



**FY 2012 CHIEF OF NAVAL OPERATIONS  
ENVIRONMENTAL AWARD COMPETITION  
AWARD CATEGORY:  
NATURAL RESOURCES CONSERVATION,  
LARGE INSTALLATION**



**INTRODUCTION**

NBC is home to over 18,000 active duty military and over 5,500 civilian employees. The primary mission of Naval Base Coronado (NBC) 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.

NBC natural resources program manages some of most diverse ecosystems in the continental United States. Two separate Integrated Natural Resources Management Plans (INRMPs) were developed and are being implemented to manage NBC's complex natural resources.

The eight NBC installations represent over 60,000 acres of land and water and are distributed over an area of 3,380 square miles in San Diego and Los Angeles Counties in southern California. Of the total acreages, approximately 6,000 acres are developed or improved, 130 acres are used for agriculture, 748 acres are wetlands or Waters of the U.S., and the remainder of terrestrial (53,000) is managed for wildlife and/or plant communities while supporting operational requirements. San Clemente Island Range Complex (SCIRC) also supports more than a dozen range and operational areas that are clustered within the 57 square mile island and the SCI INRMP manages the marine environment out to three nautical miles surrounding the island.

**BACKGROUND**

The NBC Installation Commanding Officer leadership is vital to the success of the natural resources program 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 Director (IEPD). The IEPD, 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 program office (NRO) is administered by two wildlife biologists, a botanist, and an environmental protection specialist (located on SCI) who report to the IEPD. 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 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 (CMM, formerly La Posta), Camp Morena, and San Clemente Island (SCI) Range Complex (SCIRC).



Two separate INRMPs are in place to manage NBC's complex natural resources. The *Naval Base Coronado and San Clemente Island INRMPs* were finalized in 2002. In September 2012 each of these documents were documented as compliant with the latest reviews for operation and effect. Implementation of each INRMP is tracked through annual reviews (metrics meetings) and through the NBC Environmental Management System (EMS). The NBC and SCIRC INRMPs are currently undergoing the final steps of major revisions with finalization of each expected mid-2013.

The following installations are managed under the mainland *Naval Base Coronado INRMP*.



**NASNI** is headquarters to four major military flag officer staffs including Commander Naval Air Forces, and supports 21 aircraft squadrons and more than 190 aircraft. Its piers are homeport to two nuclear powered aircraft carriers, the USS RONALD REAGAN (CVN 76), and the USS Carl Vinson (CVN 70).

**NAB** includes 7.9 miles 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 14 miles 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 close to 300,000 operations per year. It is also the home of Commander, Maritime Expeditionary Security Group One.

**SSTC-S** is a premier training facility for the military's Special Forces. Located on the Imperial Beach / Coronado border, this 566-acre 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. Under new land use agreements, RTSWS doubled its size and now provides 12,544 acres to support SERE and other essential Navy and Marine Corps training.

**Camp Michael Monsoor** is located 50 miles 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 CMM makes it an ideal location for special reconnaissance training, map and compass training, and other special warfare training. CMM, like SCIRC, is one of the few places that allow Special Forces to train in a real life environment with limited encroachment problems. CMM is undergoing a land expansion and will soon total 5,554 acres.



**Camp Morena** is located in southeast San Diego County five miles northwest of CMM. 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 SCI.



**SCI**, the Navy's only remaining live-fire ship-to-shore and air-to-ground range, is the southernmost Channel Island, covering 57 square miles (equating to 37,000 acres). 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.

### **PROGRAM SUMMARY**

NBC's conservation program is based on an ecosystem management approach, which includes comprehensive management of federally listed species and their habitats in a manner compatible with military operations and provides a model for effective natural resources management. NBC supports one of the highest densities and number of listed species throughout DoD with 31 marine and terrestrial federally-listed species within the NBC area of control and use. Despite these potential constraints, NBC natural resources program continues to support no net loss to the military mission and exceeded this mandate during the achievement period by providing expanded training opportunities. Outstanding success of the program has been manifested by sustained increases in population or nesting numbers of multiple species while providing increased access to essential training areas. The species documented with sustained population increases are the federally endangered San Clemente loggerhead shrike (*Lanius ludovicianus mearnsi*), the federally threatened western snowy plover (*Charadrius nivosus nivosus*), the federal candidate San Clemente Island fox (*Urocyon littoralis clementae*), and all six of the federally-listed SCI plants.

### **ACCOMPLISHMENTS**

**Awards: FY 2010 CNO Natural Resources Award Winner, FY 2011 CNO Installation Restoration Team Award Winner, In 2012 Meritorious Civilian Award issued to Melissa Booker (SCIRC Biologist) and Tiffany Shepherd (NBC Mainland Biologist)**

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 (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 (SCI fox hospital or "foxpital"). From 2010 through 2012, the SCI fox population reached the highest numbers ever recorded on the island, a huge rebound for a species that was once considered for listing under ESA and a testament to the effectiveness of NBC fox management. In 2011, NBC developed a reduced intensity monitoring strategy aimed at getting continued data critical to fox management with reduced costs and effort. This plan will be implemented in 2013. In 2011, a sentinel fox monitoring program was initiated at SCI as recommended in the SCI Fox Epidemic Response Plan. This critical project will allow rapid response to a disease threat that could otherwise impact the fox population to the point of ESA listing, with potential corresponding significant constraints on all operational training and facilities support actions.

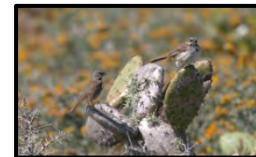


Aggressive and comprehensive recovery efforts for the San Clemente Loggerhead Shrike peaked in 2010 when the maximum population estimate reached over 300 birds (estimate includes all birds in the wild, adults and juveniles that reach independence within a given year). The population has rebounded from a low population estimate of less than 30 birds in 1998. This dramatic recovery is the direct result of well-funded (Commander, U.S. Pacific Fleet), well-coordinated efforts by the NBC-led San Clemente Loggerhead Shrike Working Group (comprised of the Navy, contractors, and USFWS) and has significantly decreased encumbrances on military ship to shore and air to ground training. In recognition of the rebounded population of SCI shrike (and the absence of a USFWS recovery plan), NBC NRO is currently developing a Population Sustainability Plan (Navy version of a Recovery Plan) that will identify Recovery Goals and Objectives. This plan should allow for the

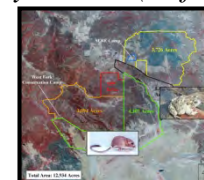


downsizing of the Shrike Recovery Program in a managed fashion and would support a petition for de- or down-listing.

In 2010 - 2012, NBC conducted a survey of the federally threatened *San Clemente Sage Sparrow* (*Amphispiza belli clementeae*). This survey revealed that previous monitoring had underestimated the population and that Sage Sparrows were utilizing additional areas on SCI. This discovery is part of the impetus to redesign Sage Sparrow monitoring (an on-going project to be completed in 2012) to better assess population numbers and habitat and will likely change the species "poor" prognosis as laid out in a previous Population Viability Analysis. As the species most likely to constrain future training at SCI, the discovery of a high population level with more habitat flexibility is significant for future consultation negotiations.



Newly developed, innovative monitoring techniques for the federally endangered *arroyo toad* (*Bufo californicus*) and *Stephens' kangaroo rat* (*Dipodomys stephensi*) were initiated during 2010 and 2011 in accordance with the new Biological Opinion (BO) for expanded land use at RTSWS. The innovative monitoring techniques, developed by U.S. Geological Survey in coordination with USFWS and local species experts, will allow population trends to be determined over time and were presented by USGS at The Wildlife Society Western Section meeting in Feb 2011 in a talk titled, "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."



The NBC *Least Tern and Snowy Plover Management Program* continued its successful implementation during the 2011 and 2012 nesting seasons. During this time, NBC supported record-high numbers of Snowy Plover nests and produced 62 and 59 plover fledglings in 2011 and 2012, respectively, which provided some of the highest fledgling numbers on record for NBC. The Navy's successful management has allowed local management goals for the Snowy Plover (95 breeding birds for the Silver Strand, as identified in the 2007 USFWS Recovery Plan) to be met or exceeded, and this position paved the way for the expanded access to training areas approved by the USFWS during development of the SSTC EIS (discussed below).



During the 2012 nesting season, NBC was a leader in tern/plover management and research by implementing new strategies for predator control and completing the first year of a study looking at the effects of military working dogs on the nesting birds. Additionally, NBC staff took over the reins of the raptor predator management by obtaining an installation migratory bird depredation permit (formerly the base program was under a permit issued USDA Wildlife Services) which led the way for land-owner permits being issued in southern California.



NBC completed a sensitive plant status report for over 20 rare species on SCI including six listed plant species. Survey showed a more than ten-fold increase for five of the six listed plants since time of listing, due to enhanced management practices and increased war fighter support. NRO discovered new populations of Santa Cruz Island *rock cress* and San Clemente Island *woodland star* thriving in areas with few NRO direct actions.

The NBC team has worked diligently on updating its *NBC and SCI INRMPs*, including an expanded SCI INRMP footprint that extends out three nautical miles into marine environments and an expanded NBC INRMP footprint which includes the near-shore SSTC training lanes. This effort has translated into exclusion of Critical Habitat for arroyo toad (RTSWS), western snowy plover (NASNI), quino checker spot butterfly (CMM & RTSWS) and black abalone (SCIRC).

### **MISSION ENHANCEMENT**

In August 2012, the *Record of Decision for the SSTC EIS* was signed increased training tempo and expanded access to training areas on SSTC. NRO staff negotiated a new SSTC BO with USFWS to allow three formerly closed SSTC beach training lanes to re-open to training during the nesting season. The SSTC EIS also

provides for less encumbered training by placing a cap on the total number of Snowy Plover nests buffered at one time and by allowing operators to schedule foot traffic training within vernal pools occupied by endangered San Diego Fairy Shrimp (*Branchinecta sandiegonensis*) if the pools are determined to be dry. These expanded and formerly off-limits areas will provide to the war fighter greater than 50 additional acres of prime, centrally-located, enhanced training lands.

In 2011, NRO completed the Quino Checker spot Butterfly Enhancement Plan, which will allow for the construction of the Navy Special Warfare (NSW) Multi-structure Training Complex, tripling the operational training capabilities at CMM.



During FY11 and FY12, NRO worked closely with the NBC Community, Plans, Liaison, Officer (CPL0), on multiple encroachment buffering projects, which include acquiring buffer lands at CMM and NOLF IB to ensure future compatibility of the military mission with local communities. In 2012, approval was received by Navy headquarters to pursue a new Restrictive Use Easement (RUE) on a 282 acre property north of CMM. The RUE will provide important buffer land adjacent to existing training areas at CMM, and includes an innovative clause which reserves the right to any future mitigation credits generated on this property to be used or assigned by the Navy.

### **CONSERVATION MANAGEMENT**

NBC 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 of. The close involvement of NBC with the recovery team ensures 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.”

NBC staff completed annual surveys for sensitive dune species found on SSTC-N and NASNI. One of the species surveyed is Brand’s phacelia (*Phacelia stellaris*), which is currently a Candidate species for listing under ESA. Due to management actions on NBC properties, NBC has over 30,000 Brand’s phacelia each year. This monitoring effort and the successful management will be used to preclude listing of this species, and prevent unnecessary encumbrances on training.

NBC implemented a new *Seabird Monitoring Program* in 2012, with a focus on ESA candidate seabird species. Implementation of this proactive program, coupled with non-native predator control puts the Navy in an excellent position to respond to listing proposals and ultimately avoid any Critical Habitat designation on NBC.

In early 2011, NBC partnered with one of the foremost experts on the Channel Islands’ botany species. Field visits to SCI led to the discovery of multiple new populations of listed and sensitive plant species, which enhance the Navy’s management position with regards to SCI plants.

NBC biologists reviewed and contributed to the development of 2 EIS’s, 5 Environmental Assessments (EA), and 197 Record of Categorical Exclusions (CATEXs) during this period. NRO works closely with USFWS to complete ESA consultations informally whenever possible to provide timely support to operators and facilities projects.

### **Land Use Management**

In FY12, NBC completed the development of a comprehensive Avian and Dune Management Plan for SSTC. Phase one will meet mitigation requirements of the SSTC EIS by restoring approximately 17 acres of coastal dunes at the SSTC and enhancing approximately 20 acres of existing Least Tern/Snowy Plover nesting sites on the SSTC-N bay side. SCI’s habitat restoration program was highlighted in an article in the 2011 Navy’s “Natural Selections” magazine.



Additionally, an updated vegetation map of SCI was developed in 2011. This map will form the basis for better management of threatened and endangered species, more accurate NEPA analyses, and an effective INRMP revision.

In FY11 and FY12, NBC staff continued restoration of native habitat on abandoned trails and roads at RTSWS. These restored areas will be utilized by the Survival, Evasion, Resistance and Escape (SERE) program for future training and implement conservation measures within the RTSWS BO.

### ***Forest and Fire Management***

In partnership with base operations and range personnel, NBC implemented a the SCI Fire Management Plan, installing over 15 miles of fuel break around explosive bombardment impact areas to reduce the threat of fire to sensitive natural resources, training areas, and infrastructure. Fire management plans for RTSWS and CMM are currently under development and will be vital documents to support these eastern San Diego County properties prone to fire.



### ***Fish and Wildlife***

In 2012, NBC completed the fourth year of a *Monitoring Avian Productivity and Survivorship (MAPS)* banding program at NOLF IB and first year at RTSWS, which provides important productivity estimates for migratory birds. This year’s agreement was awarded at significant cost savings by using an Economy Act Agreement with U.S. Geological Survey rather than traditional contracting mechanism. As a result of the cost savings achieved through the use of an inter-agency agreement, the RTSWS program will also include an effort to look at migratory bird fall migration, which will inform regional knowledge of migration in east San Diego County.



In 2011-2012, NBC confirmed the return of *nesting Peregrine Falcons* at SCI. This is indicative of the health and recovery of natural resources at SCI and the surrounding ecosystem under Navy management. NBC partnered with USFWS (at very low cost) to monitor the newly established nest and band the nestlings to provide data for Navy management as well as regional monitoring of this delisted species.

To enhance migratory bird habitat during FY12, NBC funded the installation of a new Osprey nesting platform at NAB which will be installed to replace a natural nest built on top of a light post prone to destruction during inclement weather.

### ***Invasive Species Management***

The NBC natural resource team partnered with the Channel Islands Restoration group to bring a group of 25 volunteers to SCI. The group worked for four days and was able to remove 41 acres of ice plant (an invasive species that crowds out native plants) from dune habitat that supports a variety of sensitive plant and animal species.

Application of a stringent native vegetation requirement on our ranges results in a benefit to native plant communities, decreased invasive species concerns and costs, and water conservation through drought tolerant landscaping. In addition, all landscaping projects must follow the NBC Plant List developed by the NBC Botanist in coordination with the NAVFAC Landscape Architect.

### ***Conservation Education***

In 2010 and 2011, NBC published for our war fighters, two natural resources training DVDs, “San Clemente Island Training Our Troops While Protecting Our Natural Resources” and “Naval Base Coronado Wildlife Protection and Management”. These DVDs outline natural resource avoidance and minimization measures for operators and other range users to ensure compliance with the ESA and the BOs issued for training activities at NBC. The SCI DVD is provided to all SCI users via a mandatory Island Indoctrination process.

Since the DVD has been implemented on SCI, ESA and BO violations have dropped to less than 14% of the pre-DVD levels.

NBC boasts an *Island Fox Management and Natural Resource Compliance Outreach Program* (e.g., DVD, signs, wallet cards, brochures distributed to the war fighter upon arrival at the range) that has set the precedent for federal agency outreach and is a model for other resource management institutions.

### ***Community Relations***

NBC biologists regularly give presentations at events and conferences. These include the Island Fox Working Group Meetings (annually), a presentation on the “Progress Toward Recovery of Listed SCI Species” was given at the N45 Natural/Cultural Resources Symposium (2012), presentations for the annual meeting of the Wildlife Society’s Western Section (2011, 2012) and co-authored talks and posters at American Ornithologists’ Union conferences (2010, 2012), The Wildlife Society national conference (2012), and the Channel Islands Symposium (2012).

NBC is proud to acknowledge that our staff participates in several professional organizations including: The Wildlife Society, American Ornithologists’ Union, California Native Plant Society, and the National Military Fish and Wildlife Association.

To reduce the high level of unauthorized recreational disturbance on federally-listed California Least Tern (*Sternula antillarum browni*) and Western Snowy Plover, NBC natural resources staff and COMPACFLT initiated a new and unique *cooperative agreement with the California Department of Fish and Game (CDFG)* to provide Game Warden patrols on NBC training areas.



In 2012, NBC successfully transferred three island foxes to California zoos to support education and research for this unique species. Each of the foxes was an injured or orphaned pup rescued but deemed un-releasable. Their use as outreach animals at zoos within the region helps to promote the public’s understanding of Navy stewardship as highlighted in the Navy Compass July/August 2012 as well as local newspapers.

NBC natural resources staff continues to support and maintain a *twice-monthly “Bird Walk”* at NASNI. This outreach program gives base military, civilians, and guests an opportunity to spend a morning viewing NBC’s unique and sensitive wildlife and to learn about NBC’s comprehensive natural resources management.

NRO continued its *partnership with La Jolla High School, CNRSW Fed Fire, and USDA Wildlife Services* to install eight new Burrowing Owl artificial burrows at NASNI during March 2012. This work was done to encourage more burrowing owls, a federally sensitive and declining species in southern California to nest on NASNI. NBC views these community partnership events as vital to the success of our natural resources program.



In 2012, NBC assisted the California Native Plant Society (CNPS) with a site visit to San Clemente Island. CNPS wanted to visit the island to document the recovery of many listed and sensitive plant species on the Island. CNPS will publish a proposal to downgrade the “rare plant ranks” for many of the plants on SCI in late 2012/early 2013.

### ***Environmental Enhancement***

The accomplishments of the NBC natural resource program benefit the Installations 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, outstanding community education and outreach. In short the NBC conservation model provides a vivid example of how training and natural resources can successfully coexist.