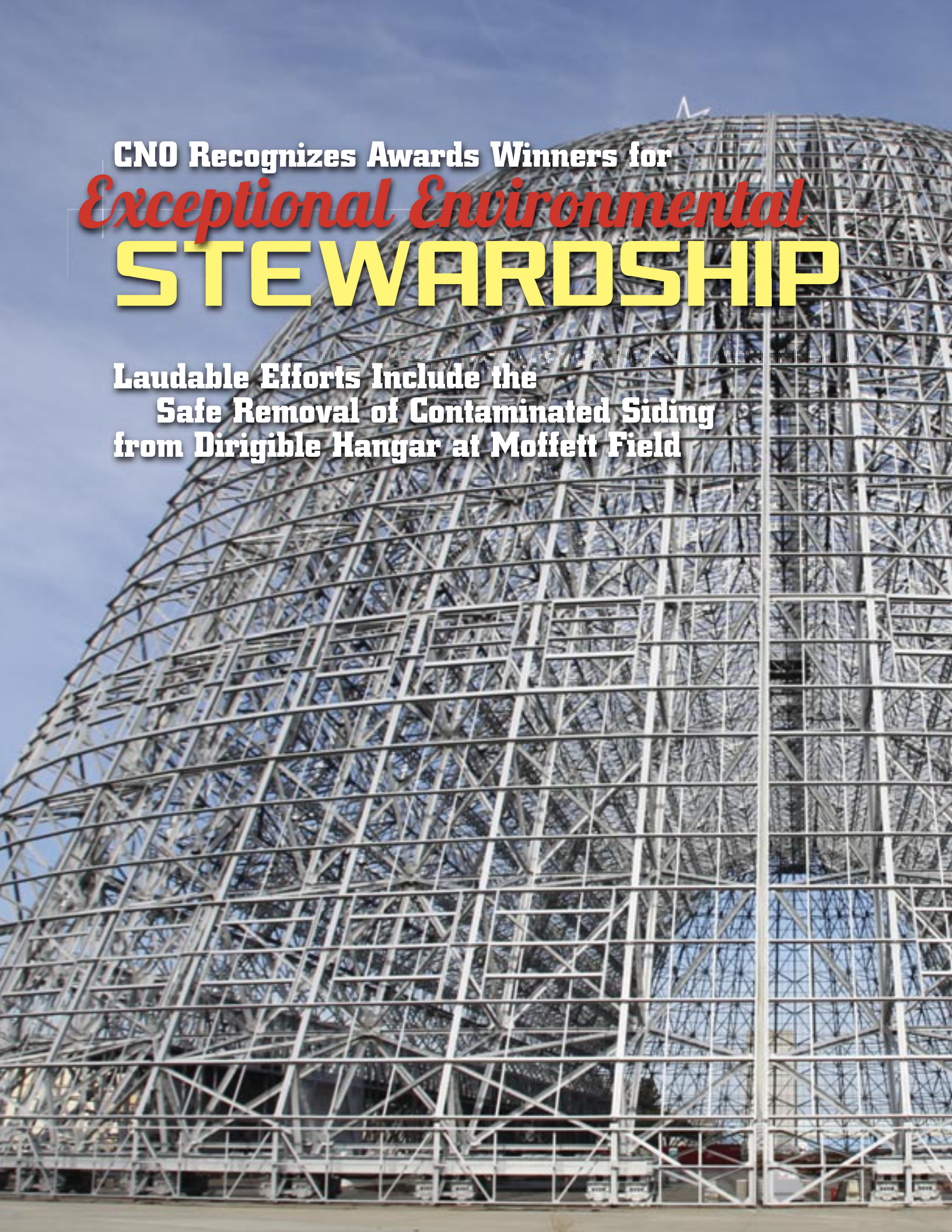


CNO Recognizes Awards Winners for *Exceptional Environmental* STEWARDSHIP

Laudable Efforts Include the Safe Removal of Contaminated Siding from Dirigible Hangar at Moffett Field

Hangar 1 exterior.
NASA/Ames

27 winners

have been announced for the Fiscal Year (FY) 2013 Chief of Naval Operations (CNO) Environmental Awards competition. Among the award winners is the Naval Facilities Engineering Command Base Realignment and Closure Program Management Office (NAVFAC BRAC PMO) for its efforts to successfully remove contaminated siding and other building materials at the former Moffett Field's Hangar 1—a structure that was constructed in the early 1930's to house the dirigible airship USS Macon (ZRS-5).

USS Macon and Hangar 1 at Moffett Field (1933).
NASA/Ames

Extensive scaffolding system constructed inside Hangar 1 for siding removal, cleaning, and painting.

"Congratulations to the fiscal year 2013 CNO Environmental Award winners and to all who participated in noteworthy efforts promoting environmental stewardship," said Vice Admiral Phil Cullom, deputy chief of naval operations for fleet readiness and logistics. "I applaud all of the nominees for your exceptional dedication to protecting the environment and preserving resources in support of our Navy mission."

For the FY 2013 competition, Navy commands from around the globe submitted nominations for consideration in 10 award categories:

1. Environmental restoration (installation)
2. Environmental restoration (individual/team)
3. Natural resources conservation (small installation)
4. Natural resources conservation (individual/team)
5. Environmental quality (non-industrial installation)
6. Environmental quality (individual/team)
7. Environmental quality (large ship)
8. Sustainability (industrial installation)
9. Cultural resources management (installation)
10. Environmental excellence in weapon system acquisition, large program (individual/team)

Subject matter experts from the Navy and non-government organizations judged the nominations on accomplishments from October 1, 2011 through September 30, 2013. Accomplishments of the FY 2013 CNO environmental award winners are highlighted below.

Environmental Restoration

These awards recognize efforts to protect human health and the environment by cleaning up identified Department of Defense (DoD) sites in a timely, cost-efficient, and responsive manner. Nominations may be from the Military Departments or Defense Agencies for any U.S. Military active or closing installation worldwide and any individual or team.

Installation

Former Naval Air Station Moffett Field, California

The mission of the NAVFAC BRAC PMO is to provide the services necessary to realign, close and dispose of Navy

These extremely complex environmental projects were independently *challenging* but uniquely *connected*.

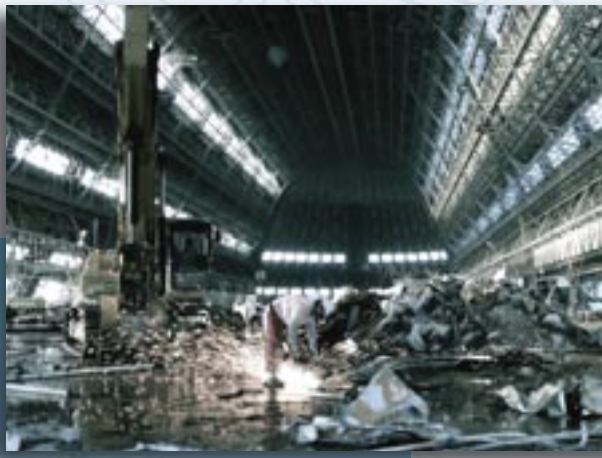
and Marine Corps BRAC properties. Such realignments and closures provide cost savings that can be reapplied to support Navy and DoD programs.

Under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), two significant projects were completed in 2013 at the former Naval Air Station Moffett Field (Moffett). The NAVFAC BRAC PMO Environmental Restoration (ER) Team completed a Removal Action to remove contaminated siding and other building materials at Site 29 (Hangar 1) as well as a Remedial Action for contaminated sediments in an active stormwater retention pond (Site 25). As described below, these extremely complex environmental projects were independently challenging but uniquely connected.

Moffett is located in Santa Clara County, California approximately ten miles north of San Jose. The population of Santa Clara County is approximately 1.8 million, and is home to "Silicon Valley"—host to some of the largest high

Siding partially removed.
NASA/Ames

Workers removing toxic siding to reveal redwood roofing material.



The Hangar 1 removal action required the removal and disposal of over 4,940,000 pounds of toxic siding and waste materials.
Kris McGlothlin

Hangar 1 prior to siding removal activities.
NASA/Ames

USS Macon inside Hangar 1.
NASA/Ames

tech firms in the world. The local residents are particularly concerned about regional and base wide environmental protection issues and are active Restoration Advisory Board (RAB) participants.

Environmental restoration activities began at Moffett in 1983 as part of the Navy's Installation Restoration Program. In 1987, the U.S. Environmental Protection Agency (EPA) placed Moffett on the National Priorities List. In 1992, Moffett was designated for closure under the BRAC program. The National Aeronautics and Space Administration (NASA), which already operated the Ames Research Center on the northern side of the base, assumed control of the facility in July 1994 and currently is the federal property owner for Moffett. The Navy conducts environmental investigation and restoration activities at Moffett in accordance with a Federal Facilities Agreement (FFA).

The Navy, as lead agency responsible for environmental actions included in the FFA, created two groups to facilitate the base transfer process—the BRAC Clean-up Team (BCT) and RAB. The BCT consists of members of the Navy and regulatory agencies which include the EPA, the State of California San Francisco Bay Regional Water Quality Control Board, and NASA Ames representatives and serves to streamline communication of technical issues during site remediation and closure. The RAB consists of the BCT, the Cities of Mountain View and Sunnyvale, and local community members with the purpose of facilitating communication on the Navy's remediation progress and as a forum for community concerns and suggestions.

Moffett's Hangar 1 is a massive structure that was constructed in the early 1930's to house the dirigible airship USS Macon. It is one of the world's largest free-standing structures, covering over eight acres. Hangar 1 measures 1,133 feet long (over three football fields), 308 feet wide, and 198 feet high (approximately 18 stories). The hangar is regarded as a notable visual structure and cultural icon in the San Francisco Bay area. It is a recognized Historic Civil Engineering Landmark, individually listed on the National Register of Historic Places (NRHP), and is a contributing element to the NRHP-listed "Moffett Field Historic District." The siding of Hangar 1 was comprised of Robertson Protected Metal (also known as "Galbestos") and consisted of numerous layers containing polychlorinated biphenyls (PCB), lead, and asbestos. In an

Due to *weathering* and overall siding deterioration, a variety of PCBs were *leaching* from Hangar 1 into the storm drain system.

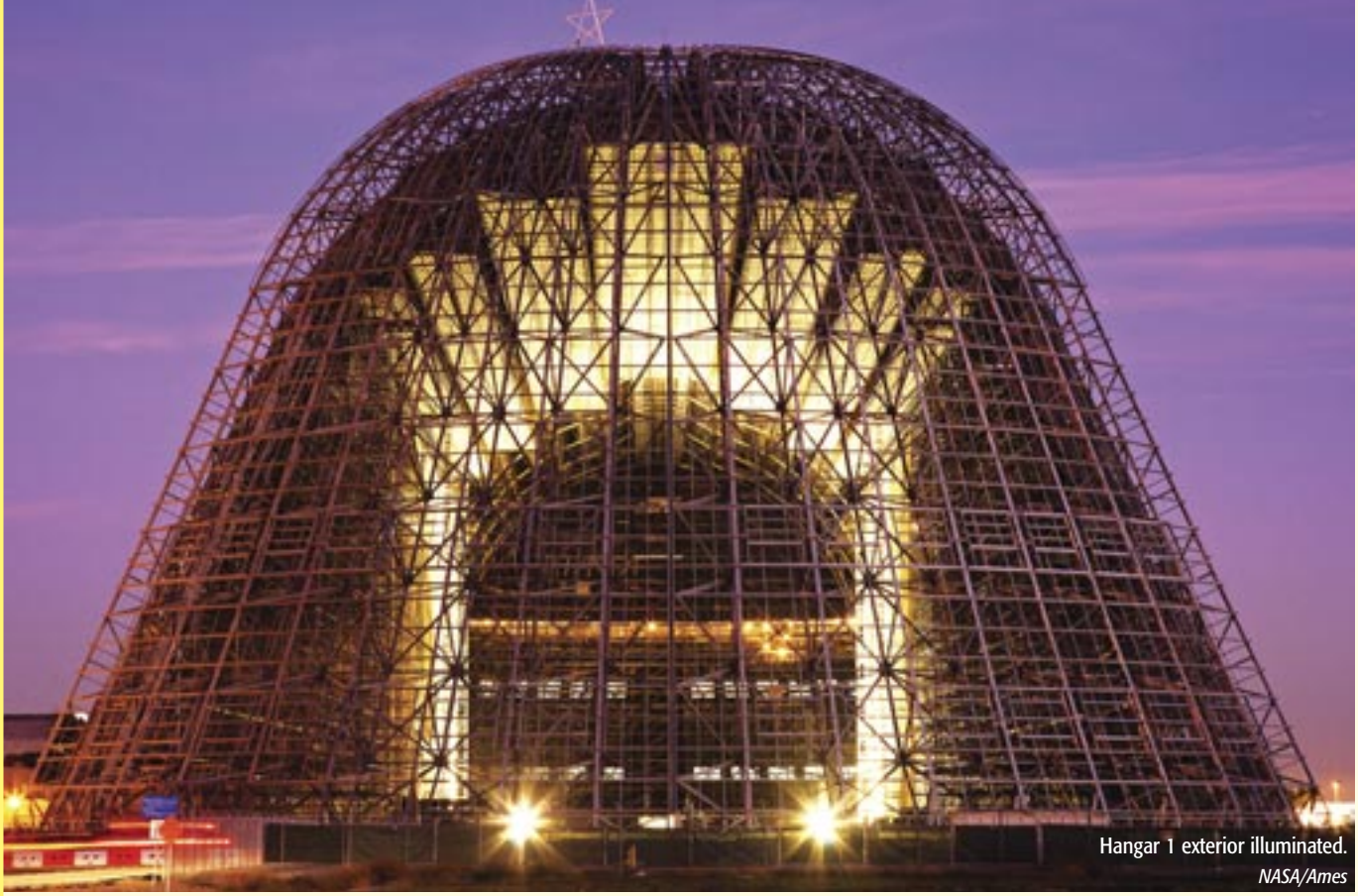
effort to determine the source of PCB contamination at Site 25, forensic sampling of the storm drain lines was conducted. Results indicated that due to weathering and overall siding deterioration, a variety of PCBs were leaching from Hangar 1 into the storm drain system.

Since 1953, a 230-acre stormwater retention pond (SWRP) and associated diked marsh have been operated at Moffett. In 1991, a settling basin was constructed to control stormwater from the western portion of Moffett (including Hangar 1) in an effort to limit sediment transport into the SWRP/diked marsh (currently identified as Site 25). The western portion of Site 25 is owned by the Midpeninsula Regional Open Space District and the central and northeastern portions are owned by NASA.

USS Macon viewed from inside Hangar 1 (1934).
NASA/Ames

Hangar 1 interior. Hangar 1 is one of the largest freestanding structures in the world, encompassing over eight acres and measuring 1,333 feet long (over three football fields), 308 feet wide, and 198 feet high (approximately 18 stories).
NASA/Ames

Hangar 1 exterior.
NASA/Ames



Hangar 1 exterior illuminated.
NASA/Ames

Historical sampling of Site 25 sediments identified concentrations of total PCBs, lead, zinc, and total dichlorodiphenyltrichloroethane (DDT) as chemicals of ecological concern (COEC). In 1997, during a routine cleanout of the settling basin, a relatively uncommon PCB (Aroclor-1268) was discovered in sediment in the settling basin and SWRP. Navy and EPA policy for sediment clean-up requires that sources of sediment contamination be identified and controlled prior to initiating cleanup. Consequently, the remedial action for Site 25 could not occur until the source was identified.

In an effort to remove the main source of contamination affecting the down-gradient Site 25 and also to protect human health and the environment, the Navy mitigated contamination at Hangar 1 by performing a Non-Time Critical Removal Action (NTCRA) under CERCLA. The Navy evaluated thirteen removal action alternatives in its 2008 Engineering Evaluation/Cost Analysis (EE/CA). The selected alternative was documented in the Action Memorandum on December 31, 2008. The selected remedy involved:

1. Removal of the PCB-contaminated metal siding and redwood roofing material
2. Disposal of all debris to appropriate off-site disposal or recycling facilities
3. Application of a weather-resistant epoxy coating on the remaining structural steel
4. Decontamination of the concrete slab
5. Implementation of historic mitigation measures

The siding was removed and disposed as a hazardous waste because the EE/CA determined that other alternatives were either not technically feasible or were not permanent and would require long-term maintenance. The structural steel frame was originally coated with paint that contained concentrations of PCBs and lead. Therefore, the application of an epoxy mastic coating was required to encapsulate the residual contaminants on the steel. This approach along with the implementation of historic mitigation measures, allows NASA to eventually install new siding and return the hangar to a new beneficial mission.

The Moffett ER Team focused on protecting human health during the NTCRA. In particular, NASA tenants and the surrounding community were guarded from potentially contaminated air and dust emissions by controlling the release of contamination from the 4,940,000 pounds of contaminated siding and waste materials that were removed, while also preserving the structural integrity of this historic building. The remedy protected the environment from additional releases of PCB contamination to the stormwater system while also reducing contaminant sources and complying with historic property requirements.

The concept of removing contaminated siding and roofing materials, and demolishing interior structures at Hangar 1

The Moffett ER Team *removed* chemicals of ecological concern in sediment from more than 31 acres and *restored* the 230-acre stormwater retention pond to tidal marsh habitat.

Hangar 1 exterior.
NASA/Ames

was a controversial topic. While the BCT agreed with the remedy approach, the community, NASA, and most RAB members were initially opposed to the removal action alternatives for Hangar 1, specifically siding removal that would impact its historic and visual aesthetic. By keeping in constant communication to identify issues and concerns, the Navy was able to involve stakeholders in the decision-making, and conduct effective outreach to mitigate the community's reservations about the preferred alternatives. The recommended alternative contained several historic mitigation measures that addressed many of the public's concerns and ultimately allowed for the re-use of Hangar 1 by NASA.

At Site 25, the contaminant levels in the sediment posed an ecological risk to numerous sensitive site receptors. To protect the environment, the Moffett ER Team implemented a remedial action under CERCLA to remove COECs in sediment from more than 31 acres and restore the 230-acre SWRP to tidal marsh habitat. The Moffett ER Team completed a Remedial Investigation and evaluated eight alternatives in a Feasibility Study that considered current and future land use scenarios. The selected remedy was documented in a Record of Decision signed in 2010 by project stakeholders and included the excavation and off-site disposal, treatment of sediment to facilitate disposal, and focused restoration of wetland excavations and ecological monitoring. By successfully negotiating with the regulatory agencies, the team was able to use the innovative Theissen polygon method to identify removal areas. Using this method resulted in the identification and excavation of 113 polygons that ranged in size from less than 500 square feet to two acres. Since these polygons were characterized prior to the excavation effort, this allowed the sediments to be directly loaded from the excavators to the transport vehicles, and then hauled directly to the off-site disposal facility. At completion, the remedial action removed over 36,048 cubic yards of contaminated sediment from a saturated and routinely inundated environment, and restored nearly 20 acres of salt marsh and transitional upland habitat. Based on confirmation sampling, no contaminants remain at the site above project action levels and the site is now available for unrestricted use.

A portion of Site 25 is accessible to the public via the San Francisco Bay Trail. This trail is a popular destination for bicyclists, hikers, birdwatchers, and duck hunters in the neighboring U.S. Fish and Wildlife Service (USFWS) Don Edwards Wildlife refuge. The public access trail provides views of Site 25

At Site 25, early planning allowed the Navy to utilize an innovative approach to identify removal areas.
Henry Ng

and the wildlife located in both the tidal and non-tidal wetlands. Remediation activities at Site 25 required periodic restrictions of access to the Bay Trail. These restrictions were communicated to the public by posting signage and by providing information to stakeholder web sites, including the Association of Bay Area Governments, the City of Mountain View, Friends of Stevens Creek, the Silicon Valley Bicycle Coalition, and USFWS. The high level of communication and interaction provided by the Moffett ER team was instrumental in not only gaining regulatory acceptance at Site 25, but also minimizing impacts to public access of the Bay Trail.

Hunters Point Naval Shipyard, California

The Hunters Point Naval Shipyard (HPNS) installation achieved significant progress in reducing environmental risks and efficiently preparing the property for transfer through a combination of treatability studies, removal actions, and remedial actions. Disposal practices, spills, and releases from past shipyard operations resulted in numerous environmental issues. A challenge of this cleanup area is its massive size, at more than 860 acres as well as the presence of multiple contaminants in various media. In 2013, over 32,000 feet of piping was tested and disposed of; 56,000 cubic yards of soil was excavated; and 28 buildings and sites were remediated. The HPNS cleanup team has worked diligently to keep the community engaged and involved in the cleanup. Through teamwork with the community, over 60 local small businesses participated in the HPNS environmental cleanup, resulting in over $15 million in awards to local businesses during FY 2012 and FY 2013.

The oldest portion of the shipyard is a 73-acre parcel that has been used almost exclusively for industrial purposes since the late 1800s and is contaminated with multiple toxins. The remedial action is extensive, consisting of soil excavation and offsite disposal, soil vapor extraction, durable covers, zero-valent iron or other biological substrate, monitored natural attenuation, and institutional controls. In FY 2013, the team accomplished over 17,300 cubic yards in excavation (78 percent of the total volume) in a three-month period.
Ulrika Messer

Naval Air Station Meridian, Mississippi

The primary objective of the Naval Air Station (NAS) Meridian installation restoration program is to manage environmental sites to protect human health and the environment while demonstrating leadership utilizing cost-effective and sustainable methods. The team met or exceeded all of the goals set forth in October 2010. This included the removal of the entire landfill, where 9,000 cubic yards of onsite soil was tested, cleaned, and re-used as backfill—saving the project $700,000; the preservation of a stand of long-leaf pine; the demolition of the old test cell; and a new jet engine testing facility which is now built and currently operational.

At a metals landfill, a sorter segregates small metal debris from on-site soils. Most of the small scrap was recycled, while the soil was tested and used as fill on site to reduce costs and the carbon emissions of mining and transport of new materials.

Individual or Team

Joint Expeditionary Base Little Creek—Fort Story, Virginia

Achievements of Joint Expeditionary Base Little Creek—Fort Story (JEBLCFS) include reaching "no further action" status for one cleanup site; establishing remedy-in-place for two sites, completion of action decision documents for two sites, and implementation of land use controls for two sites. The team accelerated environmental cleanup and is on track to achieve the completion of the facility construction approximately 18 months ahead of the Navy's FY 2015 goal.

The team successfully collaborated and evaluated the needs of the community, the Navy Environmental Restoration Program, and the mission, and applied economical, environmentally sound, and sustainable methodologies issues under examination. These efforts have resulted in over two million dollars in cost savings and have made approximately 103 acres available for reuse.

Following dredging during the removal actions at Installation Restoration Solid Waste Management Units 3 and 7b, clean sand was placed on the sediment surface. Sand was placed to address residual contamination and promote the natural establishment of a benthic macro-invertebrate community.

Jeremy Scott

This solar-powered air sparging system was chosen by the Cecil Field BRAC Cleanup Team for a pilot study at Site 3 to act as a sustainable solution for a cut-off wall to prevent groundwater contamination from discharging into the nearby creek. The system began operation in November 2012 with run times based on the season and amount of available sunlight.

Naval Air Station Cecil Field, Florida (Base Realignment and Closure Cleanup Team)

As of December 2013, 14 Installation Restoration sites have been approved for No Further Action, 99 percent of the 17,225 acres have been transferred, and remedies are in place for all sites in accordance with CERCLA and the Florida Department of Environmental Protection's Petroleum Program. The Cecil Field BRAC Cleanup Team coordinated with the Restoration Advisory Board and teamed with experts to devise and use innovative solutions and technologies to achieve its mission of property transfer while adhering to its vision of partnering.

Since the transfer of property, the City of Jacksonville and Jacksonville Aviation Authority (JAA) have begun improving and developing the property. The redevelopment has included utility upgrades, building demolition and renovation, improvement and expansion of existing hangars and significant development of new hangars, roadway construction/realignment, Lake Fretwell expansion, construction of an Equestrian Center and Recreation Complex, and construction of a Florida Community College of Jacksonville campus.

Naval Air Station Jacksonville, Florida (Environmental Restoration Partnering Team)

NAS Jacksonville developed an innovative prioritization protocol for evaluating vapor intrusion (VI) into industrial workspaces in lieu of a more traditional site-wide, building-by-building investigation method. The approach reduced the number of buildings investigated from 167 to 12 at a potential cost savings ranging from $30,000 to $60,000 per building.

The use of portable chemical identification system, gas chromatography/mass spectrometry units enabled the field team to identify VI source areas beneath the building slabs in real time, minimizing disruption and reducing cost associated with planning, sampling, analyzing, and reporting on the order of $10,000 to $20,000. In total, use of these innovative technologies saved approximately $250,000 on the VI assessment at Operable Unit Three compared to using traditional building-by-building VI sampling and investigation methods. The NAS Jacksonville team's success is the result of numerous effective partnerships including a project to implement an innovative high-resolution sampling strategy and a fate and transport modeling study to evaluate the impacts of cont-

amination stored in low permeability layers and the effects of "back-diffusion" on long-term groundwater quality sponsored by the Environmental Security Technology Certification Program.

Long-duration passive samplers enabled the NAS Jacksonville Environmental Restoration Partnering Team to perform a comparative study for future applicability. Long-duration sampling reduces uncertainties associated with temporal variability and can simplify deployment of samplers.

CH2M Hill

Indigo bunting captured and banded during annual Monitoring Avian Productivity and Survivorship surveys. These surveys were developed under NBPL's Integrated Natural Resources Management Plan.

Andy Wastell

Natural Resources Conservation

These awards recognize efforts that promote the conservation of natural resources. This includes the identification, protection, and restoration of biological resources and habitats; long-term management and use of the land and its resources; and the promotion of the conservation ethic.

Small Installation

Naval Base Point Loma, California

The most successful natural resources conservation accomplishments of Naval Base Point Loma (NBPL) are in adaptive ecosystem management and marine resources management. By partnering with Point Loma Ecological Conservation Area (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 enhancement. Adaptive ecosystem management also increases efficiency through collaboration and shared management and financial responsibilities among PLECA members.

Pacific Missile Range Facility, Hawaii

The Pacific Missile Range Facility (PMRF) protects natural habitat for a variety of endangered, threatened and endemic species that, in return, provides an unparalleled and accessible outdoor laboratory for academic research in a host of areas.

PMRF's involvement in projects and programs have resulted in new accomplishments including:

1. Zero bird fatalities during the 2013 migration season—the first time in over 10 years
2. An expansion of protected lands for the Laysan Albatross Surrogate Parenting Program
3. Analysis of non-viable Laysan albatross eggs
4. A shoreline survey to study erosion and accretion along Barking Sands coastline
5. Support of a research study for the restoration of a marine snail known as "opihi"

Dr. Lindsay Young, Pacific Rim Conservation Biologist, places a "good" egg donated from PMRF under a nesting adult Laysan albatross according to the "Egg Swap" protocol at *Na Aina Kai* Botanical Garden's protected albatross nesting area.

Stefan Alford

Individual or Team

Mr. Gary Cottle and Ms. Anna Keyzers, Naval Air Station Fallon, Nevada

Mr. Cottle and Ms. Keyzers work in the Natural Resources (NR) branch of the Public Works Environmental Division and manage the lands at Naval Air Station Fallon. The air station occupies approximately 241,000 acres in Churchill County, Nevada; the main station consists of 8,670 acres surrounded by 3,000 acres in the Agriculture Outlease Program; and 3,865 acres of rangeland vegetation. The remaining area is the Fallon Range Training Complex (FRTC), which features four noncontiguous air-to-ground training ranges and an electronic warfare range.

The NR team has successfully enhanced the ecosystem at the distinctively isolated Dixie Valley while controlling invasive species. They also enhanced bird and bat habitat protection in two training ranges by closing ten abandoned mines with custom bat-compatible designed gates to help protect their habitat from human intrusion; and removed over 30 PVC pipes to stop birds from getting trapped.

Custom made gates were added to 10 abandoned mine openings, allowing bats continued access while preventing unsafe access to people.

Anna Keyzers

Mrs. Michael Wright, Naval Air Station Oceana, Virginia

Mrs. Wright is a Natural Resources Specialist who oversees the management and implementation of three Integrated Natural Resources Management Plans covering four primary naval properties. She provides direct leadership to the region's conservation law enforcement officer, a biological science technician, several student hires, and volunteers. As part of her duties, she is a U.S. DoD Partners in Flight representative, where she reviews and provides feedback on all DoD Legacy Project proposals related to birds.

One of Mrs. Wright's many accomplishments was to help organize over 150 volunteers to assist with habitat restoration activities, including shore infrastructure protection, at Naval Air Station Oceana (NASO) Dam Neck Annex. During multiple dune restoration events, volunteers, Cooperative Ecosystem Studies Units partners, and natural resources team members planted over 60,000 plants by hand, installed over two miles of dune fencing, and recycled over 2,500 Christmas trees. In FY 2012, Mrs. Wright obtained funding for and coordinated the award or implementation of over 38 natural resources projects, obligating $1.8M dollars; and in FY 2013 she awarded or implemented 41 projects, obligating over $460,000.

Mrs. Wright holding an Endangered Kemps ridley sea turtle hatchling, found during the excavation of a nest after the nest had successfully hatched. Mrs. Wright and a number of volunteers in coordination with state and local agencies released the sea turtle later that evening and watched it successfully make its way into the ocean.

Naval Support Activity Monterey, California (Natural Resources Conservation Team)

Naval Support Activity (NSA) Monterey borders the Monterey Bay National Marine Sanctuary. As stewards of four federally threatened or endangered species and several rare ecosystems, the NSA Monterey Natural Resources Conservation Team (NRCT) has the immense responsibility of balancing one of the world's most ecologically diverse areas with growing mission demands and community encroachment.

NSA Monterey's many accomplishments include:

1. Protecting three federally listed endangered plant species by removing invasive plants and developing interpretive signage
2. Creating a partnership with California State University, Monterey Bay to implement a no-cost Lake Management Plan resulting in a savings of $40,000
3. Managing a fragile dune ecosystem
4. Using reclaimed stormwater for 98 percent of irrigation on the main base.

The team also engaged with base personnel and the public by giving native botanical tours and using symbolic fencing to direct the public away from protected areas while still providing access.

The dunes area of NSA Monterey is ecologically sensitive with two endangered plant species in evidence. Walkways have been created to prevent people from walking across the dunes and damaging the area.
Todd Wills

Environmental Quality

These awards recognize efforts to ensure mission accomplishment and protection of human health in the areas of environmental planning, waste management, and compliance with environmental laws and regulations.

Non-industrial Installation

Commander, Fleet Activities Yokosuka, Japan

By maintaining strong working relationships with on- and off-base organizations, Commander, Fleet Activities Yokosuka (CFAY) consistently coordinates efforts to establish quick and thorough alternatives to avoid environmental degradation and destruction. With support from military and civilian personnel, base residents, and the cities of Yokosuka, Zushi, and Yokohama; team members successfully develop and maintain invaluable partnerships crucial to the success of the environmental program. CFAY's Environmental Division manages over 20 multi-media environmental programs, integrated through a capstone Environmental Management System (EMS). Its workforce is staffed with more than 30 U.S. and Japanese environmental professionals composed of engineers, environmental specialists, program managers, program analysts, and technicians.

Their accomplishments include:

1. Instituting an aggressive change in above-ground storage tanks assessment
2. Implementing a comprehensive Internal Assessment Plan and standardized internal review process

Yokosuka Middle School students observe the aeration process at the wastewater treatment facility on the Yokosuka Naval Complex as Ms. Shinobu Hagio looks on.
Yoko Echizen

3. Participating in the annual Health, Safety and Environmental Awareness Fair, providing environmental oversight and consultation services.

In addition, the Qualified Recycling Program (QRP) diverted over 6,000 tons of recyclable material and QRP revenues exceeded $1 million for the second consecutive year.

Joint Expeditionary Base Little Creek—Fort Story, Virginia Beach, Virginia

Environmental protection is an integrated, ongoing part of JEBLCFS's mission. The environmental staff ensures protection of resources, and compliance with regulatory permits to keep training sites and facilities operational at all times. JEBLCFS' EMS program is actively registered to the International Organisation for Standardization (ISO) management standard 14001.

After an external audit, the base's most significant recognition was the resident command awareness—91 percent of personnel surveyed had knowledge of the base's EMS. To foster environmental excellence throughout the base they incorporated methods such as hands-on training, consistent and concise communications, and weekly site visits; and distributed 20,000 EMS "Green Cards." They provide solutions to overcome problems that may impact the installation's permits and compliance. Other accomplishments include zero discrepancies during nine federal, state and local agency inspections, and a decline in hazardous waste disposal. The base achieved a 63.2 percent reduction in off-site routine hazard waste disposal since 2007, saving approximately $254,000 in disposal costs.

Each year, the JEBLCFS environmental staff works with a local elementary school, providing space and assistance as they raise their own oysters. This project has provided an educational opportunity to the children and has enabled them to play a role in the restoration of the Chesapeake Bay.

Scott Mohr

Navy Region Center Singapore

With the implementation of the EMS, Navy Region Center Singapore (NRCS) has identified energy and solid waste reduction as two major focus areas. Significant accomplishments include successfully reinstalling the EMS; completing triennial major claimant environmental quality assessment; offloading over 347,000 pounds of shipboard-generated industrial waste, and implementing an effective solid waste QRP. NRCS installed over 2,000 backflow preventer devices to ensure protection of the water supply; conducted training to enhance spill response capability; established two functional Regional and Installation Water Quality Boards to oversee drinking water standards; and gave lighting retrofit for nine buildings to reduce energy consumption.

Individual or Team

Dr. Awni Almasri, U.S. Naval Support Activity Bahrain, Bahrain

Dr. Almasri continually manages broad and complex multi-media environmental programs in the most diverse and dynamic operating theater in the world, Southwest Asia. His hard work and tireless efforts were the main reasons for NSA Bahrain to successfully pass the recent external EMS audit resulting in the base re-declaring conformance to ISO management standard 14001.

By specifically targeting source reduction and recycling, the programs Dr. Almasri designed and managed reduced costs by over six million dollars over the past two years. The implemented programs also target the life cycle nature of the activities, thereby assuring continued savings into the future. Under Dr. Almasri's proactive leadership, NSA Bahrain Environmental Team continues its unwavering support by adapting to tenant commands' and Fleet needs, initiating new programs, and improving existing ones to enhance the quality of life for NSA Bahrain personnel, tenant commands, U.S. 5th Fleet, and the surrounding communities. Through face-to-face meetings, bulletin boards, brochures, emails, newspaper articles, Earth Day, and posting on the NSA Bahrain web site, Dr. Almasri demonstrates an ongoing commitment to promoting environmental management. Dr. Almasri has also worked diligently with host nations to form a plan to properly manage oil spills and to ensure the Navy's and host nation plans are compatible.

More than 200 NSA Bahrain volunteers participated in the 2013 week-long Earth Day celebration. Volunteers planted more than 55 plants and collected over 83,000 pounds of garbage, of which over 65 percent was recycled.
Jayakumar Nair

Team Leader Lieutenant Commander Watson (left) inspects a native Hawaiian pohinahina (*Vitex rotundifolia*) at the newly xeriscaped area aboard the Fleet Logistics Center Pearl Harbor. This shrub and other Hawaiian plant species thrive in this particular area's climate with very little or no supplemental irrigation.
James Murray

Fleet Logistics Center Pearl Harbor, Hawaii (Environmental Quality Team)

The Naval Supply Systems Command (NAVSUP) Fleet Logistics Center Pearl Harbor Environmental Quality Team made significant improvements in energy conservation, environmental protection, and natural resources protection. The team sought out experts from other Navy commands and federal agencies to identify best practices, review alternative courses of action, and determine the optimum solution to meet command mission requirements while ensuring environmental requirements and energy goals were met. The team's major accomplishments include:

1. Replacing traditional landscaping with xeriscaping to reduce water consumption
2. Replacing 13 gasoline powered vehicles with electric plug-in trucks
3. Installing power-saving timer devices to reduce energy
4. Participating in the Navy Exchange Earth Day Fair
5. Sponsoring the Pearl Harbor installation-wide electronic equipment recycling event for all DoD agencies.

Naval Base Ventura County, California

Naval Base Ventura County (NBVC) is comprised of three operating facilities: Point Mugu, Port Hueneme, and San Nicolas Island (SNI). With over 60 environmental standard operating procedures, over 15 base environmental instructions, and over 20 permits/plans specific to a regulatory requirement, the Environmental Quality Team set polices and guidance to ensure environmental impacts were minimized throughout NBVC. The staff works to coordinate and minimize environmental constraints to the military mission while ensuring compliance with environmental regulatory requirements. They established an aggressive and effective energy and water program designed to drive down the consumption of utilities. The command is focused on its energy and water reduction goals and is currently meeting and exceeding the Executive Order 13423 goal for its reportable energy and water usage. During FY 2012 and FY 2013, the NBVC Environmental Quality Team stayed current in their program areas and implemented new and innovative ways to improve the program. In many cases, environmental experts were in the field during critical operations to ensure successful execution of the military mission while protecting the natural resources.

A Peregrine Falcon in flight at SNI. Once listed as a federally endangered species, this bird remains as a fully protected species in California. The first documented nesting of Peregrine Falcons at SNI occurred in FY 2013.

Large Ship

USS Frank Cable (AS 40)

Homeported at Apra, Guam, USS Frank Cable is an Emory S. Land class submarine tender with a crew of 950 Navy Sailors and 156 civilian mariners from the Military Sea Lift Command. To help the marine environment, Cable installed an Oily Water Separator to separate oil from bilge water, which prevents discharge of waste oil. The ship's Paint Application and Removal Policy (FRANKCABLEINST 5103.1) was signed into instruction in March 2013. This instruction minimizes aggressive paint removal techniques to prevent lead dust from becoming airborne. Cable purchased and installed two state-of-the-art hazardous material vans to provide storage for up to four submarines at one time. These vans have automatic fire suppression systems, alarm systems in direct contact with fire and emergency services; and contain sumps with drain fittings to contain spills, climate control, and a four-hour fire rating. Cable's "capstone" environmental project this year included 203 Sailors and family members providing over 1,100 hours on a seven-month project with the Guam National Wildlife Refuge.

USS Frank Cable conducts maintenance and support of submarines and surface vessels deployed in the U.S. 7th Fleet area of responsibility.
MC3 Chris Salisbury

USS Nimitz (CVN 68)

During the Great Green Fleet demonstration, USS Nimitz was successful in the first-ever Carrier Strike Group-wide use of JP-5 bio-fuel. One hundred fifty-three aircraft were fueled with bio-grade JP-5 fuel over three flying days as Nimitz flawlessly managed the on-load and issuance of 187,000 gallons of the fuel. Nimitz completed 50 transits within restricted waters, two passages through the Suez Canal, and safely transferred more than 2.9 million gallons of sewage and 900 pallets of hazardous waste in four different fleets with no incidents. Eighteen hazardous material spill drills were conducted during Nimitz' 2013 deployment, which ensured watch personnel and command duty officers were properly trained in spill response and reporting criteria worldwide. Volunteers from Nimitz cleaned two miles of Honolulu Harbor collecting debris from an ocean-side barrier. Other community relations projects included forest preservation in Snohomish, County, the Everett Green Partnership Project and renovating an animal shelter. Nimitz conducted more than 36 replenishments, moving over 1,000 pallets of hazardous materials and 22.9 million gallons of fuel without incident in the Pacific and Indian Oceans as well as the Mediterranean and Tyrrhenian Seas.

USS Nimitz.
MC3 Katarzyna Kobiljak

USS Ronald Reagan (CVN 76)

Homeported in Naval Base Coronado, San Diego, USS Ronald Reagan is the ninth aircraft carrier of the Nimitz Class. In 2012, during the Docked Planning Incremental Availability in Bremerton, Washington, USS Reagan achieved zero environmental violations through proper hazardous material and hazardous waste handling and disposal in accordance with shipyard standards. The ship

also emphasized environmental protection during project meetings and through joint safety/housekeeping walk-throughs conducted by the ship's safety department, safety representatives from Puget Sound Naval Shipyard, and outside repair organizations. To prevent unauthorized disposal of debris and water in the dock, all overboard fixtures (i.e., deep sinks, deck drains) were marked with "Fish—No Dumping" labels to eliminate inadvertent discharge into the dock and the bay.

Reagan completed 13 overboard oil and hazardous spill drills during the award period, in addition to two Afloat Environmental Awareness and Response Training sessions provided by the Regional Waterfront Environmental Coordinator, to ensure personnel are properly trained in spill response and reporting. The ship also initiated and implemented import recycling of paper, plastics, and aluminum cans through coordination with Naval Base Coronado's Sustainable Solid Waste Program. The crew also conducted eight beautification and cleanup projects, enhancing community relations and environmental stewardship.

USS Ronald Reagan.
MC2 Stephanie Smith

Sustainability

This award recognizes efforts to prevent or eliminate pollution at the source, including practices that increase efficiency and sustainability in the use of raw materials, energy, water, or other resources. Nominations may be from the military departments or Defense Agencies for any U.S. military active or closing industrial installation worldwide.

Industrial Installation

Naval Base Ventura County, California

The EMS is a fundamental component of NBVC's daily operations. The Environmental Division continues to enhance the way NBVC does business by standardizing methods and processes that could create significant impacts to the environment. The base currently has four buildings with Leadership in Energy and Environmental Design (LEED) certifications (two gold and two silver). A fifth building is currently under construction that will achieve the Silver certification. Renovations were made to other facilities to utilize effective energy and water reduction, including high-efficiency interior and exterior lighting; equipment and lighting controls; low-flow plumbing fixtures; remote-controlled evapotranspiration irrigation controllers; renewable energy systems; and high-efficiency mechanical equipment. NBVC's construction activities for renewable energy were developed through wind, solar thermal and environmental planning, pollution prevention, solid waste management program, and community engagement. Representatives from NBVC also participated in judging student science projects at the Hueneme High School and the Ventura County Science Fair.

Mugu Lagoon at NBVC, Point Mugu provides habitat for thousands of migratory bird species, as well numerous invertebrate, fish, and plant species. The environmental planning review process allows wetlands and natural resource program managers to review proposed projects that have a potential to impact these areas.
Francesca Ferrara

Naval Weapons Station Seal Beach, California (including Detachments Fallbrook and Norco)

Naval Weapons Station (NWS) Seal Beach and its two detachments generated a massive reduction in hazardous waste and sustainable solid waste, while simultaneously using innovative approaches in water and energy conservation. Using analysis and design for in-

house low-impact development dramatically reduced contract cost. Participants also continued public outreach, both internal and external to the station.

NWS Seal Beach and the Seal Beach National Wildlife Refuge hosted a volunteer event in October 2012 to remove invasive plants, prepare the land for restoration, and plant native plants.Volunteers from public and community groups planted over 750 native shrubs and flowers, the highest number since the annual event began nine years ago.

MC1 Eli Medelin

Portsmouth Naval Shipyard, Maine

Portsmouth Naval Shipyard (PNSY) is a nuclear-powered submarine maintenance installation that has successfully accelerated its energy and sustainability programs. A continuous commitment to process improvement and reducing environmental impacts has been achieved by reducing or eliminating unnecessary steps and streamlining process flows. PNSY's energy and water consumption continues to decrease, with reductions exceeding goals by 20 to 25 percent, respectively. A solar ventilation system is being constructed and is projected to save roughly $22,000 in fuel costs per year. Successful programming, designing, and building upgrades and renovations have been implemented to increase performance and sustainably. Four LEED projects are Gold Certified and contribute to successful High Performance Sustainable Building (HPSB) projects. PNSY is on track for meeting the FY 2015 HPSB goal upon completion of energy renovation projects currently in construction. Regional planning with a local bus service has successfully started an express style commuting option to the base.

The "Sail" in PNSY's logo, "Sails to Atoms" is landscaped into the green roof of the LEED Gold certified Administrative Building. The roof provides for increased biodiversity, natural stormwater management, and roof insulation for increased energy efficiency.

Melissa Kalicin

Cultural Resources Management

This award recognizes efforts to promote cultural resources stewardship in the DoD by highlighting outstanding examples of cultural resources management. Awards are designed to showcase DoD's extensive cultural resources including archaeological sites and cultural landscapes. Desired initiatives include partnering with external stakeholders such as Native Americans, State Historic Preservation Officers, and local communities; and internal stakeholders such as master planning, public works, and range management. Nominations may be from the military departments or defense agencies for any U.S. military active or closing installation worldwide.

Installation

Commander, Fleet Activities Yokosuka, Japan

By maintaining strong working relationships with on- and offsite entities, the installation's cultural resources management program at CFAY consistently manages its cultural resources and promotes opportunities for cultural research, partnerships and conservation. With strong support from base personnel, partnerships with the Yokosuka City Museum, the Yokosuka Board of Education, the Zushi Board of Education, and the Cities of Yokosuka, Zushi, and Yokohama; CFAY has successfully developed and maintained invaluable relations crucial to the success

of the cultural resources program. Among its many efforts, CFAY recruits and educates volunteers to support resource protection efforts; reviews and continually monitors new projects from conception to completion to ensure continued compliance throughout the projects' lifecycles and maintains curation and preservation agreements with the city of Zushi. During FY 2012 and FY 2013, the Environmental Division screened over 500 contracts with zero incidences of adverse impacts to either the CFAY's mission or its cultural resources, which include 35 archeological sites, 260 historical buildings, and drydocks built in the 1860's.

The C2 building was originally the headquarters for the Japanese Imperial Navy, Yokosuka District. Following World War II, it became the headquarters for CFAY. While utilized by U.S. Forces operating in Japan, it is preserved in place with its original structural integrity intact.
Ryouko Araki

Joint Base Pearl Harbor-Hickam, Hawaii

The cultural resources management effort at Joint Base Pearl Harbor-Hickam (JBPHH) is characterized by a strong teamwork ethic that has solidified its partnerships with the Navy, Air Force, and more than 120 other major DoD tenant commands operating within the installation. The Cultural Resources Management office has proactively sought opportunities to increase efficiencies and reduce costs through the development of planning and database tools; enhanced the functionality of its Integrated Cultural Resources Management Plan; and initiated process improvements to streamline its stewardship program.

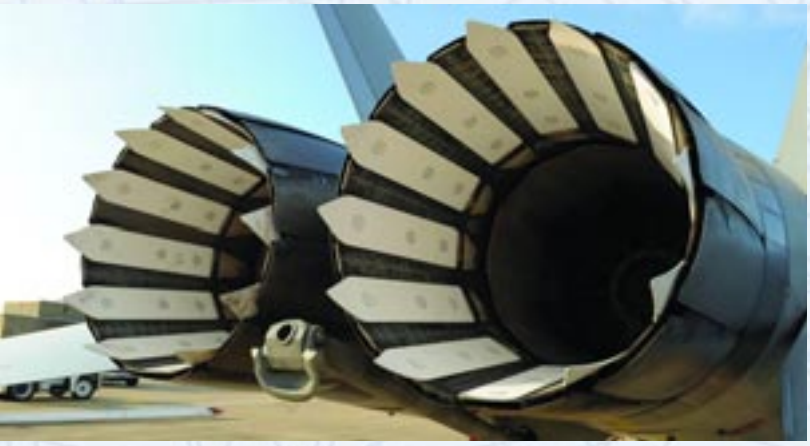
The Cultural Resources Management office received ten preservation honor awards for work completed between 2012 and 2013 from the Historic Hawai'i Foundation in recognition of its valuable and consistent stewardship of JBPHH's historic assets. The Makahiki, or "Hawaiian Thanksgiving," provides an annual opportunity for military families to appreciate and learn more about the culture and history of Hawaii. The event, which takes place on the JBPHH installation's Hickam Harbor Beach, symbolizes JBPHH's long history of successful partnerships with Native Hawaiian groups including the Office of Hawaiian Affairs, the Owen County Heritage and Cultural Center, and the Oahu Burial Council.

The renovated Hickam Fitness Center was also recognized with a local preservation honor award.
Sarah Fry

F/A-18E/F & EA-18G Program Office, PMA-265 Green Hornet Team, Patuxent River, Maryland

The Green Hornet Team (GHT) manages the environment, safety, and occupational health program for the Super Hornet and earlier aircraft. During the reporting period, the team installed a new exhaust nozzle on the F414/F404 engine, demonstrating an overall three-decibel noise reduction. Tests also demonstrated achievement of the critical criteria—no impact to thrust through maximum afterburner engine settings—ensuring Fleet acceptance of this noise reduction engineering solution.

The team took one more step in their ongoing efforts towards a hexavalent chromium-free F/A-18 and EA-18G by applying a new non-chrome primer and coating to 12 planes. In partnership with the National Aeronautics and Space Administration, the GHT also demonstrated the potential for a three percent fuel burn reduction, which could result in a fuel savings of approximately six million gallons per year. The team continued its focus on alternative fuels by laboratory and hardware testing of an alcohol-to-jet process application. Also notably, the F/A-18A-D logged 110,514 flight hours in FY 2013 without a Class A mishap.



F/A-18E with Variable Exhaust Nozzle (VEN) chevrons sits on the tarmac at NAS Patuxent River. Tests demonstrated integration of VEN chevrons onto the F414/F404 engine can achieve upwards of a 3-decibel reduction over much of the frequency range.
PMA-265

P-8A Poseidon Environment, Safety, and Occupational Health Team, Patuxent River, Maryland

The P-8A Poseidon Environment, Safety, and Occupational Health Team is a multidisciplinary group of professionals from the Naval Air Systems Command P-8A Fleet Support Team and Boeing that applied a synergistic approach to present a solution to tracking and reporting hazardous material content on the as-delivered system and for maintenance. The Hazardous Materials Authorized Use List delivered to Patrol Squadron VP-16 ensured appropriate maintenance materials were available in Japan prior to aircraft arrival and will become the Program Office's template for future deployments. Adequate material stocking affords the U.S. Navy a lifetime cost savings for reduced material removal/hazardous waste management due to expired chemicals and/or unused excess. A more thorough, dynamic method of hazardous material tracking benefits more than just the Program Manager Air (PMA-290) Program. The P-8A platform served as Boeing's prototype for system proof of concept. Lessons learned from the P-8A approach to hazardous material characterization are currently being leveraged in development of mechanisms for Hazardous Materials Management Program/Pollution Prevention reporting on the Air Force Tanker program.

PMA-290 also developed a pilot program to equip P-8A lookouts with onboard resources to facilitate a better understanding of marine mammal/sea turtle behavior for identification, increased post-action reporting accuracy, and compliance with National Environmental Policy Act, Executive Order 12114, and Marine Mammal Protection Act regulations and permit requirements. The program offers transferability to System Commands and the Fleet employing active underwater sound devices to minimize cost, schedule, and potential environment, safety, and occupational health risks associated with testing delays.

Poseidon and more than a dozen P-3C Orion patrol aircraft stand aligned on the tarmac during Rim of the Pacific (RIMPAC) 2012. RIMPAC is the world's largest international maritime exercise.
MC1 Paul Seeber

Congratulations again to all 27 of the FY 2013 CNO Environmental Award winners for their dedication to environmental excellence.

The *Awards* Process

The annual CNO Environmental Awards program recognizes installations, individuals, teams, and Navy ships that demonstrate environmental excellence and are the first step in a three-part competition within the DoD. Winners at the CNO level become nominees, along with Marine Corps nominees, at the Secretary of the Navy (SECNAV) level of competition. With the exception of the small ship and environmental planning categories, which have no equivalent at the Secretary of Defense (SECDEF) level, winners at the SECNAV level become nominees at the SECDEF level of competition.

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