Commander, Navy Region Southwest
NAVAL BASE SAN DIEGO, CA

2024 SECRETARY OF NAVY ENVIRONMENTAL AWARDS
Environmental Quality – Non-Industrial Installation Nomination

INTRODUCTION

Naval Base San Diego's (NBSD's) mission is to provide deliver the highest standard of support and quality of life services to the Fleet, Fighter and Family. 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 Navy Exchange (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. As a result, NBSD maintains meticulous records within NBSD's Environmental Management System (EMS) and performs environmental regulatory compliance oversight 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 (HW), 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 160 environmental permits including: 73 San Diego County Air Pollution Control District (SDAPCD) permitted sites and/or equipment, 48 San Diego County Department of Environmental Health permitted HW collection sites, a Part B permitted Resource Conservation and Recovery Act (RCRA) Hazardous Waste Facility, a Conditionally Authorized Bilge and Oily Waste Treatment Facility, various underground storage tanks (USTs), 32 Morale 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 NPDES requirements for industrial stormwater 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 to 62 homeported ships and personnel 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 continued to provide daily training to ships' force and contractors related to all environmental medias. NBSD's achievements during this time not only show their dedication to Navy mission, but also highlight NBSD's commitment to environmental stewardship.

NBSD EMS: NBSD completed its most recent EMS external audit in August 2023, which resulted in no major findings. NBSD was given Positive Observations including Exceptional record keeping in the Air Quality program at all NEX Gas Stations. In addition, NBSD's EMS and National Environmental Policy Act (NEPA) programs were noted as "exemplary." The 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 Department of Defense (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 Steel and Shipbuilding 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 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.

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, participates in numerous events throughout San Diego County to promote NBSD and Department of the Navy (DON) environmental leadership. NBSD EV organizes public relations booths at San Diego metro environmental/community events and provides handouts and uses visual displays to communicate the Navy's commitment to being a *good neighbor* highlighting NBSD's positive impact on the environment. NBSD has also established quarterly cleanup events to beautify the neighboring communities and allow for waste to be properly disposed. NBSD EV has been very successful at minimizing pollution to the environment by working with the community on the events listed below.

2023-08-26	Operation Clean Sweep
2023-08-19	Community Cleanup with the City of San Diego District 8
2023-07-08	Community Cleanup with National City
2023-05-26	Los Angeles Fleet Week
2023-05-20	Community Cleanup with the City of San Diego District 8
2023-05-18	2023 SANDAG Bike Anywhere Day
2023-04-21	NBSD Earth Day Cleanup
2023-02-25	Harbor Drive Community Cleanup
2022-11-04	National City Dia de los Muertos Festival
2022-10-03	San Francisco Fleet Week
2022-09-24	MCAS Miramar Air Show
2022-09-24	NBSD Centennial Celebration
2022-08-13	Los Angeles County Parks & Recreation: A Day in Nature
2022-07-30	Barrio Logan Community Cleanup
2022-06-25	Operation Clean Sweep
2022-05-19	2022 SANDAG Bike-to-Work Day

NBSD Tours: NBSD EV, along with N40 and N45, have hosted a myriad of tours for various important stakeholders during this award period. 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 environmental 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 environmental compliance (including NBSD air programs and future requirements). Many of these tours included a special focus on environmental steps and measures taken to reduce contaminates 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 (AB 617) Community Emissions Reduction Plan; as well as rule, proposed rule, amendments and issues around welding and Portable Equipment Registration Program (PERP) Umbrella permits.

During this award period, NBSD hosted tours for the following stakeholders: National City, Councilmember Vivian Moreno and the Barrio Logan Planning Group, California Board of Environmental Safety/Military Liaison Alexis Strauss-Hacker, California Air Resources Board Chair Ms. Liane Randolph, SDAPCD Air Pollution Control Officer Ms. Paula Forbis, the Deputy Secretary of Defense for Environment and Energy Resilience Mr. Richard Kidd, the President's Council of Advisors on Science and Technology, Navy Office of

Legislative Affairs and Senator Padilla's Defense Advisor JJ Villalvazo, and San Diego County Supervisors Nathan Fletcher and Nora Vargas.

AB EJ617: AB 617 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 AB 617 Portside Steering Committee holds a monthly meeting by SDAPCD 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 AB 617 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, and 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 proactive goals of emission reduction.

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. Benefits of the MOU include the following.

- NBSD generating a large amount of energy credits when ships go to cold ironing.
- NBSE receiving estimated in-kind electrical infrastructure improvements of $10-15 million annually for the next six to eight years.
- Contributing significantly to NBSD's goal of reducing Green House Gas emissions.

The MOU was a 2+ year team collaboration between NAVFAC's legal team, the Energy team's policy and technical personnel, and Region, NAVFAC, and NBSD environmental programs, that 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.

Electrification Commitment: In response to Executive Orders (EO) 14008 and 14057, which establish requirements for transitioning the federal non-tactical vehicle (NTV) fleet to a zero-emission fleet, NBSD has initiated a base-wide electric vehicle charging project. This project is intended to construct facilities to meet zero emission vehicle (ZEV) charging requirements for both government vehicles and personal operating

vehicles (POVs). EO requirements specify all light-duty (LD) NTV procurements must be ZEVs by fiscal year (FY) 2027, and all medium- and heavy-duty NTV procurements must be ZEVs by FY 2035. These requirements align with automotive industry trends towards electric vehicles and away from internal-combustion engine vehicles. Commander, Navy Installations Command (CNIC) has programmed significant funding for installing EV charging stations to support Navy NTV fleet electrification.

NBSE initiated a micro-grid project at the base, which will increase resiliency, provide electrical flexibility, and serve as a test bed for readily deployable, standardized micro-grid technology. A combination of photovoltaic electrical generation, battery storage, and electric back-up systems will be constructed via a PWD San Diego project at the NBSD Port Operations and Security building, which operates 24/7. Aside from reduction in greenhouse gas emissions and improved energy independence, this project serves as a test bed for an expandable, scalable blueprint that is able to be accredited and deployed on an installation level scale.

Developmental Studies: 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.

Naval Information Warfare Center (NIWC) worked with NBSD to introduce cutting edge research, including the In-Situ Toxicity Identification evaluation (iTIE) device to determine what chemicals drive impairments at contaminated sites, as well as the Signal Activated Bottom Lander (SABL) device that traps sediment to evaluate and characterize deposition of particulates to the sediment in relation to storm water monitoring and management. Both studies were deployed at NBSD Paleta Creek with novel results, such as better quantification and interpretation of sample results, and promising outcomes on how the Navy can better understand the impacts to the surrounding environment.

NBSD Environmental and Port Operations conducted a demonstration and field test of a Remote Control Oil Skimmer Device on 10 August 2023. The oil skimmer device was designed to recover up to 10 gallons of Petroleum, Oil, and Lubricants (POLs) and be operated via a remote control. The skimmer unit was tested both in a pool environment recovering vegetable oil as well as in the San Diego Bay to evaluate its maneuverability in real world conditions. This Skimmer greatly increases NBSD Port Operations Facility Response Team (FRT) in their ability to reach spills in inaccessible locations such as underneath piers and quay walls greatly increasing the amount of hazardous materials that can be recovered from spills. Additionally, the Skimmers ability to pick up hazardous materials and store them in its reservoir tank can have potential cost savings by reducing the number of oil recovery pads used for cleanup and ultimately cutting down on HW processing cost. This Remote Control Oil Skimmer demonstrates NBSD's commitment to promote environmental stewardship and sustainable practices by utilizing the latest technologies available.

Storm Water Treatment Unit: 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 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, NBSD used storm water sampling resources to retrofit the treatment units with the goal of increased pollutant reductions in storm water.

A Storm Water RX, Storm Water Treatment unit was designed and installed in the newly constructed NBSD Pier 6. The ribbon cutting ceremony was held in August 2023. The storm water treatment unit will capture all

storm water runoff from Pier 6 and divert the water into a filtration chamber where contaminants from all industrial work conducted on Pier 6 will be captured.

NEX Mariner's Park Gas Station: NBSD completed construction of its first Vapor Pressure Hydrostatic monitoring system for four 20,000 gallon 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.

In addition to the new monitoring system, NBSD contracted a retention basin design and installation at the NEX Mariner's Park Gas Station. The retention basin captures all the storm water runoff on site and diverts to a basin that allows the water to slowly infiltrate into the ground and recharge the groundwater. The retention basin not only redirects the storm water which helps alleviate storm drains, it also helps by reducing contaminants and trash from going into San Diego Bay by trapping them in the basin.

Waste Reduction Efforts: NBSD conducts point-of-discharge cleanup of Chollas Creek, a 30-mile urban waterway running through three cities within San Diego County, 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 and is in the process of finalizing an intergovernmental service agreement (IGSA) with the City of San Diego to clean up Chollas and Paleta Creeks prior to their discharge into the bay after a rain event. During this award period, NBSD collected and diverted over 300,000 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 15,215 internal inspections and underwent 252 inspections and/or visits by local, state, or federal regulatory agencies.
- In FY22 and FY23, NBSD EV provided training to over 1,009 active-duty sailors and civilians, from 32 tenant commands and activities, on EMS, HW management, the spill prevention control and countermeasures (SPCC) plan, stormwater BMPs, waterfront activities, and ships' force marine coating.

Other Noteworthy Environmental Management Accomplishments

- NBSD successfully coordinated with the NBSD FEAD and contractor to submit and track all underground storage tank (UST) closure requirements with various regulatory agencies. The NEX 32nd Street Gas Station demolition project was completed ahead of schedule, which credited over $187,000 back to the Government.
- 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 support from the installation and an understanding of what's needed of them.
- NBSD implements Best Managements Practices (BMP) 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.

- In coordination with California Department of Transportation, the Vesta Street bridge project study is underway at NBSD. The project will ultimately reduce impact to the neighboring EJ 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 SDAPCD. This shift from contracted work to in-house efforts effectively saved over $15,000. During the recent August 2023 External EMS Audit, a "noteworthy practice" was recorded for the success of NBSD's Ships' Force Marine Coating Program. The combination of monthly training events, onboard ship assist visits, and tracking of marine coating usage has proven to be successful and continuously improving.
- 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 California requirements and saves over $10,000 per year in contracted support.

NEPA Planning, Analysis, and Implementation: In September 2021, the NAVFAC Commanding Officer recognized NBSD EV staff for outstanding management of the NBSD NEPA and Environmental Natural Resources programs. Staff diligently researched the DON Categorical Exclusion (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 MWR team $400,000 by ensuring allocated funds were used within the associated fiscal year. In addition, during the August 2023 EMS external audit, the NEPA program was recognized with a "positive observation" write-up, recognizing the exemplary efforts from project initiation to project completion. The NBSD NEPA Program regularly attends Work Induction Board meetings, and has successfully developed a spreadsheet to accurately track the status and fate of each Record of CATEX and Record of Environmental Review developed, ensuring all signed documents were readily available for review. During this award period, over 150 CATEXs were reviewed.