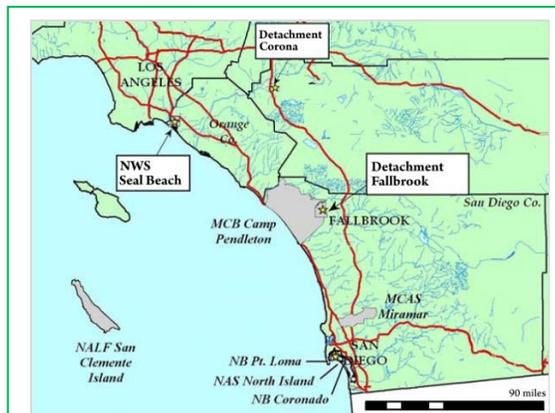


# Naval Weapons Station Seal Beach

## Environmental Quality – Industrial Installation Award Nomination 2010

**INTRODUCTION** – Naval Weapons Station (NAVWPNSTA) Seal Beach, California and its Detachments - located in Corona and Fallbrook, California - exist to provide weapons storage, loading of ready-for-use ordnance, missile maintenance, weapons systems assessment, and support to ships of the United States Pacific Fleet. Our facilities also support Coast Guard vessels and Marine Corps units stationed afloat and ashore. The three locations, which are approximately 80 to 130 kilometers (km) apart, are managed predominantly from Seal Beach. Environmental management challenges include operating within an intensely developed megalopolis which places high demands upon energy and water usage, creates pressure on remaining natural areas, and causes tight regulation due to air and water pollution impacts to both human health and the environment.



Location of Naval Weapons Station Seal Beach and Detachments Fallbrook and Corona.

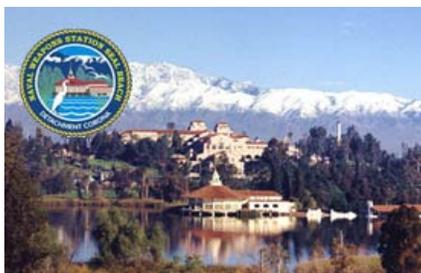
### SEAL BEACH



NAVWPNSTA Seal Beach is a key munitions supply point for the Pacific Fleet homeported in San Diego. The base is host to Navy Munitions Command CONUS West Division (NMC CWD) and a component of NSWC Corona, as well as several other Navy and USMC commands.

One-fifth of the facility's land area, predominantly wetlands, has been designated as a national wildlife refuge and is home to several endangered and threatened species. The community is extremely active in the care of the refuge through numerous volunteer opportunities and outreach programs. The station is also home to the nation's West Coast WWII Submarine Memorial. AREA: 2020 hectare (ha) - Population: 1366

### CORONA



Detachment Corona is home to the Naval Surface Warfare Center (NSWC), Corona Division. NSWC Corona performs weapons assessment and research work. The installation encompasses Lake Norconian which is part of a historic district dating back to the heydays of early Hollywood.

The man-made lake poses challenges for water conservation and historic preservation. Community interest is high in the historic properties as well as the natural resources potential of the lake. This has created opportunities for volunteer programs and engagement with local historical groups. AREA: 100 ha Population: 1408

### FALLBROOK



Detachment Fallbrook is home to the only West Coast air-launched missile maintenance facility. A unique component of the mission is to load amphibious assault ships with munitions via "vertical replenishment" pictured here. Fallbrook also provides support to USMC Camp Pendleton.

The Detachment is also home to a variety of endangered or threatened species that share the base with their Navy neighbors in one of the few remaining open spaces in the region. Fire management poses a unique challenge in this dry southern California habitat. AREA: 3582 ha – Population: 320

# Naval Weapons Station Seal Beach and Detachments Corona & Fallbrook



## Environmental Policy

The command environmental policy employs an integrated approach to continuous improvement aimed at sustainability and readiness while advancing stewardship of our unique natural resources. The Environmental Management System (EMS) is the primary method of implementing the policy and improving environmental quality across multiple environmental media. The overarching policy objective is to fully integrate environmental sustainability into all aspects of mission and facilities management thereby achieving long-term *Environmental Readiness*.

*Excerpt from Station  
Environmental Policy Statement*

*“Our challenge is to achieve a truly sustainable NAVY MISSION. We are all responsible to TAKE ACTION and make a difference.”*

--Captain T. Auberry  
Commanding Officer

The EMS encompasses all organizations aboard the three installations as set forth by command instruction NAVWPNSTASBINST 5090.6. Conformity was attained in March 2009 and includes major tenants such as NMC CWD and NAVSEA NSWC Corona Division.

## Top Management Leadership

Leadership is provided by an Environmental Top Management Council (ETMC) chaired by the Commanding Officer and supported by the heads of each installation and major tenants. The ETMC, as facilitated by the Environmental Program Manager, develops policy, sets and monitors progress toward achieving sustainability goals, and conducts a management review of the EMS annually to promote continuous improvement.

Key players on the ETMC also include:

- Strategy & Future Requirements (N5)
- Public Affairs Officer
- Public Works Officer
- NAVOSH Safety Director
- Emergency Management Officer
- Fire Chief
- Trip Reduction Coordinators
- Security Officer
- Port Operations
- Training Officer (N7)

Through the NAVFAC PWO, the Utilities and Energy Manager, Sustainable Solid Waste Coordinator and Transportation Fleet Manager are engaged in the ETMC. All supervisors are also supported by a network of Environmental Coordinators designated by each work center. Environmental staff provides program oversight and technical guidance to facilitate achievement of command goals.

| 9/30/2010 | ORGANIZATION                     | STATUS | TOTAL OPEN CAPAs   | Last 15 days - Class 1        | Class 2        | Class 3        | Require CAPA ECD Response | POAM-on track -        | Last 15 days - Closed        |
|-----------|----------------------------------|--------|--|-------------------------------|----------------|----------------|---------------------------|------------------------|------------------------------|
|           | COMMAND                          |        |  |                               |                |                |                           |                        |                              |
|           | FIRE                             |        |  |                               |                |                |                           |                        |                              |
|           | HOUSING                          |        | 1  |                               | 1              |                | 0                         |                        |                              |
|           | MWR                              |        | 6  |                               | 4              | 2              | 2                         | 4                      | 1                            |
|           | PORT OPS                         |        |  |                               |                |                |                           |                        |                              |
|           | SECURITY                         |        |  |                               |                |                |                           |                        |                              |
|           | NMC- ORDNANCE                    |        | 1  |                               |                | 1              | 1                         | 0                      | 2                            |
|           | NMC - Underwater Weapons/Torpedo |        | 1  | 1                             |                |                | 0                         | 0                      | 1                            |
|           | FISC                             |        |  |                               | 1              |                | 1                         |                        |                              |
|           | MAREX BOAT Det                   |        | 1  |                               | 1              |                |                           |                        |                              |
|           | MARINES                          |        | 1  |                               | 1              |                |                           |                        | 1                            |
|           | NAVFAC                           |        | 9  | 1                             | 5              | 3              | 3                         | 6                      | 2                            |
|           | NAVFAC - ENV                     |        | 1  |                               | 1              |                | 0                         | 1                      | 2                            |
|           | NSWC                             |        | 4  |                               | 4              |                | 1                         | 3                      |                              |
|           | OTHER                            |        | 2  |                               |                | 2              | 0                         | 2                      |                              |
|           | EMS - Env Management System      |        | 9  |                               |                | 9              | 0                         | 9                      |                              |
|           | <b>NAVWPNSTA SEAL BEACH</b>      |        | <b>TOTAL</b>   | <b>Last 15 days - Class 1</b> | <b>Class 2</b> | <b>Class 3</b> | <b>CAPA ECD Response</b>  | <b>POAM-on track -</b> | <b>Last 15 days - Closed</b> |
|           |                                  |        | 37   | 7                             | 16             | 17             | 8                         | 25                     | 8                            |
|           |                                  |        | Last Week's Status   | 31                            | 0              | 9              | 22                        | 4                      | 27                           |
|           |                                  |        | Class 1: Immediate threat to human health or the environment<br>Class 2: Non-compliance with federal, state and local environmental regulations<br>Class 3: Non-conformance with internal procedures or Navy prescriptive requirements |                               |                |                |                           |                        |                              |

“Dashboard” metric that is showcased at weekly Command Staff Meeting.

Top management monitors compliance / conformance weekly by reporting status on all open “Corrective / Preventative Actions” (CAPAs) during command staff meetings. Other “dashboard” metrics track training and initiatives as well as progress toward achieving goals.

## Naval Weapons Station Seal Beach and Detachments Corona & Fallbrook



### Environmental Aspects and Goal Setting

The significance determination for environmental aspects entails an interactive interview and evaluation held jointly between environmental staff, practice owners, and management. Information from existing records and recent field surveys are coupled with user knowledge to score, for each tenant or functional area, the relative significance of resources consumed, waste and pollution generated, and potential impact to natural resources and surrounding communities. Adjustment factors account for mission and fiscal concerns. The result is that the head of each organization identifies what their environmental impacts are in context with the overall installation's significant aspects.

Setting of EMS Objectives & Targets is fully integrated with the command's strategic planning process, which is facilitated by N5 and aligned with the CNIC Strategic Plan via the Installation Execution Plan (IEP). In this manner, EMS goals

dovetail with all command goals and are fully aligned with DoN goals via regional and CNIC strategic plans. The methodology of "Whole Goals®," adopted this year by CNIC, has been employed since 2007. The methodology of developing sustainability goals in tandem with strategic planning is regarded as a model by other installations for an integrated EMS.

The ETMC and command strategic planning group are comprised of the same core members, who further ensure consideration of significant aspects, and ensure that command goals are aligned with Executive Order 13324, DoD/DoN, and Navy Region Southwest. While goals set by higher authority were initially adopted in FY07, the sustainability goal targets continue to be more aggressive each year as the system matures and initial targets are surpassed. For FY 11-12, the newly issued Executive Order (EO) 13514 will also be incorporated in the IEP.

### EMS OBJECTIVES & TARGETS as listed in the INSTALLATION EXECUTION PLAN

| IEP OBJECTIVE and Target  | Site   | Baseline | FY 08  | FY 10  | Total Reduction FY 09-10 | EO 13423 GOAL | Total EO 13423 Reduction |
|---|--------|----------|--------|--------|--------------------------|---------------|--------------------------|
| <b>Electricity</b> (utility provided) is reduced by at least 2 % per yr, and by 15% by 2015 from a 2003 baseline. (MWh)           | SB FB  | 15,735   | 13,332 | 11,608 | 13.2%                    | 15% by 2015   | 26.23%                   |
|   | Corona | 10968    | 12681  | 12073  | 8.63%                    |               | -10.07%                  |
| <b>Natural Gas</b> (utility provided) is reduced by at least 2% per yr, and by 15% by 2015 from a 2003 baseline. Giga Joules (GJ) | SB FB  | 40,864   | 36,583 | 28,848 | 25.9%                    | 15% by 2015   | 29.40%                   |
|   | Corona | 8395     | 14,224 | 12,518 | 12.68%                   |               | -49.11%                  |
| <b>Water consumption</b> (utility provided) is reduced by 5 % per yr, and 40% by 2015 from a 2007 baseline. (Mega Liters) (ML)    | SB FB  | 527.15   | 470.66 | 325.82 | 37.22%                   | 15% by 2015   | 38.19%                   |
|   | Corona | 127.44   | 71.83  | 104.10 | -42.97%                  |               | 18.32%                   |
| Golf Course <b>well water</b> use is reduced by 5% annually (2008 baseline) (ML)  | SB     | 805.09   | 808.42 | 529.20 | 30.89%                   | NA            | 34.27%                   |
| <b>Solid waste diversion</b> rate is increased by 6 % over FY 08 baseline to 40 %   | All    | 22.78%   | 22.78% | 47.36% | 41.79% Avg.              | 40%           | Exceeds Goal             |
| <b>Construction and Demolition</b> waste diversion rate continues to exceed 50%.  | All    | 72.62%   | 72.63% | 98.04% | 94.06% Avg.              | 50%           | Exceeds Goal             |

## Naval Weapons Station Seal Beach and Detachments Corona & Fallbrook



**Electricity Use** – NAVWPNSTA Seal Beach, Detachment Fallbrook and the Navy Golf Course completed projects including installation of three photovoltaic (PV) arrays, CFL bulbs, more efficient appliances, etc. Electricity reductions exceeded EO

13423 goals resulting in a \$350,000 savings.

Planned future projects include LED lighting retrofits at the wharf and a PV project for



Public Works Officer LCDR Lorenzana inspects newly installed photovoltaic system.

housing. Detachment Corona has unique energy challenges due to strict climate controls requirements of the mission-critical laboratories. Brought to light by monitoring goal achievement, innovative projects to install a PV array and utilize a large scale water source heat pump in Lake Norconian, are being planned to meet EO targets.

**Natural Gas Use** – NAVWPNSTA Seal Beach, Detachment Fallbrook and the Navy Golf Course have taken measures to reduce natural gas use which also resulted in over \$60,000 in savings. Among other projects, Seal Beach is evaluating the use of concentrated solar thermal for boilers to make reductions beyond the new EO 13514 requirements and in order to address NSWC Corona Division's unique mission requirements that hamper their ability to reduce usage.

**Utility Provided Water Use** - All sites (except Corona) reduced water use by 41 percent, well beyond the more aggressive Navy regional goal of 5 percent/year and netted over \$155,000 savings. The water conservation program employed the use of a high tech irrigation system, CalSense, which monitors water moisture on site and correlates with

recent weather data and forecasts to automatically adjust watering times. Reducing irrigation water through CalSense and reducing maintained areas achieved the bulk of the reductions. Detachment Corona completed negotiations with the City of Norco to obtain recycled water for irrigation and replenishment of Lake Norconian, which will save more than 519 Mega Liters (ML) of water per year.

**Challenges** - While total water reductions exceed the EO goals, Fallbrook's individual water use increased due to leaks in WWII vintage water lines. Tracking water reduction goals brought additional attention to water line problems that led to FY2010 project plan for line replacement and to make it a top funding priority. The first of three phases is now set for execution in FY2011.

**Well water use** - The Navy Golf Course, run by Morale Welfare and Recreation (MWR), uses well water for irrigation. Seal Beach command set an internal goal to reduce well water use by five percent per year with 2008 as the baseline. Well water is pumped into holding ponds and then to the irrigation system. Reductions in irrigated areas resulted in some well water savings; however, seepage from the pond bottoms causes a significant loss of water. The high-tech polymer ESS-13 was added to the ponds to seal the bottoms and reduce seepage by about 85 percent.

**Solid Waste Diversion** – NAVWPNSTA Seal Beach and Detachments have implemented a sustainable solid waste management program. A program to educate employees to recycle, provide better signage on large, outdoor recycling and trash dumpsters; and supply more desk-side recycling receptacles increased the recycling rates to exceed the EO goals. In addition, education on the furniture re-use program increased the recycling rate and saved \$288,000 in FY2010. Collaboration with Stronghold Engineering, prime contractor for footprint reduction projects, resulted in a diversion rate above 90 percent for all demolition debris.

## Naval Weapons Station Seal Beach and Detachments Corona & Fallbrook



### Continuous Improvement Initiatives

A command culture of continuous improvement is pervasive throughout all program areas and tenants. Employment of Lean Six Sigma (LSS) processes, measurable “Whole Goals®,” as well as EMS principles have helped to further drive innovation.

**Vehicle Fuel Use** – Led by the command N5 Strategic Requirements Manager, a Lean Six Sigma study was conducted to develop a vehicle fuel use reduction strategy to acquire more hybrid, E85 and electric vehicles. The plan included a revised FY10 order list for GSA fleet vehicles which is projected to reduce fossil fuel

consumption by 47 percent.

Additional reductions will be obtained as the vehicle fleet is switched over to more E85 vehicles,

hybrids and electric vehicles for use on base.



Environmental electric vehicle “decked out” at ship open house.

**Agricultural Out Leases** – Two leases at NAVWPNSTA Seal Beach were renewed in FY2010 with an emphasis on increasing organic farmland and eliminating pesticide storage. Revenue in excess of \$750,000 is used in part to support natural resource stewardship initiatives Navy-wide, over \$1,000,000 was saved through maintenance cost avoidance.

The cattle grazing lease at Detachment Fallbrook has the primarily purpose of fire management and explosives safety through fuels reduction. Grazing also plays a key role to sustain habitat for the federally endangered Stephens’ Kangaroo Rat. Reinstated in 2009 after an extensive re-evaluation, the lease will also result in cost savings of over

\$30,000/year for fire management and habitat treatments.

### Environmental Requirements Review (ERR)

**Process** - Initiated through a LSS effort, process improvements were implemented to more seamlessly integrate ERR with Facilities Planning, Engineering, and Acquisition (FEAD). The centerpiece of the streamlined ERR process is a more effective review and tracking tool: the Preliminary Environmental Analysis Report (PEAR). The PEAR delineates and more clearly communicates to project team members the specific actions needed to effectively integrate sustainability needs and compliance requirements into projects. Results of the LSS and the PEAR were shared at the 2010 CNIC / NAVFAC world-wide Environmental Managers Conference. Highlighted project accomplishments include:

- Reduced Volatile Organic Compound (VOC) emissions by 70 percent for all repair projects through use of low or no VOC content products. Made possible through collaboration with the multi-trades contractor, Q-Max.
- Improve Leadership in Energy and Environmental Design (LEED) rating from minimum “silver” to “gold” rating through active participation in the Marine Corps Reserve Training Center (MCRTC) Military Construction Project (MILCON) planning.

**Pollution Prevention** – Hazardous Materials (HM) inventories and waste have been significantly reduced by improving the “Authorized Use List” review process to reduce the number of authorized items by 38 percent. Removal of unwanted items from the shops and an on-line AUL have also streamlined HM tracking thereby improving accountability and reducing on-site inventories.

### ***SETTING THE EXAMPLE...***

The Environmental Office goes **GREEN**:

- *E-Documents for public review*
- *Recycling Initiatives*
- *Electric/Hybrid Vehicle Pool*

## Naval Weapons Station Seal Beach and Detachments Corona & Fallbrook



### Training and Practice Owner Engagement

**Creating Ownership Ethic** - Simultaneous with EMS implementation, the installation is striving to achieve STAR status from FEDOSHA through the Voluntary Protection Program (VPP). Collaboration between the safety and environmental program has created a synergy throughout the organization to cultivate a more active engagement by supervisors and all employees. This has expanded awareness opportunities through bi-annual safety stand-downs, quarterly Environmental Coordinator Training, and garnering proactive support from supervisors and practice owners to create a safer, more environmentally responsible work place. Environmental quality initiatives are further promoted through command Zone Inspections during which top management conducts “multi-program” evaluations of all work areas on the installation.

**New Training Program for Munitions Rule Implementation Policy** – Deployed revised training program for the proper handling of waste military munitions as part of the munitions community annual stand-down. The Seal Beach training program has been successfully transferred regionally throughout NMC CWD.

**Spill Response Program** – The Environmental Program spearheads a fully integrated spill response program. Annual training and drills include: Facility Response Team (FRT), Hazardous Substances Incident Response Management (HSIRM) and Incident

Command System (ICS) in addition to local, regional, and national drills.

Partnerships with the United States Coast Guard and

California Department of Fish & Game Office of

Spill Prevention and Response (OSPR) have been galvanized to ensure that all sensitive sites are protected.

**Sustainability Faire** - The centerpiece of the internal awareness and engagement program is the station’s annual Sustainability Faire. The focus of the Faire is to promote an understanding of sustainability and to enlist employees to take on the challenge of positive change at home as well as at work. The approach for this annual event is to highlight the multi-faceted nature of sustainability by engaging key departments, including NAVOSH, Fire Safety, MWR Health and Fitness Program, Recycling, and Mission Sustainment (Ordnance). Over 300 participants, including 5<sup>th</sup> grade classes from the local elementary school, visited over 30 booths that highlighted sustainable programs and products.

### Partnerships and Community Involvement

**Seal Beach National Wildlife Refuge (NWR) and Friends of Seal Beach National Wildlife Refuge** – Established in 1972, the Seal Beach National Wildlife Refuge comprises nearly 400 ha of the 2020 ha weapons station. Staff from the United States Fish and Wildlife Service and the Navy work side-by-side to ensure the protection of a number of endangered and threatened species and to protect the long-term health of the ecosystem. This partnership is showcased through monthly public tours as well as specialty tours and programs, such as bird-watching tours with local Audubon Society chapters.

**Friends of Lake Norconian** - Detachment Corona has partnered with the Lake Norconian Club Foundation to complete projects to enhance landscapes in the NRHP-listed Lake Norconian Club Historic District, which includes a 1920s era Mission Revival resort. Volunteers have participated in events that focused on clearing out dead and overgrown vegetation from around the pond and lake shores.



Station personnel participate in annual spill response training.

## Naval Weapons Station Seal Beach and Detachments Corona & Fallbrook



### National Public Lands Day Events –

NAVWPNSTA Seal Beach and its detachments have hosted National Public Lands Day events each of the past eight years. Programs have varied from replacing noxious invasive weeds with native plants, trash and debris cleanup, and construction of bat, owl, and bluebird boxes. Each year, an average of over 200 volunteers from scout groups, local businesses and the community have participated in



Volunteers celebrate the completion of a National Public Lands Day planting event.

these successful events that showcase the Navy's ongoing commitment to environmental stewardship.

**Restoration Advisory Board (RAB)** - The RAB, comprised of state regulators and 16 community members, meets quarterly and tours Installation Restoration Program sites annually. The RAB meetings offer an opportunity for the community to actively participate in the evaluation and decision-making process of investigating and cleaning up contaminated sites. The RAB forum has been an effective conduit for community engagement since 1994.

### PROGRAM SUMMARY

NAVWPNSTA Seal Beach has integrated its EMS program throughout all installation functions during the award period and expanded participation to further engage all supervisors and practice owners. Sustainability goal setting is intertwined with strategic planning and the command's Installation Execution Plan through which top management drives continued improvement. Progress toward achieving Executive Order and other goals to reduce

the Environmental Footprint of the installation and mission operations has well exceeded eight out of the nine sustainability goals from twice to four times the target set for FY09 - 10. Total estimated cost savings realized through these achievements is estimated at over \$1,000,000. Furthermore, goals targeted by Executive Order 13423 for attainment by 2015 have already been exceeded for five out of eight command EMS objectives.

Transferable components of the EMS include the quantitative methodology used to identify significant environmental aspects, the definition of specific roles and responsibilities for the ETMC, and installation instructions developed for the EMS and for the Environmental Requirements Review process (i.e., NEPA review). Employment of LSS promotes innovation and ensures results are measured and documented for Navy-wide dissemination. Through active participation in the joint CNIC / NAVFAC EMS Working Group, lessons learned and pilot project results are shared with Navy leadership to assist with improving Environmental Quality throughout the shore installation enterprise.

### **OTHER AWARDS AND ACHIEVEMENTS**

- DoN Energy & Water Management Award, Platinum Level (2010)
- CNO Award for Natural Resources Conservation, Detachment Fallbrook (2009)
- Secretary of the Navy Safety Award (2008, 2009, 2010)