts. Chapter 1.7 specifically calls out the conservation of viewsheds along scenic highways including State Route 1 along the northern border of NBVC Point Mugu. A corresponding policy states discretionary development which would significantly degrade visual resources or obscure public views of visual resources shall be prohibited unless feasibly mitigated.

Though the General Plan does seek to protect undeveloped and agricultural lands, no goals in these sections reference the dual-benefit of the SOAR and agricultural / farmland protection measure, which also protects the NBVC military missions from encroachment ultimately protecting the approximately \$2 Billion in economic impact from the base.

County of Ventura Zoning Ordinance

The lands surrounding NBVC Point Mugu are primarily zoned Open Space and Agricultural exclusive. The Ventura County NCZO includes established purposes for the Open Space zone which include formation of cohesive communities and prevention of urban sprawl as well as support of the mission of military installations that comprise adjacent areas. The purpose of the agricultural zone is stated to preserve and maintain agriculture as a major industry and to protect against encroachment by nonrelated uses.

Some uses that Ventura County allows in these zones may not be compatible with military activities. Housing types including single-family dwellings and farmworker housing are allowed with appropriate review and permits. Regulations also permit structures that exceed height limits with acquisition of appropriate permits. The NCZO does not contain any reference to military notification regarding development in military influence areas.

5.14. Light and Glare

This factor refers to man-made lighting (street lights, airfield lighting, building lights) and glare (direct or reflected light) that disrupts vision. Light sources from commercial, industrial, recreational, and residential uses at night can cause excessive glare and illumination, impacting the use of military night vision devices and air operations. Conversely, high intensity light sources generated from a military area (such as ramp lighting) may have a negative impact on the adjacent community.

The evolution of technology has made it possible for warfare to excel at night. Night vision devices and other special operations tactics are deployed to enable strategic nighttime warfare. Thus, nighttime warfare enables the military to execute a multi-faceted offensive strategy under the cover of darkness. In order to be successful in combat, the military must train under conditions and environments similar to what is found in combat theaters. Night vision devices allow military personnel to train in near-daylight conditions during nighttime hours.

Under dark sky conditions, the use of night vision goggles (NVG) allows military personnel to view objects up to a distance of 300 meters (984 feet); however, lighting located outside of an installation can decrease the NVG effectiveness to a distance of 50 meters (164 feet). Off-installation lighting, such as street lights or other elevated structures that are lit at night, also produces a halo effect around objects, which further reduces visibility and resolution for air and ground personnel. The amount of ambient light experienced on the ground is a function of:

- intensity of nearby light sources (up to 20 miles away);
- distance from the sources;
- spectra of the light sources (blue light decays faster in the atmosphere);
- density of the cloud deck;
- height of the cloud; and
- relative humidity.

Key Terms

Glare. The presence of excessively bright light, such as direct or reflected sunlight, or artificial light, such as sport field and stadium lights at night. Glare reduces visibility and can completely impair vision when very intense.

Night Vision Device. An optical instrument that allows images to be produced in varying levels of light approaching darkness. These devices are often used by military and law enforcement agencies.

Light Pollution. This type of pollution is created by the artificial brightening of sky caused by development, including street lights and other man-made sources. This has a disruptive effect on the natural cycles and inhibits the observation of stars and planets and can render night vision devices ineffective.

Technical Background

In measuring light pollution, the proximity to a community has a significant effect on the amount of light pollution that saturates the sky. Proximity twice as close to a community makes its sky glow appear approximately six times brighter.

Sky glow from communities typically diminishes in the later hours of the night, when businesses close and some lights are turned off. It follows that, as development continues to progress outward from a community, the area and amount of light pollution can increase. Increased light pollution can cause an increase in the amount of sky glow, and ultimately create compatibility issues with military missions.

The impacts of the use of outdoor lighting on the dark skies are primarily determined by two principal factors – the amount of developed land (density) and the distance of the developed land from the installation. The relationship between density and distance is best demonstrated using an estimate of urban sky glow called Walker's Law. The relationship captured through the use of this formula was developed based on measurements of sky glow for a number of cities in California. The following formula is used to estimate sky glow at an observing site looking at a zenith angle of 45 degrees toward an urban source:

$$I = C \times P \times R^{-2.5} \text{ or } I = C \times P \times R^{(n)}$$

Where:

I = Percent increase of the night sky brightness above the natural background, at 45° down from directly overhead (facing the community, directly overhead is roughly ¼ of this value),

P = Population of the community,

R = Distance, in kilometers, from the observing site to the center of the community,

“C” = 0.01 for “R” values between 10 and 50 km, and

“n” = 2.5 for “R” values between 10 and 50 km

According to the National Oceanic and Atmospheric Administration (NOAA), the assumed radius of a community is a function of its population, ranging from 2.5 km to 24 km. Walker's law applies if the installation is outside the city radius. If located inside the community radius, the sky glow increases in a linear manner toward the center by another factor of 2.5.

Consider the following examples:

Scenario 1: A 100-acre development located two kilometers from the installation with a density of six units per acre (assuming 2.5 persons per household) would impact the sky background by over 260 percent (nearly 663 percent with NOAA factor).

Scenario 2: A 100-acre development located 20 kilometers from the installation with a density of six units per acre (assuming 2.5 persons per household) would impact the sky background by approximately less than 1 percent (just over 2 percent with NOAA factor).

If the density was decreased to one unit per acre the resulting scenarios would result in the following increased sky glow:

Scenario 1: Approximately 44 percent (almost 111 percent with NOAA factor).

Scenario 2: Approximately less than 1 percent (still less than 1 percent with NOAA factor).

In general, the following trends are demonstrated:

- The more dense the urban development, the greater the potential for light intrusion.
- The closer development is to the installation, the greater the potential for light intrusion.

Issues Assessment

Issue LG-1

Reflective Solar Energy Development

Associated with: NBVC Point Mugu

The development of solar energy facilities may generate glare that may impair an aviator's vision in the approach and departure corridors or under closed patterns.

Solar Energy Development is growing in use as technology becomes more readily available. In an area such as Southern California, that enjoys ample amounts of sunshine, solar energy development is a practical alternative to fossil fuels. However a review of the California Solar Energy Potential Maps available on California's Energy Commission website, www.energy.ca.gov/maps/renewable/solar_potential.html, Ventura County is an unlikely resource area for solar energy. The solar energy resources are concentrated in southeastern California where desert characterizes the land resources.

Findings

- While CUPs and oversight measures exist for renewable energy resources development in the county zoning ordinances (Coastal and Non-Coastal), there are no specific identified regulations for renewable resource energy development that address heights, maximum capacity, types of renewable energy development, i.e. photovoltaic versus concentrated solar power technology.
- Ventura County allows for renewable energy resources development to occur by Planning Director-approved CUP in the Limited and General Industrial zoning districts without military notification or consideration.
- The cities of Camarillo, Oxnard, and Port Hueneme do not have stand-alone ordinances or regulations that address renewable energy development within their jurisdictions.

Existing Tools

Ventura County Non-Coastal Zoning Ordinance (NCZO)

Ventura County Non Coastal Zoning Ordinance (NCZO) allows energy production from renewable resources within the Open Space (OS), Agriculture Exclusive (AE), and Rural Agricultural (RA) zones with a Planning Commission-approved CUP. As stated in the previous factor discussion, these zoning districts characterize the land surrounding NBVC Point Mugu where aviation operations occur on a regular basis. In addition, renewable energy development is allowed in the Limited Industrial (M2) and General Industrial (M3) zoning districts with a Planning Director-approved CUP.

There are standards that have been established for CUPs in the county that partially address military compatibility. These standards apply to all CUPs including those sought for solar energy and renewable energy resource development. Some of these standards include but are not limited to the proposed development should be compatible with legally established uses that are surrounding the proposed site, and there should not be any conflicts with neighboring uses from the proposed development.

Ventura County Coastal Zoning Ordinance

The Ventura County Coastal Zoning Ordinance allows renewable energy resource developments to occur in the Coastal Open Space (COS) and Coastal Industrial (CM) zoning districts by Planning Commission-approved CUP. While this type of development must go through Planning Commission which allows for a level of oversight, there are no regulations that consider military compatibility for this type of development in this coastal area.

Issue LG-2

Lighting Controls.

Associated with: NBVC

Lack of city and county dark sky lighting standards. Too much ambient light can impact night training operations and may impair the night vision devices thus blinding the pilot.

Light and glare from unshielded or upward-directed lighting fixtures at night within cities and communities can create light pollution. This light pollution has been an ever-increasing concern for military installations and their capabilities in performing their training missions, especially since the early 1990s. The face of warfare has changed; it has become more technologically advanced warranting the need for night vision goggles or devices to enable sight in dark skies like a majority of combat theatres now. Additionally, the need to train aviators in night vision aviation is increasing too. Light pollution from development can make it difficult for night training to occur effectively. This can then result in deficiencies in military readiness for our sailors, soldiers, and our nation's defense.

Findings

- The City of Camarillo Zoning Ordinance only addresses downward lighting for parking lots. Other land uses in the city do not contain regulations for lighting considering military compatibility.

- While the City of Oxnard addresses downward lighting for some zoning districts (CBD and BRP), the regulation allows for up-lighting if approved by a manager or Planning Commission.
- Despite the City of Port Hueneme lighting regulations, there is no language that prohibits up-lighting, certain types of lighting, and no specifics about heights of light fixtures or how their location relative to other lights affects the light pollution in the area.
- While Ventura County tools are partially effective in addressing lighting controls, the tools do not address military compatibility considerations when assessing lighting controls in the county.

Existing Tools

City of Camarillo General Plan Community Design Element

The City of Camarillo General Plan Community Design Element includes minor discussion of lighting techniques. The Element provides the guiding framework for lighting controls in the city. This guidance includes the use of cut-off lighting fixtures to be directed at the target with no spillover to adjacent properties, innovative lighting is encouraged while minimizing the light and glare onto other properties, and lighting should be controlled by a timer.

Overall, the lighting guidelines of the Community Design Element are partially supportive of military compatibility. This general plan element outlines guidance for lighting control.

City of Camarillo Zoning Code

The Camarillo Zoning Code addresses parking lot lighting to be hooded and reflected away from adjoining properties and streets. All plans for parking lot lighting must also be submitted for review and approval prior to issuance of zoning clearance. There is no further discussion regarding lighting regulations in the Camarillo Zoning Code.

The Zoning Code only discusses parking lot lighting and does not discuss review or design standards for other land uses including residential and commercial structures. Without any further discussion regarding regulations that allow or prohibit certain types of lights, the Camarillo Zoning Code does not address military compatibility for lighting controls.

City of Oxnard General Plan

The Oxnard General Plan Environmental Resources Element includes a goal to control lighting and glare, specifically the Environmental Resources Goal 6.5. The goal provides guidance for all lighting sources within the city limits in that generally, all external illuminated signs, advertising displays, and billboards should use low-energy, shielded light fixtures that direct light downward. In addition, the Plan provides guidance for security lighting, which encourages the use of low-pressure sodium lighting for all outdoor lighting.

These practices have multiple benefits by protecting the night sky and environment from ambient sky glow, providing an optimal night sky for military and civilian aviation operations, and providing adequate security lighting without excess light pollution. However, beyond the general nature of this guidance, there is no further discussion of the issue in the Plan.

City of Oxnard Zoning Code

The Oxnard Zoning Code only addresses down-lighting in the Commercial Downtown Zone (CBD) and the Business and Research Park Zone (BRP) as follows:

Sec. 16-152 E Lighting

On-site lighting systems shall use theme-coordinated decorative architectural standards and devices that provide down-lighting. Lighting shall be shielded from abutting public streets, residential areas, and adjoining properties. The manager or the planning commission may approve up-lighting of architectural features that is appropriate to the structure.

Sec. 16-180 E Lighting

All on-site lighting systems shall use architectural standards and devices that provide down-lighting and lighting that is shielded from abutting public streets, residential areas, or adjoining properties.

General lighting requirements as set forth by the Oxnard Zoning Code are as follows:

Sec. 16-320 On-Site Lighting.

Lighting within physical limits of the area required to be lighted shall not exceed seven footcandles, nor be less than one footcandle at any point. A light source shall not shine upon, or illuminate directly, any surface other than the area required to be lighted. No lighting shall be of a type or in a location that constitutes a hazard to vehicular traffic either on private or on abutting streets. The height of light standards shall not exceed 26 feet. To prevent damage from automobiles, standards shall be mounted on reinforced concrete pedestals or otherwise protected.

City of Port Hueneme Zoning Code

The City of Port Hueneme Zoning Code discusses lighting in relation to oil and gas exploration as well as exterior lighting on various land uses. Oil and gas exploration and production lighting is addressed in 10207 C.1.c.1.f and C.1.c.2.g:

Lighting should be kept to a minimum to approximate normal night time light levels.

Light Emanation. Light emanation shall be controlled so as not to produce excessive levels of glare or abnormal light levels directed at any neighboring uses.

Exterior Lighting is addressed in various zones to not illuminate adjacent properties or streets. The general regulation is as follows:

10304-Exterior Lighting: General. Exterior lighting, where provided, shall be accomplished in such a manner as not to illuminate adjacent properties or streets.

Ventura County General Plan

The Ventura County General Plan suggests that discretionary development to be sited and designed to minimize lighting that causes glare, illuminates adjacent properties, or is directed skyward in rural areas. This language is very helpful, but is limited in depth and scope in terms of lighting controls. Accordingly, the Plan does not appear to provide the policy basis for developing and adopting effective lighting regulations that consider military compatibility.

Ventura County Non Coastal Zoning Ordinance

The Ventura County NCZO requires lighting related to oil development and mining to be kept to a minimum and refrain from allowing light to trespass on neighboring uses. Provisions are also included for various uses to prohibit lighting from trespassing on neighboring properties. However, Overlay and Special Purpose zones prohibit up-lighting in rural areas.

While the NCZO does help to implement the lighting goals of the Ventura County General Plan, it does not fully address the wide range of lighting impacts that could affect mission-critical activities. Without more specific standards and regulations, current tools are only partially effective.

Please see the next page.

5.15. Marine Environments

Regulatory or permit requirements protecting marine and ocean resources can cumulatively affect the military's ability to conduct operations, training exercises, or testing in a water-based environment.

Key Terms

Erosion is the gradual destruction of something (i.e. beaches, soil) by wind, water, or other natural agents

Marine Mammals. Marine mammals include a range of species that rely on the ocean for their existence. Marine mammals include a diverse group of species including seals, whales, dolphins, otters, and walruses.

Richter Scale. A Richter scale is a numerical scale used to express the magnitude of an earthquake on the basis of underground (seismic) movement and vibrations. The scale is a logarithmic scale in that an increase of one unit represents at 10-fold increase in intensity.

Submarine Surface. This refers to any surface situated under the surface of the sea.

Issues Assessment

| | |
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| Issue MAR-1 | Marine Mammal Strike Hazards <i>Associated with: NBVC Point Mugu and NBVC San Nicolas Island</i> Concern about military sea range and commercial shipping lanes and shore use along mainland coast and San Nicolas Island and implications for marine mammals. |
|------------------------------|---|

The California coastline is home to a wide variety of flora and fauna. The entire coastline has been declared a national monument by the Bureau of Land Management (BLM) to help protect the area. Ventura County's portion of the coastline contains 43 miles of beaches, protected reserve and

environmentally-sensitive areas. This portion along with other portions of the coastline is also used for military and international commerce shipping. As of 2010 approximately 15,000 large ships use the world's oceans daily for various operations including commercial shipping and military training and testing. However only 140 out of this 15,000 ships are U.S. Navy ships, which means slightly less than one percent of all ocean-faring ships are U.S. Navy making the impact of marine mammal strikes from the Navy insignificant. However, the Navy has implemented protective measures to minimize its impact on marine life.

Within the JLUS Study Area, the Point Mugu Sea Range takes up a vast area from the southern Monterey County Line to the Mexican maritime border. Similarly, the Santa Barbara Channel is a major commercial shipping route into and out of the Ports of Los Angeles and Long Beach.

With the multiple uses of the ocean and coastline of California near Ventura County, there is a general concern that military and commercial activity in the area could adversely affect marine mammals and their specific habitat within the ocean for which they inhabit or migrate.

Findings

- The Sea Range personnel are required to conduct a comprehensive assessment and surveillance prior to any Sea Range operations and activities can occur to ensure non-participating entities including aircraft, surface vessels, and marine mammals are protected.
- While the Santa Barbara Shipping Channel has modified its route to avoid marine mammal strikes, there are no similar tools that address marine mammal strikes for commercial shipping off the Ventura County coastline.
- While NBVC does not have a marine mammal / wildlife strike hazard plan, the Navy actively coordinates with the National Marine Fisheries Services (NMFS) to reasonably ensure marine mammals are protected during training and testing activities.

- Within the Large Whale Ship Strike database (2004) is a listing of ship strikes along the western U.S. coastline dating from 1965-2002.
- There is no evidence that the commercial shipping operations carry-out protective measures that minimize marine mammal strikes.

Existing Tools

Hawaii-Southern California Training and Testing Environmental Impact Statement / Overseas Environmental Impact Statement

The Hawaii-Southern California Training and Testing Environmental Impact Statement (EIS) / Overseas Environmental Impact Statement (OEIS) identifies marine resources and existing protective measures and research for which the Navy complies. The Navy not only coordinates with the EPA and USFWS regarding species management and protection, but it also coordinates with the National Marine Fisheries Service (NMFS) especially as it relates to training and testing activities in the Southern California region. The Navy has developed a sophisticated set of procedures to follow in order to monitor and detect marine life in the areas where testing and training activities occur. These procedures have a foundation in the scientific data provided by the NMFS, which makes these procedures appropriate for such activities. The following procedures are executed by Navy personnel who are required to be thoroughly trained on these:

- **Pre-exercise monitoring**, which means trained Navy personnel visually scan the surface of the ocean to detect marine life. Navy personnel also use passive sonar to detect marine life prior to using active sonar.
- **Highly trained lookouts**, certain Navy personnel go through a rigorous training called Species Awareness Training Program, which educates Navy personnel how to detect objects or activity in the water that could be marine life. In addition, there are at least three lookouts posted aboard a ship at all times and an additional two lookouts are posted during training activities that use active sonar.
- **Designation of Safety Zones for Marine Species**, which means there are three different levels of safety zones for marine mammals during active sonar testing, they are: 1) if a mammal is detected within

1,000 yards, the vessel reduces sonar power, 2) if a mammal is within 500 yards, then the vessel increases the reduction of sonar power, and 3) if a marine mammal is within 200 yards of a sonar dome, then the vessel will shut down its sonar transmissions,.

- **Conduct safe navigation**, which means Navy vessel operators are alert at all times for objects in their path, use caution, operate the vessel at a rate consistent with mission and safety requirements, and take proper actions when there is risk of collision with a marine mammal while in transit.
- **Report sightings**, the Navy works closely to report sightings of marine mammals to the NMFS during training exercises and in the event of a stranding.

These protective measures act as a good tool for Navy personnel to follow during training and testing activities regarding protecting marine life. However, this tool primarily focuses on Navy action rather than a complementary commercial shipping action.

Sea Range Complex Management Plan

The Sea Range Complex Management Plan (SRCMP) contains provisions for the protection of marine mammals while conducting military-related activities. Under Chapter 2.3 Range Operation Procedures, Range Surveillance/Clearance, the document addresses surveillance of the entire hazard area as a critical step prior to conducting range operations. This is done to ensure that non-participating entities such as aircraft and surface vessels including marine mammals are free and clear of this area prior to commencement of activities.

In addition, all range activities and testing is subject to environmental review to ensure minimal or no impact to the environment occurs during range operations and activities. This includes having an environmental impact statement (EIS) developed for range operations to assess the impacts of the environment in relation to the operations proposed including an assessment of impact to wildlife and marine mammals. This EIS ensures the installation's environmental stewardship regarding its activities and operations in the Sea Range. As a part of this EIS or environmental review,

predicted debris and impact areas of weapons testing is surveyed to assess its impact on marine mammals before any military activity occurs. Aircraft and watercraft are used to provide additional sea surveillance. If marine mammals are observed, the activities are either suspended or moved to another area of the Sea Range.

To help prevent ship/marine mammal strike incidents, all vessels in the Sea Range use safety lookouts 24-hours a day. In the event of a whale or mammal sighting, ships are responsible to initiate all practicable actions to avoid collisions and interactions.

Launches of targets and missiles from NBVC San Nicolas Island (SNI) have the potential to disturb seals resting on area beaches. Due to the importance of the missile launch events at NBVC SNI, Sea Range personnel petitioned for and were issued an incidental take permit by non-lethal harassment for sea lions and seals. This enabled the military mission to continue its operations with specific monitoring and mitigation measures to ensure the sustainability of the sea lions and seals on NBVC SNI. The following monitoring and mitigation procedures are implemented at NBVC SNI in response to the take permit:

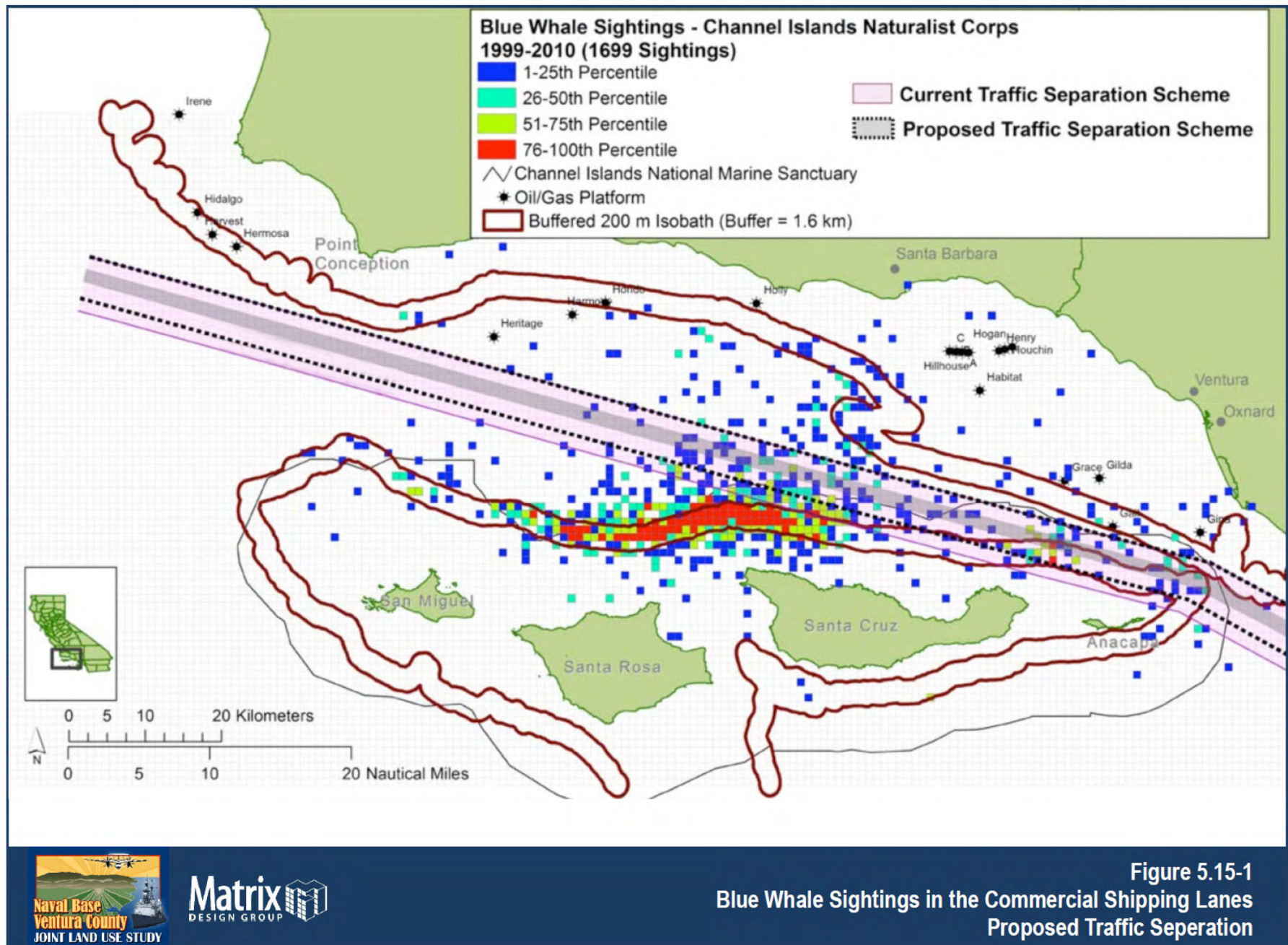
- *Personnel are prohibited from entering pinniped haul-out sites below the missile path prior to launch*
- *Launches are voided during harbor seal pupping season and limited during other pinniped pupping seasons.*
- *Target missiles are not launched at low elevations that pass close to haul-out sites and nighttime launch activities are limited*
- *Target launches in quick succession over haul-out sites are avoided, especially when young pups are present.*
- *A minimum altitude of 1,000 feet is maintained from haul-out sites during fixed-wing aircraft and helicopter operations.*
- *NMFS is contacted within 48 hours if injurious or lethal takes occur during marine mammal monitoring.*

Santa Barbara Channel Traffic Separation Scheme Amendment

Ship/Whale strike hazards have been of major concern in the Santa Barbara Shipping Channel just north of the Channel Islands. The Santa Barbara Shipping Channel is the main route of travel for many ships entering or exiting the Ports of Los Angeles and Long Beach. Though a majority of the route is situated north of the Sea Range, some of the shipping lanes do traverse the Sea Range between NBVC Port Hueneme, NBVC Point Mugu, and Anacapa Island.

However, as of June 1, 2013, the International Maritime Organization has modified the shipping lanes to move southbound/inbound traffic more shoreward to remove ships from more popular blue-whale feeding areas closer to the Channel Islands as illustrated in Figure 5.15-1. This is a positive step towards reducing potential ship/blue-whale strikes; however, this is only located in the Santa Barbara Shipping Channel. Additionally, this information is specifically for blue whales, not necessarily all marine mammals. More information about other whale species and marine mammals is needed to make an informed decision before shipping transportation schemes are modified.

Organizations such as Santa Barbara Air Pollution Control District, Environmental Defense Center, and west coast marine sanctuaries are still trying to reduce the speed limit of boats through the channel to reduce the risk of collisions. NOAA is also looking for ways to further protect whales and other marine mammals in the Santa Barbara Channel by proposing different shipping routes that would help to reduce shipping volumes in the most densely populated whale and marine mammal habitat.



Reducing the Threat of Ship Strikes on Large Cetaceans in the Santa Barbara Channel Region and Channel Islands National Marine Sanctuary

This ship strike report written by the Channel Islands National Marine Sanctuary Advisory Council (SAC) in 2009 was intended to provide the SAC Ship Strike Subcommittee with background information and strategies to reduce the threat of ship strikes of shipping on large whales. As part of the report, specific recommendations are included to reduce ship strikes along the eastern and western seaboards. Some of the recommendations include:

- Continue to expand research and monitoring efforts;
- Consider appropriateness of changes to vessel behavior in the Santa Barbara Channel region;
- Explore changes to the Santa Barbara Channel Traffic Separation Scheme;
- Continue and expand education and outreach; and
- Explore incentive and mandate based options for vessel speed reduction.

Channel Islands National Marine SAC continue their attempt to help monitor and mitigate potential ship strikes in the region by collecting whale identification data, develop ecologically-based research and monitoring proposals, and working with partner agencies on ship data. Their ship strike webpage can be accessed at http://channelislands.noaa.gov/management/resource/ship_strikes.html.

Vessel Speed Reduction Incentive Trial Program

A new trial program in the Santa Barbara Channel took place from July to October 2014 which incentivizes container ships to slow down to speeds at or below 12 knots in order to help in reduction of air pollution and to enhance the protection of endangered whales. The trial was developed by the Santa Barbara County Air Pollution District with support from the Channel Islands National Marine Sanctuary and the Environmental Defense Center, and was modeled after successful programs at the ports of Long Beach and Los Angeles. The slower speed as part of this incentive trial

program greatly reduced the chances that a ship strike on a whale will occur or cause a mortality. A press release issued in August 2014 stated that six global shipping companies participated in the program and there was an overall positive response from the shipping industry to test innovative approaches to protect human health and the marine environment. As of August, the program was seeking additional funding to expand the length of the trial.

Large Whale Ship Strike Database

This report on large whale ship strikes was authored by the NOAA, in conjunction with the National Marine Fisheries Service and was completed in 2004. It includes a short introduction on the issue of ship strikes, materials and methods used for collecting ship strike data, and a detailed database of results.

The database contains a total of 292 records of confirmed or possible ship strikes to large cetaceans (by species) which are very detailed; in some instances vessel types, extent of injury, and vessel speeds were also recorded. Before the database is presented, the report concludes with a discussion regarding ship strike data collection. While a large portion of the ship strike database is for incidents recorded along the eastern seaboard and eastern Canada, there is a large set of recorded ship strikes for the U.S. and Canada western seaboard. Many of these ship strikes are located within the Channel Islands region and near southern California coastlines. Although the database only lists recorded ship strikes in the region for years 1965 through 2002, the database is a great model and tool for ship strike research and monitoring and can assist in development of ship strike mitigation measures along the southern California coastline

Legal Petition to Limit Ship Speeds, Protect Whales in California's Marine Sanctuaries

In 2011, a legal petition was filed by the Center for Biological Diversity, the Environmental Defense Center, Friends of the Earth and the Pacific Environment seeking to reduce ship speed limits to 10 knots-per-hour for ships in marine sanctuaries. The main reason for the petition was that whales in California are in constant risk of being run over by big ships.

Reasoning behind the petition was that reducing ship speed is a reasonable way to protect the marine wildlife as well as public health from risks posed by large vessels that travel through California's waters. The introduction to the petition states that five blue whales dies as a result of ship strikes near the Channel Islands National Marine Sanctuary, at least six whales were killed by collisions with vessels in 2010, and more than 50 large whales have dies off the California coast in the past decade. Furthermore the text of the petition gives impacts of ship speed and benefits of speed reduction regarding ship strikes, noise pollution and air pollution.

In 2012, a response to the petition was issued by the NOAA, in which the agency states that they share these concerns and already have management policies in place, although despite these active strategies, whales continue to be struck by traveling ships along the California coast. Provided in the response is a detailed listing of current and future actions, monitoring and surveillance measures, and interagency collaborations. Among the most relevant actions noted within the response are:

- NOAA is exploring ways to enhance voluntary actions from the shipping industry within the Santa Barbara Channel Whale Advisory Zone to reduce the risk of lethal ship strikes;
- NOAA is working with the Coast Guard and the maritime industry to evaluate the current process for issuing Local and Broadcast Notices to Mariners in southern California;
- NOAA will seek to expand aerial surveys to monitor the presence of whales along the California coast, as resources allow;
- NOAA will continue ongoing monitoring programs to collect, compile, and analyze data that will be combined with oceanographic data and used to develop and refine models and other predictive tools to enhance understanding of the temporal and spatial distribution of whales and their food sources along the California coast.

The petition and the NOAA response can be found in PDF format on the Channel Islands National Marine Sanctuary website at:
http://channelislands.noaa.gov/management/resource/ship_reports.html

**Issue
MAR-2**

Sonar Testing Impacts on Marine Mammals

Associated with: Navy (U.S. Pacific Fleet)

The Navy conducts sonar testing relative to equipment and communications. There is concern about this sonar testing and its potential impacts to marine mammals.

Though the Navy does conduct sonar testing at various locations under military jurisdiction, the Navy does not conduct sonar testing at the Point Mugu Sea Range. The Sea Range does not support sonar operations, extensive surface ordnance detonations, or any sub-surface detonations. This reflects a management decision to leverage strengths and focus capabilities on the most competitive business lines for the range.

Findings

- Because the Point Mugu Sea Range does not support sonar testing, the sonar threats to marine mammals are minimal or non-existent. No further issue research is necessary.

**Issue
MAR-3**

Tsunami Impact Potential

Associated with: NBVC

Potential for tsunami impacts to NBVC equipment, facilities, and mission.

Tsunamis are large waves caused by submarine disturbances that have the potential to cause catastrophic damage to low-lying coastal areas. Submarine disturbances that cause tsunamis are most generally attributed to earthquakes along thrust faults. Thrust faults occur where vertical movement of tectonic plates takes place. Thrust faults in submarine environments cause displacement of water in the vicinity of the epicenter. However, other disturbances including submarine landslides, volcanic

eruptions, and even meteorite impact can cause tsunamis. Strike-slip faults are also a potential tsunami threat. Though the horizontal movement of a strike-slip fault does not displace a large amount of water, it is theorized that a strike-slip fault can cause submarine landslides that could then cause a tsunami. When a submarine disturbance does trigger a tsunami, the waves travel outward in all directions reaching speeds of up to 500 miles per hour in the open ocean.

Southern California is an active seismic center. Many different types of faults are located across the region including onshore and offshore. Many faults have yet to be mapped. Due to Southern California's seismic activity and the chance for tsunami activity triggered by a trans-Pacific event, the potential for tsunami impact at NBVC exists. This generally causes concern for the military as water inundation could cause billions of dollars in damages in facilities structures and equipment while delaying important mission training capabilities, which ultimately would cause deficiencies in military readiness.

Findings

- The information from the California Geologic Survey is dated 2009 / 2010. As climate change receives an update to information, more current information for inundation around NBVC Port Hueneme and NBVC Point Mugu should be sought.
- While the AOP considers the occurrence of earthquake-caused tsunamis a remote potential, there is no identification of other sources that could cause tsunamis which could damage military installation facilities and equipment.
- Ventura County Operational Area Tsunami Evacuation Plan only provides guidance for evacuating the area in the event of a tsunami. The Plan does not address preventing or mitigating impacts.

Existing Tools

California Geologic Survey Tsunami Inundation Maps

The California Geologic Survey (CGS) is a part of the California Department of Conservation and provides scientific products and services about the state's geology, seismology, and mineral resources that affect the health, safety, and business interests of the people of California. CGS, in coordination with the California Emergency Management Agency, has created maps that show areas at risk for tsunami inundation. As seen in Figure 5.15-2, Port Hueneme and Point Mugu are both at risk for Tsunami inundation. Impacts to Port Hueneme include a large amount of portside infrastructure whereas impacts to Point Mugu include built areas surrounding the lagoon.

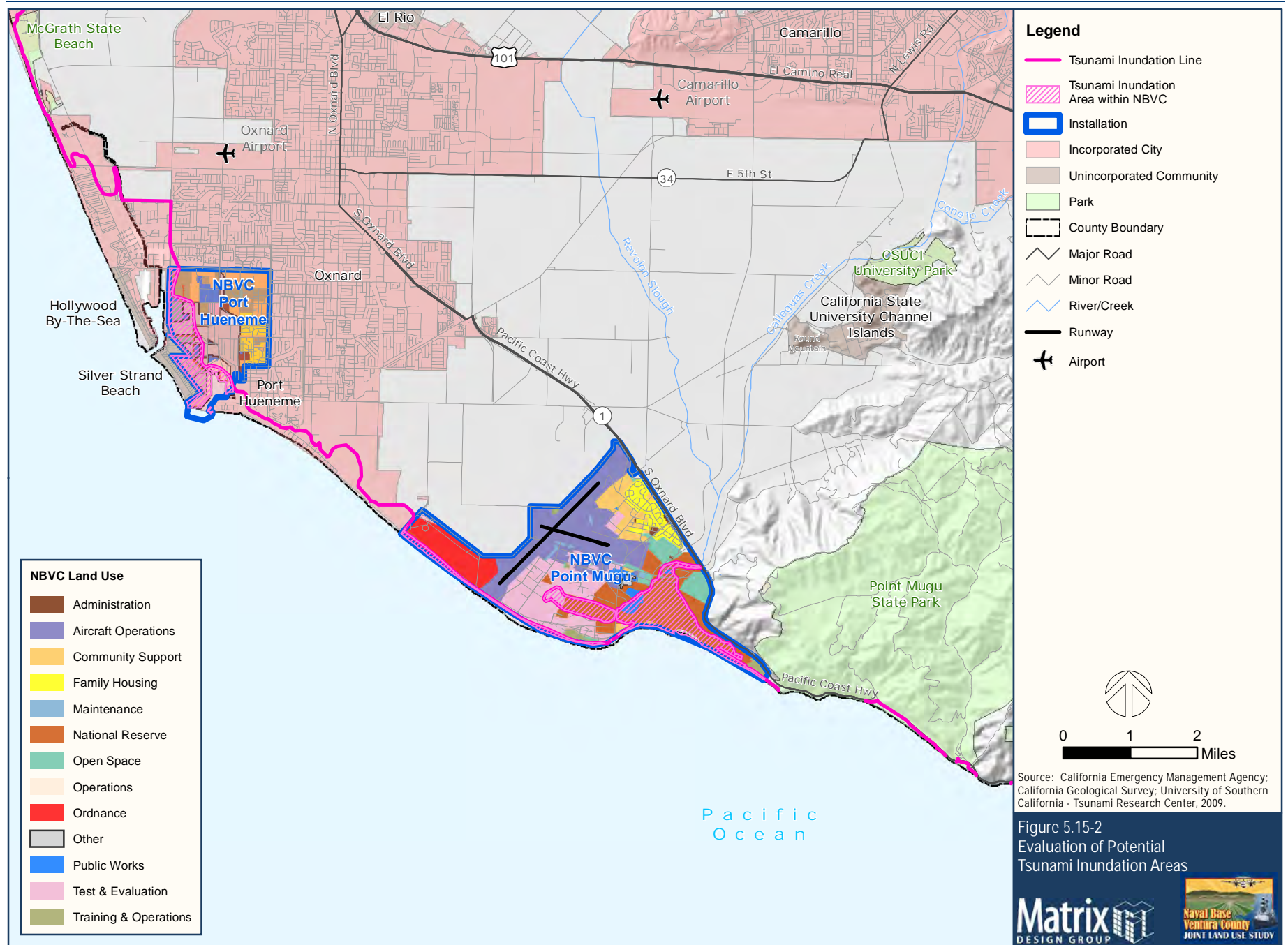
The map is subject to the limitations in accuracy and completeness of available terrain and tsunami source information. Though the CGS Tsunami Inundation Map show a large area of NBVC as unaffected by tsunami inundation, the overall level elevations of the Oxnard Plains could easily allow tsunami waves to reach further inland than the map shows.

This is a good tool to provide a general idea of the inundation areas in the event of a tsunami in this area, though waves could reach much further inland than the map indicates.

National Oceanic and Atmospheric Administration West Coast and Alaska Tsunami Warning Center

Much like the CGS Tsunami Inundation Map, the West Coast and Alaska Tsunami Warning Center (WC/ATWC) is another measure that can help to protect NBVC infrastructure from damage and destruction in the event of a tsunami. The WC/ATWC is the authoritative tsunami warning center for the mainland United States and Canada. The WC/ATWC has the responsibility for relaying messages to emergency managers, other officials, news media, and the public. The WC/ATWC records earthquake activity in the Pacific Ocean which may cause destructive tsunamis along the West Coast. This gives NBVC advanced warning of a possible tsunami.

Naval Base Ventura County Joint Land Use Study



Ventura County Operational Area Tsunami Evacuation Plan – June 2011

The 2011 Ventura County Operational Area Tsunami Evacuation Plan (VCOATEP) was developed the Ventura County Sheriff's Office for the purpose of emergency response. The plan includes the NBVC Port Hueneme and NBVC Point Mugu facilities in its plan; however, this plan's purpose is simply to provide detailed instructions for evacuation in the event of a tsunami.

The VCOATEP does not address preventing or mitigating impacts associated with a tsunami that strikes the Ventura County Coastline.

NBVC Activity Overview Plan

The NBVC Activity Overview Plan (AOP) identifies tsunamis in Chapter 5.3.2.1, Natural Constraints. The Plan identifies that the potential for an earthquake-related tsunami occurring in this area is considered remote. This remote potential is attributed to the moderately, sized earthquakes that have occurred in the area (the one registering 5.6 magnitude that occurred in 1973 at Point Mugu), and only a total number of six earthquakes have occurred within 18 miles of the area since 1934. These six earthquakes have been of moderate magnitude as well, measuring 4.0 and greater on the Richter scale.

The AOP neglects to consider the possibility of tsunamis caused by earthquakes in other parts of the world.

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| Issue MAR-4 | Sea Otter Species Management. <i>Associated with: NBVC San Nicolas Island and Sea Range</i> Concern about Southern Sea Otter management on NBVC San Nicolas Island and within the Sea Range and implications on Navy operations. |
|------------------------------|---|

The Sea Otter is an endangered species of aquatic mammal with a known range of inhabitation and migration from Japan to Baja California. Due to

excessive hunting during the 18th and 19th century, populations collapsed and the native Southern Sea Otter was thought to be extinct. A small colony of Southern Sea Otter was discovered along the Coast of Big Sur in 1938 and has since grown and been reintroduced along the native southern coast ranges.

In 1990 a population of Southern Sea Otter was relocated off NBVC SNI in an attempt to further reclaim the mammal's historic range. With the exception of defense-related actions, the sea otters were afforded essentially the same protection as the original population. Since the termination of the Southern Sea Otter Translocation Program, the population surrounding NBVC SNI has lost its experimental status and thus is protected by the provisions of the Endangered Species Act (ESA). NBVC is now under more stringent regulations, which may cause some mission operations to be inoperable at the island. This could ultimately effect the viability of some testing activities.

Findings

- Termination of the program has changed the level of review for existing Navy activities as well as any new ones. Under PL 99-625, Navy activities were allowed to consider the experimental populations as one "proposed for listing". With the termination, the otters at SNI are considered part of the ESA Threatened populations and must be treated as such. Any Navy testing and training with the potential to take a sea otter is now at risk of not being able to be conducted.

Existing Tools

Termination of the Southern Sea Otter Translocation Program, Final Rule December 2012

Termination of the Southern Sea Otter Translocation Program has not affected current defense-related agency actions within or around NBVC SNI. According to the Final Rule, the Navy has not been required to seek Marine Mammal Protection Act authorization for any of its activities there to date. Therefore, if the Navy continues to carry out the same scope of activities it currently executes, there should not be a need for authorization under the ESA.

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| Issue MAR-5 | Sand Transport. <i>Associated with: NBVC Port Hueneme</i> Sand transport along the coast, including required sand replenishment (Silver Strand, Port Hueneme, Hueneme Beach, NBVC, Ormond Beach) |
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Erosion control is a very critical issue for Ventura County beaches. Natural flow of sediment from rivers and streams into the ocean and down the coastline has been impeded by manmade developments such as jetties and harbors. Lack of sediment flow is causing detrimental effects to the stability of coastal land.

In order to ensure coastal land stability, dredging of Channel Islands Harbor is required to restore sediment at beaches down shore. According to the City of Port Hueneme, the rate of sediment flow down coast from the harbor is 1.24 million cubic yards per year while an average 2 million cubic yards is needed biennially to maintain a balance of down-coast sediment. Lack of sediment flow could not only affect development in Port Hueneme and Oxnard but could also affect coastal military infrastructure at NBVC Point Mugu.

Findings

- The Coastal Regional Sediment Management Plan (CRSMP) is a good approach to begin the conversation about sand erosion policies in the Study Area. However, the plan needs further policy and program guidance to implement the goals.
- Though there is minor discussion of artificial reef systems to help recreate natural coastal sediment flow, there is no discussion of responsibility of implementation for the idea.
- The plan does not consider military compatibility policies.
- The plan suggests sediment management in the Mugu Submarine Canyon with no reference to NBVC activities which will impact sediment management.

Existing Tools

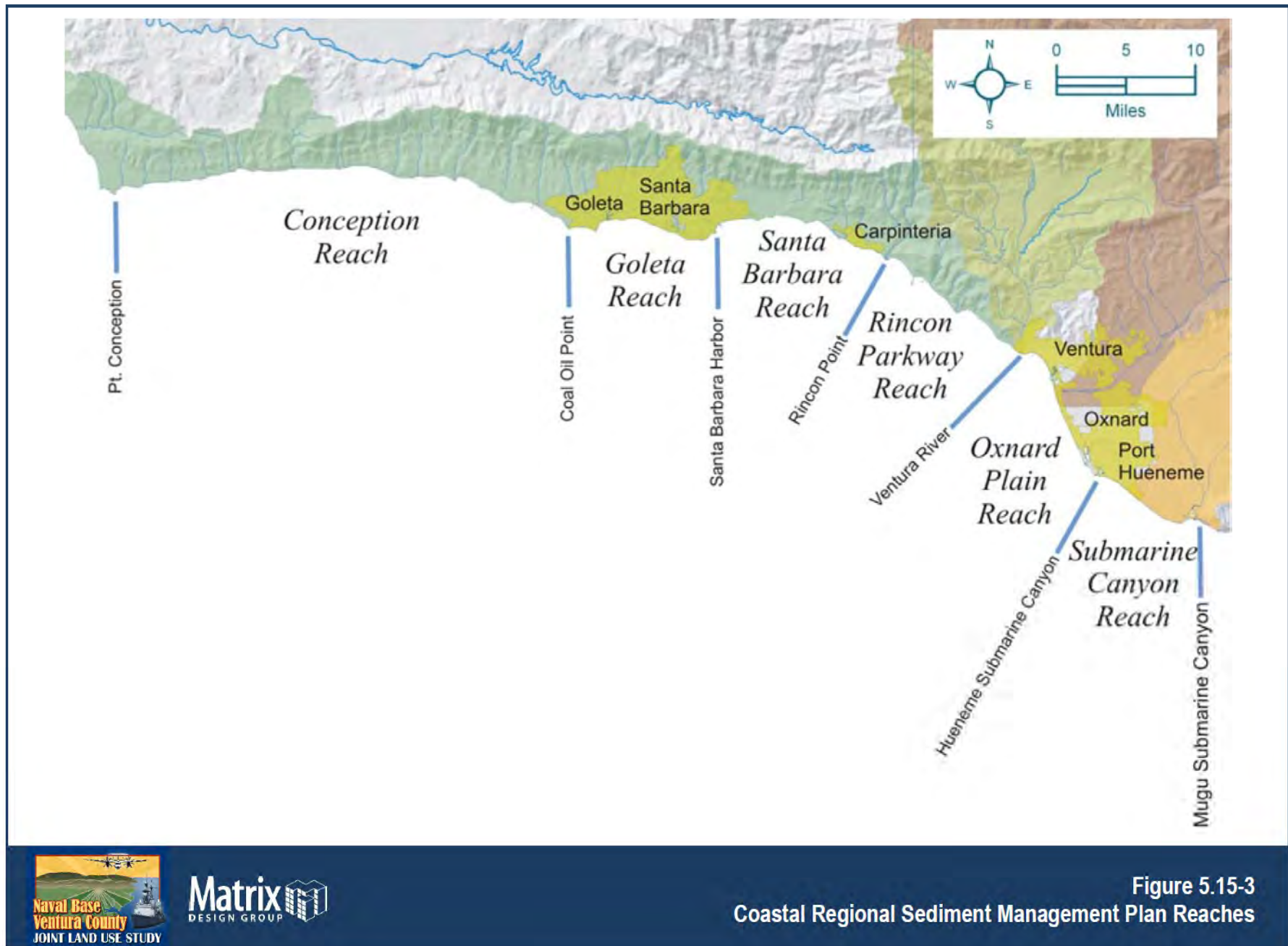
Coastal Regional Sediment Management Plan (CRSMP)

The CRSMP is a study conducted by Beach Erosion Control for Clean Oceans and Nourishment (BEACON). The CRSMP studies various aspects of sediment flow along the South Central California Coast from the Santa Maria River in northern Santa Barbara County to the Mugu Lagoon in southern Ventura County. The study looks into techniques to ensure longevity of the coast by maintaining natural landscapes or substituting the best possible alternative.

The JLUS Study area is located within a portion of the Oxnard Plain Sediment Management Area (SMA) and the Submarine Canyon SMA of the CRSMP as illustrated in Figure 5.15-3. The Oxnard Plain SMA extends from Surfers Point in Ventura to Port Hueneme Harbor. The Submarine Canyon SMA extends from Port Hueneme Harbor to Mugu Lagoon.

The recommended top priority for the Oxnard Plain SMA is to implement a regional harbor maintenance plan to ensure sediment management benefits area beaches. The recommended top priority for the Submarine Canyon SMA is to improve erosion control issues at Hueneme Beach.

Regional goals include: long-term monitoring of sand shoreline and sediment processes; increased alignment with federal authorities regarding shoreline sediment; and creation of a full time BEACON staff. The document sets a 20-year timeline to address the goals of the CRSMP but also states that, as a living document, different approaches will have to be conducted before a true solution to the problem can be found.



Please see the next page.

5.16. Noise and Vibration

The total noise associated with an existing environment (built or natural) and usually comprising sounds from many sources, both near and far, is referred to as ambient noise.

Key Terms

Ambient Noise. The total noise associated with an existing environment (built or natural) and usually comprising sounds from many sources, both near and far, is referred to as ambient noise.

Attenuation. Attenuation is a reduction in the level of sound resulting from an object's distance from the noise source or absorption by the surrounding topography, the atmosphere, barriers, construction techniques and materials, and other factors. Sound attenuation in buildings can be achieved through the use of special construction practices that reduce the amount of noise that penetrates the windows, doors, and walls of a building. Sound attenuation measures may be incorporated during initial construction for new buildings or as additional construction for existing buildings.

A-weighted Decibel (dBA). An A-weighted decibel is a unit of measurement for noise using a logarithmic scale and measured using the A-weighted sensory network on a noise-measuring device. An increase or decrease of 10 decibels corresponds to a tenfold increase or decrease in sound energy. A doubling or halving of sound energy corresponds to a 3 dBA increase or decrease.

Community Noise Equivalent Level (CNEL). CNEL is a weighted average of sound levels collected throughout a 24-hour period with a 5 dB penalty added to each of the three evening hourly average noise levels and a 10 dB penalty added to each of the nine hourly nighttime average noise levels. This measurement is similar to the day-night level (DNL), but the State of California requires the use of CNEL when measuring ambient noise.

Day-Night Average Sound Level (DNL). DNL represents an average sound exposure over a 24-hour period. During the nighttime period (10:00 p.m. to 7:00 a.m.), averages are artificially increased by 10 dB. This weighting reflects the added intrusiveness and the greater disturbance potential of nighttime noise events attributable to the fact that community background noise typically decreases by 10 dB at night.

Decibel (dB). A decibel is the physical unit commonly used to describe noise levels. It is a unit for describing the amplitude of sound, as heard by the human ear.

Noise. Defining noise from a technical perspective, sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. More simply stated, sound is what we hear. As sounds reach unwanted levels, this is referred to as noise.

Noise Contour. Noise contours consist of noise impact lines constructed by connecting points of equal noise level measured in dB and identify areas on a map that fall within that particular dB noise contour.

Noise Sensitive Receptors/Sensitive Land Uses. Sensitive receptors are locations and uses typically more sensitive to noise, including residential areas, hospitals, convalescent homes and facilities, schools, libraries, churches, recreational areas, and other similar land uses.

Technical Background

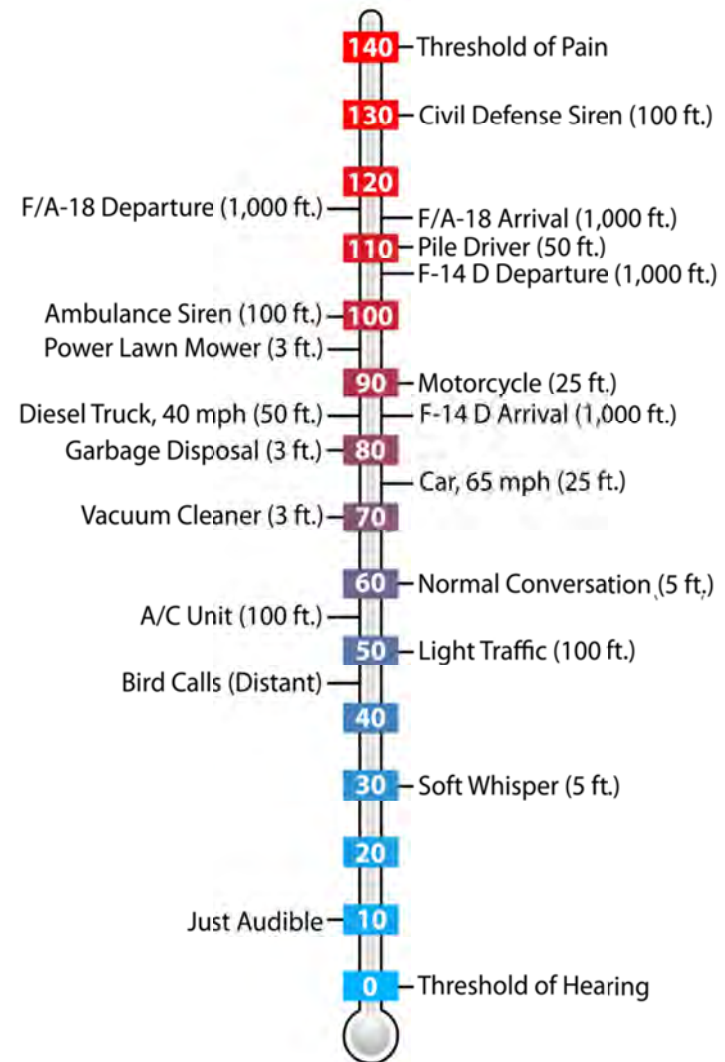
Due to the technical nature of this resource topic and its importance to the JLUS process, this section provides a discussion of the characteristics of sound and the modeling process used to evaluate noise impacts.

Characteristics of Sound

It is important to understand that there is no single perfect way of measuring sound, due to variations used by different entities when conducting sound studies or sound modeling. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). The sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The dB scale is used to quantify sound intensity. Because sound pressure can vary by over one trillion times within the range of human hearing, a logarithmic loudness scale (i.e., dB scale) is used to present sound intensity levels in a convenient format.

Since the human ear is not equally sensitive to all frequencies within the entire spectrum, noise measurements are weighted more heavily within those frequencies of maximum human sensitivity in a process called “A-weighting” written as dBA. The human ear can detect changes in sound levels of approximately 3 dBA under normal conditions. Changes of 1 to 3 dBA are typically noticeable under controlled conditions, while changes of less than 1 dBA are only discernible under controlled, extremely quiet conditions. A change of 5 dBA is typically noticeable to the general public in an outdoor environment. Figure 5.16-1 summarizes typical A-weighted sound levels for a range of indoor and outdoor activities.

Figure 5.16-1 Sound Levels Comparison in dB



Issues Assessment

| | |
|-----------------------------|---|
| Issue NV-1 | Aircraft Noise From Overflight <i>Associated with: NBVC Point Mugu</i> Noise Generated by aircraft may impact noise sensitive land uses. |
|-----------------------------|---|

Aircraft have the potential to produce high noise levels. While the loudest noises are usually located near an airfield, transiting aircraft can still produce noticeable noise events in approach and departure areas around an airfield.

NBVC Point Mugu is home to a large airfield that can support many types of aircraft. As NBVC supports so many different aircraft, there is a greater likelihood that noise could impact noise sensitive land uses that are located either adjacent to the airfield or proximate the airfield. The area immediately surrounding NBVC is mostly agriculture and open space, which is typically considered compatible with military land uses. However, approach and departure zones over the City of Camarillo and flight paths near the cities of Oxnard and Port Hueneme could adversely affect dense population centers and noise sensitive land uses.

Findings

- Local general plans provide more comprehensive guidance on noise standards in the county and the jurisdictions than the zoning ordinances of each jurisdiction.
- The jurisdictions within the study area do not have a set of comprehensive regulations in their zoning ordinances to address noise, the zoning ordinances only refer to the Unified Building Code noise standards.

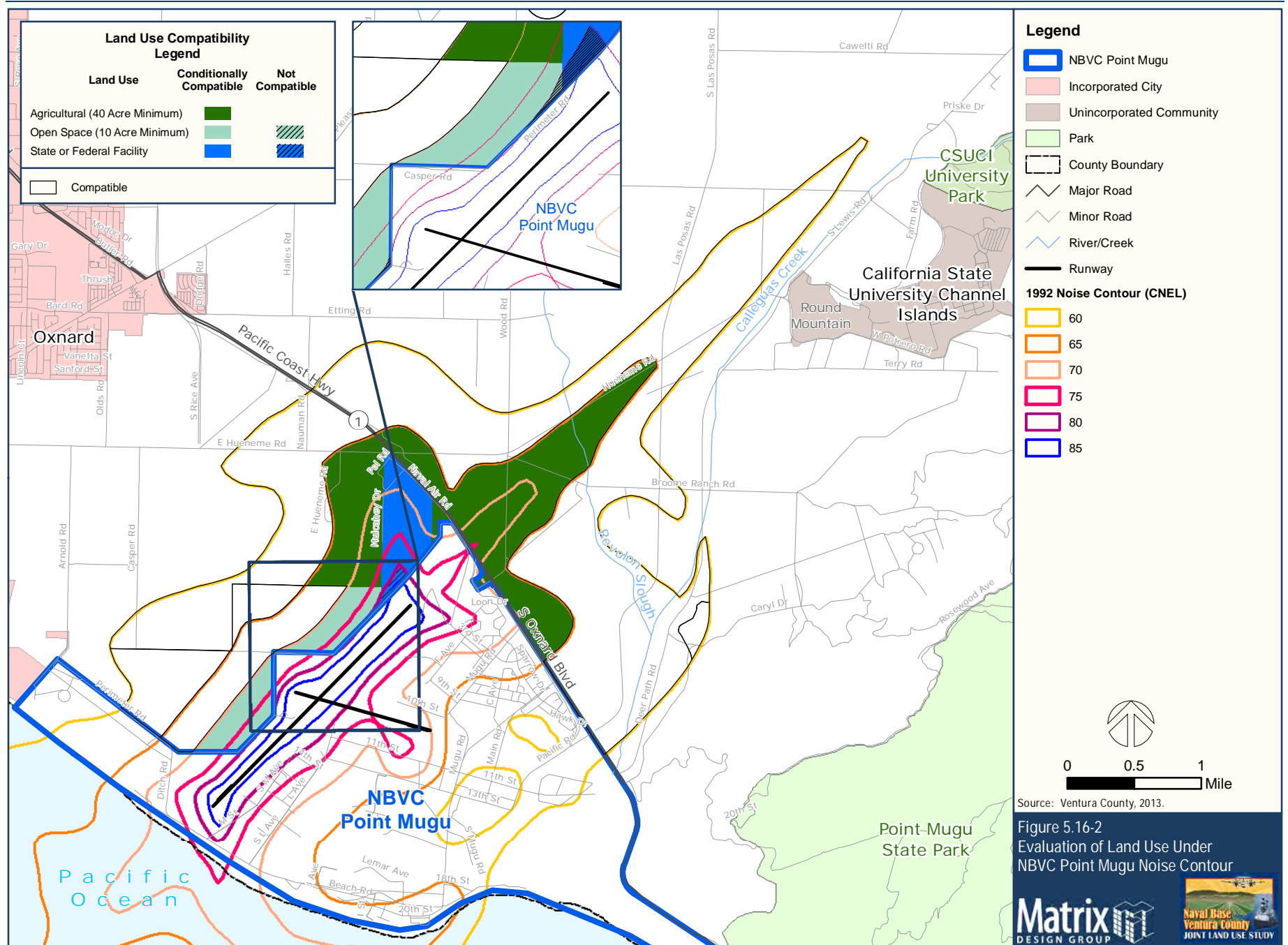
- Further evaluation of the current Building Codes for the State and the County resulted in inconclusive results for identifying noise standards. The only State Building Code that identifies external sound transmission control is the 2007 California State Building Code.

Existing Tools

Ventura County General Plan Hazards Element

The General Plan establishes a policy framework to protect the general public from noise impacts associated with aviation operations in the area. According to the Noise Section 2.16 of the Hazards Element, noise sensitive, discretionary land uses are prohibited if located in a 65 CNEL or greater, noise contour. Additionally, if noise sensitive land uses are proposed or planned for the 60 CNEL noise contour, then construction and design measures must be implemented to ensure the land use has an interior noise level of 45 CNEL or less. Figure 5.16-2 evaluates the General Plan-Designated Land Uses with the noise contours of the NBVC Point Mugu airfield. The two uses that are incompatible include open space (approximately 4 acres) and state or federal facilities (approximately 16 acres), both of these uses allow for congregations of people which in the 80 CNEL noise contour can be damaging to the sense of hearing for people. Additionally, the uses that are conditionally compatible are conditionally compatible because they also allow for congregations of people and residential dwelling units, which are conditionally compatible provided that the noise sensitive land uses are constructed with sound mitigating materials.

While this policy establishes good guidance for discretionary projects, the same standards do not apply to allowed land uses.



Ventura County Non-Coastal Zoning Ordinance

The Ventura County Non-Coastal Zoning Ordinance (NCZO) identifies several uses and operations that should not exceed certain specific CNELs and only operate during certain hours, i.e. organic processing equipment such as grinders should not operate between the hours of 7:00 p.m. and 7:00 a.m. In addition, NCZO establishes requirements for all residential units to be designed to comply with county noise standards and minimize adverse impacts generated by non-residential project noise. A noise report by a qualified acoustical engineer may also be required to recommend specific noise attenuation measures in order to comply with county standards.

Furthermore, the NCZO requires multi-family residential projects be designed so that outdoor noise levels in outdoor living and recreational areas will not exceed CNEL of 60 dB during an hour.

Figure 5.16-3 evaluates the zoning under the NBVC Point Mugu noise contours and has identified that all the agricultural uses within the 75, 80, and 85 CNEL noise contours are all conditionally compatible. While agricultural uses are typically compatible with aviation operations near an airfield, the county's zoning ordinance allows for residential uses on agricultural uses. Residential uses and any accessory structures are not recommended for these locations due to the high noise level from the airfield.

While the ordinance identifies various measures to control noise including requiring allowable operating times and certain CNELs, there is no comprehensive set of noise standards.

Ventura County Noise Ordinance

The Ventura County Noise Ordinance only establishes regulations in that no loud or raucous noise shall be permitted in any residential zones (coastal or non-coastal residential zones) of the county between the hours of 9:00 p.m. and 7:00 a.m. of the following day at a distance of 50 feet from the property line of the noise source or from any noise source if the source of the noise is in a public right-of-way.

This regulation only addresses situational noise such as loud car stereos and such in residential subdivisions. This ordinance does not establish the noise standards for the county on a comprehensive level or noise sensitive land uses.

Oxnard Safety and Hazards Element

The Oxnard Safety and Hazards Element provides the guiding framework for addressing noise. The policy guidance recommends that a quiet and safe residential and working area exist as it relates to the exposure and generation of noise. Additionally, the Plan recommends that noise be considered in land use planning and the development process. The Plan's policies that address noise consider both, noise generated by community activities and military operations include but are not limited to the following:

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 noise mitigation measures, designed by an acoustical engineer.

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-6.10 Point Mugu NAS Noise Awareness: Ensure the Ormond Beach Specific Plan and other development and use proposals possibly impacted by naval air traffic include acoustical analysis to determine potential impacts from NAS Point Mugu and Air National Guard facilities.

State Noise Insulation Standards require interior noise levels of CNEL 45. As land use decisions will be guided by noise contour maps, it can be expected that future development in Oxnard will be protected from noise generated from aircraft.

Oxnard Coastal Zoning Ordinance

Similar to the Ventura County NCZO, the Oxnard Coastal Zoning Ordinance establishes regulations for controlling noise for certain land uses and operations such as drilling. The allowed noise for day time hours (7:00 a.m. to 10:00 p.m.) is 55 dBA, and the allowed noise for drilling operations during the evening hours (10:00 p.m. to 7:00 a.m.) is 45 dBA.

Oxnard Zoning Ordinance

Other than defining noise and identifying that noise should not create objectionable issues relative to land uses and / or operations that are performed on the land uses, this ordinance does not address noise standards for the city.

Camarillo Noise Element

The Camarillo Noise Element recommends residential uses in a 60 CNEL contour to be evaluated on a project-specific basis for potential mitigation to meet 45 CNEL standards for dwelling interiors. All residential structures in a 65 CNEL contour are suggested to meet exterior noise standards. Commercial structures in a 70 CNEL contour are to be evaluated on a project-specific basis to meet interior noise standards.

According to the 1992 Point Mugu AICUZ, only a 60 CNEL contour extends into Camarillo city limits. This means that certain developments within the noise contour may or may not be evaluated for noise mitigation. Currently, the City of Camarillo is updating its Noise Element.

Port Hueneme Noise Element

The Port Hueneme Noise Element does not specifically identify conflicts with aircraft noise, but goals and policies within the element help to mitigate any aircraft noise that may affect the community. There is a stated guidance to improving the noise environment through sensitive planning and development practices. The policies that further this guidance include the following:

Policy 3-1: Incorporate sound attenuation measures in residential development where outdoor ambient noise levels exceed 65 CNEL.

Policy 3-2: Incorporate ambient noise level considerations into land use decisions involving schools, hospitals, and similar noise-sensitive uses.

Policy 3-3: Ensure all new development provide adequate sound insulation or other protection from existing and projected noise sources.

Policy 3-6: Enforce the provisions of the State of California Uniform Building Code, which specifies that the indoor noise levels for multi-family residential living spaces not exceed 45 CNEL due to the combined effect of all noise sources. The State requires implementation of this standard when the outdoor noise levels exceed 60 dB CNEL. The Noise Referral Zones (the 60 CNEL contour) can be used to determine when this standard needs to be addressed. The Code requires that this standard be applied to all new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings. The City will also, as a matter of policy, apply this standard to single family dwellings.

Port Hueneme General Plan Noise Element also includes a table that guides compatibility by land use and CNEL. Table 5.16-1 identifies the land uses and a compatibility assessment of those uses compared with the noise generated by the NBVC Port Hueneme operations as well as other community operations that generate noise.

As seen in the table, different letter grades are given to each land use depending on the corresponding CNEL. Zone A is clearly compatible and are assumed to be satisfactory without any special noise insulation requirements. Zone B is normally compatible and requires noise reduction analysis on new construction or development. Typically normal construction with closed windows and fresh air supply systems will suffice. Zone C construction or development is normally incompatible and generally discouraged unless noise insulation features are included in the design. Zone D is clearly incompatible and new construction or development should not normally be undertaken.

By assigning letter grades to each land use and explaining the compatibility of these letter grades, the General Plan further creates an understanding of the goals and policies which have been included in the document.

Table 5.16-1 City of Port Hueneme Land Use Compatibility Relative to City Noise Standards

| Land Use Category | Typical Uses | Noise Zones | | | | | | |
|--|---|-------------|----|----|----|----|----|-----|
| | | <55 | 60 | 65 | 70 | 75 | 80 | >85 |
| Residential | Single-Family, Duplex, Multi-Family, Mobile Home | A | B | C | C | C | D | D |
| Commercial: Regional, District | Hotel, Motel, Transient Lodging | A | A | B | B | C | C | D |
| Commercial: Regional, Village, District, Special | Commercial Retail, Bank, Restaurant, Movie Theater | A | A | A | B | B | B | C |
| Commercial: Industrial Institutional | Office Building, Research and Development, Professional Offices, City Office Building | A | A | A | B | B | C | D |
| Commercial: Recreation Institutional: Civic Center | Amphitheater, Concert Hall Auditorium, Meeting Hall | B | B | C | C | D | D | D |
| Commercial: Recreation | Children's Amusement Park, Miniature | A | A | A | B | B | D | D |

| Land Use Category | Typical Uses | Noise Zones | | | | | | |
|---|--|-------------|----|----|----|----|----|-----|
| | | <55 | 60 | 65 | 70 | 75 | 80 | >85 |
| | Golf Course, Go-Kart Track; Equestrian Center, Sports Club | | | | | | | |
| Commercial: General, Special Industrial Institutional | Automobile, Service Station, Auto Dealership, Manufacturing, Warehousing, Wholesale, Utilities | A | A | A | A | A | B | B |
| Institutional General | Hospital, Church, Library, School Classrooms | A | B | B | C | C | D | D |
| Open Space | Parks | A | A | A | B | C | D | D |
| Open Space | Golf Course, Cemeteries, Nature Centers, Wildlife Habitat | A | A | A | A | B | C | C |
| Agriculture | Agriculture | A | A | A | A | A | A | A |

Source: 2015 City of Port Hueneme General Plan, Noise Element.

Port Hueneme General Plan policies provide a guiding framework to address noise in the city. By recommending residential developments in areas of 65+ CNEL to incorporate sound attenuation and enforcing the provisions of the State Uniform Building Code, noise sensitive land uses should be well protected from adverse aircraft noise. Inclusion of the Noise/Land Use Compatibility Guidelines table also provides good guidance for Port Hueneme to effectively illustrate and communicate the city's noise requirements for all uses within the city.

| | |
|-----------------------------|---|
| Issue NV-2 | <p>Noise from Railroad Traffic <i>Associated with: NBVC Port Hueneme</i></p> <p>Noise related to railroad traffic to and from NBVC Port Hueneme.</p> |
|-----------------------------|---|

The Ventura County Railroad bisects the cities of Oxnard and Port Hueneme between the Port of Hueneme and the Union Pacific Junction in Downtown Oxnard. The railroad handles port cargo destined for points across the nation. The railroad has two routes to the port which traverse residential neighborhoods of varying density. The railroads proximity to a large and dense population of residential uses can cause adverse noise impacts to local residents.

Findings

- The Oxnard General Plan provides some guidance relevant to addressing the railroad noise issue; however, these are not controlling measures for which the city can regulate.
- None of the zoning ordinances appear to have regulations that control development near railroads or that limits the interior noise level.

Existing Tools

Oxnard General Plan Safety and Hazards Element

The Oxnard General Plan Safety and Hazards Element addresses noise generated from railroad operations. The Plan sets provisions for guidance of railroad-related noise; these provisions are Goal SH-6 and Policies SH-6.3 and SH-6.12. The goal and policies provide sufficient basis for the adoption of related design and other regulations, but are not, in themselves, controlling. The goal and policies are:

Goal SH-6: Consideration of noise levels and impacts in the land use planning and development process.

Policy SH-6.12 Development Near Railroads and Oxnard Airport: Require that new habitable structures be setback at least 85 feet from the nearest railroad track measured from the edge of the outermost railroad track, and only compatible with new development is located within the Oxnard Airport 65 dBA CNEL contour.

SH-6.3 Buffering of Sensitive Receptors: Require noise buffering and/or other construction treatments in development near major streets, highways, the airport, railroad tracks, or other significant noise sources as recommended by a noise analysis.

Goal SH-5 and Policy SH-5.2 both provide guidance for noise attenuation measures to be considered when constructing residential neighborhoods in city limits. Policy SH-5.4 helps to protect older neighborhoods from traffic noise, while Goal SH-6 and its corresponding policy provides the same guidance by ensuring that noise levels do not affect residential development.

Port Hueneme General Plan Noise Element

The Port Hueneme General Plan Noise Element includes goals and policies to address noise issues within the city; however, these are not specific to railroad noise. These goals and policies encourage improved noise environments through sensitive planning and development practices and

compliance with the State Uniform Building Code for interior noise levels between multi-family residential units maintaining a 45 dB/CNEL level. An additional policy states that performance standards are needed to better attenuate noise impacts.

The policies are somewhat useful compatibility tools, but do not directly address noise related to railroad operations. They could, however, serve as the basis for additional actions, but in their present form are insufficient to address the specific issue of railroad noise that can be attributed to military uses.

Issue

NV-3

Heavy Truck Traffic

Associated with: NBVC Port Hueneme

Heavy truck traffic from the military mobilization and commercial truck industry that lease land on the base cause noise and vibration impacts to roadways and nearby housing. These impacts are realized at the following areas:

Rose Avenue

Del Norte Boulevard

Rice Avenue and Oxnard Boulevard (from diverted traffic)

Channel Island, Victoria and Ventura Roads

Hueneme Road

As an active military base and commercial port, truck traffic in and out of NBVC Port Hueneme should be expected. NBVC Port Hueneme is the only naval controlled deep-water port between San Diego and the Puget Sound and the Port of Hueneme is the only deep-water port between Los Angeles and San Francisco.

The increased use of trucks as a preferred means of transporting certain goods and materials is based on market factors and is unlikely in the near term to change in any substantive degree. Also, as these routes are used by both military and non-military vehicles, an equitable assignment of proportionate impacts would seem prudent, as a precursor to tool evaluation, findings and if deemed necessary, the creation of new tools, adjustment of existing tools or other actions. In addition, the ability to alter routes and/or the timing of route use may be limited, based on specific circumstances. Finally, the ability of existing tools to effectively address this issue is complicated by the built out or developed character of many of these corridors, the age and condition of many of the affected structures, private ownership and other factors.

Findings

- While there are minimal average daily trips of heavy trucks through identified intersections, there are significant trips on major arterials by heavy trucks within the JLUS study area.
- The Port Hueneme / Oxnard Truck Traffic Study identified strategies for communities to implement to minimize the noise impacts generated from heavy truck traffic in this area.

Existing Tools

Cities of Port Hueneme/Oxnard Truck Traffic Study

The Port Hueneme and Oxnard Truck Traffic Study was completed by the Southern California Association of Governments (SCAG) to analyze existing traffic conditions and identify traffic impacts and congestion generated by truck trips traveling on local arterial roadways. The study conducted traffic counts to gauge the average number of trucks that pass through the city daily between Port Hueneme and Highway 101. The following tables show the amount of truck traffic that passed through the intersections selected for this study. For the purpose of this study, “heavy” trucks are classified as trucks with four or more axels or as trucks with four or fewer axels consisting of two or more units.

As seen in Table 5.16-2, a large number of trucks passed through major corridors daily. However, in comparison with other vehicles on the road, the highest average percentage of heavy trucks that traversed these intersections came to less than nine percent. The highest percentage of heavy trucks traversed the intersection at Rose Avenue north of 5th Street.

Table 5.16-2 2008 Roadway Daily Traffic Counts

| Roadway | Location | ADT (vehicle/day) Total | Truck ADT (vehicle/day) Total | Percentage of Heavy Trucks |
|----------------------|---|----------------------------|----------------------------------|-------------------------------|
| Victoria Ave | Between Channel Islands Blvd and 5 th Street | 31,793 | 1,585 | 5.0% |
| Victoria Ave | North of 5 th Street | 39,101 | 1,771 | 4.5% |
| Ventura Rd | Between Hueneme Rd and Channel Islands Blvd | 28,538 | 428 | 1.5% |
| Ventura Rd | North of Channel Islands Blvd | 16,834 | 1,101 | 6.5% |
| Saviors Rd | North of Channel Islands Blvd | 27,001 | 995 | 3.7% |
| Oxnard Blvd | North of 5 th Street | 28,610 | 2,187 | 7.6% |
| Rose Ave | North of 5 th Street | 30,996 | 2,608 | 8.4% |
| Rice Ave | Between Hueneme Rd and 5 th Street | 29,190 | 1,930 | 6.6% |
| Rice Ave | North of 5 th St | 28,610 | 2,187 | 7.6% |
| Hueneme Rd | Between Ventura Rd and Saviers Rd | 14,190 | 719 | 5.1% |
| Hueneme Rd | Between Saviers Rd and Rice Ave | 13,512 | 975 | 7.2% |
| Channel Islands Blvd | Between Victoria and Ventura Rd | 32,519 | 1,065 | 3.3% |
| Channel Islands Blvd | Between Ventura Rd and Rose Ave | 31,679 | 1,369 | 4.3% |

Source: Truck Traffic Study, 2008. Cities of Port Hueneme, Oxnard.

In addition, the survey results show in Table 5.16-3 that inbound commercial trucks generally remain on major arterials with only 6.9 percent of trucks using other routes. In addition, Table 5.16-4 shows that inbound trucks to NBVC typically use Victoria Avenue; however 32 percent use other routes to access NBVC.

In Table 5.16-5, outbound commercial trucks use Hueneme Road to Rice Avenue to access U.S. Highway 101, though 17.8 percent use other routes. Additionally, Table 5.16-6 shows that outbound trucks from NBVC use Ventura Road 54 percent of the time to access U.S. Highway 101. However, 40 percent of outbound trucks from NBVC use other routes.

Table 5.16-3 Route Travelled to Access Port of Hueneme

| Route | Percentage of Total | Trucks |
|------------------|---------------------|--------|
| Rice Avenue | 54.0% | 627 |
| Hueneme Road | 69.1% | 802 |
| Rose Avenue | 2.5% | 29 |
| Oxnard Boulevard | 2.3% | 27 |
| Ventura Road | 8.5% | 99 |
| Victoria Avenue | 7.1% | 82 |
| Other | 6.9% | 80 |

Source: Truck Traffic Study, 2008. Cities of Port Hueneme, Oxnard.

Table 5.16-4 Route Travelled to Access NBVC

| Route | Percentage of Total | Trucks |
|------------------|---------------------|--------|
| Rice Avenue | 5% | 12 |
| Hueneme Road | 5% | 13 |
| Rose Avenue | 2% | 5 |
| Oxnard Boulevard | 1% | 2 |
| Ventura Road | 4% | 11 |
| Victoria Avenue | 64% | 167 |
| Other | 32% | 82 |

Source: Truck Traffic Study, 2008. Cities of Port Hueneme, Oxnard.

Table 5.16-5 Route Travelled to Access U.S.-101 Freeway

| Route | Percentage of Total | Trucks |
|-----------------------------|---------------------|--------|
| Hueneme Road to Rice Avenue | 72.8% | 786 |

| | | |
|--|-------|-----|
| Ventura Road to Channel Islands Boulevard to Victoria Avenue | 13.7% | 148 |
| Ventura Road to Gonzales Road to Oxnard Boulevard | 3.5% | 38 |
| Other | 17.8% | 192 |

Source: Truck Traffic Study, 2008. Cities of Port Hueneme, Oxnard.

Table 5.16-6 Route Travelled to Access NBVC

| Route | Percentage of Total | Trucks |
|---|---------------------|--------|
| Hueneme Road to Rice Avenue | 5% | 14 |
| Ventura Road | 54% | 139 |
| Ventura Road to Gonzales Road to Oxnard Boulevard | 3% | 7 |
| Other | 40% | 103 |

Source: Truck Traffic Study, 2008. Cities of Port Hueneme, Oxnard. The survey results do not identify the “other” routes that were used by drivers. However, due to the amount of land that is zoned for residential use between the Port and Highway 101, it can be inferred that residential routes were could have been affected by heavy truck traffic.

Chapters 5.2 and 6 of the document include recommendations to reduce the adverse effects of truck traffic i.e. noise on streets and residential land uses. The chapter suggests the use of architectural features for residential buildings to reduce noise impact. Some of these features include but are not limited to:

- Permanent window seals
- Window mountings made of rubber, cork, or felt
- Reduced window sizes
- Increased window glass thickness

Additionally, Chapter 6 includes recommended strategies to address intersections and roadway improvements, address residential neighborhood

impacts, and improve awareness and use of designated truck routes. The following strategies relate to addressing residential neighborhood impacts include:

- *Encourage trucks traveling to and from major generators in the study area (Port of Hueneme, NBVC, private businesses) to utilize the established preferred truck routes on Hueneme Road/Rice Avenue and Victoria Avenue as much as possible to limit the potential impacts of high truck volumes on other streets through residential areas such as Ventura Road and Channel Islands Boulevard. Measures could include the installation of directional signage, restrictions placed on heavy trucks prohibiting them from traveling certain arterials such as Channel Islands Boulevard, and capacity or traffic signal improvements to Victoria Avenue, Hueneme Road, and Rice Avenue to make these corridors more attractive to travel.*
- *Consider truck volumes on adjacent arterial roadways when designing adjacent residential neighborhoods. If residential developments are proposed along the preferred truck routes, the design of the neighborhoods should consider the potential impacts caused by trucks traveling on the adjacent truck route. Strategies to address this issue include larger setbacks for homes located along the truck route and/or the construction of walls between the truck routes and the residential neighborhood to reduce noise impacts.*

The SCAG, as the sponsor agency for the project, cannot enforce any regulations on the cities of Port Hueneme or Oxnard. The cities of Port Hueneme and Oxnard would be the implementing agencies that could exercise control.

Issue NV-4

Noise from Commercial Activities On-Base

Associated with: NBVC Port Hueneme

The Navy leases land to commercial industry for the purposes of new and used vehicle processing. Noise associated with the transport of these vehicles impacts nearby noise sensitive land uses.

The Navy leases land to the Oxnard Harbor District (OHD) for commercial shipping purposes. Port Hueneme is a major import and export center for automobiles and other rolling stock. The OHD has three contracts with vehicle distribution companies that perform pre-delivery inspection and technical service on site.

Vehicle processing adjacent to the community could have adverse effects on noise sensitive land uses. Transportation related noise is generally the largest contributor of noise in a community. The Port has dedicated approximately 34 acres to automobile processing. Depending on the size of any given shipment, this large amount of land has the potential to enable processing of a significant number of automobiles.

The Joint Use Agreement (JUA) is the governing document that allows the OHD to lease land from NBVC for commercial use. In the JUA, Article 17 requires OHD to comply with all applicable local laws, regulations, and standards. Therefore, city and county regulations will be important tools to ensure compatibility between commercial port operations and noise-sensitive land uses.

Findings

- The Port Hueneme General Plan provides good guiding framework for addressing noise issues in the city; however, the city's zoning ordinance does not include the appropriate language and connection with the General Plan to comprehensively reflect the guidance.

Existing Tools

City of Port Hueneme General Plan Noise Element

The Port Hueneme General Plan Noise Element includes goals and policies to address noise issues within the city as previously mentioned in earlier issue discussions. The goals and policies of the Noise Element adequately address the issue from a policy perspective and would appear to establish a sufficient basis for regulating codes and other similar tools.

| | |
|-----------------------|---|
| Issue NV-5 | Noise from Military Operations <i>Associated with: NBVC Port Hueneme and NBVC Point Mugu</i> The Navy performs operations to ensure military readiness. These operations can potentially generate noise and vibration impacts that could affect noise sensitive land uses. |
|-----------------------|---|

NBVC Point Mugu and Port Hueneme have individual mission parameters that could create noise and vibration in the surrounding communities. Noise and vibration events at NBVC Point Mugu are less of a concern in the immediate area due to agricultural land uses but the impacts of the airfield can affect more noise sensitive land uses in the nearby communities.

As described in previous issue discussions, the communities all have policy framework for minimizing noise impacts generated from various sources. The cities of Oxnard and Port Hueneme have demonstrated in their general plans that the cities have an awareness of the noise issue and have recommended guidance for further implementation of noise controlling measures. However as earlier concluded, none of the jurisdictions zoning ordinances reflect a comprehensive set of regulations that address noise issues for community sources and much less for military operations. See previous issue discussions, particularly Issue NV-1 and NV-2.

| | |
|-----------------------|---|
| Issue NV-6 | Noise from Transient Navy Aircraft <i>Associated with: NBVC Point Mugu, Sea Range</i> Aircraft transiting near, but not operating at, NBVC (i.e., aircraft traveling from Naval Air Station Lemoore) create noise that is louder and heard by nearby residents and associated with operations at NBVC. |
|-----------------------|---|

Due to the nature of NBVC as an active military Naval Station, residents who are not completely familiar with the types of operations and aircraft that utilize the facility may assume that all aircraft flying through or near the area, is associated with NBVC. There are several other active military installations within relatively close proximity of NBVC that conduct aircraft operations, including Naval Air Station Lemoore, located roughly 200 miles north of NBVC Point Mugu. Aircraft traveling from Naval Air Station Lemoore to, other locations may pass through the region around NBVC and create noise. Other military aircraft, as well as commercial or general aviation, may also pass through the region, giving a false impression that they are associated with NBVC.

Findings

- There is a small percentage of transient aircraft that traverse the NBVC JLUS Study Area making this an insignificant issue.
- Both the AICUZ report and Ventura ACLUP are dated planning documents that do not reflect current operations and aircraft.

Existing Tools

1992 Air Installations Compatible Use Zones Report

Daily military operations in 1991 totaled 54,116 flights. This equates to roughly 216 flights per workday. According to the NBVC Air Installations Compatible Use Zones (AICUZ) Report, only 5.4 percent of average busy day operations are attributed to transient aircraft. These figures equate to roughly 12 transient aircraft flights per day.

The AICUZ report considers all military flights that traverse the vicinity of the base when creating noise contours. Those aircraft that generate the largest noise footprints based on numerous variables such as aircraft type, frequency of operations, and weather conditions are all factored into developing noise contours for the airfield. The AICUZ does consider the noise footprints of transient aircraft when modeling the noise contours. However because transient aircraft consist of such a small percentage of total military aircraft operations, these aircraft are not likely to generate a large number of noise complaints from residents. Though there is the potential for nuisance to occur outside of normal hours or days. The AICUZ is dated 1992 and may include information that is no longer relevant. NBVC is currently updating their AICUZ to reflect more current situations.

Naval Base Ventura County Activity Overview Plan, Final Report, September 2006

The AOP is an activities plan designed to identify and assess the NBVC's operational capabilities by their assets and shortfalls. As part of the Base Overview, the AOP includes the top five transient aircraft that traverse the area around NBVC and the jurisdiction the transient aircraft are stationed as identified in Table 5.16-7.

Table 5.16-7 Transient Aircraft of NBVC

| Aircraft Type | Organization |
|----------------|--------------|
| F/A-18 | China Lake |
| C-5 | Air Force |
| EA6B | Navy |
| HH65 | Coast Guard |
| KC-135 Tankers | Air Force |

The AOP makes clear that, though the Navy is responsible for some transient aircraft, other military organizations are responsible as well. In addition, these aircraft are large aircraft and can generate high sounds for longer periods of time than other aircraft depending on variables such as weather conditions. However as previously mentioned, the transient air operations were 5.5 percent in 1991. This percent is not significant enough to generate sustainable noise complaints by community residents.

Ventura County Airport Land Use Plan

The Ventura County Airport Land Use Plan (CLUP) discusses, among other topics, noise issues associated with airports of Ventura County. NBVC Point Mugu is included in the analysis. According to Chapter 5.6 Aviation Activity of NBVC Point Mugu, only 5.4 percent of average busy day operations were conducted by transient aircraft. The CLUP states that all sources of aircraft noise were considered when creating noise contours as part of the NBVC Point Mugu AICUZ.

Issue NV-7

Flight Operations after 10:00 PM

Associated with: NBVC Point Mugu

There is concern about flight operations, occurring after 10 PM and before 6 AM, specifically Field-Carrier Landing Practice operations. Noise and vibration generated from these operations can impact noise sensitive land uses during nighttime hours.

During the discovery portion of this study, the public brought up this issue that they have heard aviation operations after 10 pm. The noise and vibration from aircraft late at night can interrupt community activities such as sleeping. Lack of sound sleep caused from noise and vibration outside the home can result in various conditions and even prevent optimal learning the next day for school-aged children.

While NBVC indicated that there are no flights after 10 pm that occur at the base, the issue was still brought up by the public several times. After review of the AICUZ report and air operations activity for the past 11 years, there was no mention of times of day when the aircraft performed their training operations to confirm if this does occur. However, it should be noted that the AICUZ report is over 20 years old and does not necessarily reflect current operational data.

Findings

- Ventura County provides good compatibility guidance relative to times of the day and noise-related impacts in its General Plan; however, the control measures in the NCZO of the county are not nearly as comprehensive.
- The California Noise Insulation Standards do not include single-family residential uses in its requirements.

- While the City of Camarillo provides guidance for coordination with the Navy regarding noise impacts, the City's General Plan does not include guidance for preventing noise impacts during the various times of the day. It should be noted that the General Plan does not enforce regulations, but this is included here to show the policy guidance in place for the city.
- It is important to keep the time of flights logged so that the Navy and the surrounding communities have real data to discuss. It is possible the Navy does not share the timing of flights.

Existing Tools

City of Camarillo General Plan Noise Element

The Camarillo General Plan includes discussion of airborne related noise within the General Plan area. Most airborne noise impacts are in the south off the city centered near the Pleasant Valley/Santa Rosa interchange. The 60 CNEL noise contour extends into the city. The city has Transportation System Noise Control Measures as a part of the Recommended Noise Element Implementation Programs and Measures. Measure Nine of the Transportation System Noise Control Measures states the following:

The City shall establish and maintain close liaison with U.S. Navy authorities (and any successors) responsible for operations at PMTC Point Mugu. While the City has no control over Point Mugu or its operations, concerns regarding noise impacts due to flight operations should be communicated to the proper authorities.

While this measure provides the guidance for coordination with the Navy regarding noise impacts, it does not address the noise issue that may occur late in the evening hours.

Ventura County Goals and Policies Hazards Chapter

Ventura County addresses state noise element statutes by analyzing noise within the Hazards Chapter of the Ventura County Goals and Policies document of the General Plan. The goal of the Noise section of the Hazards Chapter of the Goals and Policies document states the following:

To protect the health, safety and general welfare of County residents by elimination or avoidance of adverse noise impacts on existing and future noise sensitive uses.

The policies attached to this goal include the following:

All discretionary development shall be reviewed for noise compatibility with surrounding uses.

The remainder of the policies state standards for noise sensitive uses respective to various noise generators. Two policies exist which reflect aviation related noise generators and are as follows:

- 3) Noise sensitive uses proposed to be located near airports:*
 - a. Shall be prohibited if they are in a CNEL 65 or greater, noise contour.*
 - b. Shall be permitted in the CNEL 60 to CNEL 65 noise contour area only if means will be taken to ensure interior noise levels of CNEL 45 or less.*
- 4) Noise generators, proposed to be located near any noise sensitive uses, shall incorporate noise control measures so that ongoing outdoor noise levels received by the noise sensitive receptor, measured at the exterior wall of the building, does not exceed any of the following standards:*
 - a. L_{eq1H} of 55 dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 6:00 a.m. to 7:00 p.m.*
 - b. L_{eq1H} of 50 dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour 7:00 p.m. to 10:00 p.m.*
 - c. L_{eq1H} of 45 dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 10:00 p.m. to 6:00 a.m.*

California Noise Insulation Standards

California Noise Insulation Standards require all hotels, motels, apartment houses, and dwellings other than detached single-family dwellings to include noise insulation performance standards. Regulations apply to all applications for building permits made subsequent to the effective date of the regulations. Airborne sound insulation standards require separating walls and floor-ceiling assemblies to provide interior noise levels of 50 db.

Though single-family houses are excluded from the requirements, single-family houses must be separated from other single family houses by six or more feet and individual houses must be separated from property lines by three or more feet to be considered exempt from standards.

Please see the next page.

5.17. Public Trespassing

This factor addresses public trespassing, either purposeful or unintentional, onto a military installation. The potential for trespassing increases when public use areas are in close proximity to the installation.

Military areas that are located on, or adjacent to, public lands owned by other entities (i.e., federal, state, or local) that are designated for public access, recreation, or for livestock grazing often experience issues related to public trespassing into training ranges and other areas with safety hazards related to military operations.

Key Terms

Trespass. Trespass is the intrusion by persons and / or livestock, either purposeful or unintentional, within the boundaries of NBVC Point Mugu, NBVC SNI, and NBVC Port Hueneme in a physical or non-physical manner.

Issues Assessment

| | |
|-----------------------------|---|
| Issue PT-1 | Public Trespassing <i>Associated with: NBVC Point Mugu</i> There is potential for public trespassing onto NBVC near Point Mugu and its associated lagoons. The installation is within an urban setting and coastal zone in which unintentional trespassing can occur near the fence line and shoreline. Due to the complex setting of the base, trespassing can be challenging to monitor and control. |
|-----------------------------|---|

NBVC Point Mugu is located in a coastal zone along a scenic highway that attracts visitors to the vicinity. Attractions within the vicinity of NBVC Point Mugu include the Santa Monica Mountains National Recreation Area, Point Mugu, and two game reserves. These uses border NBVC Point Mugu to the east and west. The proximity of these attractions to NBVC increases the unintentional risk of trespassing on base.

Trespassing on base represents varying concerns for the military. Low-level risks, such as accidental trespassing, may not pose a large security hazard but could delay certain training activities. High-level risks such as intentional trespassing could affect national security and military readiness. It is crucial for NBVC to maintain a secure perimeter.

Findings

- NBVC monitors and manages the installation areas for potential trespassing, and does not see the need for changes relative to the JLUS.
- While the City of Oxnard provides access and recreation to parts of the beaches near the NBVC facilities, the city has controlled this access when it relates to maintaining military security. However, the city does not define military security.

See also the discussion of trespassing along NBVC Port Hueneme fence lines in Section 5.2.

Existing Tools

Draft Integrated Natural Resource Management Plan for Naval Base Ventura County Point Mugu and Special Areas, May 2013

The Integrated Natural Resources Management Plan (INRMP) provides guidance for the protection of sensitive species located on NBVC land, which includes Force Patrol protection. Species such as the California Least Tern and Snowy Plover nest on the beaches of the base. The Navy is responsible for protecting endangered species on its property. To help accomplish species protection, NBVC restricts access to sensitive habitat on the beach. NBVC Force Protection is responsible for enforcing these beach closures and, among other duties, is on patrol 24 hours per day in order to remove trespassers.

Navy biologists usually notify Force Protection regarding trespassers on the beach property. The INRMP does make a broad statement regarding the presence of Force Patrol patrolling the fence line of the base to protect

sensitive habitat and species; however there is no further discussion of the character or frequency of the patrol.

Though the INRMP is not designed as a tool that prevents encroachment by any means, the INRMP is a reliable compatibility tool that addresses and establishes management measures for trespassing as it relates to the sensitive species management and monitoring on the facility.

In addition, it should be noted that the INRMPs for NBVC Port Hueneme and NBVC SNI did not identify public trespassing as a concern for the Navy on either of these facilities.

Oxnard Coastal Land Use Plan

The Oxnard Coastal Land Use Plan is the guiding document for managing coastal resources within the City of Oxnard. The Coastal Land Use Plan includes a section titled Coastal Access and Recreation, which includes goals and policies to maintain access to the shoreline.

However, the section also identifies exceptions to access may be made when access would be inconsistent with military security. There is no further information defining what the city considers inconsistent with military security. Similarly there are no policies or programs for dialogue between the City of Oxnard and the military.

The City of Oxnard and NBVC are conscious of the threat of trespassers on base, which is a good start to reducing incidence of trespassing. However, there are no formal measures that exist to prevent and apprehend trespassers on the facilities.

Issue PT-2

Use of Beaches / Surf Zone at Point Mugu for Surfing

Associated with: NBVC Point Mugu

Recreationalists utilize the Point Mugu Beaches for surfing and other marine activities. This has and can result in intentional and unintentional trespass of the NAVAIR Point Mugu Sea Range.

During the public meetings of this JLUS planning study, the public brought up the concern about access to the Point Mugu beaches and the surf zone for recreational surfing use. Point Mugu surf breaks provide wave conditions that are attractive to surfers. Surfers Beach and Calleguas Break create waves starting between three to five feet in height. The sandy bottom of the beach provides a soft landing for beginners who do not successfully ride a wave into shore. Wave frequency also occurs in regular intervals that create dependable surfing conditions.

Land between Surfers Beach and Calleguas Break is located entirely within NBVC Point Mugu. This area includes military uses for test and evaluation of future military technologies, protected natural habitat, and explosive safety quantity distance arcs. Trespassing onto the beach areas can endanger military security, protected species, and potentially the trespassers themselves.

Findings

- The Ventura County Coastal Area Plan does not identify what is meant by “military security needs” nor does it identify military operational areas that should remain free and clear of recreational activity.
- There is no evidence of tools that address this trespassing issue with the NBVC Force Patrol or Ventura County Sheriff’s Office.

Existing Tools

Ventura County Coastal Area Plan

The Ventura County Coast Area Plan identifies policies that protect the recreation and access to coastal and shoreline areas for recreational and environmental activities that cannot be provided by inland waters. The Plan also identifies that proposed development shall include public accessways to the shoreline unless it is in conflict with the following but not limited to public safety, military security needs, or protection of sensitive coastal resources.

This Plan is a beginning in military compatibility planning as it recognizes the need to ensure military security needs in the area; however, the Plan does not provide any further guidance about the areas that would be in conflict with military security areas nor does it identify military operational areas.

Please see the next page.

5.18. Roadway Capacity

Roadway capacity relates to the ability of existing freeways, highways, arterials, and other local roads to provide adequate mobility and access between military installations and their surrounding communities.

Key Terms

Convoy. A convoy is an assembly (3 to 10+) of military vehicles traveling to and from a military installation to conduct military training exercises.

Level of Service. A common measurement used by traffic engineers to determine the effectiveness of a traffic system is a grading system called Level of Service (LOS) which assigns a letter grade from A to F based upon traffic flow and safety characteristics as shown in Table 5.18-1.

Table 5.18-1 Level of Service of Roadway

| Level of Service | Definition |
|---------------------|--|
| Acceptable | A Represents a free-flow operation. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. |
| | B Represents reasonably free-flow operation. Ability to maneuver within the traffic stream is slightly restricted. |
| | C Represents a traffic flow with speeds near or at free-flow speed of the freeway. There is noticeable restricted ability to maneuver within the stream of traffic. |
| | D Speeds begin to decline with increased density. Ability to maneuver within the traffic stream is noticeably limited. |
| Unacceptable | E Operation is at capacity. Vehicles are closely spaced within the traffic stream and there are no useable gaps to maneuver. |
| | F A breakdown of vehicle flow is present. This condition exists within the queues forming behind the breakdown points. |

Mobilization Corridors. NBVC is Naval Construction Force mobilization base, and as such, regional access is needed to support military operations in time of national need. Mobilization corridors are roadways that have been designated to be used to move equipment, supplies, and personnel from NBVC to the regional transportation system.

Roadway Capacity. Roadway capacity refers to the ability of existing freeways, highway, arterials and other local roads to provide adequate mobility and access among military installations and their surrounding communities.

Technical Background

As urban development expands into rural areas, roads once used primarily to provide access for agricultural uses and limited local traffic begin to function more as urban major arterial roadways. These once rural roads often become the main transportation corridors for all traffic from residential to commercial trucking, including access to military installations. As transportation systems grow and provide more capacity, these facilities induce and encourage growth as rural areas become more accessible.

The facilities of NBVC are Fleet Mobilization and Training Facilities, thus mobilization operations occur frequently during the training activities and national and state emergency efforts. NBVC also supports training for other military branches as well as for law enforcement agencies. In order to prepare for and execute military mission readiness, a component of the sailors’ training involves mobilization and transportation of equipment and sailors to and from NBVC.

The military mobilization and transportation activity requires the use of heavy vehicles to transport and mobilize equipment and sailors. The weight of the vehicles may cause an unplanned need for the maintenance of specific roadways depending on mobilization frequency, weather conditions, and roadway composition. Having safe, dependable and efficient roadway systems, are not only important to NBVC to fulfill its mission, but more importantly, it is essential for the demands of interstate commerce and safety of the local communities.

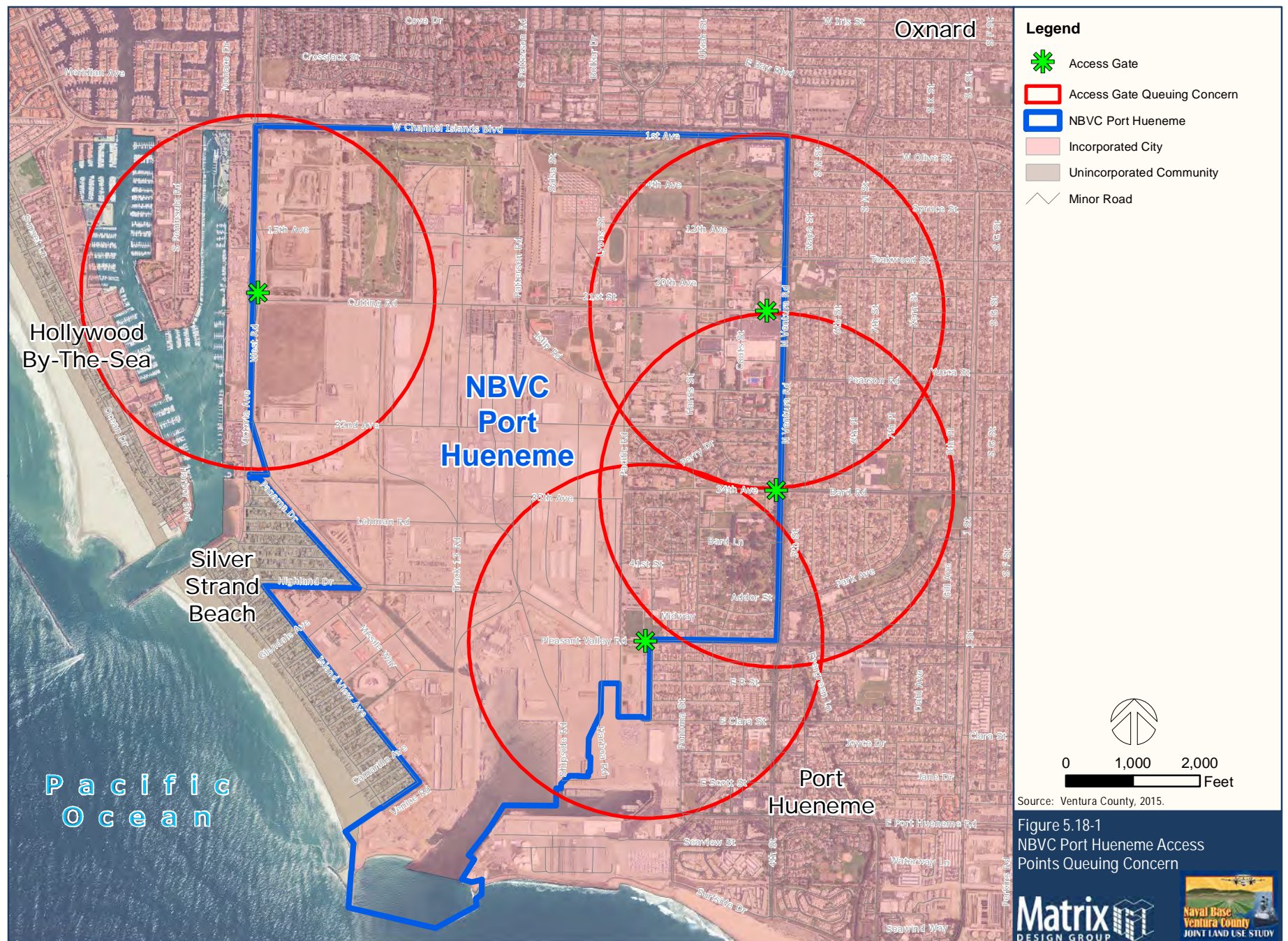
Issues Assessment

| | |
|---------------|---|
| Issue RC-1 | Base Access Gate Queuing. |
| | <i>Associated with: NBVC Port Hueneme</i> |
| | <p>The queuing at various gates at NBVC causes traffic congestion and vehicle stacking. This occurs at the following gates and times:</p> <ul style="list-style-type: none">■ Bard Gate – Limited two-car capacity between gate and street. This is the entrance for family housing.■ Pleasant Valley Gate■ Victoria Gate (morning peak hour)■ Sunkist Gate (morning peak hour)■ Patterson Gate |

At NBVC Port Hueneme, the main entry gates are located along two major arterials in the JLUS Study Area, Victoria, and Ventura Avenue as shown in Figure 5.18-1. Both arterials run north-south and connect NBVC Port Hueneme to U.S. Highway 101.

As Ventura County continues to grow, it can be expected that more people will use the roadways to travel within the JLUS Study Area. Therefore, it can be expected that both Ventura and Victoria Avenues will see increased traffic levels. A concern exists that a lack of queuing capacity at the entry gates may cause traffic congestion and vehicle stacking. As the major entry gates into NBVC Port Hueneme are located along these roads, delays in automobile entry through these gates could backup and cause congestion within the neighboring communities.

The Traffic Circulation Study for the City of Oxnard 2020 General Plan Update and EIR provides a comprehensive analysis of existing and future roadway conditions based on volume to capacity ratio of intersections and roadway segments.



This volume-to-capacity ratio produces a LOS which assigns a letter grade (A-F) to the intersection. The following tables show intersections closest to a major gate of entry as follows:

| | |
|--------------------------------|---------------------------|
| Victoria Gate | Victoria Avenue |
| | Channel Islands Boulevard |
| Sunkist Gate | Ventura Road |
| | Channel Islands Boulevard |
| Bard and Pleasant Valley Gates | Ventura Road |
| | Pleasant Valley Road |

According to the Circulation Element of the Oxnard General Plan, the minimum acceptable level of service is C. As seen in Table 5.18-2, all intersections are operating at an acceptable peak hour level of service. As shown in Table 5.18-3, future peak hour intersection LOS will decrease but will remain acceptable at Victoria/Channel Islands and Ventura/Pleasant Valley. However, Ventura/Channel Islands is expected to drop to a LOS D. This LOS designation means that more automobile traffic will be using the Ventura/Channel Islands intersection. The closest gate to Ventura/Channel Islands intersection is the Sunkist Gate. Congestion at this gate has the potential to affect traffic on Ventura Road, which could further affect the LOS at this major intersection.

Table 5.18-2 2005 Peak Hour Intersection Level of Service Results

| Intersection of Concern | AM Peak Hour | | PM Peak Hour | |
|-----------------------------|--------------|-------|--------------|-------|
| | LOS | V/C | LOS | V/C |
| Victoria and Channel Island | A | 0.504 | B | 0.658 |
| Ventura and Channel Island | A | 0.589 | C | 0.737 |
| Ventura and Pleasant Valley | B | 0.615 | A | 0.587 |

Source: City of Oxnard Traffic Circulation Study, 2008.

Table 5.18-3 2020 Peak Hour Intersection Level of Service Results

| Intersection of Concern | AM Peak Hour | | PM Peak Hour | |
|-----------------------------|--------------|-------|--------------|-------|
| | LOS | V/C | LOS | V/C |
| Victoria and Channel Island | B | 0.610 | C | 0.750 |
| Ventura and Channel Island | B | 0.666 | D | 0.830 |
| Ventura and Pleasant Valley | B | 0.638 | B | 0.680 |

Source: City of Oxnard Traffic Circulation Study, 2008.

Findings

- Key issues occur when there is a special event, increased security level, or other anomaly in normal operations.
- There are no scheduled improvements for these intersections.

Existing Tools

County of Ventura Public Works Agency, 2012-2017 Five-Year Capital Projects Programs

Currently, the county has not identified any intersection improvements for the identified intersections.

Issue RC-2

Mobilization Corridors

Associated with: NBVC Port Hueneme

Continued community growth can potentially increase traffic congestion on mission-critical and community roadways, delaying or interrupting mission activities and military readiness. These roadways including the following:

- Traffic flow on Hueneme Road where it necks down to two lanes.
- Growth may cause freight access issues from Victoria Gate to the U.S. 101.
- Traffic flow issues on Rice Avenue due to railroad crossings.
- Traffic flow issues on Rose Avenue.

Increased traffic congestion is a potential side effect of community growth. More residential and business opportunities can increase use of local roadways. An increase in roadway congestions increases the cost of transporting goods, impacts air quality and public safety and decreases the overall quality of life for residents.

In the cities Oxnard and Port Hueneme, increased congestion has the added potential to interfere with military readiness. NBVC uses major local roadways as readiness corridors to transport a wide range of military equipment (WORK). Mobilization Corridors include Victoria Avenue between NBVC Port Hueneme and Highway 101, Hueneme Road between NBVC Port Hueneme and Rice Avenue, Rice Avenue between Hueneme Road and Highway 101, and the Ventura County Railroad Right-of-Way between NBVC Port Hueneme and the Union Pacific Tie-In in Downtown Oxnard.

Findings

- While these projects were identified within the JLUS Study Area, the SCAG RTP does not necessarily reflect military compatibility in the projects as there was no mention of military coordination in the report.
- VCTC represents all communities including the military at SCAG. While this centralizes and minimizes coordination efforts, it is uncertain to what degree the military operations are considered in planning in this area.

Existing Tools

Southern California Association of Governments 2012-2035 Regional Transportation Plan

According to the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP), there are 367 Ventura-County specific transportation projects. Major projects related to the stated issue and congestion includes:

- Rose Avenue overpass at Gonzales Road
- Rose Avenue grade separation at E. Fifth Street
- Victoria Avenue overpass at Gonzales Road
- Victoria Avenue widening from Gonzales Road to Ventura city limits
- Victoria Avenue widening from Gonzales Road to Oxnard city limits
- Hueneme Road widening from Oxnard city limits to Rice Road
- Hueneme Road widening from Saviers Road to Arcturus Avenue
- Rice Avenue railroad grade separation

Ventura County Regional Transportation Plan Projects total approximately \$5 billion in investment which includes \$1.4 billion for local streets and roads. While the SCAG RTP is a long range plan, it is important to note that traffic congestion on these roads is being considered and planned for today. Currently, the City of Oxnard is in the process of upgrading portions of the mobilization corridors. Requests for qualifications/proposals (RFQ/P) have already been distributed by the City of Oxnard for the following projects:

- Environmental and Preliminary Engineering Study for Rice Avenue Grade Separation at Fifth Street/UPRR Tracks Project (DS14-08)
- Hueneme Road Widening [between Saviers Road and Arcturus Avenue] (WP03-18)

It should be noted here that there are many locally funded projects that are not contained in the Transportation Improvement Program (TIP) or the RTP. This is only necessary if we are requesting federal funding for projects, and it was reported that it's the VCTC's role to represent all communities at SCAG including the military although none are called out specifically.

Issue RC-3

Public Transit Availability and Access

Associated with: NBVC Port Hueneme and NBVC Point Mugu

There is a lack of public transit and convenient bus stops that service the base to provide transportation to and from housing (i.e., City of Camarillo Navy Housing) and commercial and recreational establishments.

Public Transportation is an integral part of regional transportation infrastructure. Public Transportation makes better use of infrastructure than the single-passenger automobile and in some cases provides a faster commute than other forms of transportation. Public transportation cuts down on per capita greenhouse gas emissions and has also been linked to increased health and reduced stress in frequent users. Public transportation works best within, or when connecting to, walkable communities.

Ventura County, as a largely rural and suburban area, is greatly influenced by automobile transportation. Even with the arrival of rail into Ventura County, the area remained largely agrarian until the 1960s when U.S. Highway 101 made commuting to Los Angeles from Ventura more attractive. During this time, auto-dominated land use patterns appeared in Ventura County.

This auto-dominated pattern still exists today and creates challenges to public transportation. Lower population densities and a lack of walkable urban form make public transportation less desirable. Another challenge to comprehensive public transportation is the numerous public transit agencies which service different parts of the County. Within the JLUS Study area, Gold Coast Transit serves Ventura, Ojai, Oxnard, and Port Hueneme, Camarillo Area Transit serves Camarillo, and VCTC provides intercity and inter-county bus service. Despite the large number of transit agencies within the area, service to NBVC is limited. NBVC Port Hueneme does have access to the public transit system and is serviced by two lines that run to the Oxnard Transit Center and one line that runs to the Ventura Transit Center at Pacific View Mall. All three routes operate daily. Route 1 operates every 20-25 minutes, Route 3 runs hourly, and Route 21 runs every 30 minutes on weekdays, and hourly on weekends. Additionally, GCTD is currently conducting a Short Range Transit Plan that is investigating the feasibility of future service improvements in this area. NBVC Point Mugu and military housing in Camarillo are not serviced by any fixed-route public transportation at this time.

Findings

- The Plan does not reflect the needs of the military because the military and/or public have not identified the military area as an underserved area. Therefore because the military and the public have not identified the need, the military is neither included nor excluded in this plan.
- Major issue in transit is the connection into and within the installations because there is no ability to coordinate with outside transit providers.

Existing Tools

Ventura County Comprehensive Transportation Plan

The Ventura County Comprehensive Transportation Plan looks at the long-range state of transportation in Ventura County to help ensure a positive quality of life and thriving economy. As part of the Plan, Ventura County Transportation Commission (VCTC) studied ways to improve transit in Ventura County. The Plan recommended the following actions to assist in serving areas that were underserved:

Support the provision of community/subregional transit service in three areas, Gold Coast Transit Area, East County Transit Area, and Heritage Valley Transit Area;

Review and reevaluate TDA Unmet Needs process and develop a Short Range Transportation Plan.

Chapter 11 of the Plan, the Plan Implementation, reported that transit is a priority in Ventura County and residents responded favorably to the development of a robust transit system that offers multi-modal transportation rather than just relying on automobiles. Some actions the Plan Implementation included but were not limited to are:

Implement the recommendations of the Regional Transit Study including needed funding, planning and policy support for creation of a more integrated system of services.

Re-evaluate the “Unmet Needs” process and definitions to ensure that transit rider’s needs are captured and given sufficient technical analysis to support any findings that are rendered.

Since the CTP speaks to the general areas of operation where there are transit providers, nothing in the Plan specifically identified or addressed the needs of military families at various sites within the JLUS Study Area. It is up to the individual transit providers to identify the specific areas they serve.

| | |
|-----------------------------|--|
| Issue RC-4 | Expansion of NBVC will Impact Regional Circulation <i>Associated with: NBVC Port Hueneme and NBVC Point Mugu</i> If expansion occurs at NBVC, increased vehicle traffic may impact regional capacity for major roadways and highways (e.g., Highway 101) near NBVC Port Hueneme and NBVC Point Mugu will be impacted by increased vehicle traffic. This could constrain mobility and access to and from these facilities. |
|-----------------------------|--|

Regional circulation is a crucial component of mobility and access for any military installation and its surrounding jurisdictions. Local infrastructure and capacity are affected by the presence of military airports and coastal ports, and these installation needs should always be factored into the regional transportation planning. Changes to military installations can have an adverse impact on circulation patterns and routes, and conversely, changes to infrastructure can also adversely impact military operations.

Comprised of three non-contiguous geographic locations and host to over 20,000 personnel, NBVC is already considered a large military installation and an expansion to either of the mainland bases could impact regional circulation. Inhibited mobility and access caused from increased vehicle traffic could be detrimental to the operations performed on the base facilities. At the same time, this possible increase of vehicular traffic could have a negative impact on local roads and military access roads at Port Hueneme and Point Mugu, which could temporarily impede emergency or mission-critical operations.

Findings

- While the jurisdictions in the JLUS Study Area support the military, regional planning tools do not explicitly address military needs or include military representation in plan development.

- Before any major expansion of NBVC can occur (facilities, change in mission, change in manpower, etc.), the Navy would undergo a NEPA (and sometimes CEQA) process. Impacts to external circulation would be evaluated to determine the impacts of expansion, and significant impacts on transportation would require mitigation, if possible.

Existing Tools

Interregional Transportation Strategic plan

The California Department of Transportation (CALTRANS) Interregional Transportation Strategic Plan (ITSP) offers a vision for the major circulation routes within the state for U.S. Highways and State Highways / Routes. Any expansions to NBVC Port Hueneme or NBVC Point Mugu could impact high emphasis and focus routes detailed in the ITSP.

Several Focus Route Concepts and Improvements are detailed within Chapter Nine of the document, the first of which is for U.S. Highway 101, a vital interregional highway along the coast of California, and through Ventura County near NBVC. The following strategies relate to any future travel demands and improvements to be made to U.S. Highway 101.

- *Manage future travel demand to maximize capacity for interregional and major regional trip volumes by supporting wise local land use decision-making and providing alternative transportation infrastructure and modes for regional trips.*
- *Continuous improvement of U.S.101 for increased interregional travel demand emphasizing goods movement, recreation, and lifeline needs.*

While this tool provides some guidance for regional coordination, it does not necessarily consider the impacts the military mission may have on this roadway nor does it identify or address impacts or improvements to the roadway that could impact the NBVC military mission.

Ventura County Congestion Management Program

This 2009 update of the Ventura County Congestion Management Program (CMP) includes supplementary performance measures that will improve the monitoring and enhancement of the multimodal transportation network. The CMP also creates a framework and structure within which counties establish their own specific policies and programs. To help provide a framework for the development of the CMP in Ventura County, VCTC developed policies and objectives to guide the original effort and the updates. The following policies from Chapter One are generally related to increased traffic that may result from an expansion at NBVC.

- F. *The California Department of Transportation (Caltrans) should assist local governments in managing congestion on the state highway system.*
- J. *To the extent feasible, existing deficiencies, and future impacts attributed to population growth independent of development, should be identified and taken into consideration when apportioning traffic mitigation costs.*

Chapter Seven of the CMP contains the Capital Improvements Program. The following are several of the near term improvements listed in the chapter that relate directly to any increased traffic that may result from an expansion at NBVC Port Hueneme or NBVC Point Mugu.

- Add HOV lanes on U.S. 101 from Mobil Pier Rd to the Ventura/SB County Line
- SR-23/US-101 Interchange Improvement Including U.S.-101 Mainline Improvements
- Adolfo Road Extension Easterly to Camarillo Springs Rd/U.S. 101
- Improve Interchange at Del Norte and U.S. 101
- Hueneme Rd from Oxnard City Limits to Rice Rd – Widen from 2 to 4 lanes

The CMP is generally a beneficial tool, but lacks specificity as to the impacts of military traffic, the impact of regional traffic on military facilities and appropriate measures to address related issues. Therefore, as a compatibility tool, the CMP is only partially effective at present.

Ventura County General Plan, Section 4.2 Transportation / Circulation

Within the Goals, Policies and Programs document of the Ventura County General Plan, Section 4.2 Transportation/ Circulation refers directly to the regional circulation network of Ventura County. This section of the general plan identifies several goals, policies and programs for several aspects of regional circulation such as roads and highways, airports and seaports. The following are goals and policies that relate generally to any possible constrained mobility or access from any expansion at NBVC:

Ensure that as discretionary development creates the need, existing roads within the Regional Road Network and Local Road Network are improved, and additional roads needed to complement the Regional Road Network and Local Road Network are constructed, so as to keep all such roads safe and functioning at an acceptable LOS.

The Public Works Agency will continue to coordinate with the Port of Hueneme-Oxnard Harbor District, the cities of Port Hueneme and Oxnard, and CalTrans to ensure an adequate road network is available to accommodate projected harbor related commerce.

As with the County's CMP, the General Plan's provisions are also non-specific with regard to military needs and impacts, and thus are only partially effective as a compatibility tool at present.

El Rio/ Del Norte Area Plan

The El Rio/ Del Norte Area Plan encompasses approximately 6,900 acres of unincorporated land northeast of the city of Oxnard. The plan provides specific policies concerning development in the area, some of which refer directly to circulation. Section 4.1 Transportation/ Circulation includes distinct goals and programs for the El Rio/ Del Norte area, one of which deals directly with future road improvements.

The Public Works Agency will seek to revise the Reciprocal Traffic Mitigation Agreement with the City of Oxnard to fund all necessary road improvements within each respective jurisdiction, including but not limited to the U.S. 101 overpasses (e.g., Rice Road, Rose Avenue).

While this tool may provide some guidance for regional coordination on transportation improvements and is a good start in the way of military compatibility, it does not necessarily consider the impacts the military mission may have on this roadway in the areas around NBVC Port Hueneme or NBVC Point Mugu, nor does it identify or address impacts or improvements to regional transportation infrastructure that could have impact on the NBVC locations.

City of Camarillo General Plan, Section 5 Circulation

The City of Camarillo General Plan includes a circulation element. Several goals and objectives are generally relevant to any expansion at NBVC, and while they may not reference military use or compatibility it is important to note that these goals encompass several roadway networks that are used by NBVC.

City of Oxnard General Plan, Section 4.4 Circulation and Section 7 Military Compatibility

The Oxnard General Plan was adopted in October 2011. The circulation and military compatibility elements contains these following goals that are relevant to possible constraints on mobility or access due to any expansion at NBVC.

ICS 2.2 Improved Port of Hueneme Access: Continue to improve access to the Port of Hueneme and between the Port and the Ventura Freeway.

ICS 3.4 Roadway Design/101 Freeway Capacity: Review the potential addition of auxiliary lanes or lane expansion to increase roadway width and number of lanes, where feasible, in order to mitigate traffic congestion and improve level of service.

MC 4.3 Utilities and Services: Request and consider the projected need for additional utilities and other municipal services by NBVC installations in the development of new infrastructure plans.

These provisions are excellent and assuming they are used to guide the community's capital improvement plans and related funding, they are very beneficial tools.

City of Port Hueneme General Plan, Section C Circulation / Infrastructure

The Port Hueneme General Plan also includes the mandated element for circulation/ infrastructure. The circulation element contains these following goals that relate directly to roadway capability and military compatibility in regards to any future expansion at NBVC.

Policy 1-2: The City will continue to work closely with the Navy and the Port District to ensure circulation system improvements are implemented to the mutual benefits of the three jurisdictions.

Policy 4-1: Explore the feasibility of access through the Naval CBC to connect Pleasant Valley Road with Victoria Avenue, especially with regard to harbor-related traffic and in a manner which will not jeopardize naval operations (Coastal Act/30210, 212-5).

Policy 4-4: Work with the Oxnard Harbor District, City of Oxnard, Ventura County and CALTRANS to expedite completion of the Rice Avenue bypass to Port Hueneme Road for Port access (Coastal Act/30254, 30210-21 2-5).

As with the Oxnard City General Plan, these provisions also clearly demonstrate intent to work in collaboration with the military on transportation issues.

Southern California Association of Governments Plans

The SCAG is a Joint Powers Authority of local jurisdictions that voluntarily convene to discuss regional issues. Under federal Law, SCAG is a Metropolitan Planning Organization (MPO) and under state law, a Regional Transportation Planning Agency. SCAG has two major documents that are of

importance to circulation in Ventura County and the surrounding areas, the SCAG Regional Comprehensive Plan and the SCAG Regional Transportation Plan. While both of these documents are important to regional transportation and circulation, neither specifically addresses military compatibility. Therefore at present, these SCAG documents are considered insufficient as tools for military compatibility.

National Environmental Protection Act / California Environmental Quality Act

As with any major expansion of federal facilities, the NBVC would be required to undergo an environmental assessment of the proposal. For a federal action, this would be conducted under NEPA. If the project has a state component (such as changes to the California National Guard facility), review under CEQA may also be required.

These assessments evaluate a comprehensive set of factors, including air quality and circulation. Before a determination or decision is made about expansion of facilities, these public processes would provide information on alternatives considered, impacts assessed, impact findings, and any potential mitigations proposed to address significant impacts.

5.19. Safety

Safety zones are areas in which development should be more restrictive, in terms of use and concentrations of people, due to the higher risks to public safety. Issues to consider include aircraft accident potential zones, weapons firing range safety zones, and explosive safety zones.

Key Terms

Accident Potential Zone I (APZ I). APZ I is an area beginning at the end of each clear zone (see definition below) and continuing out to a length of 5,000 feet long by 3,000 feet wide. APZ I follows a curved shape to reflect the predominant flight tracks, and can even split to reflect differences in standard approaches/departures and closed pattern tracks. This area has a lower potential for accidents and therefore has less restrictive development restrictions recommended.

Accident Potential Zone II (APZ II). APZ II is an area that begins at the end of each APZ I and extends an additional 7,000 feet long by 3,000 feet wide. This APZ can also be curved as the flight tracks are considered in designating this APZ. Again, the accident potential in this area reduces further, and with this, some additional development types are allowed.

Captive Carry. Flight tests allow for in-flight testing such as the collection of telemetry for post-flight analysis, verification of proper control room telemetry displays and simulation of all the test activities that will occur in later air-launched flight tests.

Clear Zone (CZ). The CZ begins at the end of each runway measuring 1,500 feet wide (the same width as the primary surface of the runway) and extending outward in a fan-shape to a length of 3,000 feet from the end of each runway. The fan-shape of this zone flares to a width of 2,284 feet wide at the end of the zone. This is the area has the highest potential of an aircraft incident (but again, a very low probability). As the name reflects, this area should be kept clear of all structures, including fences.

Explosive safety quantity distance (ESQD). ESQD arcs are calculated to express all areas where it has been identified that there is a potential safety risk should an unlikely explosion occur related to the storage of explosive materials or munitions.

Government Lot Acceptance Tests (GLAT). A government program for guided missiles that requires completion of a maximum of six mirror landings during GLAT Captive Flight Profiles ("GLAT flights").

Technical Background

Military installations often engage in activities or contain facilities that, due to public safety concerns, require special consideration by local jurisdictions when evaluating compatibility. It is important to regulate land use near military airfields in order to minimize damage from potential aircraft accidents and to reduce air navigation hazards. To help mitigate potential issues, the Department of Defense (DOD) has delineated Clear Zones (CZ) and Accident Potential Zones (APZ) in the vicinity of airfield runways. The APZ is usually divided into APZ I and APZ II. Each zone was developed based on the statistical review of aircraft accidents. Studies show that most mishaps occur on or near the runway, predominately along its extended centerline.

Issues Assessment

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| Issue SA-1 | <p>Increased Potential for BASH Incidents <i>Associated with: NBVC Point Mugu</i></p> <p>There are several land uses near the NBVC Point Mugu's airfield that have the potential to increase BASH incidents. They include but are not limited to the following:</p> <ul style="list-style-type: none">■ Duck Club activities;■ Wetlands; and■ Wetland and other habitat restorations or new establishments;■ Levees and plantings that attract birds;■ Changes in land use. |
|-----------------------|--|

Bird aircraft strike hazard (BASH) is a very serious concern for the military. Bird aircraft strikes can cause significant damage to aircraft and in some cases, may render aircraft completely irreparable.

NBVC Point Mugu is located adjacent to the wetlands of Mugu Lagoon. Wetlands are very attractive habitat for bird species as the habitat provides breeding and nesting sites and a source food, water, and shelter.

In addition to the environment being ideal for waterfowl and other bird species, there are recreational activities such as duck hunting that occur near the NBVC Point Mugu airfield. Two game preserves are located immediately west of NBVC Point Mugu. The game preserves use various techniques to attract birds to the site including providing habitat and food sources and building levee supported ponds. To minimize hunting pressure, hunting only occurs during Wednesdays and Saturdays.

Changes in land use can also have an effect on bird populations in the area. Land use types including sanitary landfills and dumps, recreation, and

agriculture can attract birds while encroaching development can drive birds to open spaces of landing strips.

This increase in bird population in vicinity of the base increases opportunities for BASH related incidence. To maintain mission-critical aviation activities on base, it is crucial to control bird populations to not have adverse effects on aircraft or their pilots.

Findings

- While the Navy's BASH Plan provides a protocol and a measurement of management when conditions are high risk for BASH incidents, it does not address or even identify the immediate concern of the duck clubs / reserves immediately adjacent to the airfield.
- The Ventura County Zoning Ordinance does not consider military compatibility as it relates to BASH incidents and the prevention of BASH, nor does it address the concern of the duck clubs / reserves immediately adjacent to the airfield.

Existing Tools

Bird-Aircraft Strike Hazard (BASH) Plan

NBVC updated their BASH Plan in 2012. NBVC BASH Plan takes into account the various elements which make NBVC Point Mugu attractive to large populations of birds. Section 2.4 of the BASH Plan is dedicated to Wildlife Hazards outside of the base. These hazards include Calleguas Creek, the Oxnard Drainage Ditch, Mugu Lagoon, the Point Mugu and Ventura County Game Preserves, and typical agricultural uses.

The BASH Plan includes various land management techniques to help control the bird population surrounding NBVC. Land Management techniques include controlling grass length and removing possible perching habitat. Wildlife Exclusion techniques are also put forward including pest control to decrease the availability of food for bird populations and demolition of unused buildings to discourage shelter use by bird populations.

The BASH Plan also designates various responsibilities to different parties to ensure the goals of the BASH plan are met. For example, the Bird Hazard

Working Group is a civilian/military group that discusses wildlife hazards and solutions to various problems. The NBVC Environmental Division develops natural resource management strategies and ensures the BASH program is consistent with the INRMP. These and additional groups all work together to ensure the BASH plan is working to ensure military compatibility with the local natural resources.

Integrated Natural Resource Management Plan (INRMP)

The INRMP discusses BASH as part of Chapter 3.4.4.1 Bird/Animal Aircraft Strike Hazard. This Chapter discusses current efforts by the BASH Plan to reduce adverse effects to bird and animal populations at NBVC Point Mugu. While this document does have a focus on adverse effects to wildlife populations, management strategies exist regarding BASH. The following objective is included under Management Strategies of Chapter 3.4.4.1:

Objective: Minimize BASH impacts to migratory birds and raptors and their habitats to the maximum extent feasible, while reducing BASH hazards.

The INRMP is not a tool to directly manage BASH incidents. However, the document does ensure some level of compatibility to reduce BASH and therefore is an adequate supplemental tool.

Ventura County Zoning Ordinance

The Ventura County Zoning Ordinance designates property surrounding NBVC Point Mugu as Agriculture or Open Space. The Zoning Ordinance allows military compatible uses within Agriculture and Open Space designations but also allows for potentially incompatible uses such as organic composting and waste disposal by way of conditional use permits. The Zoning Ordinance does not include military compatibility as one of the necessary findings for a conditional use permit. Additionally, no coordination exists regarding projects that are proposed in the vicinity of NBVC. These factors could lead to oversights that harm mission-critical activity.

Therefore, the Ventura County Zoning Ordinance does not consider military compatibility with regard to protecting against BASH incidents.

Issue SA-2

Creation of New Wetlands near Point Mugu

Associated with: NBVC Point Mugu

Development of new wetlands in the vicinity of the NBVC Point Mugu airfield may increase BASH incidence in the area.

The creation of additional tidal and/or inland wetlands is often used as a means of mitigating resource impacts associated with development. In issuing various environmental permits and certifications, Federal, State and/or municipal regulatory agencies may attach conditions mandating that the permit holder offset impacts. In fact, depending on the extent of the permitted impacts, the area of required “new” wetlands compared to impacted or destroyed wetlands might be substantially higher.

Although conditions must be favorable to wetland creation (and sustaining their functions over time) and given that direct impacts to existing wetlands are typically only permitted after the consideration of all prudent and feasible alternatives, considering NBVC Point Mugu is located adjacent to the wetlands of Mugu Lagoon, there is a possibility of the creation of more expansive wetlands in the area.

With the environment being ideal for waterfowl and other bird species, the creation of new wetlands in the vicinity would increase possible incidence of Bird Air-Strike Hazards (BASH) in the area. According to the BASH Plan from 2012, since 1980, there have been seventeen damaging wildlife/aircraft strikes at NBVC Point Mugu. The cumulative cost of damage from these wildlife/aircraft strikes is over \$84 million. To maintain safe aviation activity on base, and to keep costs down from BASH incidence, it is critical to control the development of new wetlands, and by association, their bird populations.

Findings

- There are pros and cons with wetland restoration relative to encroachment. While existing jurisdiction and agency tools address the opportunity for restoration of wetlands in the JLUS Study Area, these plans do not consider the impacts the wetlands will have on the military mission or civilian aviation operations relative to BASH. At the same time, protection of open space resources, such as wetlands, can be valuable tools in protecting lands near the installation from development.

Existing Tools

Integrated Natural Resource Management Plan (INRMP)

The INRMP discusses wetlands as a major component of ecosystems management in Section 3.3.1 Marine and Wetland Communities. The plan identifies that of the approximately 2,140 acres of NBVC Point Mugu, almost 50 percent is designated as wetlands. This section of the report subsequently states that drainage ditches on the base also support freshwater wetlands, while other freshwater wetlands have developed in areas where tidal influence is insufficient for salt march development.

Management strategies for wetland communities are discussed in Section 3.3.1.5 Jurisdictional Waters-Wetlands Management. This section contains Wetland Restoration and Mitigation Banking strategies at NBVC Point Mugu as well as a myriad of ecological issues and concerns. The following is the major goal of the Wetland Mitigation Bank.

“The principal goal of the bank is to sustain no net loss of wetlands and maintain functional wetland habitat at NBVC Point Mugu, while providing an efficient and flexible mitigation credit and debit system.”

The INRMP appears to at least provide an initial basis for developing a more comprehensive treatment of the issue and potential data needs, communication procedures and other related measures.

California State Coastal Conservancy Strategic Plan

The updated 2013 SCC Strategic Plan details several coastal regions of California, one of which is the South Coast region of California which includes Ventura County and NBVC. The plan describes the characteristics of the South Coast and how much of the wetlands and flood plains have been destroyed for urban development and flood control. The SCC Strategic Plan also states that the Conservancy has invested resources in support of the Southern California Wetlands Recovery Project, a program that would improve coordination, resources and advance the recovery of wetlands in the region. While any recovery of wetlands in the NBVC Point Mugu vicinity would be positive for the ecosystem and the coastline, it would allow for an increase in habitat restoration and in turn a higher chance for BASH incidences. One of the sets of goals located within the Strategic Plan is directly related to the conservation of coastal resources. Several of the goals and strategies are related to the addition and conservation of wetlands and the impacts that may come from those actions, they are:

Goal 4: Acquire significant coastal resource properties. (2007)

- *Protect resource lands that: 1) connect existing public and other protected lands to provide large, contiguous blocks; 2) protect habitat and wildlife corridors; 3) support regional plans (e.g., recovery plans for listed species); and 4) preserve scenic vistas and open space.*
- *Objective 4A: Protect 25,400 acres of significant coastal and watershed resource properties. 2,200 acres of which shall be located within the South Coast some of which will be within Ventura County and in proximity to NBVC Point Mugu.*

Goal 5: Restore and enhance biological diversity in coastal watersheds. (2007)

- *For identified key regional habitat types, concentrate on restoring systems that are of sufficient size and complexity to help ensure lasting ecological integrity.*

- *Objective 5A: Develop 28 plans for the restoration and enhancement of coastal habitats, including coastal wetlands and intertidal areas, stream corridors, dunes, coastal terraces, coastal sage scrub, redwood forest, oak woodlands, Douglas fir forests, and coastal prairie, and for prevention, eradication, or control of invasive species. 9 of these 28 plans shall be developed for the South Coast, at least one of which contains Ventura County and NBVC Point Mugu.*
- *Objective 5B: Restore and enhance 6,820 acres of coastal habitats including coastal wetlands and intertidal areas, stream corridors, dunes, coastal sage scrub, coastal terraces, redwood forest, oak woodlands, Douglas fir forests and coastal prairie. 1,300 acres of which will be located along the South Coast, and in the vicinity of Point Mugu.*

Goal 6: Improve water quality, habitat, and other coastal resources within coastal watersheds and the ocean. (2007)

- *Develop and implement projects to protect and restore riparian, coastal, and marine ecosystems, including projects to improve water quality, protect and restore fish and wildlife habitat, implement endangered species recovery plans, and restore coastal wetlands, floodplains, and watershed lands.*
- *Objective 6A: Develop 21 plans to preserve and restore coastal watersheds and create river parkways. 6 of these 21 plans will be conducted within the South Coast, at least one of which will encompass Ventura County and NBVC Point Mugu.*

The objectives of this Plan and related initiatives could help to further prevent encroachment, but conflict with the interest to limit BASH incidents.

City of Oxnard General Plan, Chapter 5 Environmental Resources

The city of Oxnard General Plan details several goals and policies that directly address wetlands within and around the area of NBVC Point Mugu. The

following are those goals and policies that could possibly deal with the creation, or at least the restoration, of wetlands.

Goal ER-2: Maintenance and enhancement of natural resources and open space.

- *ER 2.1 **Restoration of Ormond Beach Wetlands** Consider the California Coastal Conservancy's Ormond Beach Wetland Restoration Feasibility Study preferred Alternative 2U, "Restore Seasonally Open Wetland Habitats and Ponds (Unconstrained)" when reviewing planning and related entitlement applications, including but not limited, to the South Ormond Beach Specific Plan and in the update to the Oxnard Local Coastal Program (LCP). Include in the LCP update the complete remediation of the Halaco Superfund Site. (Same as Policy CD-22.1).*

Goal ER-3: Protected, restored, and enhanced of water-related habitats and their associated plant and wildlife species.

- *ER 3.1 **Preservation of Riparian Habitat** Require the preservation and enhancement of the riparian habitat along the Santa Clara River, Edison Canal, the McGrath Lake vicinity, and within the Ormond Beach wetlands.*

Like the SCC Strategic Plan, these objectives are also in direct conflict with the military's need to limit BASH incidents.

SCAG Regional Comprehensive Plan, Open Space and Habitats Chapter

In their Regional Comprehensive Plan from 2008, the Southern California Association of Governments had briefly discussed goals and policies regarding planning for wetlands and their restoration in their Natural Lands Action Plan. The following are those policies and strategies regarding wetlands along the coast in Southern California, all of which are directly related to the wetlands near NBVC Point Mugu and Mugu Lagoon.

OSN-5 SCAG should support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.

OSN-8 SCAG should support regional efforts to identify and cooperatively plan for wetlands to facilitate both sustaining the amount and quality of wetlands in the region and expediting the process for obtaining wetlands permits.

While there are no goals here that directly mention the creation of new wetlands it is important to note that all of these policies and strategies discuss the restoration of existing wetlands and therefore can possibly contribute to the accumulation or collection of additional wetlands. In addition, compliance or consistency with Plans (such as a regional plan) is often requirements or criteria associated with grant applications for environmental mitigation, including possibly wetland creation or restoration. Therefore, to the extent these plans, programs and initiatives are in conflict with military objectives and do not mention or consider those objectives, they are not effective tools for compatibility.

| | |
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| Issue SA-3 | Weapons Systems Testing <i>Associated with: NBVC Point Mugu and NBVC San Nicolas Island</i> New energy-directed weapons systems currently being tested in the Pacific associated with SNI which may impact commercial sea lane activities and marine life. |
|-----------------------|---|

Energy-directed weapons systems release energy in an aimed direction without the means of a projectile, while transferring energy to a specific target for a desired effect. Aside from uses as potential missile defense, directed energy technology has also been shown to stop or disable moving cars, unmanned aerial vehicles (UAVs), jet skis and electronic devices such as mobile phones as well as negatively impacting biological resources such as marine and plant life.

NBVC Point Mugu is equipped with two runways used to perform a variety of operations including Gun Firing and Bombing and even Aerial Mining Exercises (installation of navy mines in water). These operations combined with the Sea Range assets enable NBVC Point Mugu to perform testing and evaluation of weapons and missile systems. This allows weapons to be assessed under natural conditions expected during Fleet operations. NBVC San Nicolas Island's (SNI) primary mission is the testing and evaluation of weapons systems and large-scale UAVs. If uncoordinated, these military missions and operations may adversely impact commercial sea lane activities in the Pacific as well as marine life within the land and sea range used by NBVC.

Findings

- The 2002 EIS for the Point Mugu Sea Range identifies the procedures to which the NBVC Point Mugu Weapons Test Squadron performs to ensure the Sea Range is cleared of vessels prior to any weapons systems testing is executed.

Existing Tools

Naval Base Ventura County Activity Overview Plan, 5.3.2.2. Man-Made Constraints

The Activity Overview Plan for Naval Base Ventura County details several issues and constraints associated with man-made systems, locations and operations and furthermore, classifies these constraints into specific "areas and zones". The following areas and zones are integral to the testing of weapons at NBVC Point Mugu or NBVC SNI.

Electromagnetic Radiation (EMR) Hazard Zones: Communications and electronic devices such as radar, electronic jammers, and other radio transmitters produce EMR. A hazard exists when transmitting equipment generates electromagnetic fields of sufficient magnitude to induce currents or voltages that trigger electro-explosive devices in ordnance, cause harmful effects to people or wildlife, or create sparks that can ignite flammable substances in the area. Hazards are reduced or eliminated by establishing minimum distances from EMR emitters for ordnance, people, and fuels. Hazards of Electromagnetic Radiation to Ordnance (HERO), Hazards of

Electromagnetic Radiation to Personnel (HERP), and Hazards of Electromagnetic Radiation to Fuel (HERF) have been determined for EMR sources based on frequency and power output.

Although there are no goals or policies given in this plan to reduce or mitigate the impact of weapons testing on commercial sea routes or marine life, these areas and the issues they pose are still relevant.

Final Environmental Impact Statement / Overseas Environmental Impact Statement Point Mugu Sea Range 2002

The EIS provides for the various procedures performed by military personnel prior to executing a weapons testing. The Weapons Test Squadron at NBVC Point Mugu provides sea range surveillance and range clearance for the outer sea range beyond the range of the communication sites at Point Mugu (Radar Surveillance Sites at Channel Islands and Laguna Peak). This squadron uses the NP-3D aircraft to also act as an airborne platform to collect data, telemetry, and relay. The following procedures are executed by the squadron in the NP-3D aircraft before any weapons systems testing is conducted on the Sea Range:

1. Takeoff from Point Mugu and proceed to the selected area of the Sea Range;
2. Conduct a radar and visual search of the planned test area from 4,000 feet (1,220 m) MSL (this altitude provides about 100 nautical miles [NM] [190 km] of radar coverage);
3. Upon contact with a surface vessel, attempt to communicate with the captain or crew via FM radio;
4. Warn the crew of the impending test and advise them to move out of the affected test area;
5. If unable to establish radio contact, the aircraft descends to low altitude over the boat (approximately 500 feet [150 m]);

6. Attempt to get the attention of the crew by visual means while still trying to establish radio contact;
7. Advise the crew of the hazards of their position on the Sea Range and monitor the vessel as it leaves the area;
8. Communicate range clearance to Range Operations.

If the area cannot be cleared, then the testing is delayed or moved to an area that is clear.

Point Mugu Sea Range Plan

The Point Mugu Sea Range Plan updates the Draft Point Mugu Range Management Plan developed in the late 1990s. All information was analyzed and used to assess the suitability of sea range processes related to the commercial and sustainability foundations.

Chapter 6 Environmental Stewardship, Environmental Review of the Sea Range EIS

The environmental review process is required by NEPA and ensures that all operations are evaluated for potential impact to the environment. This review occurs during the test planning process and is performed in accordance with NAVAIRINST 3960.4B, Project Test Plan Policy and Guide for Testing Air Vehicles, Air Vehicle Weapons (AVW), and Air Vehicle Installed Systems (AVIS), which requires that environmental analysis be performed for all NAVAIR projects. While energy-directed weapons may not be considered the same as AVW, this description of AVW and AVIS should somewhat encompass energy-directed weapons as these weapons can be associated with and installed on aircrafts and UAV's.

Environmental Assessment of Laser Testing & Training Naval Air Warfare Center Weapons Division, Sea Range, Point Mugu, CA

The Environmental Assessment/Overseas Environmental Assessment (EA/OEA) from 2010 addresses the potential environmental impacts of the proposed laser testing and training on the Point Mugu Sea Range, including components within as well as outside of the 12 nautical mile (nm) limit of the U.S. Territorial Seas.

2.1.8 Wildlife Protection

The path from the laser to the target would be monitored by observers with binoculars or remote camera as necessary to ensure that the laser is not fired if and when wildlife is within the NHZ identified in the RHA. Laser targets mounted on floating structures would not be placed on horizontal surfaces where sea lions might haul out, and surfaces near a target may have “bird spikes” (www.nixalite.com) attached to discourage perching.

4.3.2.2. Marine Biological Resources

Before a laser can be fired, the Navy will require as standard procedure that no persons, wildlife, reflective surfaces, or non-target obstructions of any sort are present within the hazard area (which is specific to the type of laser being used) between the laser and the target.

There are a set of alternative actions within the EA/OEA that supplement the preferred action of continuing energy directed weapons testing. Alternative 1 would include lasers on airborne, ocean surface, or land (SNI) platforms aimed at targets on SNI; and lasers on SNI aimed at airborne or ocean surface targets. Alternative 2 would limit activities to airborne or ocean surface platforms and targets on and over the open ocean environment; no targets or laser platforms would be placed on SNI. The following are biological resource mitigation measures for both alternatives.

4.3.4 Alternative 1

Biological resources impacts under the Alternative 1 laser testing and training program would be the same on SNI, i.e. terrestrial biological resources, as for the proposed action. Potential impacts on marine biological resources would be similar to those of the proposed action in the near shore environment, but less in the open ocean environment. The same restrictions to operations and precautions described under the proposed action would be followed under Alternative 1; therefore, this alternative would have no significant impacts on biological resources.

4.3.5 Alternative 2

Biological resources impacts under the Alternative 2 laser testing and training program would be less than those analyzed under the proposed action. No

impacts on terrestrial resources would occur, and vessel and aircraft activity would be widely dispersed and unlikely to encounter areas of concentrated breeding or feeding for marine species. Alternative 2 would have no significant impacts on biological resources.

Implementation of the proposed action or either action alternative, in conjunction with other past, present, and foreseeable projects, would not substantially alter or otherwise affect marine habitats and species in the vicinity of the proposed action. Therefore, there would be no cumulative impacts on marine biological resources.

Issue SA-4

Mobile Home Park in Aircraft Safety Zones

Associated with: NBVC Point Mugu

A mobile home park is located in accident potential zone (APZ) I, where aircraft fly at lower altitudes and decreased speeds to perform approach-departure activities. FAA and DOD policy guidance (DoDI 4165.57) states that residential development should be limited to very low densities due to the increased potential for an aircraft accident in this area.

More intense residential densities are not permitted in Accident Potential Zones because of increased safety concerns in these areas. APZs include the area where aircraft are approaching or departing the base. These areas are more likely to be the site of an aircraft accident. Intense residential densities are not permitted to decrease the loss of life and property in the case of an aircraft accident.

As shown in Figure 5.19-1, NBVC Point Mugu is primarily surrounded by agricultural exclusive and open space uses within the APZs, which are typically not a concern. There are acres designated as agriculture exclusive within APZ I of the northeastern APZ I that is incompatible by the AICUZ recommended land uses for aircraft safety zones.

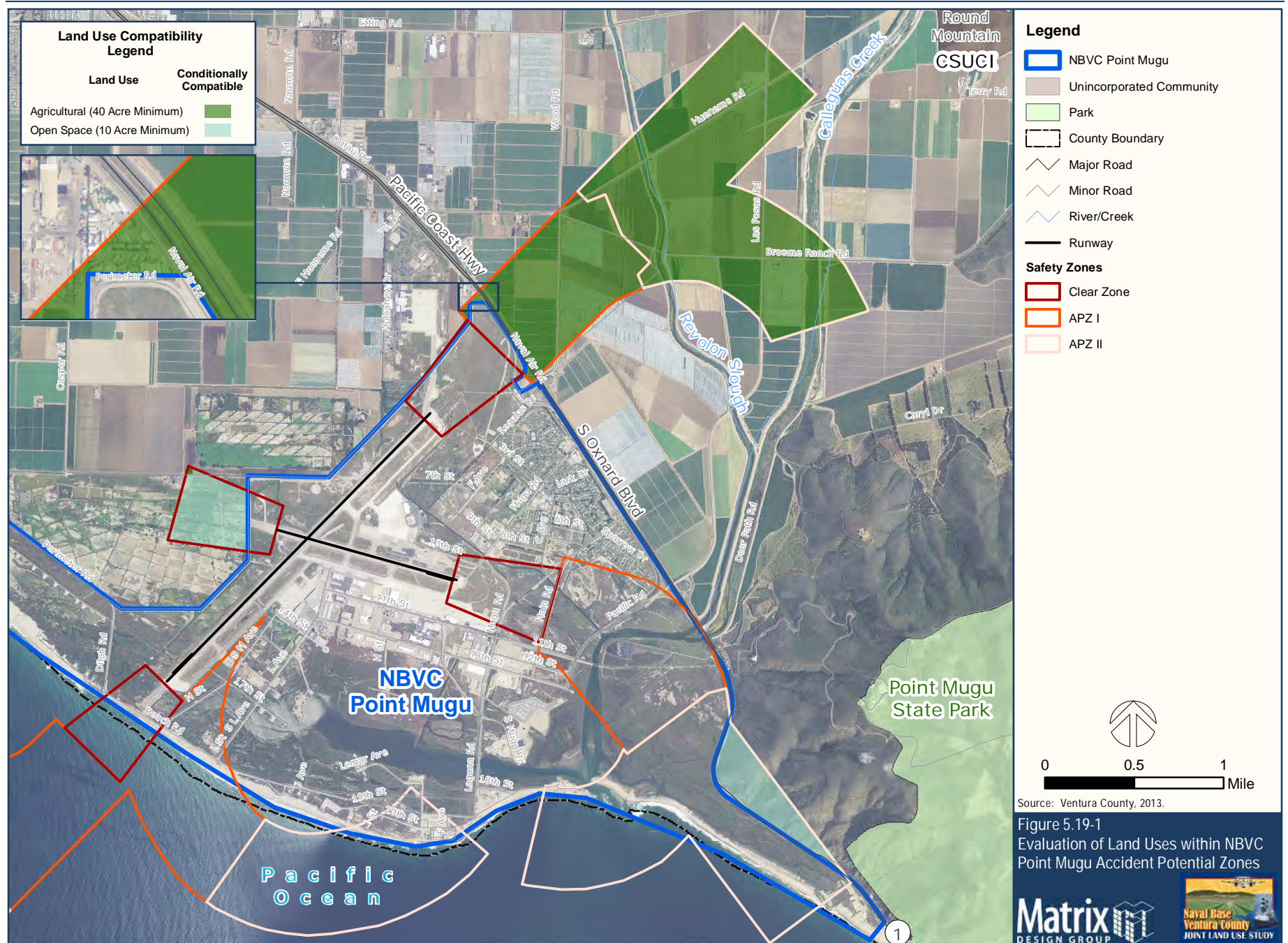


Table 5.19-1 identifies the uses that are recommended and not recommended for the clear zones (CZs) and the APZs.

Figure 5.19-2 illustrates the zoning around NBVC Point Mugu's APZs. This figure illustrates the location of the nonconforming mobile home park use that is located adjacent to Runway 25 within the APZ boundary. The mobile home park is located within an agricultural exclusive zoning district, this use is considered incompatible because of the actual uses on the ground. Mobile homes are not compatible with aviation operations, especially in the aircraft safety zones. Mobile homes are not constructed with materials that effectively mitigate sound transmission from external sources; therefore this actual use on this parcel of land zoned for open space is incompatible.

Findings

- While the Navy has identified actions to address the mobile home park concern in the aircraft safety zones, the County's zoning ordinance does not consider military compatibility in this situation.

Existing Tools

Air Installations Compatible Use Zones (AICUZ)

The 1992 AICUZ identifies the nonconforming mobile home park as an incompatible use. The implementation chapter of the AICUZ states that the military will ensure that incompatible land uses do not develop into a more significant problem. Table 5.19-1 shows the recommended and non-recommended land uses for the APZs of an active military airfield. Should the mobile home park become a greater issue for NBVC, the AICUZ includes military level strategies to address the problem. Some of these strategies include: land exchange, Navy easement acquisition, leaseholds, and fee title acquisitions. By identifying the incompatible use and putting tools forward to ensure the incompatibility does not grow larger, NBVC AICUZ is taking proactive steps to ensuring future support of mission-critical activities.

Table 5.19-1 AICUZ Recommended Land Uses for Accident Potential Zones

| SLUCM No. | Land Uses | Accident Potential Zones | | | |
|-----------|--|--------------------------|-------|----------------|-------------------------|
| | | Clear Zone | APZ I | APZ II | Density |
| 11 | Residential | | | | |
| 11.11 | Single units: detached | N | N | Y ² | Max. ² Du/Ac |
| 11.12 | Single units: semi-detached | N | N | N | |
| 11.13 | Single units: attached row | N | N | N | |
| 11.21 | Two units: side-by-side | N | N | N | |
| 11.22 | Two units: one above the other | N | N | N | |
| 11.31 | Apartments: walk-up | N | N | N | |
| 11.32 | Apartment: elevator | N | N | N | |
| 12 | Group quarters | N | N | N | |
| 13 | Residential hotels | N | N | N | |
| 14 | Mobile home parks or courts | N | N | N | |
| 15 | Transient lodgings | N | N | N | |
| 16 | Other residential | N | N | N | |
| 20 | Manufacturing³ | | | | |
| 21 | Food and kindred products; manufacturing | N | N | Y | Max. FAR 0.56 in APZ II |
| 22 | Textile mill products; manufacturing | N | N | Y | Max. FAR 0.56 in APZ II |

| SLUCM No. | Land Uses | Accident Potential Zones | | | |
|-----------|---|--------------------------|-------|--------|--|
| | | Clear Zone | APZ I | APZ II | Density |
| 23 | Apparel and other finished products; products made from fabrics, leather and similar materials; manufacturing | N | N | N | |
| 24 | Lumber and wood products (except furniture); manufacturing | N | Y | Y | Max. FAR 0.28 in APZ I, 0.56 in APZ II |
| 25 | Furniture and fixtures; manufacturing | N | Y | Y | Max. FAR 0.28 in APZ I, 0.56 in APZ II |
| 26 | Paper and allied products; manufacturing | N | Y | Y | Max. FAR 0.28 in APZ I, 0.56 in APZ II |
| 27 | Printing, publishing, and allied industries | N | Y | Y | Max. FAR 0.28 in APZ I, 0.56 in APZ II |
| 28 | Chemicals and allied products; manufacturing | N | N | Y | |
| 29 | Petroleum refining and related industries | N | N | N | |

| SLUCM No. | Land Uses | Accident Potential Zones | | | |
|-----------|---|--------------------------|----------------|--------|--|
| | | Clear Zone | APZ I | APZ II | Density |
| 30 | Manufacturing³ (Continued) | | | | |
| 31 | Rubber and miscellaneous plastic products; manufacturing | N | N | N | |
| 32 | Stone, clay, and glass products; manufacturing | N | N | Y | Max. FAR 0.56 in APZ II |
| 33 | Primary metal products; manufacturing | N | N | Y | Max. FAR 0.56 in APZ II |
| 34 | Fabricated metal products; manufacturing | N | N | Y | Max. FAR 0.56 in APZ II |
| 35 | Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks | N | N | N | |
| 39 | Miscellaneous manufacturing | N | Y | Y | Max. FAR 0.28 in APZ I, 0.56 in APZ II |
| 40 | Transportation, Communication, and Utilities^{3, 4} | | | | |
| 41 | Railroad, rapid rail transit, and street railway transportation | N | Y ⁶ | Y | Max. FAR 0.28 in APZ I, 0.56 in APZ II |

| SLUCM No. | Land Uses | Accident Potential Zones | | | |
|-----------|---------------------------------|--------------------------|----------------|--------|--|
| | | Clear Zone | APZ I | APZ II | Density |
| 42 | Motor vehicle transportation | N | Y ⁶ | Y | Max. FAR 0.28 in APZ I, 0.56 in APZ II |
| 43 | Aircraft transportation | N | Y ⁶ | Y | Max. FAR 0.28 in APZ I, 0.56 in APZ II |
| 44 | Marine craft transportation | N | Y ⁶ | Y | Max. FAR 0.28 in APZ I, 0.56 in APZ II |
| 45 | Highway and street right-of-way | Y5 | Y ⁶ | Y | Max. FAR 0.28 in APZ I, 0.56 in APZ II |
| 46 | Automobile Parking | N | Y ⁶ | Y | Max. FAR 0.28 in APZ I, 0.56 in APZ II |
| 47 | Communication | N | Y ⁶ | Y | Max. FAR 0.28 in APZ I, 0.56 in APZ II |

| SLUCM No. | Land Uses | Accident Potential Zones | | | |
|-----------|--|--------------------------|----------------|----------------|--|
| | | Clear Zone | APZ I | APZ II | Density |
| 48 | Utilities ⁷ | N | Y ⁶ | Y ⁶ | Max. FAR 0.28 in APZ I, 0.56 in APZ II |
| 48.5 | Solid waste disposal (landfills, incinerators, etc.) | N | N | N | |
| 49 | Other transportation, communication, and utilities | N | Y ⁶ | Y | See Note 6 Below |
| 50 | Trade | | | | |
| 51 | Wholesale trade | N | Y | Y | Max. FAR 0.28 in APZ I, 0.56 in APZ II |
| 52 | Retail trade – building materials, hardware and farm equipment | N | Y | Y | See Note 8 Below |
| 53 | Retail trade ⁹ – including shopping centers, discount clubs, home improvement stores, electronics superstores, etc. | N | N | Y | Max FAR 0.16 in APZ II |
| 54 | Retail trade – food | N | N | Y | Max FAR 0.24 in APZ II |

| SLUCM No. | Land Uses | Accident Potential Zones | | | |
|-----------|---|--------------------------|-----------------|-----------------|--|
| | | Clear Zone | APZ I | APZ II | Density |
| 55 | Retail trade – automotive, marine craft, aircraft, and accessories | N | Y | Y | Max. FAR 0.14 in APZ I, 0.28 in APZ II |
| 56 | Retail trade – apparel and accessories | N | N | Y | Max FAR 0.28 in APZ II |
| 57 | Retail trade – furniture, home, furnishings and equipment | N | N | Y | Max FAR 0.28 in APZ II |
| 58 | Retail trade- eating and drinking establishments | N | N | N | |
| 59 | Other retail trade | N | N | Y | Max FAR 0.16 in APZ II |
| 60 | Services | | | | |
| 61 | Finance, insurance and real estate services | N | N | Y | Max FAR 0.22 in APZ II |
| 62 | Personal services | N | N | Y | Office uses only. Max FAR 0.22 in APZ II |
| 62.4 | Cemeteries | N | Y ¹¹ | Y ¹¹ | |
| 63 | Business services (credit reporting; mail, stenographic, reproduction; advertising) | N | N | Y | Max FAR 0.22 in APZ II |

| SLUCM No. | Land Uses | Accident Potential Zones | | | |
|-----------|---|--------------------------|-------|--------|--------------------------------------|
| | | Clear Zone | APZ I | APZ II | Density |
| 63.7 | Warehousing and storage services ¹² | N | Y | Y | Max FAR 1.0 in APZ I, 2.0 in APZ II |
| 64 | Repair Services | N | Y | Y | Max FAR 0.11 in APZ I 0.22 in APZ II |
| 65 | Professional services | N | N | Y | Max FAR 0.22 in APZ II |
| 65.1 | Hospitals, nursing homes, Other medical facilities | N | N | N | |
| 66 | Contract construction services | N | Y | Y | Max FAR 0.11 in APZ I 0.22 in APZ II |
| 67 | Government services | N | N | Y | Max FAR 0.24 in APZ II |
| 68 | Educational services | N | N | N | |
| 68.1 | Child care services, child development centers, and nurseries | N | N | N | |
| 69 | Miscellaneous | N | N | Y | Max FAR 0.22 in APZ II |
| 69.1 | Religious activities | N | N | N | |
| 70 | Cultural, Entertainment and Recreational | | | | |
| 71 | Cultural activities | N | N | N | |

| SLUCM No. | Land Uses | Accident Potential Zones | | | |
|-----------|--|--------------------------|-----------------|-----------------|---|
| | | Clear Zone | APZ I | APZ II | Density |
| 71.2 | Nature exhibits | N | Y ¹³ | Y ¹³ | |
| 72 | Public assembly | N | N | N | |
| 72.1 | Auditoriums, concert halls | N | N | N | |
| 72.11 | Outdoor music shells, amphitheaters | N | N | N | |
| 72.2 | Outdoor sports arenas, spectator sports | N | N | N | |
| 73 | Amusements – fairgrounds, miniature golf, driving ranges; amusement parks, etc. | N | N | Y | |
| 74 | Recreational activities (including golf courses, riding stables, water recreation) | N | Y ¹³ | Y ¹³ | Max FAR 0.11 in APZ I 0.22 in APZ II |
| 75 | Resorts and group camps | N | N | N | |
| 76 | Parks | N | Y ¹³ | Y ¹³ | Max FAR 0.11 in APZ I 0.22 in APZ II |
| 79 | Other cultural, entertainment and recreation | N | Y ¹¹ | Y ¹¹ | Max FAR 0.11 in APZ I 0.22 in APZ II |

| SLUCM No. | Land Uses | Accident Potential Zones | | | |
|--------------|---|--------------------------|--------------------|--------------------|---|
| | | Clear Zone | APZ I | APZ II | Density |
| 80 | Resource Production and Extraction | | | | |
| 81 | Agriculture (except live stock) | Y ⁴ | Y ¹⁴ | Y ¹⁴ | |
| 81.5 81.7 | Livestock farming and breeding | N | Y ^{14,15} | Y ^{14,15} | |
| 82 | Agriculture related activities | N | Y ¹⁴ | Y ¹⁴ | Max FAR of 0.28 in APZ I; 0.56 in APZ II, no activity which produces smoke, glare, or involves explosives |
| 83 | Forestry activities ¹⁶ | N | Y | Y | Max FAR of 0.28 in APZ I; 0.56 in APZ II, no activity which produces smoke, glare, or involves explosives |

| SLUCM No. | Land Uses | Accident Potential Zones | | | |
|-----------|---|--------------------------|-----------------|-----------------|---|
| | | Clear Zone | APZ I | APZ II | Density |
| 84 | Fishing activities ¹⁷ | N ¹⁷ | Y | Y | Max FAR of 0.28 in APZ I; 0.56 in APZ II, no activity which produces smoke, glare, or involves explosives |
| 85 | Mining activities ¹⁸ | N | Y ¹⁸ | Y ¹⁸ | Max FAR of 0.28 in APZ I; 0.56 in APZ II, no activity which produces smoke, glare, or involves explosives |
| 89 | Other resource production or extraction | N | Y | Y | Max FAR of 0.28 in APZ I; 0.56 in APZ II, no activity which produces smoke, glare, or involves explosives |

| SLUCM No. | Land Uses | Accident Potential Zones | | | |
|-----------|---------------------------|--------------------------|-----------------|-----------------|---------|
| | | Clear Zone | APZ I | APZ II | Density |
| 90 | Other | | | | |
| 91 | Undeveloped land | Y | Y | Y | |
| 93 | Water areas ¹⁹ | N ¹⁹ | N ¹⁹ | N ¹⁹ | |

Source: Air Installations Compatible Use Zones, DOD Instruction 4165.57, 2011.

Y (Yes) – Land uses and related structures are normally compatible without restriction

N (No) – Land use and related structures are not normally compatible and should be prohibited.

Yx – Yes with restrictions. The land uses and related structures are generally compatible. However, see notes indicated by the superscript.

Nx – No with exceptions. The land uses and related structures are generally incompatible. However, see notes indicated by the superscript.

1. A “Yes” or a “No” designation for compatible land use is to be used only for general comparison. Within each, uses exist where further evaluation may be needed in each category as to whether it is clearly compatible, normally compatible, or not compatible due to the variation of densities of people and structures. In order to assist air installations and local governments, general suggestions as to FARs are provided as a guide to density in some categories. In general, land use restrictions that limit occupants, including employees, of commercial, service, or industrial buildings or structures to 25 an acre in APZ I and 50 an acre in APZ II are considered to be low density. Outside events should normally be limited to assemblies of not more than 25 people an acre in APZ I, and maximum assemblies of 50 people an acre in APZ II. Recommended FARs are calculated using standard parking generation rates for various land uses, vehicle occupancy rates, and desired density in APZ I and II. For APZ I, the formula is $FAR = 25 \text{ people an acre} / (\text{Average Vehicle Occupancy} \times \text{Average Parking Rate} \times (43560/1000))$. The formula for APZ II is $FAR = 50 / (\text{Average Vehicle Occupancy} \times \text{Average Parking Rate} \times (43560/1000))$.
2. The suggested maximum density for detached single family housing is two Du/Ac. In a planned unit development (PUD) of single family detached units where clustered housing development results in large

| SLUCM No. | Land Uses | Accident Potential Zones | | | |
|-----------|-----------|--------------------------|-------|--------|---------|
| | | Clear Zone | APZ I | APZ II | Density |

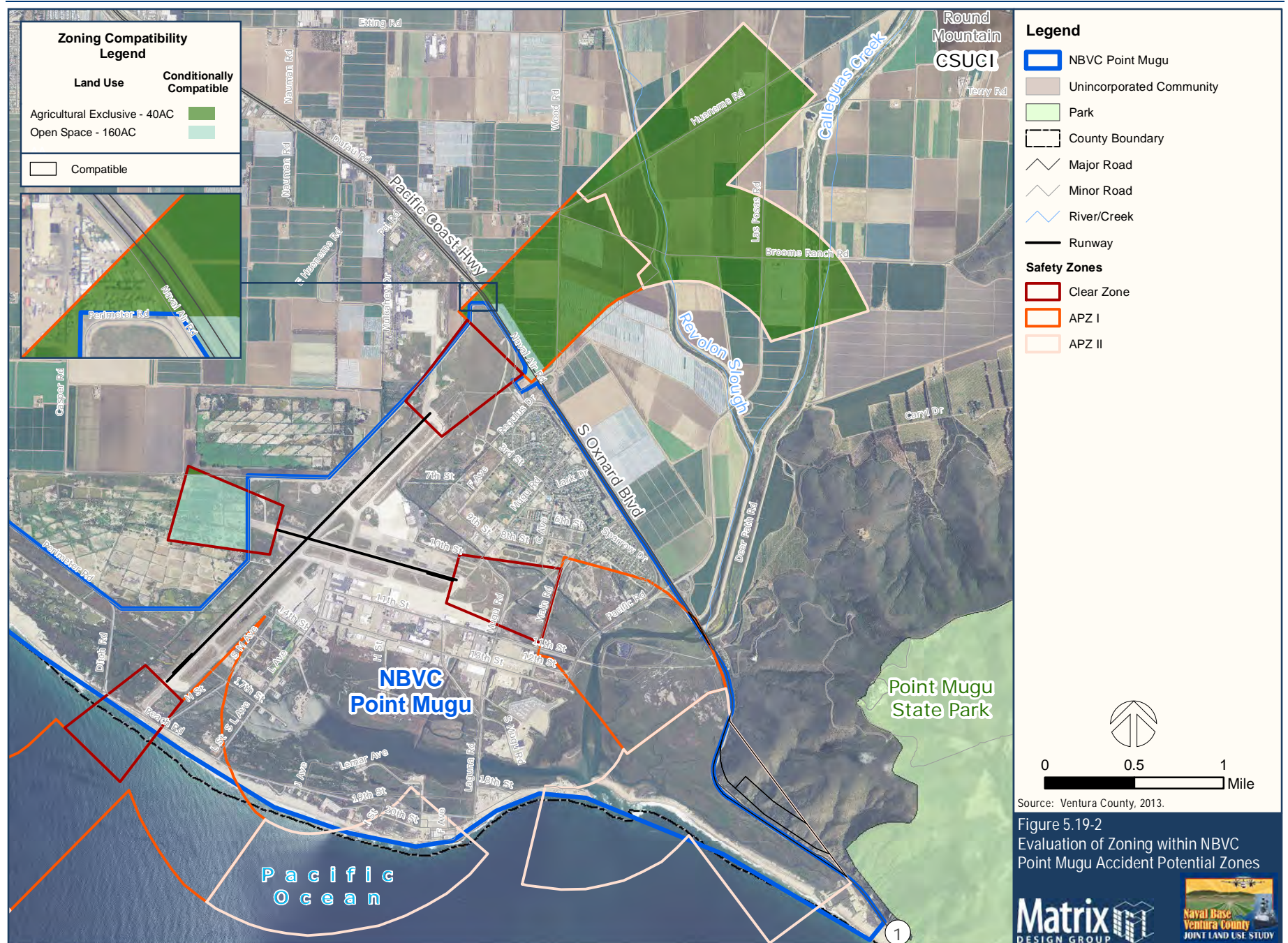
open areas, this density could possibly be increased slightly provided the amount of surface area covered by structures does not exceed 20 percent of the PUD total area. PUD encourages clustered development that leaves large open areas.

3. Other factors to be considered: Labor intensity, structural coverage, explosive characteristics, air-pollution, electronic interference with aircraft, height of structures, and potential glare to pilots.
4. No structures (except airfield lighting and navigational aids necessary for the safe operation of the airfield when there are no other siting options), buildings, or above-ground utility and communications lines should normally be located in Clear Zone areas on or off the air installation. The Clear Zone is subject to the most severe restrictions.
5. Rights-of-way for fenced highways, without sidewalks or bicycle trails, are allowed.
6. No above ground passenger terminals and no above ground power transmission or distribution lines. Prohibited power lines include high-voltage transmission lines and distribution lines that provide power to cities, towns, or regional power for unincorporated areas.
7. Development of renewable energy resources, including solar and geothermal facilities and wind turbines, may impact military operations through hazards to flight or electromagnetic interference. Each new development should to be analyzed for compatibility issues on a case-by-case basis that considers both the proposal and potentially affected mission.
8. Within SLUCM Code 52, maximum FARs for lumberyards (SLUCM Code 521) are 0.20 in APZ-I and 0.40 in APZ-II. For hardware, paint, and farm equipment stores, SLUCM Code 525, the maximum FARs are 0.12 in APZ I and 0.24 in APZ II.
9. A shopping center is an integrated group of commercial establishments that is planned, developed, owned, or managed as a unit. Shopping center types include strip, neighborhood, community, regional, and super-regional facilities anchored by small businesses, a supermarket or drug store, discount retailer, department store, or several department stores, respectively. Included in this category are such uses as big box discount clubs, home improvement superstores, office supply superstores, and electronics superstores. The maximum recommended FAR for SLUCM 53 should be applied to the gross

| SLUCM No. | Land Uses | Accident Potential Zones | | | |
|-----------|-----------|--------------------------|-------|--------|---------|
| | | Clear Zone | APZ I | APZ II | Density |

leasable area of the shopping center rather than attempting to use other recommended FARs listed in Table 1 under Retail or Trade.

10. Ancillary uses such as meeting places, auditoriums, etc., are not recommended.
11. No chapels or houses of worship are allowed within APZ I or APZ II.
12. Big box home improvement stores are not included as part of this category.
13. Facilities must be low intensity, and provide no playgrounds, etc. Facilities such as club houses, meeting places, auditoriums, large classes, etc., are not recommended.
14. Livestock grazing is a compatible land use, but feedlots and intensive animal husbandry are excluded. Activities that attract concentrations of birds creating a hazard to aircraft operations should be excluded.
15. Feedlots and intensive animal husbandry are included as compatible land uses.
16. Lumber and timber products removed due to establishment, expansion, or maintenance of Clear Zone lands owned in fee will be disposed of in accordance with applicable DOD guidance.
17. Controlled hunting and fishing may be permitted for the purpose of wildlife management.
18. Surface mining operations that could create retention ponds that may attract waterfowl and present bird/wildlife aircraft strike hazards (BASH), or operations that produce dust or light emissions that could affect pilot vision are not compatible.
19. Naturally occurring water features (e.g., rivers, lakes, streams, wetlands) are pre-existing, nonconforming land uses. Naturally occurring water features that attract waterfowl present a potential BASH. Actions to expand naturally occurring water features or construction of new water features should not be encouraged. If construction of new features is necessary for storm water retention, such features should be designed so that they do not attract water fowl.



Ventura County Zoning Ordinance

According to the Ventura County Zoning Ordinance, only commercial and industrial uses in Residential, Open Space, and Agricultural zones are amortized. All other uses are allowed to continue but are not allowed to expand or construct additions except as required by law. All other nonconforming uses may also be changed to a similar use if parking requirements are the same or less for the new use. Nonconforming uses may not be changed to a use that requires a conditional use permit. As such, the Ventura County Zoning Ordinance does not currently include any language that would lead to the immediate or gradual removal of the nonconforming mobile home park.

Issue SA-5

ESQD Arcs Extend Off-Base

Associated with: NBVC Point Mugu

Public recreational uses adjacent to the base that are located within or near explosive safety quantity distance arcs and may not be compatible.

ESQD arcs represent the areas surrounding ordnance storage and handling points where development is restricted due to safety standoffs associated with potential ordnance detonation. ESQD arcs are determined by the type and amount of ordnance kept at each handling or storage point and the type of facility used to store the materials. Inhabited buildings are generally restricted within ESQD arcs but the Chief of Navy Operations can make exceptions to typical restrictions.

About 73 acres of land lie within the current ESQD arcs that extend off-installation at NBVC Point Mugu. These lands are designated as open space / agriculture in the Ventura County General Plan. In addition, this entire area is within the Ventura County Game Preserve where recreationalists engage in hunting and other activities, and is considered a compatible use.

Findings

- While wildlife hunting is allowed in the areas off installation that are located within the ESQD arcs. There is no posting of this safety area to those that may use this area.

Existing Tools

Naval Base Ventura County Activity Overview Plan 2006

Recreational activities are allowed by Chief of Naval Operation exemption in various areas surrounding the base. Waterfowl hunting in Mugu Lagoon is allowed within ESQD arcs generated by ordnance facilities east of South L Avenue. ESQD arcs that extend northwest of the station boundary are permitted for game hunting as well. Though these areas are not intense uses of land and it is unlikely that ordnance will explode, this area possesses the possibility of concern to individuals who use the land for recreation if ordnance detonates.

Issue SA-6

Police and Fire Response

Associated with: NBVC Port Hueneme

Concern about first responder times when train bisects base from community. Railroad operations can cut-off access from the base to the rest of the community delaying response times in the event of emergency.

The Port of Hueneme is a major shipping port and the only deep-water port between Los Angeles and San Francisco. The Port of Hueneme supports cargo from many large companies and is a major port of entry for automobile and produce freight.

The Ventura County Railroad connects the Port to the Union Pacific Railroad in Oxnard. The Ventura County Railway (VCRR) is owned by the Oxnard Harbor District (OHD) and managed by Genesee and Wyoming Incorporated (GWI). Ventura County Railroad right-of-way (ROW) has 23 grade crossings

along two separate ROWs between the Port and Union Pacific junction in Downtown Oxnard. Although there are many grade crossings that may bisect the community from the installation, a 2010 statistic recorded 2,000 train cars that traveled over the VCRR.

During the discovery phase of this project, an issue was identified that creates concern for the military and the community. During normal train operations, the train can bisect the installation from the rest of the community. This could cause delays in emergency responses times should an emergency arise in the community or on base. While the potential for this incidence is quite low due to short and infrequent train runs along the railway, it is still an issue that needs conscious awareness.

Findings

- While there are emergency management procedures and mutual aid agreements that exist to manage emergency responses, these plans and agreements do not directly address the issue of railway bisecting the installation from the rest of the community and impacts this may have on additional response.
- The City of Oxnard 2030 General Plan Draft Program Environmental Impact Report Appendices Volume I and II identifies that the railroads in the area do cause significant traffic delays in and around Oxnard and NBVC. However, the report does not identify impacts to emergency responders and their issues concerning mobility.

Existing Tools

Public Safety Facility Locations

According to the 2010 Annual Report for the Oxnard Police Department, response time for life threatening emergencies was approximately five minutes. According to the City of Port Hueneme Police Department website, the average response time for any police emergency was under five minutes. Similarly, the Oxnard Fire Department states on their website that the Oxnard Fire Department strives to maintain a response time of 5 minutes 90 percent of the time.

Figure 5.19-3 illustrates police and fire station location in Oxnard and Port Hueneme. Around each fire station is a radius that represents five minutes of travel time from the station. The map shows that adequate police and fire coverage exists on both sides of the railroad. In the event of an emergency, response officials will have alternative stations to dispatch.

Mutual Aid Agreement for the Provision of Fire Fighting Assistance

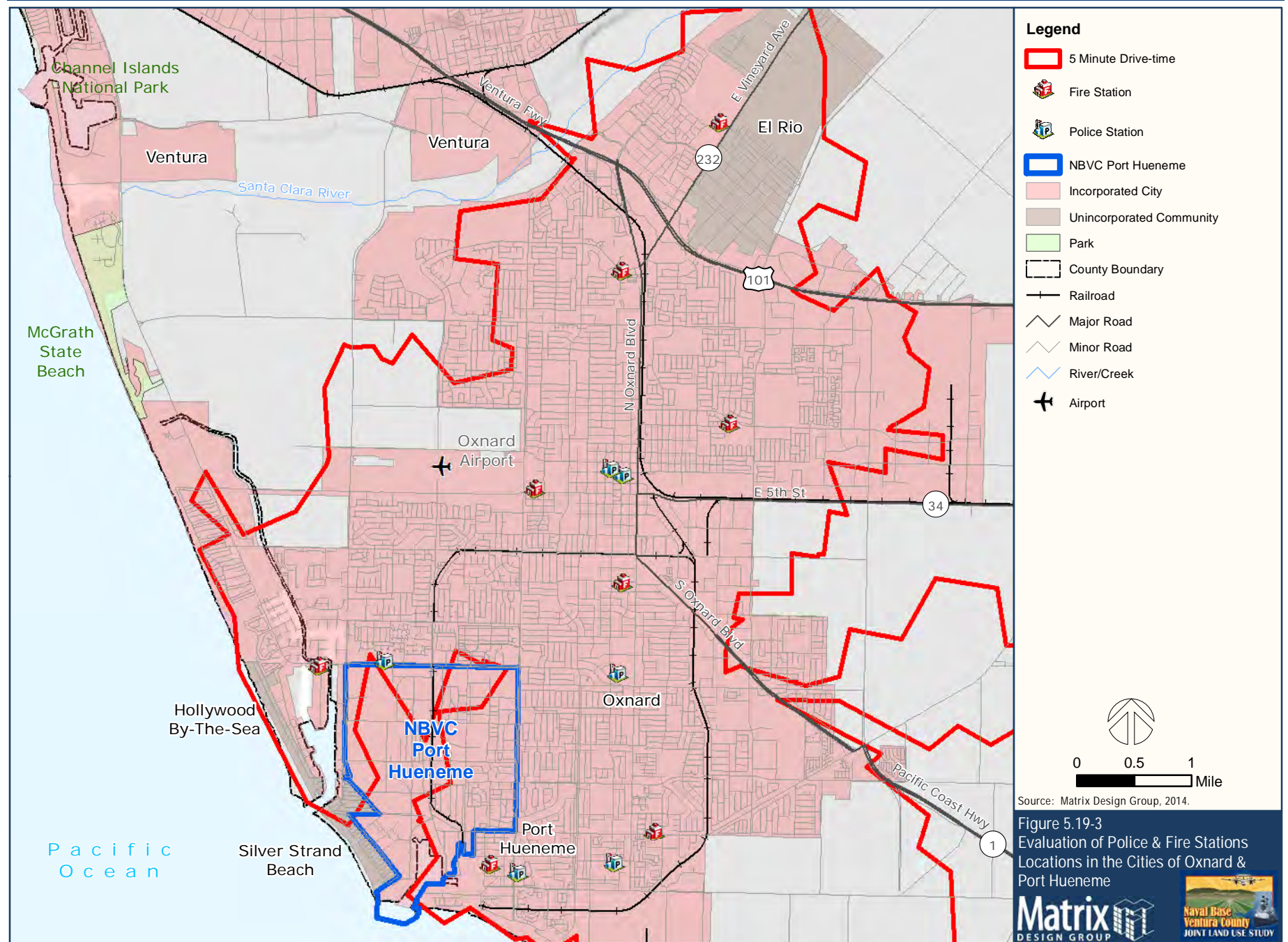
A mutual aid agreement (MAA) exists between NBVC, the City of Oxnard, the City of Ventura, and Ventura County for firefighting assistance. It is Department of the Navy policy to enter into MAA with non-Federal Fire departments located in the vicinity of a naval installation whenever practical. As part of the MAA between NBVC and the surrounding JLUS study area jurisdictions, the parties involved agree to the following but not limited to:

- Provide personnel and equipment required for fire prevention,
- The protection of life and property from fire,
- Firefighting and suppression to include emergency services, including basic medical support, basic and advanced life support, and;
- Hazardous material containment and confinement.

A senior officer of a fire department which is part of the MAA may request assistance from any of the participating parties when he/she deems it necessary.

City of Oxnard 2030 General Plan Draft Program Environmental Impact Report Appendices Volume I and II

In the City of Oxnard 2030 General Plan Draft Program Environmental Impact Report (EIR) Appendices Volume I and II, railroad traffic was identified as both a means to reduce and increase roadway congestion. With railroads in the area freight truck traffic is decreased, which reduces roadway congestion; however, these railways can increase roadway congestion due to at-grade crossings shared with regular vehicular traffic including emergency responders.



The Draft EIR identified the two railways that traverse the area—the Union Pacific Railroad (UPRR) and the VCRR. Currently, the UPRR is the only intercity freight rail provider. The railroad connects the City of Oxnard to all major west coast destinations and markets. Due to UPRR grade crossings, the flow of vehicle traffic can be significantly delayed in Oxnard. Traffic is interrupted by rail movements and by the proximity of the rail crossings to major intersections along Oxnard Boulevard and Fifth Street. The UPRR ROW also creates a physical barrier across Oxnard. In addition, UPRR freight service levels are approximately eight through freight trains plus local service daily and this level is expected to continue or increase.

The VCRR line, operated by the Ventura County Railroad Company (Rail America), transfers freight from the Port of Hueneme and connects with the UPRR Coast Main Line in downtown Oxnard. The VCRR interrupts traffic movement along Wooley Road and at other locations, especially at the Five Points intersection. Due to the type of equipment and operating standards, the Ventura County Railway has less impact on Oxnard than UPRR. The VCRR has potential for adding passenger service and increasing freight service.

These two rail lines have the potential to increase the freight service, which could increase traffic congestion and mobility for this area. The EIR also provided an action to resolve some of the issue with at-grade crossings by recommending grade separations—separating vehicular traffic from rail traffic. This is done by a flyover bridge where railroad is under or over the normal, routine vehicular traffic.

This EIR discusses the conditions of the impact to traffic relative to the two railroads in this area. It also recommended a work-around through grade separations; however, that can be costly and many years out. The EIR does not discuss railroad operations and its impact on emergency response.

Oxnard General Plan Goals and Policies

The Oxnard General Plan Infrastructure and Community Service Element includes the following goal that helps to increase the level of service and intersections adversely affected by rail operations:

Policy ICS-4.6 Freight Rail

Work with Union Pacific Railroad and the Ventura County Railway to mitigate intersections that are impacted or delayed by rail crossings in order to improve vehicular level of service. While this policy does not act directly as an emergency response tool, it helps to increase intersection level of service which allows ease of mobility and emergency vehicles to access a site quicker.

The Safety Element of the Oxnard General Plan also includes important goals and policies that can help to ensure police and fire response times remain low. Goal SH-4 is meant to ensure the community is prepared for emergency management situations. The following policies of Goal SH-4 partially address the issue of emergency response crews accessing community and base locations in the event of an emergency:

Policy SH-4.2 Continued Evaluation of Emergency Response Plans

Continue to evaluate, develop, and practice emergency response plans in light of changing natural and man-made risks and hazards, and in coordination with County, State, and Federal emergency planning.

Policy SH-4.5 Update Emergency Operation Plan

Support and periodically update the City's Emergency Operations Plan, to meet current federal, state, and local emergency requirements.

Policy SH-4.6 Access and Evacuation Corridors

Ensure that access and evacuation corridors are identified in the event of various types of minor and major emergencies.

The policies show that Oxnard understands that emergency preparation is critical to resident safety in emergency situations. While it is important to have language like this in the document, there is no direct reference or identification of the railway and its potential impacts on safety or response times.

Genesee and Wyoming Incorporated Formal Agreements

Genesee and Wyoming Incorporated is the management company for the VCRR, and oversees the 17 miles of track that is part of the railroad. GWI provides an opportunity for several different types of real estate agreements, two of which are potentially relevant to the issue of access management. These two agreements include Grade Crossing Agreements and Land Leases, and could be potentially utilized by public or private entities that have a need for this type of formal agreement or coordination regarding the railroad.

Issue SA-7

Live Ordnance Flight Routes

Associated with: NBVC Point Mugu

There is concern about aircraft that perform operations with live ordnance and the associated impacts to the communities if an aircraft mishap should occur.

In regards to air operations, NBVC Point Mugu hosts many ordnance assembly buildings, the Ordnance Air Launch Facility and the Ordnance Handling Pad/ Building 56 exists for airship ordnance handling and assembly. Thus, NBVC Point Mugu supports the Navy conducting live ordnance flight operations in the vicinity of NBVC on the Point Mugu Sea Range when there are operational requirements to do so. These flights can originate at different military bases and require overflight of both populated and unpopulated areas. Pilots follow specific safety procedures applicable to the type of ordnance their aircraft is carrying. Whenever possible, pilots with

live ordnance fly to the Point Mugu Sea Range via routes that avoid populated areas. The Navy exercises due diligence to ensure safety measures are in place and are adhered to for such flights in the following ways:

- Regularly communicate with the Federal Aviation Administration to de-conflict airspace;
- Follow established procedures both on the ground and in the air to ensure weapon safety; and
- Use safety features on weapons to ensure they are kept in "safe" mode for the duration of their transit

These training operations conducted at NBVC Point Mugu include bombing which utilize conventional ordnance and gun firing of conventional ordnance. Several warning areas designated of the Sea Range provide for conventional ordnance use, including W-289, W-289N, W-290, W-412, W-532, W-537 and R-2519.

Although the 1992 AICUZ is dated, potential impacts to the community can be assessed through analyzing locations of flight tracks. Fixed wing flight patterns are present in all community areas adjacent to NBVC Point Mugu, which is where a potential focus area of concern would be located.

Findings

- Government Lot Acceptance Test (GLAT) flights are addressed in the Air Operations Manual in relation to live ordnance operations, yet there is no mention of their operations range or flight routes.
- Over flight of U.S. Highway 1 and populated areas are prohibited, yet there are no restrictions regarding other areas such as the Game Preserve and proximate local beaches and no notification to the public regarding ordnance flight routes and their impacts.

Existing Tools

Air Operations Manual, NBVC Instruction 3710.1E

The Air Operations Manual, NBVC Instruction 3710.1E provides extensive guidance of operating procedures for NBVC Point Mugu. One of the procedures described are aircraft ordnance procedures, which relate directly to the flight routes that may contain aircraft with live ordnance.

The manual describes how during GLAT flights, externally carried unexpended explosive ordnance is prohibited from being flown during touch-and-goes when the flight path in the landing pattern is over public roadways. It follows by saying when the flight path is over uninhabited areas, touch-and-goes are permitted but the following apply:

- **Touch-and-goes.** *Touch-and-goes are not permitted during GLAT flights to Runways 3 or 27, nor at SNI. Over flight of California Highway 1 should be avoided, except for full stop landing.*
- **Restrictions.** *GLAT aircraft will avoid overflight of the industrial complex. Tower may be required to wave-off or delta GLAT aircraft to de-conflict with IFR arrivals/departures.*

The Air Operations Manual describes the process of arming and de-arming of aircraft ordnance, including the de-arming of unexpended ordnance.

Pilots of aircraft with externally carried unexpended ordnance will advise the controlling agency of the type of ordnance load before entering the Class D airspace. Aircraft will not enter the break, nor create an undue hazard to populated areas, and FCLP and touch-and-go landings are prohibited, except as provided under the GLAT program above.

The arming of ordnance is generally done prior to take off or during flight. Additionally, in determining landing patterns, aircraft arriving with live forward firing ordnance can expect a wide left downwind turn for Runway 21 to avoid a mishap into populated base areas.

Issue SA-8

Hanging Ordnance Flight Routes

Associated with: NBVC Point Mugu

Concern about aircraft with hanging ordnance.

When pilots have attempted to drop or fire ordnance from an aircraft in flight, but the release of the ordnance fails due to a mechanical malfunction, the weapon is then classified as a hung or hanging ordnance. Unlike inert ordnance, hung ordnance poses potential threat to pilots of the aircraft, landing control operators and technicians in charge of de-arming and removing the ordnance.

While this does not occur often and when it occurs, most hanging ordnance on aircraft make it back to the base for ordnance safety control. However, in some occasions the potential for aircraft with hung ordnance to enter public or populated areas still exists. Accidental release of hung ordnance can create adverse impacts on military readiness as well as safety and health issues for nearby communities and wildlife.

Findings

- While the Air Operations Manual provides internal communications for pilots and control towers, the external communications does not appear to be addressed in this document.
- Safety investigation procedures and requirements found in OPNAV Instruction 5102.1D are a good example of military compatibility in that they require reports for ordnance mishaps, including all ordnance impacting off range areas and communities, as well as coordination with command and Naval Ordnance Safety and Security Activity (NOSSA).

Existing Tools

Air Operations Manual, NBVC Instruction 3710.1E

The Air Operations Manual from 2012 describes procedures and requirements for aircraft arriving with suspected or confirmed hung ordnance or misfires. They are as follows:

- a. **Initial Contact.** The pilot will notify the controlling agency of hung/misfired ordnance, the type and the condition of weapons/stores, whether live or inert, and whether drop or forward firing.*
- c. **Restrictions.** During the approach and landing, pilots will avoid over flying populated areas.*
- d. **Post-arrival.** After landing, the aircraft will proceed to the prescribed arming/de-arming area. After inspection and de-arming are completed, the aircraft may revetment area for normal downloading.*

The Manual also details ordnance and weapons handling, and Appendix F, Section 305 elaborates on handling procedures for aircraft equipped with hung ordnance. It states that no release or fire of ordnance because of malfunction is considered an emergency and will be handled as one. Furthermore it requires pilots of aircraft carrying hung ordnance to advise Nick Tower of the type of ordnance onboard before entering the Class D Surface area.

OPNAV Instruction 5102.1d

OPNAV Instruction 5102.1D policy directive governs mishap and establishes safety investigation procedures and requirements for all Navy commands and installations for the submittal of safety investigation reports (SIREPS), and hazard reports (HAZREPS). Mishap reporting and record keeping are to include aviation ordnance use and all explosive mishaps, including all ordnance impacting off range areas, surface danger zones and all live fire mishaps within those areas. The manual serves to maintain a standardized system to investigate those mishaps, including templates for the SIREPS and HAZREPS.

As per the directive, the Commander of the Naval Safety Center is required to coordinate with the appropriate controlling command, NOSSA and other commands to determine if a Safety Investigation Board (SIB) is needed to conduct local safety investigations of any explosive mishaps. An SIB is required for all explosive ordnance mishaps impacting off range and all live fire mishaps resulting in an injury.

Additionally, Conventional Ordnance Deficiency Reports (CODR) are required to be submitted using the Deficiency Reporting Web (DRWEB) site (now the Joint Deficiency Reporting System (JDRS) for all aviation, surface, shore and submarine activities including release or mishap of ordnance. CODR incident is where ordnance or weapons systems fail to function with the designed intent and results in no property damage or injury.

**Issue
SA-9****Potential for Hazardous Materials Release***Associated with: NBVC Port Hueneme and NBVC Point Mugu*

NBVC Port Hueneme performs convoy operations that carry hazardous materials to and from NBVC Point Mugu. There is concern about the potential release of these hazardous materials and the associated impacts to the communities.

One component of the NBVC mission is to manage, store, and transport hazardous materials. These materials have potential significant impacts due to the chemical characteristic of the materials and their impact on health and safety. Areas of concern have been raised due to the activities, transportation, storage, and use of hazardous materials for the NBVC mission relative to their impact on adjacent or nearby land uses such as commercial, residential, and industrial areas. Due to the amount of hazardous materials being moved in and out of the port, these activities are considered to be a level of concern because of the operations, and activities that involve storage and transfers of equipment, fuels and other products that are consumed by offshore oil industries.

These users generate various chemicals, acids, and waste oils that are continuously imported into the Port and are then transferred to trucks to be disposed. There are two facilities northeast of the harbor, and along Hueneme Road that store petroleum fuel. The probability of a fire or explosion at these facilities is relatively low, but accidents during transfers are possible and could cause impacts that can extend off of the Port property.

Findings

- While the City of Port Hueneme's General Plan recognizes the NBVC mission along with other missions in the transport of hazardous materials, the plan does not identify coordination with the military in the event of a hazardous material spill or fire involving military equipment or personnel.

- In the City of Port Hueneme's Zoning Code, protocols for handling hazardous materials are not identified as a compatibility measure for military operations.
- The Ventura County Non-Coastal Zoning Ordinance (NCZO) does not identify coordination with the military in the event of a hazardous material spill or fire involving military equipment or personnel.

Existing Tools**City of Port Hueneme General Plan**

The Public Safety and Facilities Element within the City's General Plan identifies the Port and Naval activities that support the storage, transport, and management of hazardous materials as an area that should be considered in planning activities. The Port of Hueneme includes over 110 acres of land and water. Most of the products are brought into the Port by truck and sent out by ship; deliveries average per month, 50 - 60 in the winter, and 80 - 100 in the summer. Due to the probability of spills, the City of Port Hueneme's fire department and HAZMAT team are to be notified immediately in the event of an emergency.

City of Port Hueneme Zoning Code

Under the Development Standards, the following applies to mitigate hazardous material incidents:

Reporting accidents: all operations shall immediately notify the director of community development, chief of police and fire department and all other applicable agencies in the event of a fire, spills or hazardous conditions not incidental to the normal operations at the project site. Upon request of any city department the operator shall provide a written report of any incident within 7 days which shall include, but not limited to, a description of the facts of the incident the corrective measures used and the steps taken to prevent reoccurrence of the incident.

Ventura County General Plan – Hazards Appendix

The County's General Plan Hazards Appendix establishes standards to mitigate spills of hazardous materials with marine activities on and off shore. The Plan identifies safety regulations and pipeline and equipment maintenance as important in reducing the probability and effects of a spill. Additionally in the instance of a hazardous materials event, operators and emergency responders can analyze pipeline, facilities, and transportation routes related to the hazards through a GIS system.

Ventura County Non-Coasting Zoning Ordinance

Section 8109-3.1.3 Industrial Performance Standards, identifies the regulations for handling hazardous materials.

Hazardous Materials - Land or buildings shall not be used or occupied in any manner so as to create any fire, explosive or other hazard. All activities involving the use or storage of combustible, explosive, caustic or otherwise hazardous materials shall comply with all applicable local and national safety standards and shall be provided with adequate safety devices against the hazard of fire and explosion, and adequate fire-fighting and fire suppression equipment in compliance with Ventura County Fire Prevention Regulations. The burning of waste materials in open fires without written approval of the Fire Department is prohibited.

Section: 8107-36.3.4 Temporary Collection Activities, states the following regulations:

Where hazardous waste or household hazardous wastes are being collected, the following additional conditions shall apply:

- (1) The contained area used for unloading, identifying, consolidating and packaging the hazardous wastes/materials shall be set back at least 50 feet from the nearest residence, business, hospital, or dedicated public street or highway.*
- (2) The following local authorities shall be notified of the proposed activity prior to use inauguration: Environmental*

Health Division, Fire Protection District, Sheriff's Department, and Air Pollution Control District

Source: Division 8, Chapter 1 Ventura County Non-Coastal Zoning Ordinance (6-28-11 edition)

Issue SA-10

Wildland Fire Risk

Associated with: NBVC Point Mugu

Potential impacts from wildland fires near the airfield.

Wildland fires are a common threat to much of Southern California. A generally dry landscape coupled with various atmospheric conditions creates conditions suitable for fires. The native chaparral landscape of the hills and mountains that surround the region are suitable fire fuel during the dry months towards the end of summer and into autumn.

NBVC Point Mugu is within proximity of the Santa Monica Mountains National Recreation Area (SMMNRA). The most recent fire to occur in the SMMNRA was the Springs Fire of 2013, which burned about 24,000 acres, including 300 acres of the hills immediately east of NBVC Point Mugu. The location of the hills is of great concern because of the military equipment on Laguna Peak and potential effects of smoke on military operations. NBVC has Mutual Aid Agreements (MAA) with the local jurisdictions and CalFire, which allows for others to assist during extreme fires. Prior to the severe growth of the fire, the command staff at NBVC decided to activate the Emergency Operations Centers (EOC) to prepare for response. As the Spring Fire encroached onto NBVC, two county strike teams assisted on Laguna Peak, one of which was led by a NBVC Federal Fire Department engine.

According to the California Department of Forest and Fire Protection and the USDA Forest Service, the Santa Monica Mountains are at a very high risk of wildland fire, as shown in Figure 5.19-4.

Findings

- While there are several Federal and State Fire Management Laws and Plans that enable fire management financial assistance and plans do not directly identify military installations as possible agencies that would be affected by wildland fires.
- The Ventura County Fire Management Plan recognizes the military equipment at Laguna Peak as an asset that should be protected from wildland fires.
- While the Ventura County Plan establishes major focus areas for fire management, the information in the plan is just about 10 years old and may not reflect current practices or fire management techniques.

Existing Tools

The Federal Land Assistance, Management and Enhancement (FLAME) Act of 2009

The FLAME Act was passed in 2009 to create separate funds for the Forest Service for emergency fire suppression activities. This funding is available to the Secretary of the Interior and the secretary of Agriculture to pay the costs of catastrophic emergency wildfire suppression activities. The Flame Act is very important to Southern California because of the likelihood of wildland fire across the region.

U.S. Forests and Rangelands Western Regional Action Plan

The Western Regional Action Plan is an overarching document that entails goals and strategies to combat wildfire in the Western United States. The document is based on three overall strategies: Fire-resilient landscapes; human populations and infrastructure can withstand wildfire without loss of life and property; jurisdictions participate in making and implementing safe, effective, risk-based wildfire management decisions.

California Fire Plan

The California Fire Plan recognizes that the threat of wildland fire is expected in California and has established goals and objectives to utilize and manage the risk of wildfire. The Plan has seven goals that enhance the protection of lives, property, and natural resources from wildland fire. These goals include:

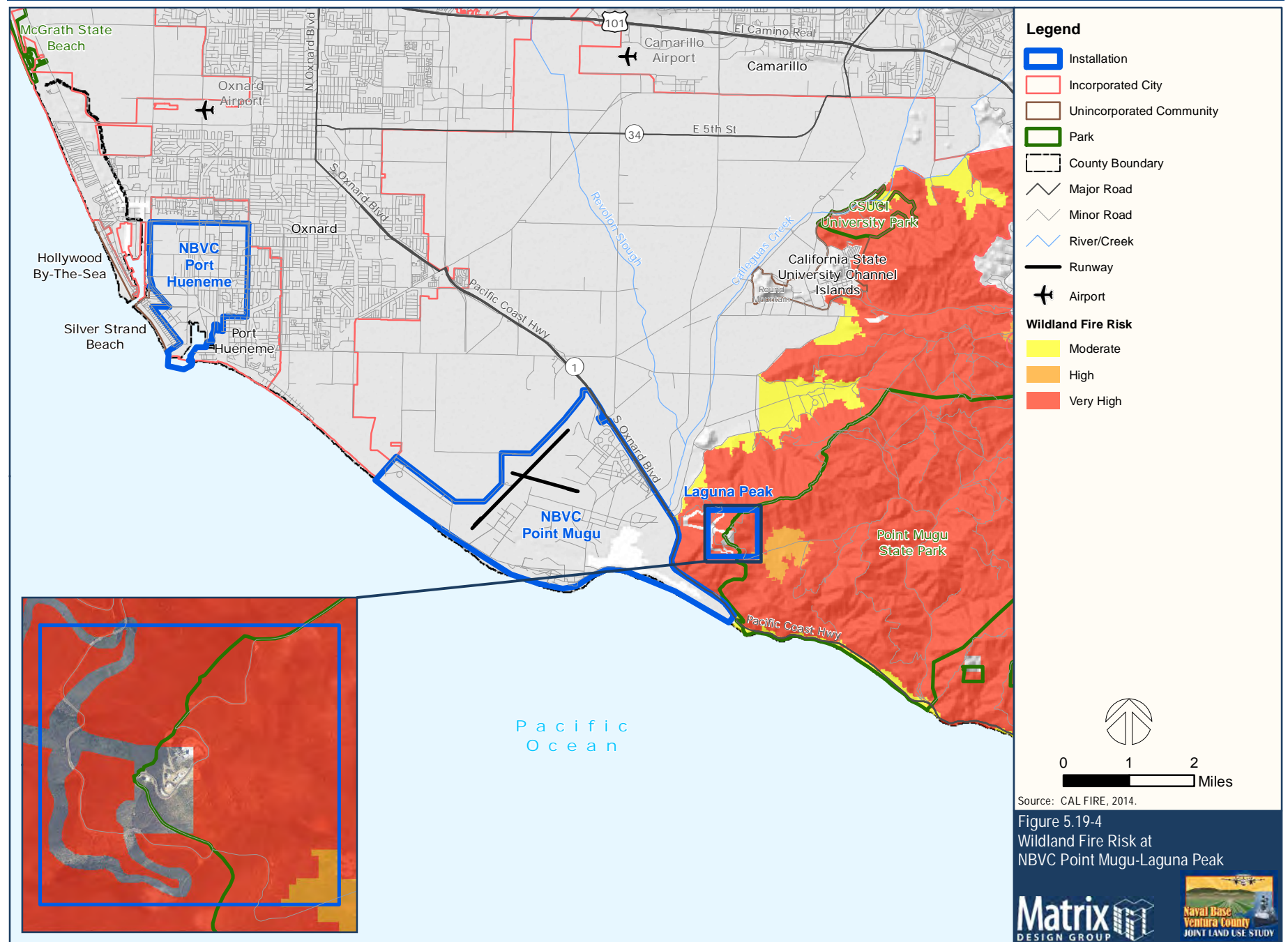
- *identifying and evaluating wildland fire hazards and recognizing life, property, and natural resource assets at risk;*
- *articulating and promoting the concept of land use planning as it relates to fire risk;*
- *supporting and participating in collaborative development and implementation of wildland fire protection plans;*
- *increasing awareness, knowledge and actions implemented by individuals and communities to reduce human loss and property damage from wildland fires;*
- *developing methods to integrate fire and fuels management practices with landowner priorities and multiple jurisdictional efforts;*
- *determining the levels of fire suppression resources necessary to protect the values and assets at risk identified during planning processes; and*
- *addressing post-fire responsibilities for natural resource recovery.*

Ventura County Fire Management Plan

The 2005 Ventura County Fire Management Plan is a comprehensive document that discusses fire prevention and suppression. The plan identifies five major components that form the basis of management techniques in Ventura County. These techniques include: wildfire protection zones; swift and efficient fire suppression; asset protection; pre-fire management; and sound fiscal framework.

The Plan identifies specific fuel beds within the county and potential actions to reduce the threat of wildland fire. The Malibu Fuel Bed is located directly east of NBVC Point Mugu in the SMMNRA. The document specifically references military protection as a part of fuel reduction near Laguna Peak. Fuel reduction in the area is meant to protect sensitive military equipment and also support range improvements.

Naval Base Ventura County Joint Land Use Study



5.20. Scarce Natural Resources

Pressure to gain access to valuable natural resources (such as oil, natural gas, minerals, and water resources) located on military installations, within military training areas, or on public lands historically used for military operations can impact land utilization and military operations.

Pressure to gain access to valuable natural resources (such as oil, gas, minerals, and water resources) located on military installations, within military training areas, or on public lands historically used for military operations can impact resource utilization and military operations.

Increasing development surrounding military installations will continue to compete with the need for naturally limited resources, such as water, oil, gas, minerals, and scenic / recreational assets. Continual development around the military installation could reduce the available supply of these finite resources.

Key Terms

Potable Water. This term refers to water that is safe for humans to consume or use with low risk of immediate or long term harm.

Water Quality. Water quality refers to the chemical, physical, biological and radiological characteristics of water.

Issues Assessment

| | |
|------------------------|---|
| Issue SNR-1 | Water Quality <i>Associated with: NBVC</i> There is a general concern about sufficient potable water quality for the area. |
|------------------------|---|

Water supply in Southern California is a very important topic. Southern California averages only 15 inches of rainfall a year. This amount is

not sufficient to supply the needs of the population, industry and agriculture. Therefore, a majority of Southern California's water comes from areas outside of the region. The California State Water Project (SWP) transports water from sources in Northern California to various agricultural and urban areas across Southern California.

The JLUS study area receives its water from the SWP and groundwater sources. However, recent state actions due to drought conditions have caused the SWP to stop sending water to Southern California. This decision will be reviewed monthly to ensure water deliveries resume when permitted by adequate rainfall amounts. Until that time, the JLUS study area needs to rely on local water sources to supply local water needs.

Findings

- While these plans and programs provide various actions to ensure water quality and potable water in the area, there is no evidence that military coordination is occurring.

Existing Tools

Fox Canyon 2007 Groundwater Management Plan (GMP)

The Fox Canyon Groundwater Management Agency (FCGMA) manages and protects aquifers in several groundwater basins which serve several Ventura County cities including Oxnard, Port Hueneme, and Camarillo. According to the 2007 GMP the annual yield of the basins within the FCGMA is approximately 120,000 acre feet. However, according to the FCGMA 2012 Annual Report, approximately 125,000 acre feet of water were extracted from the basin in the 2012 calendar year. This not only threatens available water supplies but also threatens water quality. Water quality is threatened by overdraft of the water supply because of the basin's proximity to the ocean. Ocean proximity leads to a higher risk of salt water intrusion into depleted groundwater basins. Other risks to groundwater include saline intrusion from surrounding sediments and high nitrate levels. The GMP describes current and future strategies to maintain water quality and quantity in the basins. An example of some current strategies is included below:

Limitations on Ground Water Extractions: *This project would reduce pumping by five percent every five years over a period of 20 years. The project began in 1985 and has successfully reduced water consumption.*

Construction/Modification Restrictions on Upper Aquifer System Water Wells: *New wells drilled into the more easily replenished Upper Aquifer System will help to conserve water located in the Lower Aquifer System.*

Annual Groundwater Monitoring Program: Monitoring wells measure groundwater levels and allow water quality sampling at each well site. This information is used to study water quality and quantity.

East and West Las Posas Basin Pumping Restrictions: Water use outside of the Las Posas Basin or Agency boundary is prohibited. At the time of publication, some service extended outside the Agency boundary. The GMP includes guidance to sever connections with those areas.

The FCGMA appears to be undertaking planning, monitoring, operations and enforcement measures that are sufficient at present to protect potable water supplies for the area. As conditions change (population growth, industrial and commercial growth), it will be critical to continue, and possibly amend or supplement these efforts that are included below:

The Groundwater Recovery Enhancement and Treatment (GREAT) Project: Project will help to reduce aquifer overdraft but will not be fully implemented until approximately 2017 to 2022. The project has three major components including a new regional groundwater desalination facility, a recycled water system to deliver water to manufacturing and industrial non-potable water uses within the City of Oxnard, to agricultural uses in the Pleasant Valley area, and to inject water as a barrier to seawater intrusion; and conveyance of desalination backwash concentrates through a brine line to either the City's existing ocean outfall or the Ormond Beach area for coastal wetland restoration.

It is anticipated that the project will yield 5,000 to 21,000 acre feet per year.

South Las Posas Basin Pump/Treat: The South Las Posas Basin Pump/Treat Project will pump saline groundwater from the basin and allow for winter storm water to percolate into the aquifer. The pumped saline groundwater will be treated and used for consumption while percolation will allow the basin to recharge.

Taken together, these plans, programs and initiatives will ensure a sufficient and reliable potable water supply for NBVC in the near term; however the potential for increased competition in the future suggests that careful monitoring of the issue going forward is prudent.

5.21. Vertical Obstructions

Vertical obstructions are created by buildings, trees, structures, or other features that may encroach into the navigable airspace used for military operations (aircraft approach, transitional, inner horizontal, outer horizontal, and conical areas, as well as military training routes). These can present a safety hazard to both the public and military personnel and potentially impact military readiness.

Key Terms

Height Restriction Zones (HZR). This is a term used to describe boundary lines that surround an airfield to help enforce building heights within Approach and Transitional Surfaces.

Imaginary Surfaces. The term imaginary surface refers to the areas surrounding a heliport or airfield that must be kept clear of objects that might pose a safety threat to aviation activities. A man-made or natural object that projects above an imaginary surface is an obstruction. See Chapter 3 for more information.

Vertical Obstructions. Vertical obstructions are objects or structures that exceed a specified height above ground level and extend into airspace. Vertical obstructions may be created by buildings, trees, structures, or other features that are of greater height than, and encroach into, the navigable airspace used for military operations (aircraft approach-departure surfaces, transitional surfaces, as well as military training or flight routes). These can present a safety hazard to both the public and military personnel and potentially impact military readiness.

Technical Background

Vertical obstructions can compromise the value of low-level flight training by limiting the areas where such training can occur. These obstructions can include a range of items from man-made, such as telephone poles and radio antennae, to natural, such as tall trees and land features.

In relation to flight operations from an airport (military or civilian), vertical obstructions are addressed through compliance with Federal Regulation Title 14 Part 77, which establishes standards and notification requirements for objects affecting navigable airspace. Commonly referred to as Part 77 compliance, this regulation provides details to evaluate the potential for a vertical obstruction based on the elevation of the airfield, the height and resulting elevation of the new structure or facility, and the location of the structure or facility in relation to the airfield in question.

To determine when structures or facilities should be evaluated for vertical obstruction, Part 77 states the following requirements for notifying the FAA:

§77.9 - Any person/organization who intends to sponsor any of the following construction or alterations must notify the Administrator of the FAA:

Any construction or alteration exceeding 200 feet above ground level

Any construction or alteration:

- within 20,000 feet of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 feet.

- within 10,000 feet of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 feet.

- within 5,000 feet of a public use heliport which exceeds a 25:1 surface

Any highway, railroad, or other traverse way whose prescribed adjusted height would exceed the above noted standards

When requested by the FAA

Any construction or alteration located on a public use airport or heliport regardless of height or location

Further, Part 77 identifies the height at which an object may be considered an obstruction at a designated distance. An excerpt from Section 77.17 follows:

§77.17- Obstruction standards.

(a) An existing object, including a mobile object, is, and a future object would be an obstruction to air navigation if it is of greater height than any of the following heights or surfaces:

- (1) A height of 499 feet above ground level at the site of the object.*
- (2) A height that is 200 feet above ground level or above the established airport elevation, whichever is higher, within three nautical miles of the established reference point of an airport, excluding heliports, with its longest runway more than 3,200 feet in actual length, and that height increases in the proportion of 100 feet for each additional nautical mile from the airport up to a maximum of 499 feet.*
- (3) A height within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area, which would result in the vertical distance between any point on the object and an established minimum instrument flight altitude within that area or segment to be less than the required obstacle clearance.*
- (4) A height within an en route obstacle clearance area, including turn and termination areas, of a Federal Airway or approved off-airway route, that would increase the minimum obstacle clearance altitude.*
- (5) The surface of a takeoff and landing area of an airport or any imaginary surface established under § 77.19, 77.21, or 77.23. However, no part of the takeoff or landing area itself will be considered an obstruction.*

(b) Except for traverse ways on or near an airport with an operative ground traffic control service furnished by an airport traffic control tower or by the airport management and coordinated with the air traffic control service, the standards of paragraph (a) of this section apply to traverse ways used or to be used for the passage of mobile objects only after the heights of these traverse ways are increased by

- (1) 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance.*
- (2) 15 feet for any other public roadway.*
- (3) 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road.*
- (4) 23 feet for a railroad.*
- (5) For a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it.*

The FAA has identified certain imaginary surfaces around runways that are used to determine how structures and facilities are evaluated to identify if they pose a vertical obstruction in relation to the airspace around a runway. The levels of imaginary surfaces build upon one another and are designed to eliminate obstructions to air navigation and operations, either natural or man-made. The dimension or size of an imaginary surface depends on the runway classification. These imaginary surfaces were defined in detail in Chapter Three of this Background Report.

Issues Assessment

| | |
|-----------------------|---|
| Issue VO-1 | Potential for Increased Heights of Existing Facilities <i>Associated with: NBVC Point Mugu</i> Implications associated with proposals to increase the height of structures at existing facilities, and the potential for these changes to impact navigable airspace. |
|-----------------------|---|

While jurisdictions within Ventura County have imposed height limits for most zones, instances occur where an increase in height limits are allowed by conditional use permit (CUP).

There is a general concern that existing structures permitted at a certain height may later be approved for height increases that would interfere with aviation operations at NBVC Point Mugu. This potential interference could result in safety hazards and ultimately mission realignment from NBVC to a more ideal geography with minimal or no interference from incompatible community development.

Incompatible development can include natural or man-made structures within imaginary surfaces and approach and departure zones of NBVC Point Mugu.

Findings

- While all the jurisdictions in the JLUS study area have reasonable height regulations and do not pose a risk to aviation operations, the jurisdictions that allow the use of CUPs and SUPs to extend heights at either set or no established maximum height pose a risk to navigable airspace for the military and civilian aviation operations in the area.
- CUP and SUP regulations do not consider military or civilian aviation compatibility.

Existing Tools

City of Camarillo Zoning Ordinance

The tallest structures allowed by right under the Camarillo Zoning Ordinance are zoned Recreational Commercial (R-C) and Camarillo Commons Mixed Use (CCM) and are allowed to reach a height of 45 feet. Though other uses are regulated at shorter heights, a CUP can be obtained to increase the height. Table 5.21-1 identifies zones which allow height exceptions by an approved CUP:

Table 5.21-1 City of Camarillo Height Regulations by Right or Use Permit

| Zone District | Description | Heights Permitted by Right or with a Use Permit |
|---------------|---------------------------------|--|
| R-E | Rural Exclusive | 35 feet but allowed to increase height to 75 feet with Special Use Permit. Height limits do not apply to single family residential structures. |
| R-1 | Single-Family Residential | 25 feet but allowed to increase height to 75 feet with Special Use Permit. Height limits do not apply to single family residential structures. |
| RPD | Residential Planned Development | 25 feet but increases in height are allowed by approval of a conditional use permit. Maximum height is not regulated. |
| MHPD | Mobile home Park Development | 25 feet but increases in height are allowed by approval of a conditional use permit. Maximum height is not regulated. |

| Zone District | Description | Heights Permitted by Right or with a Use Permit |
|---------------|--------------------------------|--|
| P-O | Professional Office | 25 feet but increases in height are allowed by approval of a conditional use permit. Maximum height is not regulated. |
| CMU | Village Commercial Mixed-Use | 25 feet exclusive of architectural features. Increases in height are allowed by approval of a conditional use permit. Maximum height is not regulated. |
| COT | Camarillo Old Town | 35 feet exclusive of architectural features. Increases in height are allowed by approval of a conditional use permit. Maximum height is not regulated. |
| CPD | Commercial Planned Development | 35 feet but increases in height are allowed by approval of a conditional use permit. Maximum height is not regulated. |
| SC | Service Commercial | 35 feet but increases in height are allowed by approval of a conditional use permit. Maximum height is not regulated. |
| L-M | Limited Manufacturing | 35 feet but increases in height are allowed by approval of a conditional use permit. Maximum height is not regulated. |

| Zone District | Description | Heights Permitted by Right or with a Use Permit |
|---------------|-------------------------|---|
| M-1 | Light Manufacturing | 40 feet but increases in height are allowed by approval of a conditional use permit. Maximum height is not regulated. |
| M-2 | General Manufacturing | 40 feet but increases in height are allowed by approval of a conditional use permit. Maximum height is not regulated. |
| | Ground Mounted Antennae | 15 feet but increases in height to 75 feet are allowed by approval of a conditional use permit. |

Only buildings in the R-E and R-1 Zone and antennae are subject a maximum height (75 feet) for developments that obtain a CUP.

Chapter 19.62 includes the necessary findings for a conditional use permit. However, the required findings do not specifically address vertical height obstruction of aircraft. This could lead to oversight and potential incompatibility.

The City of Camarillo zoning regulations provide limits on height that protect airspace operations. While structure heights can be modified using a special use permit (SUP) or CUP, most standard structures would not be an issue given the distance from NBVC Point Mugu. Area of the city within the Approach/Departure corridor should coordinate with the Navy to ensure safety for structures exceeding 200 feet.

City of Oxnard Zoning Code

The maximum allowed height in the Oxnard Zoning Code (100 feet) is in the Heavy Manufacturing (M-2) Zone. All other uses are regulated at heights equal to or less than 55 feet, which is generally compatible in this area given the airfield is at least seven miles or more away from the City of Oxnard. However multiple zones allow for increases in height with a SUP, it is when these special uses are approved that can potentially obstruct navigable airspace. The zoning districts that allow for approved SUPs to extend heights beyond the permitted height are shown in Table 5.21-2.

The Commercial Office (C-O), General Commercial (G-2), Commercial and Light Manufacturing (C-M), and Business and Research Park (BRP) zones all do not have an established maximum height requirement with a use permit, which can lead to vertical obstructions in the airspace that could cause potential issues with both military and civilian aviation operations.

Conditions of Approval for CUP do not prohibit buildings or structures from extending into areas that may have adverse impacts on military and civilian aviation activity.

Table 5.21-2 Oxnard Non-Coastal Use Permit Height Regulations

| Zone District | Description | Heights Permitted by Right or with a Use Permit |
|----------------------|----------------------------------|--|
| R-4 | High Rise Residential Zone | 45 feet but increases in height to 100 feet are allowed by approval of a special use permit. |
| C-O | Commercial Office | 15 feet but increases in height are allowed by special use permit. Maximum height is not regulated. |
| C-2 | General Commercial | 35 feet but increases in height are allowed by special use permit. Maximum height is not regulated. |
| CBD | Central Business District | 48 feet but increases in height to 60 feet are allowed by special use permit. Non-habitable architectural features may exceed the maximum height by 15 feet. |
| C-M | Commercial & Light Manufacturing | 35 feet but increases in height are allowed by special use permit. Maximum height is not regulated. |
| BRP | Business & Research Park | 35 feet but increases in height are allowed by special use permit. Maximum height is not regulated. |

City of Oxnard Coastal Zoning Ordinance

The maximum permissible height as of right is allowed in the Coastal Dependent Industry (CDI) sub-zone (55 feet). Only three zones in the Oxnard Coastal Zoning Ordinance allow for greater heights by a Coastal Development Permit (CDP) as shown in Table 5.21-3.

Table 5.21-3 Oxnard Coastal Use Permit Height Regulations

| Zone District | Description | Heights Permitted by Right or with a Use Permit |
|---------------|------------------------------------|---|
| CNC | Coastal Neighborhood Commercial | 35 feet but increases in height are allowed by coastal development permit. Maximum height is not regulated. |
| CVC | Coastal Visitor-Serving Commercial | 35 feet but increases in height are allowed by coastal development permit. Maximum height is not regulated. |
| CDI | Coastal Dependent Industrial | 55 feet but increases in height are allowed by coastal development permit. Maximum height is not regulated. |

The CDP do not address maximum vertical height limitations, which can present vertical obstructions to aviation operations if uncoordinated with the appropriate agencies.

City of Port Hueneme Zoning Regulations

The maximum permissible height as of right is in the Mixed-Use Residential zoning district (R-4) at 45 feet. The R-4 zoning district is the only zone that allows an increase in height if one-third of the building's or structure's square footage is dedicated to residential uses and an approved SUP has been obtained. The City of Port Hueneme has established a maximum height of 60 feet for this zoning district and is not likely a major concern to aviation operations.

Ventura County Non-Coastal Zoning Ordinance

The maximum permissible height as of right under the Ventura County Non-Coastal Zoning Ordinance (NCZO) is allowed in Residential Planned Development (RPD), Residential High Density (RHD), and Commercial Planned Development (CPD) zones and are allowed to reach a maximum height of 35 feet, which is not of major concern for the military or civilian aviation operations. Though other uses are regulated at a shorter height, a CUP can be obtained to increase the height. Table 5.21-4 identifies these zones which allow height exceptions by CUP.

Table 5.21-4 Ventura County Non-Coastal Use Permit Height Regulations

| Zone District | Description | Heights Permitted by Right or with a Use Permit |
|---------------|--------------------------------|---|
| CO | Commercial Office | 25 feet but increases in height to 60 feet allowed by planning commission use permit. |
| C1 | Neighborhood Commercial | 25 feet but increases in height to 60 feet allowed by planning commission use permit. |
| CPD | Commercial Planned Development | 35 feet but increases in height to 60 feet allowed by planning commission use permit. |
| M1 | Industrial Park | 30 feet but increases in height to 60 feet allowed by planning director approval. |
| M2 | Limited Industrial | 30 feet but increases in height to 60 feet allowed by planning director approval. |
| TP | Timberland Preserve | 25 feet but increases in height to 60 feet allowed by planning commission use permit. |
| | Antennae | 40 feet but increases in height to 75 feet are allowed by the proper permit. |

Because Ventura County sets a maximum height limit on buildings that can apply for CUP and Planning Director Approval, there is less of a chance that buildings will encroach on military and civilian aviation areas. Similarly, Ventura County NCZO Sec. 8106-7.3 requires height limits to adhere to FAA regulations when in approach and turning areas of any Ventura County Airport.

Issue VO-2

Vertical Height Obstruction Determination

Associated with: NBVC

Jurisdictions in the vicinity of NBVC can determine vertical obstructions using different regulations, some are less restrictive. This can potentially create conflicts with aviation operations.

Communities regulate height in various ways, including through conventional zoning absent any reference to FAA Part 77 or “imaginary surfaces.” Others use conventional zoning, but incorporate Part 77 or imaginary surfaces by reference, or in more explicit terms. These various methods can and do result in different outcomes, some of which create vertical obstructions in violation of imaginary surface and/or Part 77 standards. These obstructions impact military operations by creating safety and operational hazards.

Currently, Camarillo, Oxnard, and Port Hueneme contain mostly low-rise buildings (1-3 stories). However, as Camarillo, Oxnard, and Port Hueneme continue to grow, taller buildings could become more commonplace. If SOAR boundaries are extended past 2020, the need for additional housing could result in taller structures to accommodate growth.

Rural land uses also pose a problem. Energy production facilities or agricultural buildings, such as silos, can create vertical obstruction. This issue addresses the various Study Area jurisdictions and the existing tools they use to regulate height.

Findings

- While the ACLUP establishes provisions for the protection of the airspace around airfields, the ACLUP may not reflect or consider the more restrictive Imaginary Surfaces recommended heights and slopes of the area surrounding an airfield.
- There is no evidence that the Oxnard Coastal Zoning Ordinance requires compliance with FAA guidelines for height restrictions.
- The Ventura County NCZO requires compliance of the FAA Part 77 recommendations; however, the County’s Coastal Zoning Ordinance which applies to the land uses immediately around the NBVC Point Mugu airfield does not establish requirements for compliance with the FAA guidance.

Existing Tools

Ventura County Airport Compatibility Land Use Plan

The Ventura County Airport Compatibility Land Use Plan (ACLUP) incorporates HZR. Development within the HZR is meant to keep building height in-line with FAR Part 77 requirements.

FAR Part 77 requires developers to notice the FAA of any projects over 200 feet tall or within the vicinity of airports to ensure that the buildings will not be a hazard to air navigation. The FAA has no land use powers, so it can only encourage local jurisdictions to oppose any development that would create a hazard to air navigation. Thus, the ACLUP contains the following airspace protection standards:

Any structures proposed within any part of the F.A.R. Part 77 Airspace Plan which requires a variance, conditional use, or special use permit because they exceed the permitted height requirements of the zoning ordinance shall be reviewed by the Airport Land Use Commission if the height of the proposed structure would penetrate any F.A.R. Part 77 surface.

If the Federal Aviation Administration (FAA) reviews the proposed structure and finds that the structure would represent a hazard to air

navigation, the proposal shall be disapproved. The proposal shall also be disapproved if the FAA finds that the structure would require the raising of approach minimums at any military or public use airport in the County

If the Federal Aviation Administration (FAA) reviews the proposed structure and makes a finding of “no hazard,” the structure shall be permitted, provided that it shall be marked and lighted in accordance with the recommendations of the FAA.

While these are good coordination efforts established by the ACLUP, these do not consider other imaginary surfaces heights and slopes around the airfield.

City of Oxnard General Plan

The City of Oxnard General Plan suggests that development subject to Oxnard’s zoning authority should comply with FAA Part 77 requirements.

***MC-3.2 Vertical Obstructions** Ensure all new development within the City is developed in accordance with Federal Aviation Regulations (FAR) Part 77 that is generally concerned with any construction or alteration more than 200 feet above ground level.*

By suggesting that new construction should be developed in accordance with FAA guidelines, the Plan promotes regulations that will reduce the potential for development to conflict with the imaginary surfaces.

City of Oxnard Coastal and Non Coastal Zoning Ordinance

The Oxnard Non-Coastal Zoning Code requires FAA review of projects but only for development within the sphere of influence of Oxnard Airport. This means that projects within the NBVC Point Mugu sphere of influence do not require FAA review. Parcels located in the southern area of the city overlap with the imaginary surfaces at NBVC Point Mugu. Therefore, development on these parcels has the potential to be incompatible with aviation operations at the base. The Oxnard Coastal Zoning Code does not require compliance with FAA guidelines or FAA review.

The Oxnard Coastal and Non-Coastal Zoning Code are not consistent with the Oxnard General Plan at this time. The Coastal and Non-Coastal Zoning Code will both need to be updated to ensure Part 77 compliance in-line with the Oxnard General Plan.

Ventura County General Plan

The Ventura County General Plan requires development within Chapter 2.14 Transportation Related Hazards.

***2.14.2.2 Development within the Airport Hazard Zone** shall comply with Part 77 of the Federal Aviation Regulations (objects affecting navigable airspace).*

The Ventura County General Plan requires FAA compliance with from development within any Airport Hazard Zone. This ensures that encroachment on imaginary surfaces is limited. This helps to ensure compatibility with aviation operations at NBVC Point Mugu.

Ventura County Coastal and Non-Coastal Zoning Ordinance

The Ventura County Non-Coastal Zoning Ordinance (NCZO) requires compliance with FAA Part 77 in-line with the Ventura County General Plan.

***Sec. 8106-7.3 – Airport Height Limits** Height limits as set forth in Federal Aviation Administration (FAA) regulations shall be adhered to within the approach and turning areas of any Ventura County airport.*

By requiring FAA Part 77 compatibility within the NCZO which is consistent with the General Plan policy, there is less risk that development will encroach on imaginary surfaces. However, the Coastal Zoning Ordinance does not include similar requirements, which applies to the land uses immediately surrounding the NBVC Point Mugu airfield.

**Issue
VO-3****Wind Energy Development Structures.***Associated with: NBVC*

The potential for wind energy development near NBVC or within the Sea Range may create vertical obstructions; radar and satellite communications issues; and interruptions to mission critical activities.

Government initiatives are promoting renewable energy as a major source of electricity. California has endorsed a goal of having 33 percent of its electricity produced by renewable sources by 2020. California contains coastal and non-coastal areas that are suitable, and even ideal for wind energy. However, siting and development of wind energy facilities has led to conflicts with military operations in the U.S.

The undeveloped and agricultural lands surrounding NBVC Point Mugu also provide open land for wind power facilities. The height of the structures could be a problem for aviation activities at NBVC Point Mugu and even civilian aviation operations in the area.

Findings

- Military compatibility is not considered in the Ventura County NCZO as it relates to vertical heights and wind energy developments in this area.

Existing Tools**Ventura County Non-Coastal Zoning Ordinance**

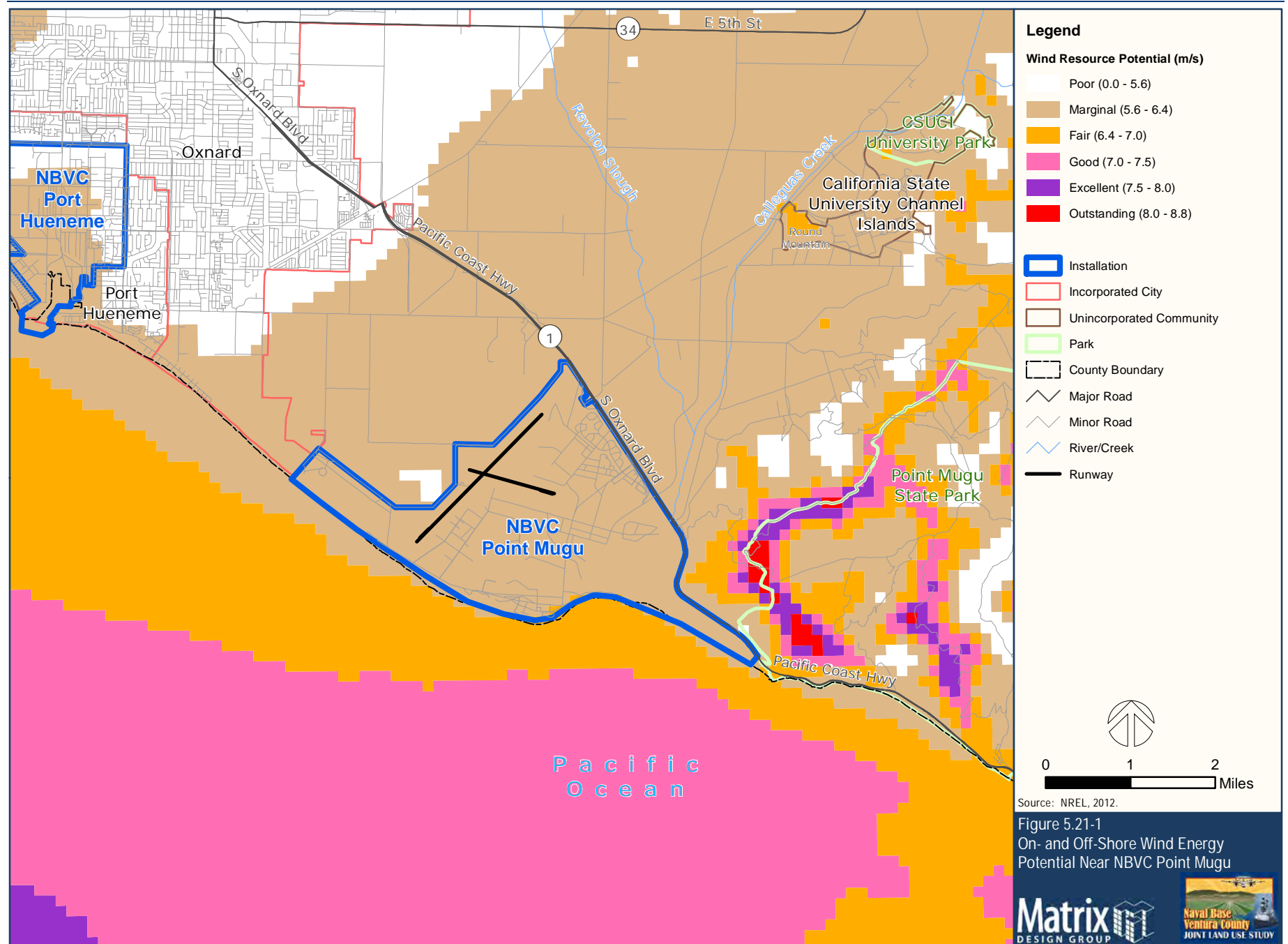
NBVC Point Mugu is surrounded by Open Space (OS) and Agricultural Exclusive (AE) zones. The Ventura County NCZO requires all renewable energy projects in the open space and agriculture zoning districts to receive a Planning Commission Use Permit per Sec. 8105-4. Findings for CUPs are coded in Sec. 8111-1.2.1.1 and require the following:

- *The proposed development is consistent with the intent and provisions of the County's General Plan and of Division 8, Chapters 1 and 2, of the Ventura County Ordinance Code;*
- *The proposed development is compatible with the Character of surrounding, legally established development;*
- *The proposed development would not be obnoxious or harmful, or impair the utility of neighboring property or uses;*
- *The proposed development would not be detrimental to the public interest, health, safety, convenience, or welfare;*
- *The proposed development, if allowed by a Conditional Use Permit, is compatible with existing and potential land uses in the general area where the development is to be located; and*
- *The proposed development will occur on a legal lot.*

Though military compatibility is not specifically identified, compatibility with legally established development can be interpreted to include NBVC Point Mugu. However, because of the lack of specific identification, oversight could lead to military incompatibility.

U.S. Department of Energy Wind Program and National Renewable Energy Laboratory (NREL) 80-Meter Wind Map

The U.S. Department of Energy and the National Renewable Energy Laboratory (NREL) created a wind resource map for the State of California. This map shows annual average wind speeds in meters per second at 80 meters above ground level (AGL). Areas with an annual average wind speeds of greater than or equal to 6.5 m/s at 80 meters AGL are considered most suitable for wind energy development. The area surrounding NBVC Point Mugu has wind speeds of between 5 and 6 m/s as illustrated in Figure 5.21-1. This is less than the preferred speed of 6.5 meters per second and is therefore less likely to be developed. Though this area has less than the preferred 6.5 meters per second wind speed, a developer still may choose to site wind power within the NBVC vicinity.



5.22. Water Quality and Quantity

Water quality / quantity concerns include the assurance that adequate water supplies of good quality are available for use by the installation and surrounding communities as the area develops. Water supply for agriculture and industrial use is also considered.

Key Terms

Acre-Foot. An acre-foot is the volume of one acre of surface area to a depth of one foot. It is equal to approximately 325,853 gallons.

Groundwater. Groundwater is water held underground in the soil or in pores and crevices in rock.

Point-Source Pollution. This term refers to water pollution that comes from a single, discrete place, such as a factory drainage pipe.

Saltwater Intrusion. This is the movement of saline water into freshwater aquifers, which can lead to contamination of potable water sources and other consequences.

Wetlands. Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Jurisdictional wetlands are those that are regulated by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act.

Issues Assessment

Issue WQQ-1

Wildlife Waste Management

Associated with: NBVC

The regulations concerning wildlife, bird, and seal waste on wharves and piers make it challenging for the Navy and commercial industry to clean-up waste.

The port area of NBVC comprises about 200 acres at Port Hueneme and is a crucial part of NBVC. NBVC Port Hueneme comprises several wharves, which are homeport to several research, development, testing and evaluation (RDT&E) vessels due to the close proximity to the Point Mugu Sea Range.

All of the wharves at NBVC Port Hueneme are over 40 years old, only two (Wharf 3 and Wharf A) have been improved since they were built. Asset analysis at NBVC identified wharf facilities in good condition overall, although there are underlying erosion issues which has led to deteriorating wharf and finger pier facilities. There is a general opinion that wildlife waste may be contributing to the erosion issues. In addition, certain regulations complicate the ability to remove this waste in an efficient and timely manner.

Findings

- While the Clean Water Act and the Safe Water Drinking Act both support maintaining water quality, they do not have any specific mentions of wildlife waste impact on coastal waters.
- Any wildlife waste regulations not assessed below are needed to further assess and make conclusions about this issue.

- Many of the federal and state regulations regarding animal waste pertain to livestock operations and agricultural lands and not specifically to marine wildlife waste, water facilities or coastal areas.
- The California State Water Resources Control Board identifies Animal Waste as one of their water issues as part of the Nonpoint Source Pollution Control Program, although there is no emphasis on marine wildlife waste or coastal areas.

Existing Tools

Coastal Zone Act Reauthorization Amendments Section 6217

Section 6217 of the Coastal Zone Act Reauthorization Amendments contains the Coastal Nonpoint Source Pollution Control Program, which addresses nonpoint pollution problems in coastal waters of the U.S. The section requires that all states and territories with approved Coastal Zone Management Programs develop their own Coastal Nonpoint Pollution Control Program which will implement nonpoint source pollution controls or management measures that conform to EPA and NOAA standards.

As per the requirements of this section, states and territories need to ensure the implementation of the management measures which may include permit programs, zoning, enforceable water quality standards, and general environmental laws and prohibitions. States and territories may also use voluntary approaches like economic incentives if they are backed by appropriate regulations. While this provision is not the same as regulating wildlife waste, it is evident that marine animal waste contains levels of pollutants which may affect coastal facilities and increase erosion impacts.

California Water Control Board Nonpoint Source Pollution Control Program

The California State Water Resources Control Board helps to administer the state of California's Nonpoint Source Pollution Control Program through their Nonpoint Source Pollution (NPS) unit. Interagency coordination is required to effectively implement the California NPS Program, due to the program goals which are based upon the regulating authority of 28 state agencies. As of June 2014, the NPS unit is working on a Six-Year Plan (2014-2020) with other Regional Water Quality Control Boards and the EPA.

The Control Board identifies animal waste and solid waste as two of the water issues identified as part of the Nonpoint Source Pollution Control Program. The Control Board website lists an index of management measures for each land use category, and for the marina and recreational boating land use the operation and maintenance of solid waste, including fish waste is detailed. The management measure identifies the need to promote sound fish waste management through a combination of fish-cleaning restrictions, public education, and proper disposal of fish waste.

This is not the same as waste created by marine wildlife, and pertains only to the waste of fish created by fishing and fisherman who are cleaning their catch. Although it is not the same as wildlife waste, it is similar in nature and could be amended to include control and cleanup measures for wildlife waste.

Another management measure identified by the Control Board is for the agriculture land use category and deals more directly with wildlife waste. This animal waste management measure states the need to limit the discharge from the confined animal facility that is not a Concentrated Animal Feeding Operation (CAFO) by containing both facility wastewater and contaminated runoff from animal facilities and managing stored runoff through appropriate waste utilization systems. Again, although this is not the same as marine wildlife waste, it is similar in nature and could be amended to include control and cleanup measures for wildlife waste found in coastal waters that may impact public and private coastal water facilities or increase erosion impacts due to pollutants found within the waste.

**Issue
WQQ-2****Saltwater Intrusion***Associated with: NBVC Point Mugu*

Salt water intrusion due to overdraft in the groundwater basin can impact water quality in the area, including water resources used by the installation.

Overdraft is a situation in which the amount of water withdrawn from a groundwater basin is greater than the amount at which the water will be replenished. While this has long term implications for water supply in all areas where overdraft occurs, coastal areas like Ventura County are more at risk due to the added threat of saltwater intrusion.

Ventura County takes a percentage of its water from coastal groundwater basins. Fox Canyon Groundwater Management Agency (FCGMA) manages and protects aquifers within the JLUS study area. According to the Fox Canyon Groundwater Management Plan, the annual yield of the basins within the JLUS study area is approximately 120,000 acre-feet. However, according to the FCGMA 2012 Annual Report, approximately 125,000 acre-feet of water was extracted from the basin in 2012.

Findings

- The future strategies of the GMP acknowledge the threat of saltwater intrusion and provide guidance to help prevent future problems. The GMP acts as an adequate planning compatibility tool for the communities.
- These plans do not consider military compatibility as it relates to saltwater intrusion and potable water on-base.

Existing Tools**Fox Canyon 2007 Groundwater Management Plan (GMP)**

The Fox Canyon Groundwater Management Agency (FCGMA) manages and protects aquifers in several groundwater basins which serve Oxnard,

Port Hueneme, and Camarillo. According to the 2007 GMP the 120,000 AF annual yield of the basins within the FCGMA was overdraft by 5,000 AF.

The GMP includes a description of current and future strategies that are meant to help improve water quality in the JLUS study area. For the purpose of this issue, the focus is on future strategies that will help reduce saltwater intrusion.

Groundwater Recovery Enhancement and Treatment (GREAT) Project

The GREAT project has three major components:

1. A new regional groundwater desalination facility;
2. A recycled water system to deliver water to manufacturing and industrial non-potable water uses within the City of Oxnard, to deliver water to agricultural users in the Pleasant Valley area, and to inject water as a barrier to seawater intrusion; and
3. Conveyance of desalination backwash concentrates through a brine line to either the City's existing ocean outfall or the Ormond Beach area for coastal wetland restoration.

The GREAT Project would focus on pumping water from the readily recharged Oxnard Forebay Basin and reducing pumping from more impacted basins such as the Oxnard Plain or Pleasant Valley. The GREAT Project also aims to use recycled water for manufacturing/industrial and agricultural uses for non-potable water needs. During winter months, when there is not as great a need for recycled water from either use, the water would be injected into wells to help recharge basins and protect groundwater from further saltwater intrusion.

The EIR for the GREAT Project showed that the project would have a positive effect on groundwater levels in both readily recharged and impacted basins. The groundwater model indicated that water levels in the Lower Aquifer System beneath the Southern Oxnard Plain basin and Pleasant Valley basin would rise by approximately 70 feet. Water levels in the Upper Aquifer

System of the Oxnard Forebay Basin were shown to drop by only 5 feet in wet periods and 20 feet in dry periods.

Non-Export of FCGMA Water

When the FCGMA was formed, it was anticipated that new agricultural uses might be established within agency boundaries. However, overtime new agricultural uses on the fringe of the agency boundaries have been using agency water without proper permission. GMP guidance suggests better education to water users of water export policies, procedures to identify where violations have occurred, and ways to address violations of the policy.

By preventing illegal pumping of groundwater, FCGMA technically introduces pumping reductions which increases the amount of groundwater. By ensuring that illegal pumping is reduced, the amount of groundwater can be maintained and overdraft is less likely.

Continuation of 25 Percent Pumping Reduction

The GMP currently has a strategy in place that will reduce pumping by 5 percent every 5 years to achieve a 25 percent reduction in historical pumping allocation. By introducing further pumping reductions approximately 3,800 acre-feet of water would be preserved which would raise groundwater levels in the UAS by approximately one foot at the Port Hueneme coastline and raise the Lower Aquifer System groundwater levels by approximately two feet.

RiverPark Recharge Pits

The RiverPark recharge pits would help to divert water from the Santa Clara River. During especially wet years, excess water from the Santa Clara River flows straight to the ocean. The RiverPark recharge pits would allow some of this excess water to be diverted into the Oxnard Forebay to further recharge the basin. Modeling conducted by United Water Conservation District and Ventura County estimates a yield of up to 4,000 AFY, with an annual yield ranging from 400 AF (dry years) to 11,500 AF (wet years). This recharge in the Forebay would help to pressurize the greater Oxnard Plain and further protect groundwater from saltwater intrusion. Similarly, recharging the

Forebay through the RiverPark pits would allow for a more secure yield related to the GREAT Project discussed earlier.

Issue WQQ-3

Flood Management

Associated with: NBVC Point Mugu

NBVC Point Mugu airfield is 13 feet above mean sea level and is located within a coastal zone. When flooding occurs, rising waters reach the airfield at NBVC Point Mugu causing delays in aviation operations.

NBVC Point Mugu is located on the Mugu Lagoon at roughly 13 feet above sea level. A majority of NBVC Point Mugu lies in the 100 year floodplain. This means that there is a one percent chance that the area will be inundated by flood in any given year. Critical infrastructure is at risk of inundation in a flood event. Flood damage to critical infrastructure on-base could cause financial burden to the base and also delay timely recovery from flooding events.

It is important for NBVC to take action on-base to prepare NBVC Point Mugu for the likelihood of flood events and to ensure that effects are mitigated appropriately.

Findings

- While the base has initiated MILCON projects to help mitigate the effects of flood which are useful, it could be improved through collaboration with the County and other jurisdictions to regionally plan for flood management measures.

Existing Tools

Naval Base Ventura County Activity Overview Plan, Final Report, September 2006

According to the Activity Overview Plan (AOP), flooding has been a significant problem at NBVC Point Mugu. More than half of the base is located within the 100-year flood zone and historic floods have damaged areas of NBVC Point Mugu including the residential areas and the portion of Laguna Road bisecting the lagoon. NBVC Point Mugu does have a system of tide gates, storm drains, and retaining walls and berms that have been constructed to decrease the chance of flood damage. However, the existing tide gates have been damaged over time and do not provide adequate protection. NBVC has initiated MILCON project P-286 to construct tide gate flood protection systems to protect key facilities located around NBVC Point Mugu.

| | |
|------------------------------|--|
| Issue WQQ-4 | Point Source Pollution Off-base <i>Associated with: NBVC Port Hueneme and NBVC Point Mugu</i> Off-base activities have the potential to impact water quality on base. Such point source pollution includes the pesticides used on agricultural lands. |
|------------------------------|--|

Point source pollution within a watershed has the ability to affect groundwater resources. As Ventura County relies on groundwater to provide a percentage of its drinking water, unregulated point source pollution could affect the ability of residents to have access to clean water. Drinking water within the JLUS Study Area is managed by the Fox Canyon Groundwater Management Agency.

NBVC relies on Fox Canyon GMA to provide drinking water to the installation. Should point source pollution lead to a reduction in available potable water, mission-critical activities may have to be scaled back or eliminated due to

lack of personnel. This could lead to downsizing closure of certain activities at NBVC.

Findings

- FCGMA GMP acts as a sufficient tool that is seeking to protect drinking water in the basin from point source pollution. The measures are designed to reduce and/or eliminate adverse effects on the groundwater supply in Ventura County.

Existing Tools

2007 Update to the Fox Canyon Groundwater Management Agency Groundwater Management Plan

According to the Fox Canyon Groundwater Management Agency (FCGMA) Groundwater Management Plan (GMP) nitrates are introduced from human activity in overlying recharge areas where nitrates can travel directly into the aquifer. Nitrate concentrations are typically highest during dry periods when there is not enough recharge water available for dilution. In groundwater away from recharge areas, nitrates are generally diluted to levels that are safe for human consumption. Nitrates are primarily introduced by poorly maintained or designed septic systems and agricultural fertilizers.

To combat the issue of increased nitrate levels in groundwater, septic systems have been prohibited in the Oxnard Plain Forebay basin. Also, the Los Angeles Regional Water Quality Control Board enacted the Agricultural Irrigated Lands Conditional Waiver program to monitor nitrate levels from fertilizers. If nitrates from agricultural fertilizers are detected entering groundwater basins, the waiver program requires the implementation of Best Management Practices to reduce adverse effects.

The Fox Canyon GMP also has a five-year strategy to destroy abandoned or leaking wells. FCGMA has a list of abandoned or leaking wells that have the potential for cross contamination with aquifers. The Agency is seeking funding to continue to shut down and destroy these wells to protect the upper aquifer systems in the Oxnard Plain and Pleasant Valley basins.

Issue WQQ-5

Development Impacting Storm Drainage Flows

Associated with: NBVC

Development that occurs upstream can create constraints and challenges for stormwater drainage facilities downstream, including areas within NBVC facilities.

Land development creates impervious surfaces in the form of buildings and paved area. Impervious surfaces carry stormwater differently than natural ground. Most soil types allow for rainwater to permeate the soil surface. When water permeates the soil, there is less water that is transferred to waterways. Similarly, natural ground covering help to slow the path of rainwater so that large amounts are not immediately swept into waterways. Impervious surfaces however, act in the opposite way. Impervious surfaces do not allow for permeation of soil surfaces and do not slow down water. Therefore, rainwater is immediately transferred into storm drainage systems that may not be built to handle the capacity.

Thanks to SOAR and Greenbelt agreements between cities, the immediate threat of suburban development and increased impervious surface is not as severe as in places without this protection. However, Ventura County is expected to grow. Growth will bring more people and more development which could cause stormwater drainage issues.

NBVC Point Mugu lies at the end of the Calleguas Creek. Therefore, stormwater runoff flows from the upper reaches of the watershed and deposits on-base at Mugu Lagoon. Although there are new runoff restrictions as part of the Municipal Separate Storm Sewer System (MS-4) that require all runoff be captured on-site, many times flooding still occurs. If stormwater drainage is not regulated, large storm events could cause flooding issues at NBVC Point Mugu. This could impact mission critical activity and expend important base resources.

Findings

- While all these plans provide general guidance and requirements for stormwater drainage facilities, these plans do not consider military compatibility nor do they reflect military coordination and impacts on the military from upstream development and stormwater facilities.
- There are new runoff restrictions as part of the Municipal Separate Storm Sewer System (MS-4) that require all runoff be captured on-site.

Existing Tools

Calleguas Creek Watershed Management Plan

The Calleguas Creek Watershed Management Plan (CCWMP) includes various actions that are meant to improve the watershed. Two of these actions help to address storm water drainage concerns.

Action 3: Evaluate Stormwater Retention and Detention Systems

This action is mean to determine the overall functional efficiency of the retention/detention basin system of the Calleguas Creek. How well the system functions indicates how well the system will prevent flooding.

Action 15: Promote and Recommend Best Management Practices (BMPs) Based on a Watershed-Wide Strategy to Control Volume, Flowrate and Sediment Load of Stormwater Runoff.

This action focuses on erosion and its effects on drainage in the waterway. However, it is also states that urban development with impervious surfaces creates greater runoff impacts to the watershed. As part of Action 15, BMPs can be put into place that will help to control erosion and sedimentation, and flooding.

A combination of these tools is evidence that stormwater runoff is regulated within Ventura County. The goals, policies, and programs that regulate stormwater infrastructure in the Study Area help to prevent flooding that could impede the mission at NBVC Point Mugu.

El Rio / Del Norte Area Plan

El Rio / Del Norte Area Plan covers the unincorporated community north of Oxnard that lies at the northwest reaches of the Calleguas Creek Watershed. The Area Plan specifically calls out stormwater drainage policy as follows:

4.4.2 Flood Control and Drainage Policy: Discretionary development which would result in increased runoff which would contribute to flooding or erosion/siltation hazards shall be required to fund a Deficiency Study and Improvement Plan to Identify existing flooding and erosion/siltation problems and determine appropriate flood control and drainage facilities necessary to reduce these hazards. If the Deficiency Study determines the need for flood control facilities, the discretionary development project shall be required to construct and/or contribute to the construction of all improvements necessary to reduce hazards to a less-than-significant level.

This policy at least holds discretionary developments accountable for ensuring adequate stormwater facilities are built during construction of the project.

Ventura County General Plan

The Ventura County General Plan does not include extensive guidance on drainage related facilities and their impact on downstream environments. The Plan provides general guidance which follows:

2.10.1.2 Design and construct appropriate surface drainage and flood control facilities as funding permits.

Ventura County Subdivision Ordinance

Section 8204-5 of the Ventura County Subdivision Ordinance helps to protect downstream development from stormwater drainage. Major points of the section are summarized below:

- The design of a subdivision shall conform to the Ventura County Flood Plain Management Ordinance and shall provide for the proper drainage of the subdivision and all lots and improvements therein based on the runoff that can be anticipated from ultimate development of the watershed in accordance with the General Plan.
- The subdivision and all lots and improvements therein shall be protected from off-site drainage or flood damage.
- Any concentrations or increases of surface water resulting from the development of the subdivision must be conveyed by means of adequate facilities to a suitable natural watercourse in the area.

This language requires developments to build to standards based on upstream development and downstream development. This protects the new development from stormwater runoff from previous development upstream and protects existing development downstream from any impacts the new development would create.

Camarillo General Plan Community Design Element

The Camarillo General Plan does not include specific direction to protect downstream development from runoff. However, the Community Design Element establishes sustainable site planning guidelines that limit runoff to recharge water supplies including but not limited to:

f. Site drainage should be designed integrating a decentralized system that distributes stormwater across a project site to replenish groundwater supplies. In addition, various devices that filter water and infiltrate water into the ground should be considered.

By encouraging stormwater to stay on-site and replenish groundwater supplies, the amount of stormwater which flows into waterways offsite is reduced. However, because this is a “should” statement, there is no guarantee that the guideline will be put into place. Downstream impacts caused by stormwater runoff could still be an issue.

Camarillo Subdivision Ordinance

The following language from the Camarillo Subdivision Ordinance is evidence of the measures Camarillo is taking to protect areas downstream from stormwater runoff:

18.55.020.B Construct and install all drains, drainage facilities, channel improvements and other drainage works required to provide adequate drainage for every lot and to protect all lots from flood or overflow by storm or floodwaters, in accordance with the approved plans for drains and drainage works. Stormwater runoff from the subdivision shall be collected and conveyed by an approved storm drain system. The storm drain system shall be designed for ultimate development of the upstream watershed. The storm drain shall provide for the protection of abutting and off-site properties that would be adversely affected by an increase in runoff attributed to the development; off-site storm drain improvements and/or stormwater acceptance deeds may be required to satisfy this requirement;

In addition, Camarillo's Grading Ordinance states drainage and run off review for projects that do not require a subdivision map. Development standards are as follows:

180.100.030.B Drainage Standards. Natural habitats and vegetation shall be considered and preserved wherever possible. To this extent all proposed drainage facilities shall respect the natural (before development) hydrologic characteristics of the subject terrain; where feasible, drainage channels shall be preserved in the natural state; where preservation is not feasible, drainage channels shall be designed in such a manner as to simulate the natural environment and preserve the public health, safety and welfare.

Camarillo has made sure that the development will have the capacity to accept stormwater from upstream events as well as not overburden to properties downstream that would be affected by the new development.

City of Oxnard General Plan

The City of Oxnard General Plan includes multiple goals and policies to improve stormwater drainage in new development.

Goal ICS-13 Adequately sized storm drain system and discharge treatment, certified levees, and implementation of appropriate National Pollutant Discharge Elimination System (NPDES) permits and regulations.

ICS-13.2 Adequate Storm Drains and NPDES Discharge Treatment: Provide storm drainage facilities with sufficient capacity to protect the public and property from the appropriate storm event and strive to meet storm water quality discharge targets set by NPDES and related regulations

ICS-13.4 Low Impact Development: Incorporate low impact development (LID) alternatives for stormwater quality control into development requirements. LID alternatives include: (1) conserving natural areas and reducing imperviousness, (2) runoff storage, (3) hydro-modification (to mimic pre-development runoff volume and flow rate), and (4) public education.

By endorsing adequately sized storm drains that protect the public and property from the appropriate storm events, the likelihood of flooding due to inefficient drainage systems is less likely to occur. As well, LID standards for stormwater control act as a proactive measure to keep certain amounts of stormwater from ever entering waterways.



