

BRAC 2005 - Ventura County Task Force

Preserving Our Bases, Homeland Security and the Economy

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August 12, 2005

Mr. Anthony Principi, Chairman
Base Realignment and Closure Commission
2521 South Clark Street, Suite 600
Arlington, VA 22202

Dear Chairman Principi,

The synergy of units at both the Point Mugu and Port Hueneme operating locations of NBVC makes it a natural facility for numerous future DoD missions. These missions will often contain joint requirements in support of all services, as well as allied forces on occasion. They will demand expert technical skills and advanced technologies, all of which are available in abundant supply at NBVC. These skills and technologies represent a broad base of engineering, test and evaluation capabilities for surface and airborne weapon systems, including electronic warfare systems, and expeditionary forces facilities requirements.

“NAVAL BASE VENTURA COUNTY, *A Business Model for DoD Activities*”, is attached for your review. This document was created in 2004 and recently updated to spell out the extensive capabilities, unique location and varied missions of NBVC. Beginning on page 20 of the attached document, you will find a summary discussion of NBVC's potential for supporting future missions and programs for our country's national defense. Movement of key capabilities from NBVC, as proposed by the BRAC 05 recommendations, will adversely affect its ability to support the future.

The Ventura County Community testified during the Los Angeles Base Realignment and Closure (BRAC) hearings in Los Angeles on July 14 regarding the inaccuracies and misconceptions in the BRAC 05 recommendations. The China Lake Defense Alliance (CLDA) has submitted comments to the BRAC Commission regarding the Ventura County Community presentation. The establishment of a single location at China Lake seems contrary to the movement toward network centric warfare being developed and practiced today. Our business model clearly demonstrates that NBVC is better positioned to support future joint programs and transformation.

Sincerely,



Kathy Long
Supervisor, County of Ventura
BRAC Task Force Co - Chair



Edward Summers
Affinity Bank
BRAC Task Force Co-Chair

Cc: BRAC Commissioners

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NAVAL BASE VENTURA COUNTY

A Business Model for DoD Activities

NAVAL AIR STATION POINT MUGU
CONSTRUCTION BATTALION CENTER PORT HUENEME
CHANNEL ISLANDS AIR NATIONAL GUARD BASE



Prepared by
Military Base and Economic Committee

VENTURA COUNTY ECONOMIC DEVELOPMENT ASSOCIATION
September 2004
Revised August 2005

For additional information: (805) 320-1328 or www.vceda.org/bases

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EXECUTIVE SUMMARY

This paper presents a Navy developed business model to combine various commands and missions in a cost effective manner. It also outlines the critical military value of Naval Base Ventura County (NBVC), the units it supports, and the facilities it operates.

NBVC has three major operating locations on the coast of Southern California (for the purpose of this discussion the Air National Guard Base, which shares airfield facilities, is considered as part of NBVC). First is an un-encroached, airfield complex, which is one of the few DoD airfields, having immediate over the beach access to military controlled airspace. Second, approximately ten miles west of the airfield, is a harbor complex, which is the only military controlled deep-water port between San Diego and Northern Washington State. The third is a heavily instrumented, military-controlled island (San Nicolas), approximately 60 miles southwest of the Point Mugu site.

Business Model

Unlike many DoD facilities with a single dominant mission, NBVC, which is organizationally aligned under the Chief of Naval Installations, hosts several tenant organizations. As these tenants pay for common services, such as roads, public works, and utilities, this host/tenant arrangement creates a cost effective and efficient way to meet customer needs.

In support of their missions these tenant activities share facilities such as the harbor, airfield, lay-down acreage, and warehousing. *Some of these shared facilities are identified in Table 1.* Some agencies such as the Naval Surface Warfare Center and the Naval Air Warfare Center share common project resources and specialized engineering capabilities. This decentralized Business Model adds much to the flexibility and military value of the Base.

Diversity of Missions

NBVC supports more than 90 diverse military units conducting 11 major and numerous smaller important missions. For example, NBVC unit missions include test, training, and evaluation, satellite operations, mobilization, formal schools, and Reserve components of all the services. The airfield is critical to the success of eight of the 11 major missions. The deep-water harbor is similarly critical to six major missions. Many of these missions are synergistic. For examples: Operational Seabee units rapidly mobilize and deploy, and require both a seaport and airfield. The operation of the instrumented sea range provides critical infrastructure for the Navy and Air Force, which use the airfield and harbor for deploying missile launch platforms and targets. The harbor and adjacent areas are a key element in the mobilization and deployment of all DoD forces requiring sea-lift of heavy equipment.

Joint Operations and Support

As the operator of the largest instrumented sea test range in the world, NBVC provides a testing and training facility for all the allied nations of the United States. The sea range is also used by the Navy, Air Force, and the Missile Defense Agency to perform development of missile systems and operational training, exercises, and joint operations. The range provides integrated, real-time, technical support to Vandenberg AFB and Edwards AFB operations. The harbor and adjacent facilities are used to deploy and receive Army, Navy and Marine Corps heavy weapons and equipment from locations all over the globe. NBVC is also used as a base for mobilization of Reserve components of all of the services. Navy satellite operations at NBVC are linked with those of the Air Force. The engineering personnel and facilities at NBVC are used to directly support Air Force and Navy electronic warfare operations by providing a worldwide real-time response to threats. NBVC also provides direct engineering support to the Air Force and Navy for anti-air missile systems.

TABLE 1
MISSION UTILIZATION OF NBVC ASSETS

SUPPORT MISSION / FUNCTION	Interstate	Rail	Lay-Down (300 Acres)	Warehouse (1.7 M Sq Ft)	Berthing & Messing	Harbor	Airfield (2 Major Runways)	Air\Sea Range\Geography (36,000 Sq Mi)	Laboratories	Aircraft Maintenance	Technical Schools
	A. Expeditionary Deployments and Unit Mobilizations	A	A	A	A	A	A	A		B	
B. Formal Schools	B				B						A
C. Construction/Humanitarian Support	A	A	A	A	A	A	A		B		A
D. RDT&E and In-Service Engineering of Surface Ship Combat Systems	B			A	B	A	B	A	A		B
E. RDT&E and In-Service Engineering of Airborne Combat Weapons Systems	B		B	B		A	A	A	A	A	
F. Airborne Early Warning					B		A	B		A	B
G. Naval Satellite Operations								A			
H. Support for Multi-Service Reserves	A	A	A	B	B	B	A			A	A
I. Testing, Training, and Integrated Joint Warfare Experiments	B					A	A	A	A	A	
J. Air National Guard (ANG) Airlift	B				B		A			A	
K. Homeland Defense and other tenant unit missions	A	A			B	A	A				B

A Critical to Mission Success

B Important to Mission Success

Note 1: Major Laboratory Complexes located at NBVC:

- EA-6B (2) Reactive Jamming, Communications
- TERPES
- Bi-Static Radar Reflectivity Chamber
- Missile Simulation Complex
- Naval Facilities Engineering Service Center (NFESC)
- Surface Warfare Engineering Facility (SWEF)

INTRODUCTION

NBVC Mission

“Naval Base Ventura County is a major aviation shore command and Naval Construction Force mobilization base providing airfield, seaport, and base support services to fleet operating forces and shore activities.”

NBVC Resources

NBVC offers airfield, seaport, railhead, extensive mobilization lay-down acreage, training areas, climate-controlled storage, and primary base facilities. NBVC supports multiple tenant activities and operations important to all military branches. In turn, these activities give essential support for innumerable joint DoD missions.

NBVC Base Assets

- Over 15,000 military, civilian, and contract personnel
- 36,000 square mile air/sea test range
- NAS Point Mugu
 - 4,490 acres
 - 2 runways
 - Laguna Peak Antenna Facility
 - Air National Guard Base
- CBC Port Hueneme
 - 1,615 acres
 - Deep-water port
 - 300 acres of lay-down area
 - 16 miles of rail/railhead
 - 1.7 million square feet of warehouse space
- San Nicolas Island (SNI)
 - 13,370 acres
 - 1 runway



NBVC is comprised of two major operating facilities; NAS Point Mugu and CBC Port Hueneme that combined serve as home for more than 90 tenants—civilian and all branches of the military. Listed below are the major commands for the operating locations.

Naval Air Station Point Mugu

- Airborne Early Warning Wing, Pacific Fleet
- Naval Air Warfare Center – Weapons Division
- Naval Weapons Test Squadron
- Naval Satellite Operations Center (NAVSOC)
- Naval Air Reserve
- Explosive Ordnance Disposal Unit



Construction Battalion Center Port Hueneme

- Naval Facilities Expeditionary Logistics Center
- 31st Seabee Readiness Group
- Naval Surface Warfare Center, Port Hueneme Division
- Naval Facilities Engineering Service Center
- Engineering Duty Officers School
- Naval Reserve Center
- Naval Construction Training Center
- Naval School Civil Engineer Corps Officers
- Marine Corp Reserve Training Center

In addition, 75 smaller tenant commands are located at NBVC. The 146th Airlift Wing, California Air National Guard is located at Channel Islands Air National Guard Base, adjacent to NAS Point Mugu, and shares use of the airfield facilities.



Hueneme Harbor is the only Navy owned deep-water harbor between San Diego, CA and Puget Sound, WA.



The airfield at Point Mugu is shared by both the Navy and the Air National Guard.



The Self Defense Test Ship, shown in the foreground, is an essential test asset,

MILITARY VALUE

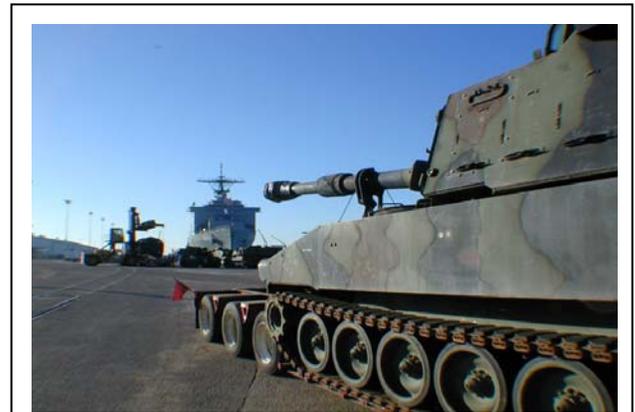
1. Current and Future Missions Supported by NBVC

The missions accomplished by NBVC are carried out by the tenant organizations of the Bases. Some tenants work in multiple mission areas. An effort that extends across the missions of Air and Surface Weapons, satellites, and construction forces is the In-Service Engineering.

In-Service Engineering – Modern telecommunications technology and commercial off-the-shelf systems have made it practical and expeditious to connect the war fighters with engineers and technicians. These engineers and technicians are intimately familiar with the design, operations, and maintenance of the sophisticated weapons systems and construction systems being employed in forward areas, such as Iraq and Afghanistan. When a problem arises the affected service unit can immediately contact expert help that includes access to all the technical documentation available to restore the system to its operational capability. When a deployed SEABEE encounters a difficult decision, he can immediately seek expert advice to address potential solutions based on years of similar experiences. In practical terms this might mean reduced manning on combatant ships and squadrons because such aid is immediately available and reliable. This capability will be expanded to remote monitoring of deployed equipment, so that imminent failure can be predicted and avoided. The military value of real-time, in-service engineering will be realized in the coming years as the operating forces become accustomed to taking advantage of such tools and methods.

A. Expeditionary Deployment and Unit Mobilization

NBVC supports operational tenant units in day-to-day training necessary to maintain combat ready forces. Many units use the base facilities and locally operated combat ranges to insure unit readiness and ability to rapidly deploy for exercises, humanitarian relief, contingency operations, and combat. The core operational units are the combat construction forces (Seabees), Airborne Early Warning Wing, Air National Guard (ANG), and US Naval Reserve (USNR) aviation units. The expeditionary construction force mission involves housing, outfitting, equipping, and training four Naval Mobile Construction Battalions and one Underwater Construction Team. At least one of these units is deployed at all times. The E-2 Early Warning Wing supports carrier group deployments and normally has at least one squadron deployed at all times. ANG and USNR aviation units perform scheduled short-term deployments in support of active forces.



Port Hueneme is a key mobilization and deployment location for all Services.

NBVC supports the critical mobilization response of Marine Corps and Army combat units who would process, along with tenant units, through the bases facilities. The large number of reserve component units throughout the NBVC community are also supported in their many and varied mobilization and deployment requirements. All these diverse units take advantage of the secure, Navy controlled, seaport and airfield.

The largest unit supported is the Seabee Combat Construction Force located on NBVC. The mission of the construction force mobilization calls for peacetime training, outfitting, and exercising eight reserve construction units. During mobilization, the base receives, houses, feeds, outfits, organizes, trains, equips, and deploys the mobilized units and their equipment, supplies, and construction material. Once the units are deployed and/or mobilized, NBVC continues to supply replacement personnel, parts, equipment, supplies, and construction materials. In order to meet the deployment time schedules, NBVC maintains equipment and supplies on pre-positioned ships around the world. Equipment and supplies for initial mobilization units are stored in the base's dehumidified warehouses.

Follow-on equipment, supplies, and construction materials must be procured, received, processed, and prepared for shipment and then exported in the order needed by the deployed units. These functions are accomplished using NBVC's rail and highway network which circulates through warehouses, lay-down areas, and the deep-water harbor. NBVC's airfield is used to move personnel with commercial and military aircraft.

The training of active duty and mobilized personnel covers technical construction skills, military weapons training, organization, defensive operations, convoy protection tactics, and mission-specific task training. The 31st Seabee Readiness Group, using assigned personnel with major assistance from the Naval Construction Training Center and the Civil Engineer Corps Officers School, directs this training.

NBVC supports Marine Corps and Army heavy combat equipment mobilization for expeditionary deployments and training exercises. In light of the global war on terrorism, the need for rapid deployments and mobilization activities will be even greater in the future.



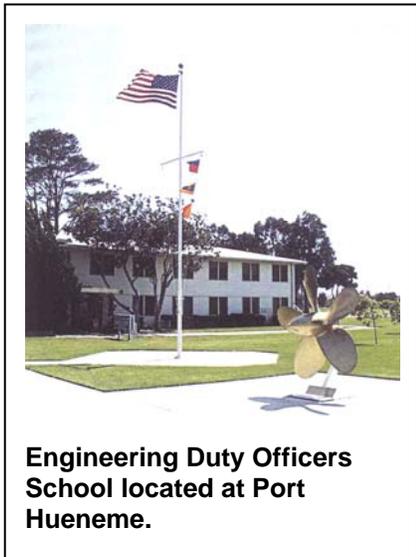
The port is the major embarkation and reception point for Army and Marine heavy combat equipment to the Middle and Far East.

Over the years, units deployed from NBVC have supported the Pacific Fleet and other U.S. forces to build and repair roads, base camps, airfields, ammunition storage, and bridges in Estonia, Uzbekistan, Kenya, Albania, Kosovo, Puerto Rico, Guam, Diego Garcia, the Philippines, Kuwait, and Iraq.

The Naval Mobile Construction Battalions, Underwater Construction Team and the Mobile Utility Support Equipment Unit carry out worldwide humanitarian efforts through NBVC. These organizations train and equip at NBVC and are deployed and supplied through the storage, staging, packaging, and shipping capabilities of NBVC's airfield and harbor.

B. Formal Schools

NBVC provides space and support for numerous schools engaged in training for expeditionary mobilization. The primary schools are described below:



Naval Construction Training Center (NCTC) provides basic and advanced construction trade skills. These schools meet the joint requirements of Army, Navy, and Air Force. The Air Force equipment mechanics school is integrated as a part of the joint operation of the NCTC.

The Civil Engineer Corps Officers School provides a full-range of classes for officers and civilians, providing career development training, including Seabee/Contingency Engineering, Facility Acquisition, Facilities Management, and Ashore Environmental Management. The Naval Facilities Institute and the Defense Acquisition University teaches all aspects of the federal acquisition process, which complements this school.

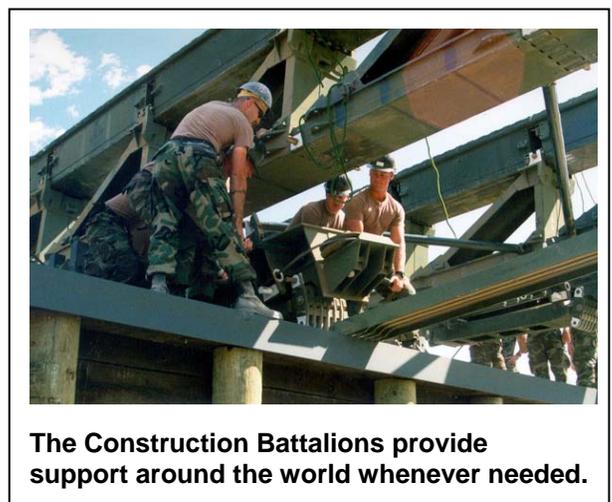
The Engineering Duty Officers School is located at NBVC and enjoys the synergy of a location with multiple professional schools and educational institutions. NBVC provides space for classrooms, laboratories, and hands on field training for the students.

Working in conjunction with the educational centers at NBVC is the Naval Facilities Engineering Service Center (NFESC), the Navy's premier specialized facilities engineering and technology center. The Center supports the Fleet and Naval Facilities Engineering Command (NAVFAC) clients with cost-effective, responsive solutions, using leading-edge technology and resources. As technology advances, personnel training at all levels will grow. The Navy's commitment to less manpower and more sophisticated technology demands a well-trained, integrated force benefiting from the co-location of research facilities, schools, and operating forces.

C. Construction/Humanitarian Support

Work carried out by the units stationed at NBVC extends beyond military operations. Construction operations aiding humanitarian efforts and disaster relief around the globe is an integral part of what is done by the Naval Mobile Construction Battalions, Underwater Construction Team, and Mobile Utility Support Equipment Unit.

Specific humanitarian missions carried out by these same battalions and units include disaster recovery in Tunisia, typhoon recovery in Guam, hurricane recovery in Puerto Rico and Hawaii, and earthquake recovery in the Philippines and California. Continuing humanitarian construction activities such as providing potable water, building schools, bridges, and roads to improve the quality of life for the local population is a significant part of the construction forces' mission.



The Channel Islands ANG mission includes disaster response and humanitarian support for both the State of California and DoD support for civil authorities. The most unique of these is the Modular Airborne Fire Fighting System (MAFFS) mission. The MAFFS fire fighting operation supports both the US Forest Service and California Department of Forestry. Fire retardant aircrafts have operated from the ANG ramp and the Point Mugu NAS airfield with the critical support of NBVC. ANG support has also been required for flood, earthquake, and civil disturbance response.

D. RDT&E and In-Service Engineering of Surface Ship Combat Systems



The Self Defense Test Ship stationed at Port Hueneme provides an unmanned platform for the development of defenses from threat weapons.

A major mission of NBVC is the technical support of the operational surface fleet of the Navy. The Naval Surface Warfare Center (NSWC) at Port Hueneme provides test and evaluation, In-Service Engineering (ISE), and Integrated Logistics Support (ILS) for surface warfare combat systems, subsystems, equipment, and related expendable ordnance of the Navy's surface fleet. Through its vision to "provide safe, effective, and affordable warfare systems that enable ships and sailors to fight and win," combatant and underway replenishment ships in the U.S. Fleet and many Allied foreign naval fleets are given ISE and ILS support through NSWC. Through their commitment to continuous improvement of the services and products they provide the fleet, and by their innovation of new concepts and approaches for surface warfare systems of tomorrow, NSWC is positioned to be a key player in the Navy's transformation in the 21st Century.

A short list of the better-known weapons systems covered by the center are; AEGIS, TOMAHAWK, SEA SPARROW, HARPOON, STANDARD MISSILE, PHALANX Gatling Gun, five-inch MK45 Gun, and Cooperative Engagement Capability. NSWC sustains the engineering needed to correct problems, improve performance, enhance reliability, and reduce costs; and manpower to maintain and operate the systems. Logistics also has a major responsibility that entails provisioning spare parts and technical manuals, training, repairing, and overhauling, providing technical data, and other aspects of maintaining the systems.

NSWC is at the forefront of improving logistical support to our ships and sailors. One example is the Joint Engineering Data Management Information and Control System, allowing electronic access to millions of combat and



The Surface Warfare Engineering Facility (SWEF) overlooking the Sea Range provides a shirtsleeve environment for evaluating ship weapon system issues.

weapon system engineering drawings and technical manuals. In the year 2000, Vice President Gore awarded NSWC the Golden Hammer Award.

Other recent innovations include the Sailor-to-Engineer Program, allowing sailors on board a ship to contact an engineer at any time to help resolve system problems through satellite linkages. In the future, on-shore engineers will be able to test shipboard systems and direct maintenance actions before failures occur.

The Standard Missile III is a major component of the center's programs, as is the AEGIS and Vertical Launching System, all of which are command responsibilities. All are vital components of the Navy's Theatre Ballistic Missile Defense program. The command was instrumental in developing Force Protection (Anti-terrorism) concepts for swimmer and small boat detection, including exercises performed within the Port Hueneme harbor. This effort is directed against future attacks similar to that of the USS Cole in 2000.

The command handles all computer programs associated with surface warfare systems, including subsystems and related software. Examples include search and tracking radars, fire control systems, and launchers/gun mounts. NSWC is ideally suited to perform all of these functions, because as the Test and Evaluation agent on all of the systems and by continuing to provide production support for many of them, they know the systems in-depth before the systems enter the Fleet. As a part of their T&E responsibility, they maintain and control a recently decommissioned DD-963 Class Destroyer (USS Paul F. Foster) as the Navy's Self Defense Test Ship. This major asset, which is remotely controlled during T&E operations, allows for the defense systems to be tested against live, incoming targets representing real threats.

NSWC is invaluable to the modern Navy's Battle Group Interoperability. It ensures all elements of the battle group communicate with each other and share common data displays. This includes incoming threats and targeting information. It is a major player in the next generation of surface ships with a significant responsibility in the DD(X) (next generation destroyer) program and other new ship projects. At the forefront of the Navy's Theater Ballistic Missile Defense program for a number of years, the center continues to be a key contributor for the future.

E. RDT&E and In-Service Engineering of Airborne Combat Weapons Systems

The air combat weapons systems mission at Point Mugu ensures the effectiveness of the Navy's missile and airborne electronic combat systems. The focus is on two distinct areas: test and engineering of anti-air radar guided missiles launched from aircraft or ships, and airborne electronic combat systems.

The following list of tasks handled by missile systems test and engineering at Point Mugu illustrates the diverse nature of the command's responsibilities.



NBVC tests and refines missile technology launched from all Air Force and Navy Platforms.

Flight Test Operations and Planning –

Provides project officers, engineers, and pilots who plan and execute flight-testing as part of an overall weapons evaluation project.

Simulation Laboratories – These laboratories are real-time hardware in the loop simulations of key missile systems. Missile system simulations include HARM, AMRAAM, Sparrow, and others. These simulations support test and evaluation, as well as engineering investigation by technicians at Point Mugu and Port Hueneme.

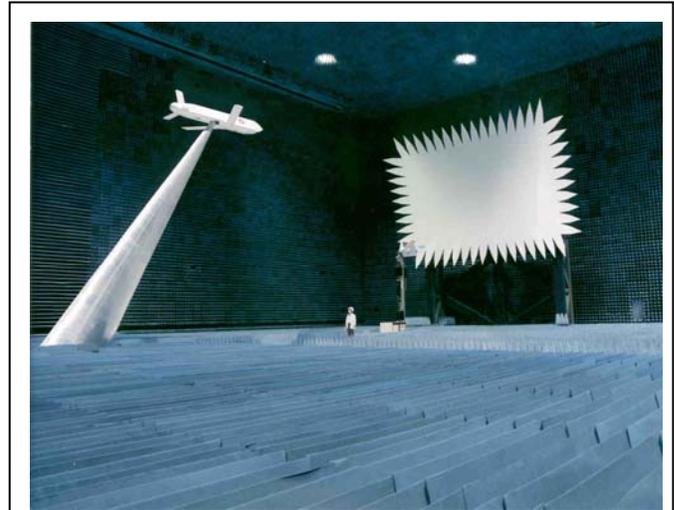
Electronic Environment Design – Designs and engineers, deployable electronic devices, which simulate threat emitters and electronic countermeasures. These devices are used on the sea range and elsewhere.

Test Article Preparation Labs – The equipment and facilities of the Radar Missile/Test Article Preparation prepares and performs ground checks of missiles to be fired on the range.

Radar Measurement Laboratories – Radar cross-section measurement facility contains the Navy's premiere indoor radar signature test laboratory. The facility measures, analyses, and synthesizes radar signature data from a wide-spectrum of targets including re-entry vehicles, air-to-air missiles, drone targets, aircraft and ship models, low-RCS vehicles, and components. The large Bi-Static Anechoic Chamber handles targets up to 30 feet long and weighing up to five tons.

Missile/Test Article Instrumentation Laboratory – Designs unique instrumentation packages to be installed into missile systems. These packages include signal conditioning electronics, encryption, transmitter, and antennas customized to fit the standard configuration of any missile.

Electronic Warfare (EW) Center – Provides EW support for the Navy, Marines, and Air Force. These facilities support the EA-6B, E-2C, and MH-60. The EW Center develops and tests radar receivers/jammers, communication receivers/jammers, satellite communication systems, data links, threat databases, and mission planning systems. Additionally, the EW Center provides electronic combat simulation for development of advanced airborne jamming techniques, and their test and optimization when used against enemy threats. These laboratories regularly perform avionics and systems integration for EW weapons systems upgrades and related operational software. Especially important during times of conflict, the EW Center maintains a 24/7 hotline to support queries from operational Fleet and Expeditionary forces. However, the real strength of the Center is not in its facilities, but in its cadre of scientists, engineers, and operational subject matter experts with extensive experience in the latest weapon systems, systems integration, software engineering, and EW technology.



The Bi-Static Radar Reflectivity Chamber at Point Mugu is one of the major technical facilities required to evaluate missile technology.

Weapon System Support Activities (WSSA) – The Airborne Electronic Attack (AEA) integration facility is unique in the world. The laboratories are currently providing systems integration and software lifecycle support for the EA-6B Aircraft—the AEA platform used by the Navy, Marines, and Air Force. The Center is currently upgrading the WSSA to support the EA-18G, the replacement for the EA-6B, scheduled for deployment as early as 2008. The transfer of electronic warfare subject matter expertise from programs currently under development/test to new programs such as the EA-18G is invaluable to the successful future of Electronic Warfare operations.

For over 30 years, the Point Mugu F-14 Weapon System Support Activity provided cradle-to-grave engineering support to all aspects of the three variants of the F-14 Aircraft. This included periodic functional upgrades due to changing threats, roles, and missions; correction of latent defects; replacement of obsolete parts; and reliability, and readiness improvements. With the phasing out of this aircraft, many of the scientists and engineers have transitioned to new programs. This has transferred a tremendous experience base into weapon system integration and software engineering.

F. Airborne Early Warning

As a result of BRAC-95, NBVC was selected to receive the E-2 equipped, Airborne Early Warning Wing. The Record of Decision was approved in June 1998 and the Wing commenced the move that summer. The Airborne Early Warning Wing, Pacific is now headquartered at NBVC. The Wing is composed of 5 full E-2 squadrons, a wing staff, and the attendant schools required to train the airborne crews to perform their mission of providing airborne early warning for the aircraft carrier battle group.

Each Aircraft Carrier deployed from the West Coast has one of the Airborne Early Warning Squadrons from Point Mugu in the embarked Air Wing. These squadrons are made up of 4 E-2 aircraft and 180 officers and enlisted personnel. The aircraft of these squadrons are the eyes and ears of the Battle Group. In a battle scenario, the aircraft are continuously airborne, providing control of friendly assets, long-range search for enemy threats, and a general safety net for the fleet with their airborne radar systems.



The E-2C Hawkeye is the U.S. Navy's all-weather, carrier-based, tactical airborne warning and control system platform.

NBVC provides the optimum location for this Wing for the following reasons:

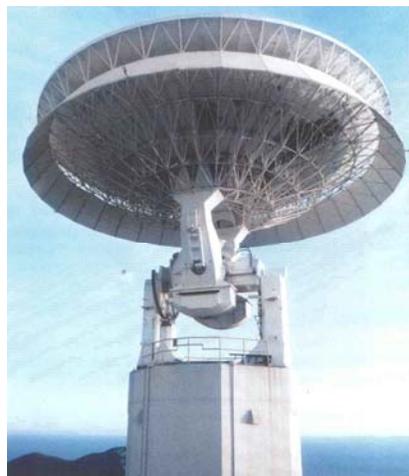
- The unique geography of NBVC provides rapid access to open, ocean airspace for crew training and proficiency.
- NAS Point Mugu is one of only two Naval Air Stations located on the Pacific Ocean, (the other is NAS North Island).
- The Naval Air Warfare Center, Sea Test Range provides an excellent environment for the Wing to interface with other Pacific Fleet assets, both aircraft and surface ships for wing/squadron airborne control training.
- With no competing carrier aircraft squadrons, NBVC provides access for Field Carrier Landing Practice (FCLP). This is a major problem for the AEW Wing Atlantic and the Replacement Air Group at NAS Norfolk. These aircraft often come to NBVC for FCLP training.
- NBVC provides short turn-around to fleet operating areas in Southern and Northern California, and Nevada (Fallon).
- The Naval Surface Warfare Center, also at NBVC, is developing the Cooperative Engagement Capability for the fleet. The E-2's play a major role in this process and the juxtaposition of activities provides a synergistic benefit to both the aviators and the Surface Warfare engineers.
- The proximity of NBVC to the Los Angeles metropolitan area was critical to the Wings air defense role immediately following the terrorist attacks of 9/11/01.

G. Naval Satellite Operations Center

The Naval Satellite Operations Center (NAVSOC) has been operating spacecraft from its headquarters at NBVC and its several detachments for more than 42 years. NAVSOC operates under the guidance of the Naval Network and Space Operations Command in Dahlgren, Virginia, and handles three remote Tracking, Telemetry, and Commanding (TT&C) activities and a second Satellite Operations Center. Its 60-foot communications antenna, located three miles from its headquarters at 1,500 feet on Laguna Peak, recently underwent a \$1 million renovation and systems upgrade to bring it to the state-of-the-art condition. It supports the Satellite Ground Link System (SGLS), TT&C operations for its many satellites under NAVSOC control.



Laguna Peak hosts not only Sea Range radar and telemetry systems, but also the communications systems for the Navy Satellite program.



**Laguna Peak's 60-foot antenna,
Laguna Peak, CA.**



**NAVSOC Detachment DELTA
Satellite Operations.**

The total worldwide system NAVSOC operates includes two remote sites; one located in Prospect Harbor, Maine, which supports TT&C through the SGLS, Ultra High Frequency (UHF) and Extremely High Frequency (EHF) capabilities. The second remote site, located at Finagayan, Guam, serves as NAVSOC's third satellite earth station. It completes NAVSOC's nearly global coverage of the geosynchronous satellite belt and has UHF, SGLS, and EHF TT&C capabilities. There is also a NAVSOC detachment at Schriever AFB, Colorado Springs, Colorado. This activity shares the daily workload of satellite operations with HQ, Space Command.

NAVSOC'S current mission includes the Fleet Satellite (FLTSAT) constellation providing military UHF narrow-band communications and the UHF Follow-On (UFO) constellation providing UHF narrow-band, EHF, and Global Broadcast System communications. NAVSOC operates the FLTSAT EHF packages on two FLTSAT satellites and the EHF package on one Polar-orbiting host satellite. These packages provide additional EHF communications to military users.

The Geodetic Satellite (GEOSAT) radar altimeter provides ocean surface height information to worldwide Naval Meteorological Centers along with the six remaining transit satellites which support ionosphere research, are also operated by NAVSOC.

In the next few years, a number of new systems will come online. In fiscal year 2006, two new polar-orbiting satellites will be launched with EHF packages. In fiscal year 2008, the Mobile Users Objective System constellation will come under the control of NAVSOC. NAVSOC has been a leader in

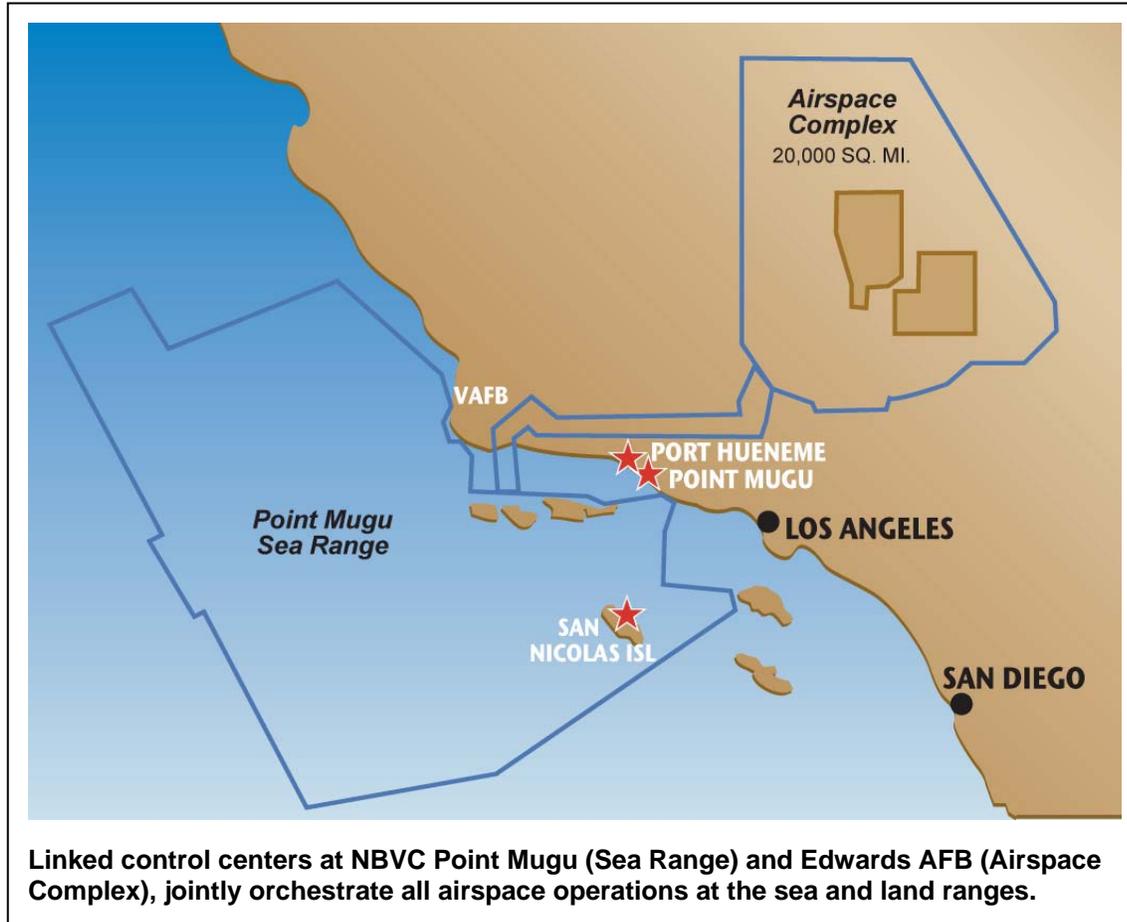
implementing new satellite operating concepts and continues to modernize and upgrade its worldwide facilities to keep abreast of new technology in the field. It is allied with the Air Force Satellite Control Network and shares antenna resources for its round-the-clock operations.

H. Support for Multi-Service Reserve Forces

Currently, our nation relies more than ever upon Reserve forces. A significant number of reserve components and other government organizations are located on the base, or within the adjacent cities of Port Hueneme and Oxnard.

These organizations include the eight Reserve Construction Battalions (Seabees), Naval Air Reserve at Point Mugu, Port Hueneme Naval Reserve Center, Patrol Squadron 65, and the Fleet Logistics Support Squadron 55; Marine Corps Reserve Training Center's Weapons Company, 2nd Battalion, 23rd Marine Regiment, 4th Marine Division; the California Air National Guard's 146th Airlift Wing Channel Islands; Army Reserve Headquarters 6252nd U.S. Army Hospital, the Defense Utilization Marketing Office, and the Coast Guard.

I. Testing, Training, and Integrated Joint Warfare Experiments



The Test and Training missions are supported by the operation, maintenance, and continued development of the **largest instrumented weapons range in the world.** Depending on the user's needs, it spans from Big Sur in Northern California to the South, the U.S./Mexico Border, and as far West as the Army's Kwajalein Missile Range. Metric track, surveillance, telemetry, communications, and command and control sites are located at Point Mugu, Laguna Peak, Santa Cruz Island, and San Nicolas Island. Ground-based coverage is augmented by airborne instrumentation from NP-3D Orion aircraft. The range functions located at NBVC include range safety planning and operations; development, and maintenance of sensors; data processing, instrumentation; data collection systems and control software test operation; and orchestration of all range assets in real-time. The following describes the activities performed during an operation.

Range Operations - Clears the operating areas of intruders; Ensures in-flight safety of test articles and platforms; Destroys or terminates errant missiles/targets; Monitors test weapons system performance; Directs aircraft, ships, and drone vehicles; Maintains display systems interface in real-time with Time, Space, Position Information (TSPI) sources, GPS receivers, radar, and airspace surveillance systems and telemetry receiving facilities; Provides real-time video display; Maintains operational control rooms configured to accommodate numerous simulations and training operations; provides post-operation data products to customers, and provides information and control for remote instrumentation sites along the California coast from San Diego to San Francisco.



Airborne targets are launched and recovered from Point Mugu and San Nicolas Island. Seaborne targets are launched and recovered from Port Hueneme.

Target Systems - Targets are a necessary adjunct to the range. Surface targets are deployed from the harbor at CBC Port Hueneme, airborne target launchers located on the beaches of NAS Point Mugu and San Nicolas Island (SNI), and from aircraft launched from NAS Point Mugu. Engineering development and maintenance of aerial and sea targets is done at NBVC. The base provides full lifecycle support services for all Navy aerial and surface targets including target development, modification, test and evaluation, operations, maintenance, acquisition, development, and in-service engineering functions. **It is the only facility operating all the Navy target systems, and has the mission and engineering expertise to provide unique modifications to meet individual test requirements.**



San Nicolas Island is a key element of the Sea Range. A new use for the island is as a test bed for the launch and evaluation of Anti - Ballistic Missile Systems (ABMS).

Target Systems Include:

Subscale targets: BQM-74E and BQM-34S capable of speeds up to Mach .95 and altitudes of 50,000 ft.;

Missile targets: MQM-8 (series) Vandal targets Capable of Mach 2.1 at 3.6-meter (12-feet above the ocean) altitude with terminal weave/link end-game maneuver and AQM-37 C and D targets. AQM-37D can reach Mach 4.5 at 33,500 meters (110,000 feet) with an extended performance kit;

Surface targets: These range in size from 8 meters to 80 meters. **Seaborne target harbor facilities at Port Hueneme provide ready access to the sea range and the open ocean.**

J. Air National Guard Airlift

Channel Islands Air National Guard, 146th Airlift Wing. The California Air National Guard is located adjacent to NAS Point Mugu. The unit is a fully contained Air National Guard Wing, sharing common airfield facilities with the Navy.

Following a long selection process, the Channel Islands location was selected as the most suitable location in Southern California for the wing. Criteria for the selection included:

suitable airport facilities, recruitment base, flying weather, and federal support facilities.

The Wing completed its relocation in 1991 from its long-time home at the Van Nuys Airport in the San Fernando Valley. The 1,200 military members of the Wing support 12 C-130 Aircraft and have a dual mission supporting both the federal and state governments. The primary missions of the Wing are tactical airlift, insertion, re-supply airdrop, and medical evacuation. Missions critical in both the combat arena, as well as natural disasters and homeland defense roles.

The 146th Airlift Wing performs the unique mission of aerial firefighting using the Modular Airborne Fire Fighting System (MAFFS). The base is capable of establishing a fire retardant loading base supporting federal, state, and local firefighting organizations. The firebase operation is dependent upon NBVC airfield facilities.

K. Homeland Defense and Other Missions of Tenant Units

Homeland Defense is a new element in the defense equation. It is included as an element of the major missions at NVBC because the activities associated with Homeland Defense are spread among a variety of organizations and functions of the base.

The location of a DoD controlled port and airfield near, but not a part of, the Los Angeles basin, provides an outstanding staging area in response to any crisis situation. In the days immediately after September 11, 2001, NBVC was used as the staging area for air defense fighters and airborne early warning aircraft protecting Southern California airspace. Numerous current activities also are focused on-harbor and in-harbor ship defense.

The location of the Naval Mobile Construction Battalions (NMCB's) provides an immediate response capability to crises in the Los Angeles Basin and at the Los Angeles harbor. NMCB's are completely self-contained units with their own supply, medical, dental, chaplain, and personnel permanently attached. The units are trained and continually practice mobilizing and deploying to remote sites to do recovery and construction service.

The Center for Asymmetric Warfare, at NVBC, studies and conducts counter-terrorism and weapons of mass destruction exercises. It has been the lynch pin for orchestrating exercises integrating state, local, and federal resources. The center evaluates the ability of the government, at all levels, in their response to crisis scenarios. During the recently completed Asymmetric Warfare Initiative 2003, Point Mugu Weapons Division personnel planned, coordinated, and executed a major homeland defense exercise involving more than 20 military, local, state, and federal agencies.



The Air National Guard has a key mission of responding to forest fires in support of federal, state, and local agencies.

2. Joint Services Availability and Condition of Land, Facilities, and Associated Airspace

The strategic location of NBVC with its air space, sea space, and land facilities, makes it a vital asset to support joint military operations and joint system development, testing, and training into the future. The physical assets of NBVC are unmatched in their own right, but are also in proximity to the Navy's testing and training, involving the development of next generation military systems, as they provide direct support to the war fighter. Thus, NBVC provides a bridge to the transformed military of the future, a military that operates with speed and agility from new locations overseas with effective new equipment and systems that require the joint capabilities of NBVC.

NBVC includes:

- Training areas suitable for maneuver by ground (naval or air forces), throughout a diversity of climate and terrain areas, and staging areas for the use of the Armed Forces in military test, training, and homeland defense missions.
- Control of the largest instrumented weapons range in the world (36,000 sq. mi.—expandable to 196,000 sq. mi). NBVC also controls all military and civilian traffic within this air space.
- A range with connectivity to Test Ranges, Impact Ranges, and Restricted Airspace of Edwards Complex, China Lake, and Vandenberg Air Force Base. It controls three runways; two at NAS Point Mugu and one on San Nicolas Island.
- Nearly 365 days of flying weather each year.
- Un-encroached runways as a result of enlightened county legislation and unique topography.
- An ocean front location which allows direct launch of aircraft and targets from airfields into secure airspace over the sea range.
- Aerial Fire Fighting Retardant capability is available on the Air National Guard facility for military and commercial aircraft fighting wild land fires.



The following are key physical assets and capabilities of NBVC:

Land/Sea Training Areas

- Largest instrumented weapons range in the world
- Warning and Restricted Areas controlled by Navy

Air

Development and operational testing of weapon systems by US forces and foreign military forces. Connectivity to Test Ranges, Impact Ranges, and Restricted Airspace of Edwards Complex, China Lake, and Vandenberg Air Force Base.

- Non encroached airfield at NAS Point Mugu
- Three runways (two at NAS Point Mugu and one at San Nicolas Island)
- 360+ days of flying weather per year
- Direct launch from airfields to secure airspace over sea range Restricted Areas: R-2519, R-2535A and B
- Warning Areas: W-289, W-290, W-60 and W-537
- Drone and missile launch capability from NAS Point Mugu, San Nicolas Island, and airborne platforms
- Aerial Fire Fighting Retardant base available, on ANG facility

Sea

- 36,000 sq. mi. Test Range – expandable to 196,000 sq. mi.
- Major fleet exercises conducted on fully instrumented test range
- Trans-shipment of heavy combat equipment for expeditionary forces.
- Navy operated harbor for target recovery, Self Defense Test Ship, Homeland Defense Exercises
- Operations at NBVC of US and Foreign Navy vessels
- Mobilization facility for the deployment of DoD forces

Land

- Nearby ranges provide diverse training topography
- Littoral; beach, shore, island
- Desert
- Mountainous terrain
- Lay down acreage for mobilization, storage, deployment, and follow-on force pre-positioning.

Climate

- Mediterranean climate
- Year-round flying weather

Terrain

- From sea-level to high mountains
- Ocean, desert, mountains, island, agricultural

Homeland Defense

- Navy controlled deep-water harbor used for joint exercises
- Center for Asymmetric Warfare

3. Ability to Accommodate Contingency, Mobilization, and Joint Future Force Requirements

With the Department of Defense having announced the planned homeward transfer of 70,000 U.S. troops from Europe and Asia, with over 100,000 relatives and civilian personnel and their equipment, and then the relocation of certain existing military operations and special equipment to new bases in highly strategic locations, NBVC is an operation that will be central to the redeployment of U.S. military capabilities world wide. Just as NBVC has been central to today's deployments to Iraq and Afghanistan, NBVC will be the key to future redeployments and to temporary new bases and military jumping-off sites in Uzbekistan, Kyrgystan, and elsewhere.

NBVC is strongly positioned to accommodate contingencies and emergency requirements. The in-service engineering organizations of NAVAIR, NAVSEA, and Naval Facilities Engineering Command (NAVFAC), are all located at NBVC and have a rich history of responding to such requirements. They have the skills, technologies, and the operational connections to be very effective and responsive. Additionally, the operational elements of the Seabees and the Hawkeye Airborne Early Warning Wing are in the business of being prepared for such emergent tasking. Finally, NBVC has been fully involved in developing training for asymmetric warfare. This is an important capability for dealing with contingencies associated with homeland defense.

The NBVC is a major contributor to the mobilization base of DoD. NBVC is currently set-up for Seabee mobilization. Part of the normal Seabee routine is to prepare for the recall, outfitting, training, berthing, and trans-shipment of Seabee units, personnel, and equipment supporting and augmenting ongoing operations worldwide. Likewise, the Hawkeye wing has mobilization plans in place for execution on very short notice. The in-service organizations at NBVC also play a vital role in mobilization planning and execution, most notably as it relates to conventional ordnance used in both air and surface warfare. **Total force mobilization is a reality at NBVC with the Army and Marine Corps using the harbor for shipping equipment and weapons to operational theaters.**

Total force requirements are also a major element of NBVC's support of operational training. **The 36,000 square mile and extended sea range, with its connectivity to inland ranges provides a major capability for the joint training of Army, Navy, Marine Corps, and Air Force combined exercises.** Numerous successful exercises have been conducted in the past to demonstrate this value. Foreign military units have also been involved in the past and can be accommodated in the future. NBVC provides much of the training for Army and Air Force construction organizations, in addition to the Navy's Seabees. Operational, maintenance, and technical training is provided for various weapon systems on a case-by-case basis to augment the Navy's Training Command.



Aerial view of Naval Base Ventura County. Laguna Peak is foreground; Point Mugu, National Guard Airfield, and Port Hueneme Harbor in background.

NBVC supports two major operational units, Pacific Seabees Forces and the Airborne Early Warning Wing, Pacific. Additionally, the in-service engineering organizations for the Naval airborne weapons and Naval surface warfare weapons are located at NBVC and play a vital role in the support of operational forces.

NBVC and the Future

NBVC is in a position to contribute to many of the future defense programs and has been identified to do so in numerous instances. It is important to recognize the breadth of these programs that reach across the DoD of the future, including air warfare, electronic warfare, surface warfare, naval facilities, and sister services, such as the Coast Guard (Homeland Security). Also, note the elements of transformational program involvement within these future programs. For example, in the DD(X) program, the crewing will be reduced by a factor of three from past destroyers through the use of advanced technologies. These programs address the broad based future of the Navy and DoD.

To illustrate future programs that NBVC will have a role in supporting, a number of examples are explained in the following paragraphs. They are intended to demonstrate their contribution to the future of our national defense and to the process of transformation.

Shore Facilities Security/Survivability is one example of a future program that has already been started at NBVC. The Naval Facilities Engineering Service Center (NFESC) is the Navy's premier specialized facilities engineering and technology service organization. NFESC is the Navy's lead in developing new security and engineering concepts and technologies to enable the Navy to better protect its personnel and assets from terrorism, sabotage, and other unlawful/damaging acts. This program addresses structures ashore and at sea, utility systems, underwater and floating assets. As such, it will play a significant role in the future of homeland defense and in the future prevent another USS Cole event.

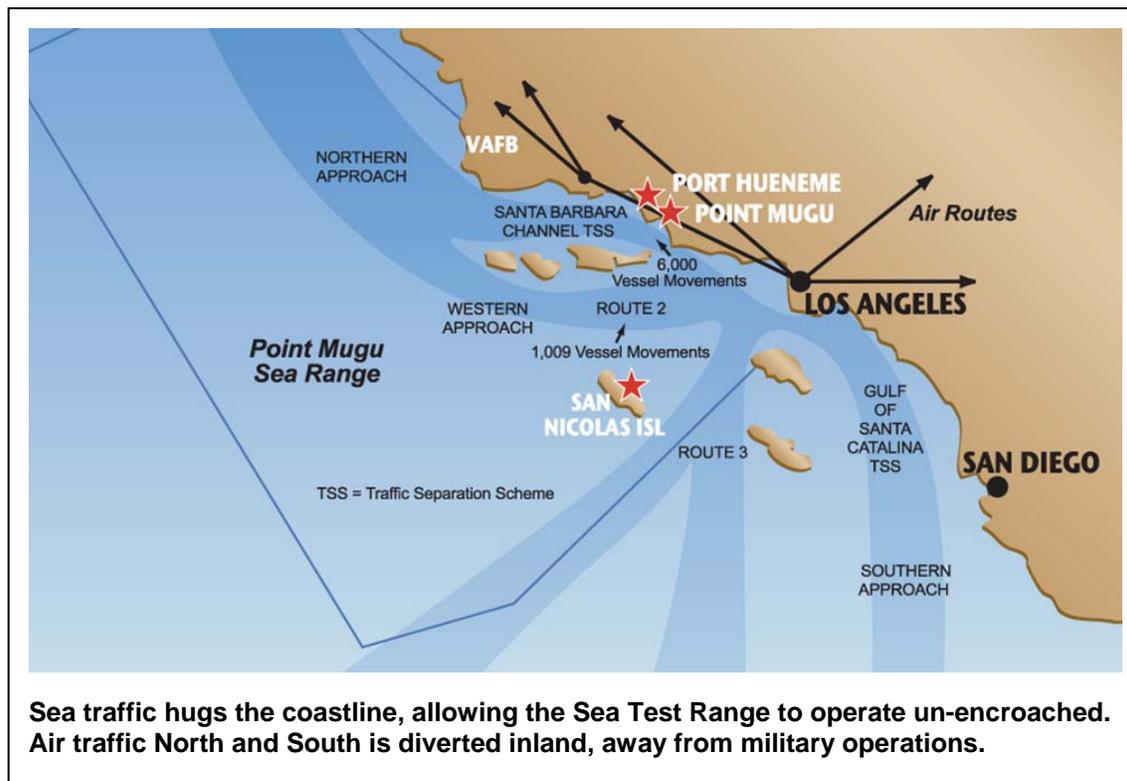
The Naval Surface Warfare Center, Port Hueneme Division (PHD), is currently providing the key T&E expertise for surface ship TBMD capability testing including missile and combat systems integration and performance. Their role is highly valued and necessary to meet program milestones and objectives. This expertise and knowledge will be used to support the integration into operational ships. This role will continue to grow in the future into the area of in-service engineering support. The synergy between PHD and the sea range at NBVC makes for a capability unique in the nation and provides for extreme effectiveness now and into the future for the TBMD program. The Naval Air Warfare Center Weapons Division (NAWCWD), at Point Mugu, is positioned to support the future of electronic warfare for the Joint Services. In supporting the EW systems of over 20 different types of aircraft from all three services, Point Mugu is best suited to lead the future of EW. Following the vision of the Office of Secretary of Defense, the base is prepared to be the architect of future non-kinetic strike capabilities. Recognizing that future conflicts will require EW collaboration that transcends the old platform centric view, the NBVC EW organization can develop and deliver dominant electronic warfare capability that future commanders will need. This capability will be synthesized from systems on the EA-18G, B-52 EW variant, Unmanned Combat Aerial Vehicles and Air Launched Decoys, all programs in which Point Mugu engineers participate in leadership roles. The A. C. Mc Mullin Electronic Combat Simulation and Evaluation Laboratory, located at NBVC, is unique in its ability to support this future requirement.

The Airborne Electronic Attack program won the competition to develop the mission systems for the newest EW aircraft, the EA-18G. The recognized excellence in EW mission planning helped Point Mugu win the task to develop the mission planning system for the EA-18G.

Hypersonic Missile development at the Sea Range - Rapid Response Missile Demonstrator (ARRMD) is but one of several hypersonic/supersonic missile development programs that are highly probable as users of the NBVC sea range and T&E expertise. The objective of this DARPA program is to build and demonstrate in flight an affordable Mach 6-8, scramjet-powered, hydrocarbon-fueled missile for the conduct of rapid-response, long-range missions against time-critical (2-8 min, 100-600 nmi) targets. In addition, a high-speed missile would enable nano-layer structured penetrators to take advantage of much higher impact velocities for the defeat of hard and deeply buried targets.

The following is a partial list of future programs slated for NBVC:

- Hypersonic Missile development at the Sea Range
- Anti-Ballistic Missile Test and Training at the Sea Range
- Theater Ballistic Missile Defense
- Joint experimentation, such as JFCOM
- Testing of new network centric concepts
- Force Protection against terrorism
- Electronic Warfare (EW) Future Concepts, e. g., virtual ranges networked with laboratory simulations, etc.
- New Destroyer DD(X), Cruiser CG(X), and other new ships of the line
- Distance Support to the Fleet
- Replacement of the EA-6B EW Aircraft with the E/A-18G EW Aircraft
- Naval Facilities Expeditionary Logistics Center
- Underwater Remotely Operated Vehicles
- Deep Ocean Laboratory
- Advanced Waterfront Technology Testing
- UAV/UCAV Testing on the Sea Range
- Shipboard Advanced Fire Support for the USMC
- New Concepts in Test, Training, and Experimentation at Point Mugu
- Asymmetric Warfare Program (Homeland Defense) at Point Mugu
- Relocation of Coast Guard air assets to Point Mugu, including their UAV and Deep Water aviation components
- Shore Facilities Security/Survivability
- Amphibious and Expeditionary Forces Concepts Development



4. Cost of Operations and Manpower Implications

Unlike most Navy facilities, NBVC is a composite base. Among its 92 tenant commands, its missions range from two significant systems acquisition, engineering, test and evaluation commands to Fleet operational commands, a space command asset controlling all Navy satellites worldwide, several large reserve organizations, a wide variety of schools including technical schools teaching Navy and Air Force construction, mechanical and disaster recovery technologies, and the Navy's Engineering Duty Officer School and the Civil Engineer Corps Officer School. This unique composite allows for the combining of support services, with resulting cost savings for all commands and it provides for synergistic opportunities between the commands that yield increased effectiveness.

Every person under these commands has a niche role in the overall composite value of NBVC. In addition to the unmatched role they play in the overall strategy of the DOD, they each in their own way pay the expenses of operating the base.

The base is able to derive significant income from the rental of storage space without interfering with military operations, through automobile companies importing cars from abroad into the Port Hueneme harbor. This space is designed as equipment lay down area in the event of a national emergency and its rental does not deprive the Seabees of needed space when a large amount of equipment is required for mobilization and deployment to hostile action overseas. The coexistence of these multiple uses in peacetime, with the clear procedures in the event of mobilization, enables NBVC to keep the costs under control and obviates the need for the civilian port to expand.

For 60 years, the NAVAIR SYSCOM Weapons Division has been at NBVC. Naval Facilities Engineering Service Center (NFESC) has been providing specialized facilities engineering and technological support to the Navy from NBVC for more than 50 years. NAVSEA SYSCOM Warfare Center opened 40 years ago. An extensive program of recruiting, educating, and training was used to bring their experienced scientific and engineering staffs to the degree of excellence they now display.

These personnel are, in most cases, civil servants, totally dedicated to their commands and their locale. Closing or moving any of these activities would create a substantial loss of human capital and engineering capability, which would take years to re-acquire. Some of the personnel could move with the command, but since high-tech job opportunities abound in Ventura and Los Angeles Counties, a large portion would leave government service for jobs in private industry to remain located in an extremely desirable area of the country.



NAVAL BASE VENTURA COUNTY
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It Works...FOR THE FUTURE

CONCLUSION

This paper demonstrates the exemplary worth of NBVC in terms of military value, unique location, joint operations and testing, and cost efficiency. These key components have been critical to NBVC in the past; they secure its value today and demonstrate the critical role it will play in the future.

The unique and un-encroached geography of the two operating locations, the numerous missions supported by the base and the synergy at NBVC offers a unique business model. The national assets of a deep-water port, "over the beach" launch capability for air resources, and the presence of the largest instrumented sea/air range cannot be replaced anywhere in the United States.

The US Navy has demonstrated forward thinking in the streamlining and integration of functions located at NAS Point Mugu and CBC Port Hueneme, thereby reducing operating expenses. The increased number of tenant units has distributed the operating expenses over numerous commands and services. The expansion of local Reserve component forces, which NBVC supports, would not be possible without the large Navy facilities to support them. Additionally, the increased interdependence between the tenant commands has resulted in increased cooperation and synergistic efforts, producing enhanced operational and training performance.

NBVC is the epitome of "joint", that is, a military base that supports all branches of the Military Services, as well as U.S. coalition partners, in testing and training for joint military operations. This includes such examples as supporting the testing of the Air Force F-22 Raptor, the joint AIM-9X missile for both Air Force and Navy platforms, the missile defense systems of the U.S. Army, and the training of the Marine Expeditionary Forces of the U.S. Marine Corps. In addition, NBVC supports the testing and training needs of US coalition partners, such as Israel and Japan, to achieve effective joint and interoperable forces.

NBVC has demonstrated that other military bases could likewise benefit from joining together as a composite command. There is the very real probability that both economic and performance benefits would result. It is suggested that the Department of Defense strongly consider this business model that the Navy has put in place at NBVC.

It is for all these reasons, and for its future military value, that NBVC works, now and in the future.