



Naval Base Point Loma
2013 Secretary of Defense Environmental Award
Natural Resources Conservation – Small Installation
Narrative

Introduction

The mission of Naval Base Point Loma (NBPL) is to enable and sustain Fleet, Fighter, and Family readiness through consistent, standardized, and reliable shore support while preserving the critical resources necessary to secure the future of our forces. We are an extension of our Fleet's warfighting capabilities and are dedicated to providing the highest level of operational and shore support.



Established on October 1, 1998, Naval Base Point Loma consists of three geographically separated areas in the Point Loma region of metropolitan San Diego, California. Home to over 70 tenant commands, NBPL provides base operating support for Commander THIRD Fleet, SPAWAR Headquarters, Naval Mine and Anti-Submarine Warfare Command, SPAWAR Systems Command - Pacific, Submarine Squadron ELEVEN and several others. With its main base situated on the historically significant western entrance of San Diego Harbor, NBPL also serves as the guardian of an abundance of cultural and natural resources.

Picture 1: Point Loma Peninsula

Extending beyond the Point Loma peninsula, NBPL is responsible for 1,869.5 acres of federal property, to include six distinct complexes, 41 special areas and 3,481 housing units. The installation and tenant commands are staffed by more than 17,000 active duty military and civilian employees, and several thousand contracted personnel.

Home to the Navy's Third Fleet leadership, technological, mine and anti-submarine warfare Centers of Excellence, and the West Coast's fast attack submarines, NBPL is vital to current operations and future capabilities. Positioned at the leading edge of innovation, NBPL tenants have access to a rich supply of human resources and a number of industry partners who are well prepared to support our mission objectives.

Uniquely, Naval Base Point Loma, the Department of the Interior, the Department of Veterans' Affairs and the City of San Diego are united in an informal partnership to help preserve the habitat and cultural resources of this historical location which includes; 640 acres of coastal sage scrub containing four endangered species, over 300 species of marine algae and invertebrates in the rocky intertidal areas on Point Loma, two pre-historic aboriginal sites, Spanish, WWI and WWII military forts, and two National Register Eligible historic districts. The Point Loma peninsula hosts over 1.2 M visitors per year.

Background

The Naval Base Point Loma Integrated Natural Resources Management Plan (INRMP) was finalized and approved in November 2012 providing the primary tool in managing NBPL's complex natural resources. This INRMP proved significant for marine resources by extending the marine region management boundaries beyond the high water mark out 300 yards (as seen in picture 2 blue shaded areas). Additionally, in October 2013, the INRMP was documented as compliant with the latest reviews for operation and effect. Implementation of the INRMP is tracked through annual reviews (metrics meetings) and via the NBPL Environmental Management System (EMS).

The Natural Resources (NR) program is a component of the Installation Environmental Department; specific NR administration and support is provided by two biologists, one specializing in marine biology and the other terrestrial wildlife biology. The Installation Commanding Officer oversees the Environmental Department via the Public Works Department and provides the overall guidance on integration between natural resources and military mission.

Summary of Accomplishments:

NBPL's most successful natural resources conservation accomplishments are in adaptive ecosystem management and marine resources management.

Adaptive Ecosystem Management.

Beginning in 1994, and renewed in 2005, a Memorandum of Understanding (MOU) was developed between Point Loma peninsula landowners (the Navy, US Coast Guard, National Park Service, City of San Diego, and Fort Rosecrans National Cemetery) and the US Fish and Wildlife Service with the goal of establishing a designated conservation area on the Point Loma peninsula. This nearly 20 year old partnership and area became known as the Point Loma Ecological Conservation Area (PLECA). The PLECA implements a comparable, but non-regulatory, ecosystem-based approach to protect sensitive biological communities on the signatories' lands, ensure their long-term viability and perpetuation, avoid incremental habitat loss, and provide for long-term habitat conservation and enhancement within the PLECA boundaries (Figure 1). Under the

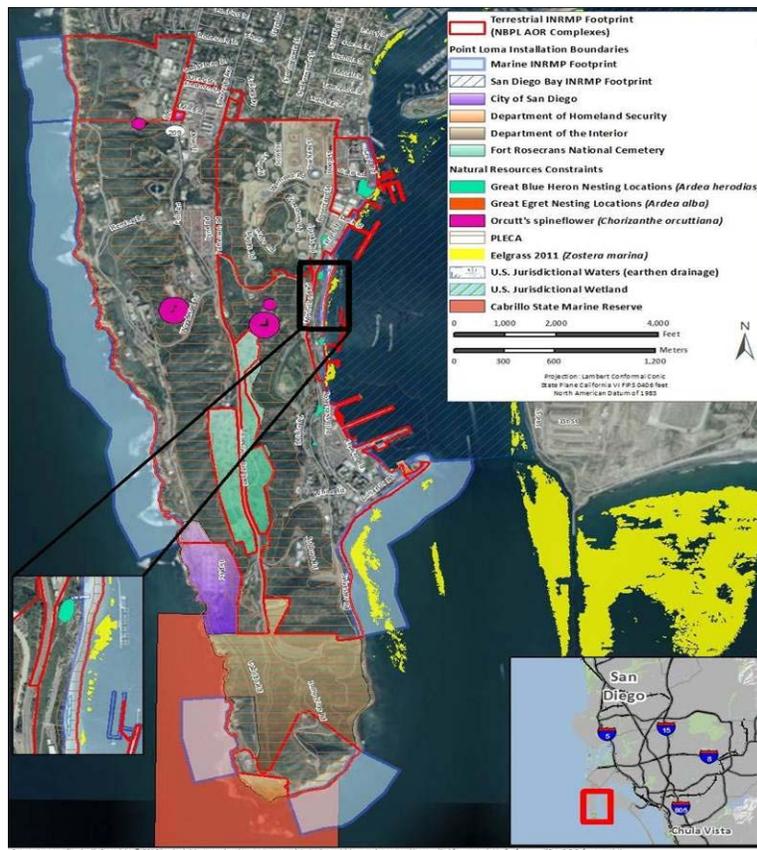


Figure 1: This map identifies natural resources constraints on the peninsula including boundaries within the Point Loma Ecological Area (PLECA). The map also includes jurisdictional property boundaries for PLECA stakeholders on the peninsula.

Under the

MOU, PLECA members partner to increase efficiency of natural resource management on the Point Loma peninsula through collaboration and shared management and financial responsibilities.

PROGRAM MANAGEMENT:

NBPL's conservation program is based on an adaptive ecosystem management approach. By partnering with the PLECA members, the Point Loma peninsula is managed as one ecosystem under multiple individual property boundaries. This management approach ensures long-term habitat viability and perpetuation, avoids incremental habitat loss, and provides long-term habitat conservation and enhancement on the peninsula. Adaptive ecosystem management also increases natural resources efficiency through collaboration and shared management and financial responsibilities among PLECA members.

TECHNICAL MERIT:



Picture 2: Indigo bunting captured and banded during annual MAPS surveys. Birds are captured using mist-nets, and various morphological data is collected such as: age, sex, skull pneumatization, breeding condition, weight, wing chord, fat deposition, feather wear, and molt status. MAPS surveys is one of the projects developed under Naval Base Point Loma's Integrated Natural Resource Management Plan.

Success of the PLECA partnership and adaptive ecosystem management is demonstrated in NBPL's ability to increase military training areas for tenant commands while showing sustained increases in population numbers of multiple species. The species documented with sustained population increases are the federally endangered Orcutt's spineflower (Figure 1 bright pink shaded area) and the special status species chaparral rein orchid. Additionally, several hundred acres of coastal sage scrub habitat have been restored.

Another example of ecosystem management partnering is the Monitoring Avian Productivity and Survivorship (MAPS) surveys conducted on the Point Loma peninsula (Picture 2). NBPL biologists partner with National Park Service staff to coordinate survey dates, time and locations on the peninsula. Survey data is part of a long-term study to monitor migratory bird population trends, estimate demographic and survivorship parameters, estimate annual productivity patterns for these species, and identify augmentation of existing distributional information.

ORIENTATION TO MISSION:

NBPL supports two terrestrial federally-listed species and several special status terrestrial and marine species within the NBPL area of responsibility. Despite these potential constraints, NBPL natural resources program continues to support no net loss to the military mission and exceeded this mandate during the achievement period by providing three new training sites approximately 3 acres expanded training opportunities to Explosive Ordnance Disposal (EOD). Balancing the needs of the mission and the natural resources requirements through close coordination with EOD and Natural Resource staff three new training sites were established on NBPL with no net loss of coastal sage scrub habitat on the Point Loma peninsula. Access to these training sites yielded a savings of ~ \$40K travel dollars, 560 man-hours, and a reduction of the unit's ITEMPO by approximately 350 days. These three new training sites are currently under review by the Naval Ordnance Safety and Security Activity (NOSSA). Once approved, these sites will improve training flexibility while dramatically reducing travel costs and ITEMPO.

TRANSFERABILITY:

The partnership parameters established under the PLECA MOU, and the associated efficiencies in resources management and shared financial responsibilities of Natural Resource projects, is directly transferable to other military installations that have multiple landowners within the same ecosystem. Utilizing the installation’s INRMP as a planning tool for these shared projects ensures regulatory agency and stakeholder agreement and support of them.

STAKEHOLDER INTERACTION:

In 2012 NBPL Environmental Resources staff partnered with Commander, U.S. 3rd Fleet's (C3F) Environmental Stewardship Flagship Program (ESF) to remove non-native plant species such as ice plant and acacia from the installation. The long-term goal is to have sailors volunteer on this restoration project once a quarter, to promote the growth of plants that are native to the area, while helping to remove all plants that are destructive to the ecology. This program makes a visible impact for the Sailors on a day to day basis, and sets precedence for future volunteer opportunities and partnerships.



Picture 3: Crew members remove acacia biomass to increase the potential for Orcutt's spineflower habitat to expand into previously unsuitable habitat areas. In several areas where acacia was removed previously, Orcutt's spineflower has since been documented. Habitat enhancement is one of the projects developed under Naval Base Point Loma's Integrated Natural Resource Management Plan.

PROJECT IMPACT AND OUTCOMES:

PLECA members partnering on Natural Resource projects provide an ecosystem wide impact vice only within individual property boundaries. For example, invasive plant removal efforts are coordinated among PLECA members to identify species, areas on the peninsula, and time frames for removal. This coordinated ecosystem wide approach has a large impact on reducing non-native invasive plants on the Point Loma Peninsula and thereby increasing the population numbers of multiple native species. This has resulted in the documented sustained population increases of the federally endangered Orcutt's spineflower and the special status species chaparral rein orchid. Additionally, several hundred acres of coastal sage scrub habitat have been restored.



Picture 4: Naval Base Point Loma south rocky intertidal site. This is one of two sites on Naval Base Point Loma for which monitoring is conducted every spring and fall. These sites have been monitored since 1995 and were added to Naval Base Point Loma's Integrated Natural Resource Management Plan update.

Summary of Accomplishments: Marine Resource Management.

Fiscal Year 2013 marked the implementation of new, and continuation of reoccurring, projects designed to support a newly developed comprehensive marine resource management program on NBPL. Within NBPL's INRMP, the objective for the rocky intertidal environment is protection of the rocky intertidal zone around

the Point Loma peninsula. This is done by conserving the native habitat and maintaining species diversity.

PROGRAM MANAGEMENT:

In 1995, the Navy established a partnership with the National Park Service and the Multi-Agency Rocky Intertidal Network (MARINe). MARINe is a partnership of agencies, universities and private groups committed to determining the health of the rocky intertidal habitat and providing this information to the public. As part of this program, in 1995 the Navy and National Park Service partnered to establish and manage two rocky intertidal survey locations on NBPL. This managerial partnership has produced an 18-year rich data set and was acknowledged in October 2012 by the US Department of Interior's Partners in Conservation award. This award recognizes conservation achievements that include collaborative activity among a diverse range of entities including Federal, state, local and tribal governments, private for-profit and nonprofit institutions, other nongovernmental entities, and individuals. Long term monitoring data indicate changes within the southern California rocky intertidal habitat, such as the decline in black abalone, sea stars, and the California mussel, are attributed to environmental inputs. Despite regional declines in specific species, the collaborative long-term data also indicate the pristine quality of NBPL's undeveloped rocky intertidal areas.

TECHNICAL MERIT:

The once dominant black abalone *Haliotis cracherodii*, was historically the largest and arguably most important herbivore in intertidal systems along the California coastline. Black abalone has experienced dramatic declines due to disease and overharvesting and was listed by the National Marine Fisheries Service as endangered under the Endangered Species Act (ESA). In the NBPL INRMP, black abalone is listed as having the potential to occur within the rocky intertidal habitat on NBPL. Although this federally endangered species has mostly been extirpated on the coast of the southern California mainland, until 2013 there were no comprehensive black abalone surveys conducted at NBPL to confirm the absence of this species. During the 2013 survey, the entirety of the Point Loma peninsula's rocky intertidal habitat was searched with a team of biologists. No black abalone was located during the surveys. However, six green abalone, listed as a National Marine Fisheries Service "species of concern" were found. Similar to black abalone, the recent declines in green abalone populations from overfishing marks this species as vulnerable to extirpation and is a likely candidate for listing under the Endangered Species Act. By continuing to monitor this species and understanding how the green abalone uses the NBPL rocky intertidal habitat, the Navy is better positioned to avoid designation of critical habitat if they are listed as endangered in the future.



Picture 5: Bat star in the intertidal on Naval Base Point Loma. This sea star was found during the 2013 Naval Base Point Loma black abalone surveys. Sea stars are a rare find on the Point Loma peninsula.

Additionally, the Navy funded a subtidal marine inventory conducted by San Diego State biologists in the waters to the west of NBPL. The major goals of this project were to survey subtidal habitat for invertebrates and fishes and perform physical habitat characterization of seafloor bottom topography. Although these data are still under analysis, preliminary findings suggest a rich diversity and abundance of keystone subtidal species are present in the waters off NBPL. These species include various types of canopy forming kelps which are designated as a Habitat of

Particular Concern (HAPC) under the Pacific Coast Groundfish Fishery Management Plan, fishes managed under the Coastal Pelagic Fisheries Management Plan (Pacific sardine and Pacific mackerel), pink abalone which are listed as a species of concern under the National Marine Fisheries Service, multiple types of sea stars, and recreationally important fishery species such as red and purple urchins and California sheephead. This subtidal survey project supports NBPL's INRMP requirement to inventory natural resources within its boundaries to allow for a no net loss to the military mission.

Since 2007, several navy-funded marine mammal surveys have been ongoing with different focus areas on the ocean-side and bay-side areas of NBPL. At the initiation of these marine mammal surveys it was clear that the bay-side of NBPL was an important haul-out area for California sea lions and harbor seals but



Picture 6: Several California sea lions hauled out on the bait barge adjacent to Naval Base Point Loma. Photo taken during on-going marine mammal surveys in San Diego Bay. CA sea lions are the most common marine mammal in San Diego Bay.

cetaceans were not commonly sighted in the Bay. Historically, cetaceans were abundant throughout San Diego Bay but have been largely absent over the last 30 years. During the ongoing marine mammal surveys and in particular beginning in June 2012, regular sightings of cetaceans in proximity to NBPL bay-side areas have been made. The recent reappearance of cetaceans in San Diego Bay near NBPL may be attributed to the general increase in water and habitat quality of the bay as well as the protection these species are afforded under the Marine Mammal Protection Act. These marine mammal data are essential during consultations for in-water facilities projects as well training and operations allowing for no net loss to the military mission on NBPL.

ORIENTATION TO MISSION:

MILCON P-1306 is a \$91M project to replace a 100 year old fuel pier (Pier 180) located at NBPL. To meet current seismic requirements, the fuel pier design required steel pier piles. However, computer modeling indicated the hydro acoustic effects of driving steel piles may impact marine mammals within San Diego Bay. Using population data from the Navy funded cetacean surveys and hydro acoustic model results, the Navy was able to obtain an Incidental Harassment Authority for the steel pile driving and continue with the MILCON.

TRANSFERABILITY:

The NBPL and National Park Service monitoring partnership established under the MARINE program and the Navy's cetacean surveys in San Diego Bay allowed are examples of NBPL's INRMP. The long term dataset from these programs establish a baseline for the health of the Point Loma peninsula, including NBPL. This habitat baseline is then used by NBPL for operational and natural resources planning, for project support, and to avoid critical habitat designation. The methods used and benefits from establishing these long term monitoring programs are directly transferable to other coastal military installations.

STAKEHOLDER INTERACTION:

Last year NBPL Environmental Resources staff partnered with Point Loma High School to integrate NBPL's natural resource management program with an advanced placement environmental science

course. This partnership resulted in a navy-guided tour of the rocky intertidal habitat at Cabrillo National Monument. In addition to creating public awareness and promoting the significance and protection of natural resources, this visit included discussion of the NBPL's Natural Resource program. This partnership between the NBPL and Point Loma High School has continued in 2014 and is being expanded to include field trips that cover Cultural Resource management, Installation Restoration and Environmental Compliance.

Finally, NBPL Environmental Resources staff hosted a volunteer beach cleanup for base residents and a local Girl Scout troop. NBPL Environmental Resources staff educated the troops on San Diego Bay ecology, with an emphasis on the effects of littering on marine life, and the importance of beach cleanups to the health of the bay.

PROJECT IMPACT/OUTCOMES:

The intertidal, subtidal, and San Diego Bay habitat are now a part of the NBPL INRMP. By properly managing these natural resources, NBPL has the scientific data to avoid critical habitat designation and the associated operational and mission impacts that can come with it.