

# NAVAL BASE VENTURA COUNTY

FY 2008 Secretary of Defense Environmental Award  
Environmental Restoration – Installation



*Providing airfield, seaport and base support services to fleet operating forces and shore activities who execute the diverse missions of the Navy and other services in support of National Defense.*

## **INTRODUCTION**

Naval Base Ventura County (NBVC) is located along the Pacific coastline in southwestern Ventura County, California, adjacent to the cities of Oxnard, Port Hueneme and Camarillo. NBVC is a major aviation shore command and a Naval Construction Force mobilization base providing airfield, seaport and base support



Laguna Peak and Point Mugu

services to fleet operating forces and shore activities. Employing more than 19,000 personnel (military and civilian), the more than 100 military commands located at NBVC are ready to support the diverse missions of the Department of Defense. These missions include combat and weapon systems testing on the 36,000 square mile Sea Range off the coast of Point Mugu.



Port Hueneme

NBVC is composed of three operating facilities: Point Mugu, Port Hueneme and San Nicolas Island (a.k.a. San Nic and SNI), located on the Pacific Ocean. Point Mugu consists of 4,500 acres, including the Laguna Peak, and is bordered by parkland, duck hunting clubs and intensively farmed agricultural lands. The primary runway at the main base is 11,000 feet by 200 feet. The secondary runway is 5,500 feet by 200 feet. Port Hueneme covers more than 1,600 acres and has more than 29 miles of roads and streets and 10 miles of railroad track. SNI is approximately 13,370 acres, nine miles long and four miles wide, lies in the Santa Barbara Channel 75 miles west of Los Angeles, and is the most northwesterly of the four southern Channel Islands. SNI also has a runway, which is 10,000 feet by 200 feet.

Equally important is NBVC's role as a good neighbor and environmental steward. For more than 60 years we, through our locations at Point Mugu and Port Hueneme, have been an increasingly vital part of the county and its development. NBVC contributes significantly to the economic health of the area, with an economic impact exceeding \$1.2 billion in 2006, as reported in an Economic Impact Study commissioned by the Workforce Investment Board of Ventura County. We continue to enjoy a strong relationship with the community and an atmosphere of mutual respect, cooperation, teamwork and shared interests.



San Nicolas Island

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## **BACKGROUND**

### **Organization**

The Environmental Division's mission is to provide guidance and technical expertise that enhances mission readiness and ensures compliance and environmental protection to all fleet and tenant commands at NBVC. Management support is the key component for continual improvement in environmental programs at NBVC. The Environmental Restoration Team is made of up 2 personnel and is part of the Environmental Division, which is made up of about 20 civilian personnel. The Environmental Division lies within the Public Works Department of the Naval Facilities Engineering Command (NAVFAC). The Environmental Restoration Team performs the following aspects of Environmental Restoration oversight for all of NBVC: Technical and administrative review of all program documents; interface with component and tenant activities; on-site logistics; facilitation with regulatory agencies; representation of the Navy for community participation; coordination of the Restoration Advisory Board (RAB); and assurance of compatibility of the program with mission requirements.

### **RABs**

NBVC has maintained an active RAB, fostering an atmosphere of mutual respect and cooperation between the Navy, regulators, and the local community. Personnel and community members communicate and work closely together as a team on common goals of environmental cleanup.

The RAB has facilitated community support of the NBVC Installation Restoration (IR) Program initiatives. NBVC utilized the RAB as a forum for required public meetings for the Port Hueneme Dredging Project and other projects at IR Site 1. The civilian co-chair of the RAB who has been member of the RAB for over ten years has been very helpful in acquiring community support of the NBVC IR Program by communicating with the community members and informing them of Navy's various environmental clean up efforts.

The local community regards the RAB as a helpful and positive tool, enhancing a good working relationship between the Navy, regulators, and community members that attend regularly. RAB meetings have created trust among the public and interested attendees. The public now has a positive opinion and better understanding of the Navy's clean up efforts and its ultimate benefits to the community, its people and the surrounding environment.

### **Associated Plans**

There were several plans and procedures that were finalized in FY07 and FY08. Some of them include the following:

December	2006	Work Plan for Remedial Investigation at IR Site 19A, the Drainage Ditches
January	2007	Remedial Investigation Report for IRP Site 4 and 9
May	2007	Chemical Safety Submission UXO Site 4
July	2007	Work Plan for Sediment Characterization at IR Site 19
November	2007	Revised Technical Memorandum, RCRA Facility Assessment
April	2008	Base Wide UST/IR Site Monitoring Well Survey Report
May	2008	2007 Annual Groundwater Monitoring Report at IR Site 14, Landfill Cover

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June	2008	Geophysical Survey Summary Report UXO Site 4 Former Gas Mask Training Area
June	2008	Technical Memorandum Sediment Characterization at IR Site 19, Harbor Sediment
July	2008	Expanded Enhanced <i>In Situ</i> Bioremediation Pilot Test
July	2008	Preliminary Assessment/Site Inspection Report UXO Site 4
July	2008	Feasibility Study report for Wetlands Sediment at IR Site 5
July	2008	Marine Biological Resources Assessment
September	2008	Background Polycyclic Aromatic Hydrocarbon Investigation Report

## PROGRAM SUMMARY

During FY07 and FY 08, the Environmental Restoration Program was extremely successful in meeting their four major objectives:

- **Restore contaminated lands and return them for use to support mission requirements** – The Port Hueneme Dredging Project will use a confined aquatic disposal cell installed in the harbor floor, to isolate 327,000 cubic yards of contaminated sediment under a cap of sand and gravel. This solution will allow future maintenance dredging to proceed with out having to deal with contaminated sediment.
- **Reduce human health risks at contaminated industrial sites to manageable levels** – Eight of fifteen IR Sites at Point Mugu have finalized records of decision and have begun implementation of remedial actions.
- **Reduce ecological risk for restoration and enhancement of ecological value of contaminated sites containing natural resource habitats** – Monitor Mugu Lagoon in efforts to meet Total Maximum Daily Load (TMDL) to identify load reductions or other actions needed to attain water quality standards (i.e. water quality goals to protect aquatic life, drinking water, and other water use)
- **Perform effective clean-ups with minimum environmental impact** – The NBVC Project Review Board reviews all restoration projects for potential impacts to natural resources and prescribes mitigative actions when necessary.

## ACCOMPLISHMENTS

### **DREDGING PROJECT**

With continued support from senior management, the Environmental Restoration Program has achieved several accomplishments over the past couple years. Full use of the harbor to its design depths (-35' MLLW) is significantly impacted by accumulation of contaminated sediment. Dredging to restore full navigability of the harbor has been prohibitively expensive since 1999 because of the contaminated sediment. In June 2007, Navy began partnering with the Army Corps



A view of Port Hueneme's Wharves

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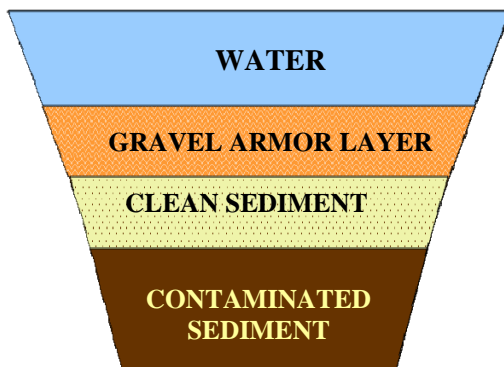


of Engineers (ACOE) and the Oxnard Harbor District (OHD) on a project to dredge the entire harbor including disposal of contaminated sediment into a Confined Aquatic Disposal site (CAD) within the NBVC portion of the harbor in order to significantly reduce project costs. 327,000 cubic yards of contaminated sediment will be placed into the CAD and capped with sand and gravel. The CAD is designed to isolate the contaminated sediment for a minimum of 8,000 years. Meanwhile, the clean sediment removed to create the CAD will be piped to replenish the heavily eroded Hueneme beach.

The contaminated sediment includes significant amounts of Dichloro-Diphenyl-Trichloroethane (DDT), Polychlorinated Biphenyls (PCBs) and tributyltin. While some of the contamination stems from naval base operations, the most serious pollution (DDT) is believed to have come from urban and agricultural runoff from a drainage canal that



Dredging Equipment in NBVC's Ports in Port Hueneme



CAD Cross Section

once ran from a power plant to the harbor. The tributyltin is believed to be from anti-fouling paints used on ships. The sediment, as thick as 14 feet in some spots, had made access to certain parts of the harbor difficult at lower tides, allowing cruiser- and destroyer-class vessels to utilize Navy wharves only 51 percent of the time.

The use of an in-harbor CAD and partnering with the ACOE and the OHD resulted in a \$27 million cost savings for the Navy when compared to the only other viable option of landfill disposal. Benefits include restoration of the harbor, clean-up of the sediment, and addition of sand to the beach.

## CALLEGUAS CREEK WATERSHED COMMITTEE

Mugu lagoon is an IR site at NBVC Point Mugu. Remediation of contamination by pesticides, PCBs, and metals was projected to cost \$35 million. Remedial Investigation data showed that much of the contamination was coming from upstream. Contentious litigation with our neighbors seemed certain. In 1998, an opportunity beckoned.

In 1998, California listed the Mugu Lagoon and lower Calleguas Creek as waters that do not comply with Clean Water Act water quality objectives. Contaminants listed included legacy pesticides, PCBs, toxicity, metals, sediment, nitrogen compounds, trash, and bacteria.

Stakeholders throughout the watershed formed Calleguas Creek Watershed Committee (CCWC). NBVC Environmental Restoration Program staffed also joined the CCWC. One of the goals of the

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CCWC was to collaborate with the Los Angeles Regional Water Quality Control Board (LARWQCB) in preparing TMDL limits for the listed impairments.

Environmental Restoration staff was able to negotiate the use of natural attenuation, continued monitoring and contaminant source control as the preferred method for contaminant removal throughout the watershed, including Mugu Lagoon. They were able to convince the LARWQCB that NBVC was not a significant continuing source of any of the listed contaminants. They reached a consensus agreement with all of stakeholders that the monitoring costs would be prorated by the amount of contamination each party contributed to the total amount. The NBVC prorated share is ~1.1% of the total \$1.5M annual monitoring cost, approximately \$17,000 in 2008. The monitoring is projected to continue for 30 years. The estimated NBVC cost for the entire 30-year cleanup is approximately \$500,000 net present value.

## Calleguas Creek Watershed Committee Membership, partial listing

Camrosa Water District  
Heal the Bay  
The California Department of Transportation  
The Camarillo Sanitary District  
The City of Camarillo  
The City of Moorpark  
The City of Oxnard  
The City of Simi Valley  
The City of Thousand Oaks  
The County of Ventura  
The Farm Bureau of Ventura County  
The U.S. Department of Navy  
The Ventura County Waterworks District No. 1  
The Ventura Coast Keeper



Mugu Lagoon

Collaborating with the CCWC to form a watershed wide solution for contamination issues resulted in many benefits for all parties. No funding was wasted on contentious litigation. All parties gain economy of scale. This is projected to realize a \$34.5 million dollar cost savings for the Navy for Environmental Restoration of the Mugu Lagoon.

## INSTALLATION RESTORATION SITES

The NBVC Restoration team made major advancements with finalizing Records of Decision (ROD) at NBVC in FY08. In addition to finalizing the ROD for Point Mugu IR Site 1, an additional seven of fifteen IR Sites at Point Mugu also

finalized ROD(s) in 2008. The preferred alternatives presented in the ROD(s) for the 8 Sites are as follows:

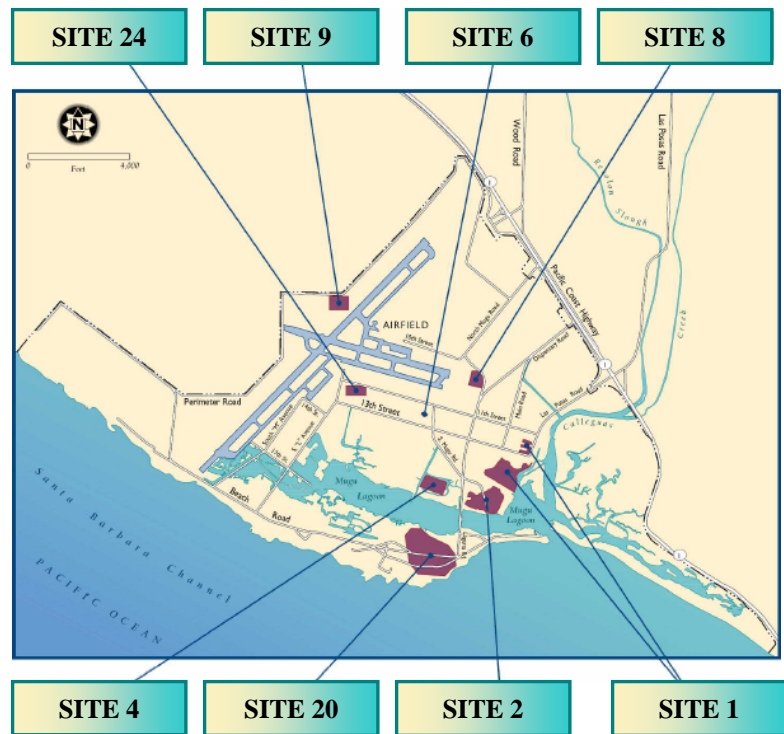
1. Site 1: A landfill at Dump Road will be graded and capped with asphalt. Morale, Welfare and Recreation (MWR) will utilize the location for long term vehicle storage.
2. Site 2: Currently, the NAVFAC Public Works (PW) Heavy Duty area. The site will be closed with no further action required.

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3. Site 4: Former NAVFAC PW storage yard and wetland restoration site. The site will be closed with no further action required.
4. Site 6: Building 311 back parking lot. Bioremediation used to cleanup solvent contamination of groundwater.
5. Site 8: Runway 27 Landfill. The site will be closed with no further action required.
6. Site 9: Former Fire Fighting training area. The site will be closed with only the requirement for continued industrial land use.
7. Site 10: Mercury spill at Pad Alpha. The site will be closed with no further action required.
8. Site 24: Building 354 yard area. Bioremediation used to cleanup solvent contamination of groundwater.

The most difficult ROD to finalize was the one for IR Site 1. The former landfill contained 3 non contiguous parcels, a larger southern parcel and 2 smaller northern ones. The Navy, together with the California Department of Substances Control, Water Quality Control Board, and other regulatory agencies reached consensus that consolidating the two independent northern landfill areas into the southern parcel would provide multiple benefits. The 2 northern parcels would return to their former natural wetland condition. The restored 3.2 acres of wetlands will be added to the NBVC Wetlands Mitigation Bank for future mission support. The corresponding reduction in total landfill area will reduce long-term operation and maintenance costs. It is anticipated that between 13,000 and 16,000 cubic yards of soil will be removed from the northern areas and utilized for the southern landfill cap maintenance. Any material from the northern areas that is deemed unusable for the southern landfill cap will be transported to an appropriate landfill.



The Site 1 project has one more collaborative partner: the NBVC Morale and Welfare Department (MWR). MWR will use 12 acres of the reworked southern parcel as a long term RV storage lot. MWR is funding further improvements to the area including fire hydrants, electrical access, security fencing, additional paving, parking space striping, lighting, and mechanical gate access with card reader. MWR will also be responsible for long term maintenance of the paving which forms the cap of the landfill.