



Commander, Navy Region Southwest NAVAL BASE SAN DIEGO, CA



2023 SECRETARY OF NAVY ENVIRONMENTAL AWARDS Sustainability – Non-Industrial Installation Nomination

INTRODUCTION

Naval Base San Diego (NBSD) consists of multiple campuses throughout the San Diego Metro Area. NBSD encompasses the NBSD complex, a three-mile stretch along Harbor Dr., one of San Diego's busiest thoroughfares, that is divided into three parts due to bisecting public roadways; the downtown San Diego Broadway Complex, where Commander, Navy Region Southwest (NRSW) and Naval Facilities Engineering Systems Command Southwest (NAVFACSW) reside; the Admiral Baker Golf Course and Recreation facilities; Naval Medical Center San Diego; as well as 18 military-family housing neighborhoods, some with childcare and NEX services.

NBSD occupies approximately 1,600 acres of land and 326 acres of San Diego Bay, including 12 Piers and two channels offering 56,000 feet of berthing. NBSD has an on-base population of over 35,000 military and civilian personnel, and 15,000 registered contractors supporting the Surface Navy's mission, making it the "Largest Employer in San Diego." The NBSD complex is divided into two distinct areas: the Wet-Side where the ships are moored along the waterfront, and the Dry-Side where most of the community facilities are located. NBSD is the principal homeport for the Pacific Fleet with more than 60 surface ships including ships from Military Sealift Command and the Maritime Administration. NBSD also supports mooring for visiting U.S. Coast Guard vessels and foreign military ships. With over 200 tenant commands, NBSD provides critical services to the Fleet, Fighter, and Family, including housing, security, public works, environmental, supply, and administrative facilities for tenant units.

San Diego is America's eighth largest city and is considered a hub for research and development companies, as well as a desirable locale for new and innovative start-up enterprises focused on biotechnology, telecommunications, and renewable energy. San Diegans take tremendous pride in their community and the local environment. In the spirit of community partnership, NBSD is a vigilant caretaker of its areas of responsibility, steadfast in compliance with environmental laws and regulations. NBSD has assumed this responsibility with an aggressive compliance oversight program and has developed cooperative working relationships with San Diego's elected officials and the regulatory community.

BACKGROUND

NBSD Environmental Program: NBSD's Environmental Department's (NBSD EV) goal is to actively support the Fleet, Fighter, and Family through exceptional environmental stewardship and strong working relationships. The Commanding Officer of NBSD established an installation-specific environmental policy, which lists the environmental priorities unique to NBSD. The success of his policy goals can be found throughout the meticulous record keeping within NBSD's Environmental Management System (EMS) and has entrusted NBSD EV to not only manage NBSD EMS but to also oversee environmental regulatory compliance for all activities at the base.

NBSD EV personnel report to the Installation Environmental Program Director, who in turn reports to the NBSD Public Works Officer (PWO) for environmental compliance. NBSD EV is made up of a team of 12 subject matter experts (SME) managing air quality, hazardous waste, water quality, program analysis, waterfront compliance, and environmental planning. NBSD EV prides itself on having all environmental SMEs cross-trained in multiple medias- taking on a more synergistic approach to promoting compliance, establishing cost-efficiency measures, and inspiring enthusiasm for environmental protection.

NBSD consistently achieves triennial environmental policy goals by performing comprehensive environmental inspections, assessing projects for environmental implications, coordinating emergency environmental response, and providing education/training to installation personnel (active duty, civilian employees, and contractors). NBSD EV manages over 150 environmental permits including: 74 San Diego Air Pollution Control Board (SDAPCD) permitted sites and/or equipment, 41 San Diego County Department of Environmental Health permitted hazardous waste (HW) collection sites, a Part B permitted RCRA Hazardous Waste Facility, a Conditionally Authorized Bilge and Oily Waste Treatment Facility, various underground storage tanks (USTs), 32 Moral Welfare and Recreation (MWR) and contractor Food Establishment Wastewater Discharge (FEWD) permits, Industrial Wastewater (IW) permits, and an installation-specific National Pollution Discharge Elimination System (NPDES) permit.

Environmental Aspects and Challenges: The most significant environmental aspects at NBSD are: the implementation of new NPDES requirements for industrial storm water areas, copper and zinc exceedances in storm drain discharges, and the regulation of all ships' force marine coating operations, required under new permit conditions by SDAPCD.

With an increase of ships and personnel now homeported at NBSD, compounded with increasingly stringent environmental requirements for both fleet and shore activities, NBSD overcame notable challenges during the award period. When faced with obstacles, NBSD rose to the challenge and exhibited unwavering support for shore readiness and the warfighters, all while managing the operational and administrative logistics of increased health protection conditions due to the continued challenges with the COVID-19 pandemic. NBSD EV Waterfront program provides daily training to ships' force and contractors related to all environmental medias. NBSD's achievements during this time not only shows their dedication to Navy mission but also highlights NBSD's commitment to environmental stewardship.

NBSD Environmental Management System (EMS): NBSD completed its most recent Environmental Management System (EMS) external audit in July 2018, which resulted in no major findings. The next external audit was scheduled for July 2021, however due to the COVID-19 pandemic the 2021 audit is postponed to occur in August 2023. In lieu of the scheduled audit, NBSD completed an EMS Internal Audit Review in August 2021 conducted by NAVFAC Southwest, resulting in only two minor findings – both reference training requirements for NBSD EV staff on Advancing an Effective EMS Program and Compliance Auditing Training, which were quickly resolved once the training courses were available to schedule. The 2018 NBSD external audit determined that NBSD's EMS program is ISO 14001:2004 compliant and continues to remain in full conformance with EO 13423 and ISO 14001 in accordance with DOD EMS policy.

SUMMARY OF ACCOMPLISHMENTS

Community Involvement: NBSD has established working relationships with the City of National City, the City of San Diego, the Regional Chamber of Commerce, General Dynamics/ National Association for Sewer Service Company (NASSCO), Port of San Diego, San Diego Port Tenants Association, San Diego Gas & Electric Company (SDG&E), Navy League, San Diego Ship Repair Association, Armed Services YMCA (ASYMCA), and local community organizations. NBSD has hosted San Diego and National City officials,

as well as local environmental organizations, to illustrate the cooperative and positive aspects the Navy has provided the surrounding communities. Emphasizing its environmental stewardship as a *good neighbor* allows the Navy to build critical relationships and encourages dialogue in areas where cooperation between Navy and the community can work to the benefit of stakeholders.

NBSD's "Green Team", comprised of NBSD EV personnel, participate in numerous events throughout San Diego County to promote NBSD and DON environmental leadership. NBSD EV organizes public relations booths at San Diego metro environmental/community events and provide handouts and use visual displays to communicate the Navy's commitment to being a *good neighbor* and highlight NBSD's positive impact on the environment. During this award period, events were as follows:

2022-09-24	MCAS Miramar Air Show
2022-09-24	NBSD Centennial Celebration
2022-07-25	Barrio Logan Neighborhood Cleanup
2022-06-25	Operation Clean Sweep
2022-05-19	2022 SANDAG Bike-to-Work Day
2021-07-30	Harbor Drive Clean-up
2021-05-16	2021 SANDAG Bike Anywhere Week
2021-03-22	Watershed Clean-Up Day (Collected 680 lbs. of solid waste)
2020-10-07	California Clean Air Day

NBSD Tours: On 5 November 2021, NBSD Installation Commanding Officer (ICO), NBSD EV, N40, N45, Office of General Counsel (OGC), and Southwest Regional Maintenance Center (SWRMC), hosted San Diego County Supervisors Nathan Fletcher and Nora Vargas, along with acting SDAPCD Air Pollution Control Officer and California Air Resources Board (CARB) Senior Advisor on Environmental Equity. The purpose of the visit was to inform the audience of NBSD's Mission, with special focus on environmental steps and measures taken to reduce contaminants and pollutants caused by Fleet maintenance. Air regulations influence operations at all Navy installations, and have increasingly been a focal point at NBSD between the development of the Assembly Bill 617 (AB617) Community Emissions Reduction Plan; rule, and proposed rule, amendments and issues around welding and Portable Equipment Registration Program (PERP) Umbrella permits. The tour included comprehensive a Command Brief with region and installation staff presenting specific air-related topics to the tour group before touring the USS Boxer (LHD 4), an amphibious assault ship of the same class as USS Bonhomme Richard (LHD 6), the ship that was severely damaged by a major fire in July 2020.

Following the successful November 2021 NBSD specific brief and tour, the NBSD ICO, along with NBSD EV, N40 and N45, presented a Metro San Diego brief on behalf of the Navy at the SDAPCD Governing Board meeting on 19 January 2022. The focus of the brief was to inform the audience of the Metro San Diego Installation's mission and discuss the installations' community involvement with special focus in environmental stewardship actions and transportation mitigation measures, and a general overview of the installations' air quality programs.

The tours successfully met the objective to educate participants on the importance of the Navy and the installation's mission and demonstrated the Navy's commitment to environmental requirements while highlighting some of the challenges around air quality compliance. By educating these important players on NBSD's mission, NBSD helped to ensure collaboration on how best to address environmental requirements where NBSD mission intersects with air quality compliance (including NBSD air programs and future requirements).

SDAPCD Welding Permit: SDAPCD released a Welding Operations Advisory in January 2021 to notify facilities that may conduct welding operations of existing permitting requirements applicable to welding

operations in San Diego County. After data was collected and submitted and many discussions with the SDAPCD, on 8 March 2022, the SDAPCD conducted a small meeting to discuss the welding operations issue between N45, Industrial Environmental Association, and shipyards. Data submitted by Navy and other shipyards sufficiently showed that welding emissions occurred before 15 November 2000 and usage and emissions have actually decreased since then. The data submitted met the “grandfathering” clause under Rule 11, making NBSD and other facilities exempt from permit requirements, which has resulted in successful reduction in regulatory requirements, liability, and obligation for the installation and all tenants. NBSD saved over \$10,000 in application fees, evaluations, community impact notifications, implementation, annual fees, and more as a result of meeting the permit exemption.

AB 617: Assembly Bill 617 (AB617) addresses the disproportionate impacts of air pollution in Environmental Justice (EJ) communities throughout California. The measure requires local air districts to take specific actions to reduce air pollution and toxic air contaminants from commercial and industrial sources with community air monitoring as a first step. One of the first EJ communities selected was the San Diego portside community including Barrio Logan, which borders NBSD and the local shipyards. An AB617 Portside Steering Committee meeting is held on a monthly basis to receive updates from the SDAPCD on community air quality monitoring and emission reduction efforts. The committee also hears concerns from the public and other stakeholders and advises SDAPCD on appropriate courses of action. The committee is comprised of local community leaders, the Environmental Health Coalition (EHC), industry, Navy and other stakeholders. NBSD has worked closely with SDAPCD to provide contributions to the AB617 San Diego Community Emission Reduction Plan (CERP) through emission reduction analysis, continuation of cold ironing of ships, and support in reductions of air emissions due to vehicular traffic. In addition, as a result of NBSD’s superb contributions and coordination with SDAPCD, SDAPCD is set to install an air monitoring station at NBSD. The air monitoring station data will greatly benefit the surrounding community and further support the Navy’s narrative and goals of emission reduction.

USS Bonhomme Richard (LHD 6): On the morning of 12 July 2020, a fire broke out on board USS Bonhomme Richard (LHD 6) while it was in a maintenance availability on NBSD at pier 2. The fire lasted for five days and was the worst fire witnessed at NBSD in its 100-year history, and resulted in a Notice of Violation to NBSD, issued by the SDAPCD. As NBSD personnel, FEDFIRE and firefighting teams from multiple afloat and ashore commands fought the fire, NBSD EV personnel provided 24-hour on-site support for three days that included on-scene monitoring, coordinating with state, local and regulatory agencies, ensuring appropriate environmental controls and mitigations were in place and escorting representatives from various agencies to view the impact of the fire on the local environment.

Over the course of two years, NBSD has incorporated lessons learned in teamwork, integration, and effective communication both internally and with many of our external partners within the County, and are currently planning future exercises to ensure preparedness for any new incidents. After many discussions on corrective action and intentions, a settlement agreement was signed in September 2022 between NBSD and the SDAPCD to determine both party’s obligations, which included the SDAPCD’s intention to allocate \$140,000 of the \$150,000 Navy settlement payment to the SDAPCD’s Portside Air Quality Improvement and Relief (PAIR) Program. If the funds cannot be properly allocated toward the PAIR Program, the funds will be allocated to alternative SDAPCD programs that benefit air quality. The settlement payment to SDAPCD effectively closed out the Notice of Violation and will ultimately positively impact the surrounding community.

Naval Vessel Cold Ironing: NBSD cold irons all US Navy vessels that are homeported at the installation. Cold ironing of ships refers to ships relying on ship-to-shore power and shutting down their main and auxiliary diesel-fueled engines. NBSD is unique to the San Diego portside community, as the US Navy is the only organization that cold irons all in-port vessels. The U.S. Environmental Protection Agency estimates

that under certain circumstances, a vessel connected to shore power can reduce overall pollution emissions up to 98% when utilizing power from the regional electricity grid. For example, at NBSD, cold ironing of a littoral combat ship (LCS) for 1,000 hours reduces emissions of oxides of nitrogen (NOx) and diesel particulate matter (PM) emissions by approximately sixty-five and three tons, respectively. For all ships home-ported at NBSD, the NRSW estimates an annual reduction of total emissions of 4,174 tons of NOx, 394 tons of SOx, 250 tons of CO, 75 tons of PM, and 69.5 tons of diesel PM due to cold ironing.

On 12 August 2022, NRSW and the Port of San Diego finalized a Memorandum of Understanding (MOU) allowing the Port to participate in the Low Carbon Fuel Standard (LCFS) program on behalf of NRSW. This program provides incentives in the form of energy credits that can be sold to other parties to meet compliance obligations.

- NBSD generates a large amount of credits when ships go from ship- to shore-power in port, otherwise known as “Cold Ironing”
- The estimated in-kind electrical infrastructure improvements NBSD will receive is \$10-15 million annually for the next six to eight years
- This will contribute significantly to NBSD’s goal of reducing Green House Gas emissions

The MOU was a more than two-year team collaboration between legal, policy and technical personnel from the energy, acquisition, and environmental programs at Region, NAVFAC, and NBSD, and involved approvals at the highest levels including the Secretary of Defense. The team continues work on the next step, an Intergovernmental Support Agreement (IGSA) to allow use of the earned credits and construction of the NBSD infrastructure improvements.

NEX Mariner’s Park Gas Station: NBSD completed construction of its first Vapor Pressure Hydrostatic monitoring system for four 20,000 gallon underground storage tanks (USTs) and 28 fuel dispensers. With the new monitoring system, NBSD is able to provide “hydrostatic monitoring,” which means a release detection method that continuously monitors the liquid level with a liquid-filled interstitial space of an underground storage tank. Each tank and under dispenser containment will now be able to detect a breach in the primary or secondary containment more accurately and at a faster rate, which will ultimately result in reduced environmental impact and dollar amount spent in environmental cleanup and mitigation efforts.

Ammunition Crates Generate Treated Wood Waste: Compliance, Guidance, and Clarification:

Wooden ammo crates are treated with chemical preservatives to protect them during transportation and storage of ammunition from degradation due to pests and environmental conditions. When ready for disposal, these ammo crates are considered Treated Wood Waste (TWW) in California. NBSD EV staff worked with the Navy Core group and NBSD Explosive Safety Officer to survey the chemical preservatives used on ammunition crates located on NBSD. Two of five chemical preservatives that were analyzed failed for toxicity (copper-8-quinolinolate and copper naphthenate). A guidance document was created to help generators make proper determinations when classifying different types of ammunition crates (hazardous vs. nonhazardous). On-site training is provided to each generator and monthly inspections performed by NBSD EV are conducted to help maintain compliance, effectively controlling the proper management of waste.

Waste Reduction Efforts: NBSD conducts cleanup of Chollas Creek to prevent trash from making its way into the San Diego Bay from upstream sources. The base collects everything from plastic bottles to tires and wooden crates, which gather behind the booms just a few hundred feet from the San Diego Bay. NBSD collaborates with the City of San Diego to clean up Chollas and Paleta Creeks prior to their discharge into the bay after a rain event. NBSD collected and diverted over 90,000 lbs of solid waste from entering the San Diego Bay.

Environmental Support:

- NBSD EV provides environmental support seven days a week and conducts monthly, semi-annual, and annual inspections of NBSD permitted sites and/or equipment. Within this award period, NBSD EV conducted over 15,381 internal inspections, a 50% increase compared to the previous award cycle.
- During this award period, NBSD underwent 266 inspections and/or visits by local, state, or federal regulatory agencies. NBSD successfully reduced the number of external regulatory citations and/or violations by 50% compared to the previous award cycle.
- In FY21 and FY22, NBSD EV provided training to over 1,887 active-duty sailors and civilians, from 32 tenant commands and activities, on EMS, hazardous waste management, the spill prevention control and countermeasures (SPCC) plan, storm water Best Management Practices (BMPs), waterfront activities, and ships' force marine coating.

Other Noteworthy Environmental Management Accomplishments

- NBSD created "NBSD Environmental Pier-side Operations Guide for Ships" to assist ships berthed at NBSD. This compact booklet outlines conformance and describes the necessary actions that will help ensure afloat units comply with local, state, and federal environmental regulations. The pier-side guide acts as an instructional manual complete with common environmental acronyms, definitions, and points of contact- giving Sailors, civilians, and contractors working on the piers a sense of support from the installation and an understanding of what's needed of them.
- NBSD implements BMPs for industrial storm water compliance to minimize or eliminate the discharge of pollutants into storm water runoff. The successful implementation of BMPs has reduced the frequency of NBSD Numeric Action Level (NAL) exceedances, thereby returning three storm water parameters back to baseline status and mitigating storm water pollutants from going into the San Diego Bay and redirecting the amount of man-hours required to complete exceedance response actions. NBSD EV was able to reallocate over 80 man-hours toward other projects.
- NBSD added influent sampling at all industrial storm water treatment units, including the NBSD Recycling Center and Piers 8, 10, and 12 to study BMP effectiveness. Results of the influent sampling are used to monitor the effectiveness of the treatment unit and identify when maintenance is needed. Monitoring treatment performance results show that the treatment units reduce metals in storm water runoff by roughly 51%. NBSD performed a study using past results and evaluated different types of treatment units to make improvements to the existing system. Based on the study, storm water sampling resources were used to retrofit the treatment units with the goal of increased pollutant reductions in storm water.
- NBSD participated in various Navy Environmental Sustainability Development to Integration (NESDI) program studies for bay water quality monitoring, Laser Induced Breakdown Spectroscopy sediment sampling, deployable in-pipe storm water treatment device, bioswale effectiveness and improvement study, in-situ automatic storm water sampling device for use at tidally influenced areas, flexible under-pier sediment assessment, and a background analysis and tracer study to identify metal contaminant source contributions to storm water runoff.
- In coordination with California Department of Transportation (Caltrans), the Vesta Street bridge project study is underway at NBSD. The project will ultimately reduce impact to the neighboring Environmental Justice communities, as well as cut emissions by relieving traffic congestion, provide more efficient commercial vehicle access to interregional freeway networks, and improve goods movement.
- NBSD actively works to save and protect affected or injured wildlife on the installation, in conjunction with Project Wildlife, Sea World, and the National Oceanic and Atmospheric Administration (NOAA).

Effective Use of Funds

- Starting FY2020, NBSD EV initiated internal ship-assist visits to address marine coating requirements set forth by San Diego County Air Pollution Control District. This shift from contracted work to in-house efforts effectively saved Department of Navy over \$15,000.
- Targeted approach to NPDES compliance. Performed a study on Standard Industrial Classification codes to accurately identify industrial facilities subject to increased NPDES monitoring requirements. The study resulted in a 54% reduction of facilities categorized as industrial and allows for efficient use of pollution prevention resources by focusing on facilities that pose a potential increased threat to water quality.
- NBSD supports NBSD EV to obtain and maintain California International Code Council Designated Underground Storage Tank Operator (DUSTO) certification to train facility employees and conduct regular visual observations at the four underground storage tank (UST) facilities under NBSD's responsibility. This in-house inspection satisfies CA requirements and saves Department of Navy over \$10,000 per year in contracted support.

Community Relations

- April 2021, NBSD EV worked alongside CNRSW Environmental, NBSD Public Affairs and School Liaison Office to create an educational video for elementary school students. The first in a series, "Behind the Fence Line; Episode One" discusses Science, Technology, Engineering, and Math (STEM) and how it relates to NBSD and the environment. Currently, this video can be publicly accessed and has been viewed by over a dozen elementary schools.
- NBSD participates in common interest Stakeholder Working Groups on multi-party environmental issues such as Chollas Creek Total Maximum Daily Loads (TMDLs) and the San Diego Regional Municipal Separate Storm Sewer Systems (MS4) Permit, along with NASSCO, City of National City, City of San Diego, California Department of Transportation, and the County of San Diego.

National Environmental Policy Act (NEPA) Planning, Analysis, and Implementation: In September 2021, NBSD EV staff was recognized by the NAVFAC Commanding Officer for outstanding management of the NBSD NEPA and Environmental Natural Resources programs. Staff diligently researched DoN CATEX with extraordinary circumstances and analyzed all requirements set forth by the Migratory Bird Act (MBA) and other natural resources regulations to ensure construction of the Admiral Baker Events Pavilion progressed, while also remaining in compliance with all requirements of the Endangered Species Act (ESA). These outstanding work and coordination efforts saved NBSD and the Morale, Welfare, and Recreation (MWR) team \$400,000 by ensuring allocated funds were used within the associated fiscal year.

Environmental Management System (EMS) Objectives: NBSD EV staff analyzed the impacts of all permitted sites, identified significant aspects that had the greatest impact to the installation, and developed three objectives to address the significant aspects:

- Monitor and maintain ship's force marine coating requirements
- Removal of single-walled underground storage tanks in accordance with regulatory requirements
- Reduce pollution runoff in storm water discharges

The objectives are accompanied by targets and milestones to provide an effective way to gauge success and foster accountability. EMS objectives are reviewed annually during the internal audit. To meet the objectives, NBSD EV staff:

- Initiated marine coating training to ship's force personnel and conducts ships' assist visits
- Notified and provided regulatory requirements to construction managers and stakeholders
- Improved work site BMPs and installed storm water treatment units.