



**FY 2010 CHIEF OF NAVAL OPERATIONS
ENVIRONMENTAL AWARD COMPETITION
AWARD CATEGORY:
NATURAL RESOURCES CONSERVATION
LARGE INSTALLATION**

Introduction

NBC natural resources program manages some of most diverse ecosystems in the continental United States. The eight NBC installations represent over 17 400 hectare (ha) of land and water and are distributed over an area of 875 000 ha in San Diego and Los Angeles Counties in southern California. Of the total area approximately 2 430 ha are developed or improved, 50 ha are used for agriculture, 303 ha are wetlands or Waters of the U.S., and the remaining 14 618 ha are managed for wildlife and/or plant communities while supporting operational requirements. SCI also supports more than two dozen range and operational areas that are clustered within a 96 kilometer (km) radius of the island. SCI hosts a diversity of native and endemic plants. More than 1,700 individual populations of sensitive plant locations have been documented on SCI including 14 endemic species and six federally listed plants.



Background

The NBC Installation Commanding Officer leadership is vital to the success of the environmental programs on NBC. He provides guidance on integration of the natural resources requirements with the military mission and management direction to the Public Works Officer (PWO) and the Installation Environmental Program Manager (IEPM). The IEPM, who reports to the PWO, manages the NBC Public Works Office, Environmental Division whose experienced and capable staff manages all aspects of NBC's environmental resources. The natural resources office/program (NRO) is administered by two wildlife biologists and an environmental protection specialist (located on SCI) who report to the IEPM. The botany program is administered with support from a botanist assigned to NAVFACSW Environmental Core. Along with a contingent of Navy and contract personnel, the environmental division provides the essential support needed to comply with Federal, state, and local regulations in a manner consistent with NBC's primary mission.

The Commanding Officer of Naval Base Coronado (NBC) is responsible for eight geographically separate installations including Naval Air Station North Island (NASNI), Naval Amphibious Base Coronado (NAB), Silver Strand Training Complex (SSTC), Naval Outlying Landing Field Imperial Beach (NOLF IB), Remote Training Site Warner Springs (RTSWS), Mountain Warfare Training Camp Michael Monsoor (La Posta), Camp Morena, and San Clemente Island (SCI) Range Complex (SCIRC). NBC's primary mission is to provide the highest quality logistical support and quality of life services for the operating forces of the U.S. Navy and for the assigned activities and other commands as needed, and to provide the right support at the right time, in the right amount, enabling our operating forces to produce the highest level of combat readiness, i.e. support the fleet, fighter and family.



Two separate Integrated Natural Resources Management Plans (INRMPs) were developed and implemented to manage NBC's complex natural resources. The following installations are managed under the *Naval Base Coronado INRMP*.



NASNI at 1134 ha is headquarters to four major military flag officer staffs including Commander Naval Air Forces, and supports 21 aircraft squadrons and more than 220 aircraft. Its piers are homeport to three nuclear powered aircraft carriers, the USS NIMITZ (CVN 68), the USS RONALD REAGAN (CVN 76), and the USS Carl Vinson (CVN 70). With all ships in port, the population of the station swells to more than 36,000 active duty, reserve, and civilian workers.

NAB includes 12 838 meters (m) of Pacific Ocean and bayside shoreline that is used for training. This area, along the Silver Strand, provides operators with expansive beaches, unique topography, and on-base facilities that encompass a critical area for amphibious and clandestine training in support of littoral, unconventional, and special warfare operations. NAB is home to over 30 tenant commands and population 5,000 personnel.



NOLF IB is located south of San Diego within the city limits of Imperial Beach. The mission of NOLF IB is to handle the overflow helicopter traffic from NASNI. As a result the helicopter squadrons at NASNI do a majority of their operations at NOLF IB averaging 300,000 operations a year. It is also the home of Commander, Maritime Expeditionary Security Group One.

SSTC is a premier training facility for the military's Special Forces. Located on the Imperial Beach / Coronado border, this 225 ha facility provides an excellent training environment with waterborne approaches from both the Pacific Ocean and San Diego Bay sides. The city-like layout of the base also provides a realistic site for critical urban warfare training



RTSWS is in a remote area near the community of Warner Springs in northeastern San Diego County and is the home for the Navy/Marine Corps West Coast Survival, Evasion, Resistance, and Escape [SERE] field school. RTSWS consists of a headquarters area with an administrative building, several staff barracks building, a wastewater treatment plant, and a realistic prisoner of war compound. RTSWS is undergoing a land expansion and will expand from 2 492 ha to 5 076 ha.

La Posta is a 430 ha site located 80 km east of San Diego, near the city of Campo. This site is exceptionally important because of its unique physical characteristics similar to foreign countries like Afghanistan. The unencumbered area around La Posta makes it an ideal location for special reconnaissance training, map and compass training, and other specialized special warfare training. La Posta, like San Clemente Island, is one of the few places that allow Special Forces to train in a real life environment with limited encroachment problems. La Posta is undergoing a land expansion and will soon total 2 248 ha.



Camp Morena is located in southeast San Diego County 8 km northwest of La Posta. The facility supports training requirements and administration buildings for Naval Special Warfare.

The San Clemente Island INRMP was developed to manage the vast resources on the SCIRC.



The **SCIRC**, the Navy's only remaining live fire ship to shore and air to ground range, is the southernmost Channel Island, covering 14 800 ha. The SCIRC is the cornerstone of the tactical training ranges supporting the Southern California Operations Area (SOCAL OPAREA). SOCAL supports the largest concentration of naval forces in the world. The SCI land, air, and sea ranges provide the U.S. Navy, U.S. Marine Corps, and other military services space and facilities which they use to conduct readiness training and test and evaluation activities. The SCIRC consists of more than six dozen ranges and operational areas; the extent of these areas range from the ocean floor to an altitude of 24 400 m. The primary purpose of the SCIRC is to provide readiness training for units and personnel who deploy overseas to meet the national strategy of forward presence and global engagement.

Program Summary

NBC's conservation program is based on an ecosystem management approach, which includes comprehensive management of 22 federally listed species and their habitats in a manner compatible with military operations. Success of the program has been manifested by sustained increases in population or nesting numbers of three species/taxa, the federally endangered San Clemente loggerhead shrike (*Lanius ludovicianus mearnsi*) the federally endangered California least tern (*Sterna antillarum browni*), and the federally threatened western snowy plover (*Charadrius alexandrinus nivosus*), with minimal impact on training requirements.

Accomplishments

Awards: * FY 09 CNO Environmental Award Winner for Environmental Quality; 2009 Association of Environmental Professionals Outstanding Environmental Analysis Document Award for the Remote Training Site Warner Springs Environmental Assessment; Melissa Booker NAVFAC Award for Technical/Professional Excellence 2009

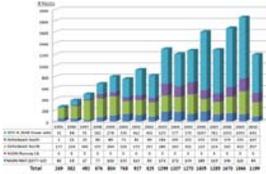
There are many aspects of our program that deserve recognition; here are but a few. The San Clemente Island fox (*Urocyon littoralis clementae*) was listed by the U.S. Fish and Wildlife Service (USFWS) on four of the eight Channel Islands (one due to disease impacts on the fox), but it was not listed on SCI due to proactive management by the Navy. To prevent future listing and corresponding impacts to the mission, NBC implemented a proactive, adaptive management and monitoring program for this taxa. The program includes extensive population monitoring, fox threat reduction roadside vegetation management to reduce road kill, and pathology & veterinary services ("foxpital"). Several years of research on island fox biology and life history culminated in 2009 and 2010 with findings applicable in species management, including the effects of roads on survival and home range, characteristics of den sites and den locations, critical information on fox reproduction, and characteristics of road segments with lower levels of road kill. This information is being used by the NBC biologist in an effort to reduce impacts to the fox to maintain the current high population numbers and obviate the need for further intensive management or listing. New in 2010, the NBC biologist worked to develop an Epidemic Response Plan for the island fox. The plan uses incident command structure, applied to disease outbreak management in an effort to provide for early disease detection and response. This plan is a pioneering effort to ensure that disease introduction will not significantly reduce the fox population, impact training, or affect the health of SCI's sailors, soldiers and civilians.



The San Clemente Island Native Habitat Restoration Program is funded to ensure the long-term viability of island species/taxa through the restoration of native plant communities, and to increase the understanding that functioning ecosystems ensure the long-term success of SCI operations.

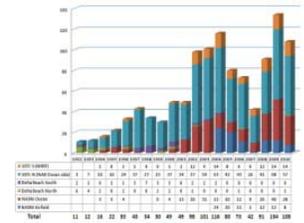
The *San Clemente loggerhead shrike* population reached a low of 14 birds in 1998, but has increased to a breeding population of 82 breeding pairs in 2009 and the number of fledglings (young) that survived to independence peaked in 2010 at 158. This increase in population size and shift in the distribution outside of the SHOBA range area resulted in decreased encumbrances on military ship to shore and air to ground training.

Continued success at SCI resulted in initiation of a delisting petition for the *San Clemente Island night lizard*. The petition is working its way through the process and we fully expect that the species will be delisted.



The *California least tern* population has seen a 9,123% increase the least tern nesting numbers since 1979. A total 1,999 nests were found during the 2010 season. The number of nesting areas has expanded to include protected nesting at NAB bayside and SSTC.

The *western snowy plover population* has grown from 12 nests in 1992 to by 108 in 2010 (total growth rate of 800%). Plovers can be found nesting on all beaches at NASNI, NAB and SSTC. In FY 2010, in order to facilitate increased training at SSTC and relieve encumbrances from tern and plover nesting on the same beaches, the USFWS recently issued a programmatic Biological Opinion (BO) to the Navy. This BO, which is planned for implementation during the 2011 season after the SSTC EIS ROD is signed, will allow the Navy under certain conditions to conduct exercises in all ten of the training lanes, where formerly only seven were available during the breeding season (three lanes were set aside for nesting), and authorize NSW training within vernal pools occupied by the endangered San Diego fairy shrimp at SSTC. The SSTC BO was the result of over 10 years of planning and negotiations and replaces annual consultations which were time-consuming for Navy/USFWS staff and led to confusion for the operators because of frequent changes in management strategy.



A BO was completed in October 2009 to address impacts to the federally endangered arroyo toad (*Bufo californicus*) and Stephens' kangaroo rat (*Dipodomys stephensi*) from the expansion of the RTSWS training area and associated increases in operations. NBC biologist in partnership with USFWS, U.S. Forest Service, BLM, and Vista Irrigation District staff quickly completed the consultation and conservation measures are already being implemented. In 2010, the Navy funded and implemented surveys for the arroyo toad and Stephens' kangaroo rat via interagency agreement with U.S. Geological Surveys (USGS). These survey methods include recently developed occupancy monitoring, of which the techniques will be presented by USGS at The Wildlife Society Western Section meeting in Feb 2011 in a presentation entitled "Monitoring Endangered Species within and Across Military lands: Application of Occupancy Monitoring for the Arroyo Toad and Stephens kangaroo Rat on MCB, Camp Pendleton and U.S. Navy Remote Training Site Warner Springs."

Mission Enhancement



The San Clemente loggerhead shrike recovery program's success has resulted in decreased encumbrances to training within and outside of SHOBA. Specifically, the success of this recovery program in concert with the new SCI Fire Management Plan allowed for the removal of training restrictions in a previous BO on "Naval Training Activities that Cause Fires" and supported successful consultation with USFWS on the SOCAL EIS (2009).

Through data gathered under an update to the SCI INRMP, the Navy was able to respond to a status review and petition for listing of the ashy storm-petrel and the USFWS determined (2009) that this species does not warrant protection under the Endangered Species Act (ESA).

Monitoring and management of the island fox at SCI has kept it from being listed and the new epidemic response planning efforts are expected to provide further assurances against future ESA listing.

During FY10, NBC biologist developed an update to the NBC INRMP to address increased management of the arroyo toad at RTSWS. This update was sent to the USFWS and CDFG for consideration and was also used to develop a letter signed out by Deputy Chief of Naval Operations to request that critical habitat designation for the toad be excluded at RTSWS and Camp Morena.

A request developed by the NBC botanist and signed by the Deputy CNO on critical habitat exclusion for the Quino checkerspot butterfly (*Euphydryas editha quino*) resulted in a USFWS June 2009 final rule excluding designation at La Posta, which will decrease encumbrance on future proposed operations at this important training facility.

Finally, NRO has worked closely with the NBC Community, Plans, Liason, Officer (CPLO), on multiple encroachment buffering projects which include acquiring buffer lands at La Posta and NOLF IB to ensure future compatibility of the military mission with local communities.

Overall Conservation Management

NBC CPLO, NRO participate in the Tijuana River Valley Recovery Team which is a multiple agency (including international partnership with Mexican officials) and non-government organization effort to streamline and develop recovery goals and implement management for the Tijuana river valley, of which NOLF IB is a large part.



In FY 2010 a population of a very rare plant, *Phacelia stellaris* (*Brand's phacelia*), was found by Navy least tern monitors on NAB bayside training areas. This species is currently documented to occur in only five locations worldwide (all in southern California), three of which consist of very small population. The discovery of this species of concern was swiftly documented by the NBC botanist and addressed in the draft SSTC EIS to ensure potential impacts and conservation measures were developed.

NBC biologist participated in a working group that culminated in a resolution process initiated in Sept 2010 called Structured Decision Making Problems (SDM). This SDM will hopefully result in improved predator management which supports the recovery of the tern and plover.

NRO is integrated in the planning process for all projects on NBC that require natural and cultural resources review. During this period, NBC biologists reviewed and contributed to the development of one EIS, five Environmental Assessments (EA), and 237 Record of Categorical Exclusions (CATEXs).

Land Use Management



Application of a stringent native vegetation requirement resulted in a benefit to native plant communities, decreased invasive species concerns and costs, and water conservation through drought tolerant landscaping. The SCI Botany Program's outplantings have increased vegetative cover, decreasing erosion within the highly erodible soils of SCI. In addition, all landscaping projects must follow the NBC Plant List developed by the NBC botanist in coordination with the NAVFAC landscape architects.

The close involvement of NBC NRO with the Tijuana River Valley Recovery Team will ensure that future management of this entire river system will not adversely impact operations at NOLF IB. This partnership will also lead to improved ecosystem management of NOLF IB which is part of the Tijuana River National Estuarine Research Reserve network and is considered a "Wetland of International Importance."

Forest and Fire Management

NBC supports a fire management programs on SCI in accordance with a newly developed and consulted Fire Management Plan. SCI program includes the maintenance of fuel breaks and fire roads with heavy equipment as well as a chemical retardant. Helicopter support is also available if any fires develop on SCI. Fire management plans for RTSWS and La Posta were funded during FY09 and are currently under development.



Fish and Wildlife

As referenced previously, the San Clemente loggerhead shrike population has rebounded and in the past 2 years appears to have reached a point of potential de- or down-listing. In recognition of this (and the absence of a USFWS recovery plan), the NBC biologist requested, received, and implemented funding for a Population Sustainability Plan (Navy version of a Recovery Plan) that will identify recovery goals and objectives. This plan should allow for the downsizing of the shrike recovery program in a managed fashion and would support a petition for de- or down-listing.



During FY10, NRO and Seabees Self-Help installed two nesting platforms for osprey. This project replaced a nest with two chicks that fell from an electric pole in June 2009. The platforms were constructed by Self-Help and the completed structures installed by PWO Facilities who performed the digging operations and erected the poles. This project was completed at no cost to environmental.

Conservation Education

In 2010, NBC finalized “San Clemente Island; Training Our Troops While Protecting Our Natural Resources”, a DVD that educates sailors, soldiers, and contractors on the natural resources of SCI and ways to ensure compliance with natural resources regulations and policies while working and living at SCI. This professional quality 20 minute video is used for in-briefings and outreach.

NRO worked with six La Jolla High School Sierra Club students, CNRSW Fed Fire, and USDA Wildlife Services to install 3 new burrowing owl artificial burrows at NASNI. This work was done to enhance habitat for the burrowing owl, a federally sensitive and declining species in southern California, who nest on NASNI. The site work was done on Sunday, March 14.



Community Relations

Since spring 2009, NRO has supported and been involved in the USFWS/California State Parks program called Plover Patrol. The Plover Patrol volunteers are trained prior to each nesting season to conduct surveys of the beaches where the snowy plover nests to determine impacts from recreational users and to educate the public about the species. This program covers land owned by USFWS, State Parks, and U.S. Navy. Each year, 10-30 Plover Patrol volunteers are involved in the program and the NBC biologist accompanies volunteers on patrols one day each month.

In FY09 and FY10, the NRO continued to offer a bird/nature walk every 1st and 3rd Friday each month starting at the NASNI Navy Lodge. This walk offers visitors, military/CIV personnel, and NBC residents an opportunity to learn about the wildlife and protected resources on NASNI. The walk provides participants with the chance to view



the snowy plover, burrowing owls, red-tailed hawks, osprey, and many species of shorebirds and gulls.

In FY09, NBC biologist co-authored an article (“Hybridization of a Yellow-Crowned and Black-Crowned Night Heron in Southern California”) published in the scientific journal “Western Birds” documenting the occurrence of a rare hybrid nesting event that took place on NASNI .

Trails supporting horseback riding and bird-watching are available to the general public on recreational Navy owned land south of NOLF IB. NBC biologist monitored management of these trails, attended quarterly trails committee meetings, and helped in FY10 to develop new Navy boundary signs to inform the public of sensitive habitat.

NRO worked with PWO Facilities in FY10 to develop and erect new informational signs to educate the public about sensitive nesting sites on SSTC.

The SCI biologist supported numerous tours in 2009 and 2010 for non-governmental organizations (NGO) from Washington D.C. and California, USFWS personnel from Washington D.C. and Puerto Rico, members of the press, military spouses, the Catalina Conservancy, the National Park Service, and others.

The NBC biologist gave presentations at several events including Island Fox Working Group Meetings (annually), which bring together federal (USFWS, DON, and National Park Service), state, NGO/private organizations; a presentation on the Shrike Recovery Program to the Department of Defense Partners in Flight Group (2009); assisted with a presentation to the San Diego Field Ornithologists; and are working on two shrike presentations for the annual meeting of the Western Section of the Wildlife Society.



The NBC biologists support regional conservation efforts, such as providing data for a statewide western snowy plover “window”, a Cooperative Research Agreement with the Santa Barbara Museum of Natural History that resulted in the publication of two scientific papers on insect fauna (beetles) of the Channel Islands, and a Cooperative Research Agreement with the Santa Barbara Zoo to provide a limited number of San Clemente Island foxes for replenishment of the mainland zoo populations.

Environmental Enhancement

The NBC natural resources program has had remarkable success supporting the military readiness mission while sustaining natural resources. NBC has the second highest concentration of federally listed species on a DON Installation and the fourth highest concentration on an Installation DoD-wide, the only remaining US live fire ship to shore and air to ground range, one of the highest concentrations of Naval Special Warfare training and range areas, and the SOCAL Range Complex is the most capable and heavily used Navy range complex in the eastern Pacific region. Despite the obvious challenge to our multiple “use” mandates, we are achieving success with six of the federally listed plants slated for down-listing, san clemente shrike population numbers and trajectories supportive of down- or de-listing, and the island night lizard pending delisting. NBC boasts an island fox management and natural resource compliance and outreach program (DVDs, signs, brochures) that set the precedent and standard for other federal agencies and private institutions. The accomplishments and constant improvements of the NBC natural resource program benefit the installation’s sailors through reduced constraints and base/range sustainment. Both installation personnel and surrounding communities benefit from NBC’s support of ecosystem balance and biodiversity through maintained or increased environmental quality (e.g., water quality), support of transient natural resources (i.e., migratory birds) that have value off of the Installation, and the continued or improved ability of the land to withstand both natural and man-made disturbances, which is critical to military and civil preparedness and overall security. In short, the NBC conservation model provides a vivid example of how training and natural resources can successfully coexist.

