# 2021 Secretary of Defense Environmental Awards

















Front cover: Boatswain's Mate Seaman Ella Koudaya rings two bells during a 9/11 remembrance ceremony on the main deck of U.S. 7th Fleet flagship USS Blue Ridge. Yokosuka, Japan, September 11, 2020.

#### **FOREWORD**



The Department of Defense's (DoD) mission is to provide the military forces needed to deter war and ensure our nation's security. To accomplish this mission the Department actively aligns defense priorities and capabilities to a changing and dynamic threat landscape. As directed by the Secretary of Defense, DoD is taking immediate action to implement three priorities: defend the Nation, take care of our people, and succeed through teamwork.

As part of these priorities DoD has recognized climate change as a national security priority. Every year, we see the consequences of increasing incidents of flooding, drought, wildfires, and extreme weather events on our installations at home. Environmental stewardship enables the Department to aggressively tackle the climate crisis. Through incorporating climate considerations into policies, strategies, and partner engagements, DoD mitigates this driver of insecurity. In the face of adversity, the DoD Components have risen to the challenge to preserve the environment, protect military personnel and civilians, and enable effective personal and institutional performance in support of the military mission.

Every year, the Secretary of Defense Environmental Awards formally recognize Service members and civilians across DoD who made significant strides to conserve our Nation's natural and cultural resources; protect human health; prevent or eliminate pollution at the source; clean up hazardous substances, pollutants or contaminants, and munitions on DoD sites; and incorporate environmental requirements into weapon system acquisition. The 2021 awards honor installations, teams, and individuals for their noteworthy accomplishments occurring from October 1, 2018 through September 30, 2020 in the following categories: natural resources conservation, environmental quality, sustainability, environmental restoration, and cultural resources management.

Congratulations to the 2021 Secretary of Defense Environmental Awards winners. Your extraordinary efforts to go above and beyond the normal call of duty by preserving and sustaining training lands, promoting energy and climate resilience, and implementing sustainable practices during uniquely challenging times demonstrates the Department's unwavering commitment to environmental excellence and military readiness.

Paul D. Cramer

Performing the Duties of Assistant Secretary of Defense for Sustainment





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#### **ABOUT THE AWARDS**

#### NATURAL RESOURCES CONSERVATION

Large Installation

This award recognizes efforts to promote the conservation of natural resources, including the identification, protection, and restoration of biological resources and habitats; the sound management and use of the land and its resources; support of the military readiness mission; and the promotion of an ecosystem management perspective. Preventing losses to threatened, endangered, and at-risk species; recovering species and their habitats; reducing bird/wildlife aircraft strike hazard incidents; proactively managing for wildfires; reducing and eradicating invasive species; and making landscapes more resilient ensures access to realistic combat environments while protecting ecosystems and the species that live there.

#### **ENVIRONMENTAL QUALITY**

Industrial Installation & Overseas Installation

These awards recognize efforts to ensure mission accomplishment and the protection of human health and the environment in the areas of environmental planning, waste management, and compliance with environmental laws and regulations (e.g., Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, Safe Drinking Water Act). Meeting or exceeding all environmental requirements not only enhances the protection of our environmental assets, but also sustains DoD's ability to effectively train and maintain readiness.

#### **SUSTAINABILITY**

Non-Industrial Installation & Individual/Team

These awards recognize 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. The sustainability award also recognizes energy efficiency and renewable energy practices, greenhouse gas reduction efforts, procurement of sustainable goods and services, waste diversion, electronics stewardship, and efforts to plan for adaptation and resilience. Sustainable practices ensure that DoD protects valuable resources that are critical to mission success.



#### **ENVIRONMENTAL RESTORATION**

Installation

This award recognizes efforts to protect human health and the environment by cleaning up hazardous substances, pollutants or contaminants, and munitions in a timely, cost-efficient, and responsive manner. Restoring these sites impacted by past DoD activities protects military personnel, their families, and the public from potential human health, environmental, and safety hazards.

#### **CULTURAL RESOURCES MANAGEMENT**

Small Installation & Individual/Team

These awards recognize efforts to promote effective cultural resources management through proactive stewardship of DoD's extensive and rich heritage assets, including archaeological sites, cultural items, the historic built environment, and cultural landscapes. Through dynamic cultural resources management programs that partner with installation stakeholders, such as master planning, public works, and range management, DoD identifies and evaluates cultural resources that impact training, testing, and operational capabilities. Awards also showcase successful partnerships with American Indian and Alaska Native tribes, Native Hawaiian Organizations, states, and other historic preservation stakeholders to protect cultural resources in a manner that sustains mission readiness as responsible stewards of our collective heritage.

### EGLIN AIR FORCE BASE, FLORIDA





Eglin Air Force Base (AFB) is located along the Emerald Coast and encompasses 464,000 acres of land and 120,000 square miles of water ranges. Of that, more than 250,000 acres are open for compatible-use outdoor recreation to 11,000 military personnel, 9,500 civilian employees, 57,000 family members and retirees, and the public. Eglin is home to the 96th Test Wing (TW) and is responsible for the development, acquisition, testing, deployment, and sustainment of all air-delivered conventional weapons. The TW and its 50 associate units accomplish their missions through a symbiotic relationship with 106 rare and endangered plant and animal species found in 34 distinct ecosystems. Eglin's Natural Resources Team (NRT) comprises a Wildlife Element and a Forestry Element who work for the Environmental Management Branch. Integrated with these employees are four members of the Eglin Wildland Fire Module who report to the Air Force Wildland Fire Branch.

- The NRT entered into a long-term partnership with the Florida Fish and Wildlife Conservation Commission, U.S. Fish and Wildlife Service (USFWS), and Virginia Polytechnic Institute and State University to conserve the reticulated flatwood salamander (RFS) population while maintaining mission sustainability. These efforts restored over 21 acres (23 percent of the total historically occupied RFS breeding habitat) and eliminated feral hog damage on an additional 140 acres of habitat. In Fiscal Year (FY) 2019-2020, the NRT released RFS eggs and larvae into two unoccupied breeding wetlands. Subadult RFS were re-captured several weeks later outside both breeding wetlands, demonstrating the effectiveness of species reintroduction.
- The NRT developed a four-pronged approach to gopher tortoise conservation. To protect the USFWS Federal candidate species, Eglin will (1) consult with USFWS on all mission activities that may affect the species; (2) establish an installation-specific species recovery goal; (3) re-establish installation populations that do not conflict with mission activity; and (4) conserve the species to help influence the final listing determination in 2023. Through an FY 2020

- Memorandum of Agreement with the Florida Fish and Wildlife Conservation Commission and Florida Fish and Wildlife Foundation, Eglin became the primary recipient site for gopher tortoise populations displaced by alternative energy production across Florida. During FY 2019-2020, over 2,300 gopher tortoises were moved to the installation. Eglin's NRT is on track to reach its goal of 6,000 tortoises by 2023.
- Eglin is home to the largest prescribed fire program in the Air Force. Eglin established an ambitious goal to prescribe burn 90,000 acres annually across the Eglin reservation to mitigate wildfire and bolster Endangered Species Act compliance. Eglin accomplishes this task through a partnership between the NRT and the Air Force Wildland Fire Branch Eglin Wildland Support Module. During FY 2019-2020, the NRT conducted 162 prescribed burns across 153,577 acres, making Eglin one of the top five most productive prescribed fire programs in the United States across all Federal agencies. Despite shutdowns to prescribed fire activity due to COVID-19 in Spring FY 2020, the NRT completed 56 prescribed burns over 56,605 acres in FY 2020 while following all COVID-19 mitigation protocols.



The NRT tags a gopher tortoise by drilling holes on the corners of its shell before releasing it into its new home deep within the base's range. The team released approximately 250 tortoises into a 100-acre environment after the turtles' rescue from urban development at their previous home in South Florida. Increasing gopher tortoise populations on base could prevent USFWS from listing the species as threatened or endangered.



Mr. Hollister Hurt, Eglin NRT forestry technician and wildland fire specialist, monitors the progress of a fire set for a prescribed burn at White Point, an 85-acre recreation area on the Choctawhatchee Bay.

# MARINE CORPS AIR STATION CAMP PENDLETON, CALIFORNIA

Environmental Quality, Industrial Installation Award



Marine Corps Air Station (MCAS) Camp Pendleton is a full-service air installation that supports rotary- and fixed-wing aircraft. Located entirely within the fence line of sister installation Marine Corps Base Camp Pendleton, MCAS Camp Pendleton is 488 acres of largely developed floodplain in Southern California's San Diego County. The air station is protected by a 14,500-foot levee and 2,300-foot floodwall to safeguard the air station and aircraft from the Santa Margarita River during flood events. The mission of MCAS Camp Pendleton is to maintain and operate air station facilities and property, providing support and services that enable I Marine Expeditionary Force, tenant units, and visiting units to maintain and enhance their mission capability and combat readiness. MCAS Camp Pendleton's Environmental Department maintains the vital balance between mission accomplishment and protecting human health and the environment. Although small, comprising eight permanent staff members, the MCAS Camp Pendleton Environmental Department adeptly meets ever-changing regulatory demands.

- MCAS Camp Pendleton partnered with the Carlsbad Fish and Wildlife Office (CFWO) to remove vegetation obstructions in the runway clear zone. The vegetation obstructions violated DoD's Airfield and Heliport Planning and Design manual and posed a significant safety concern to pilots and aircrew operating at MCAS Camp Pendleton. In 2014, the project was estimated to cost \$20 million, which was too costly. In August 2019, the MCAS Camp Pendleton Environmental Department worked with CFWO to re-scope the project and conduct a new, streamlined National Environmental Policy Act (NEPA) Environmental Assessment. Collaboration with CFWO decreased the habitat mitigation requirement, drastically reducing the project price to \$7.8 million.
- MCAS Camp Pendleton implemented several pollution prevention initiatives to minimize the potential impacts of hazardous materials (HAZMAT) and hazardous wastes. In FY 2019-2020, MCAS Camp Pendleton used over 380,000 recycled red rags for HAZMAT spot cleanups that staff
- members could launder and reuse, rather than disposable wipes. In addition, the Environmental Department recycled nearly 30,000 gallons of jet propellant and over 11,000 gallons of used oils. Together, the pollution prevention initiatives saved MCAS Camp Pendleton nearly \$2 million. In addition to providing cost savings, these efforts reduced the amount of HAZMAT used through the FYs, drastically decreasing the risk of spills or releases.
- The Comprehensive Environmental Training and Education Program (CETEP) ensures that all personnel understand the materials they work with, are certified to handle HAZMAT, and receive training in First Responder Operations. In FY 2019-2020, the CETEP trained 455 HAZMAT handlers and first responders and trained 1,800 personnel in Environmental Awareness. The program ensures there is a spill containment and rapid response capability at every squadron, which protects human health and the environment.



An AH-1Z Viper flies over the riparian scrub in the MCAS Camp Pendleton Runway Clear Zone. MCAS Camp Pendleton partnered with CFWO to reach a mutually beneficial solution: remove the hazards on the air station and restore similar habitat in the local community.



MCAS Camp Pendleton CETEP students don protective gear to exercise First Responder Operations. Working with HAZMAT daily during the maintenance of the aircraft aboard the air station, Marine Aircraft Group 39 personnel require extensive training to ensure the safe handling of HAZMAT and a rapid response to spills that could threaten human health or the environment.

# YOKOTA AIR BASE, JAPAN

Environmental Quality, Overseas Installation Award



Yokota Air Base (AB) is the headquarters for the 5th Air Force, home of the 374th Airlift Wing. The 374th Airlift Wing executes rapid global mobility through agile airlift operations across the Indo-Asia-Pacific region. It is responsible to the 5th Air Force Commander for C-130J, UH-1N, and C-12J operations, including tactical air-land, airdrop, aeromedical, and distinguished visitor airlift. As the primary Western Pacific airlift hub for peacetime and contingency operations, the Wing provides airlift for the movement of passengers, cargo, and mail to all DoD agencies in the Pacific area of responsibility and provides transport for people and equipment throughout the Kanto Plain and the Tokyo metropolitan area. The 374th Airlift Wing comprises four groups, each of which manages several of the installation's 17 squadrons. More than 3,500 military members and American and Japanese civilian employees make up the installation's workforce, supporting 32 tenant units and a base populace of more than 12,000. The Wing includes the 36th Airlift Squadron, which flies the C-130J Hercules, and the 459th Airlift Squadron, which flies UH-1N helicopters and the C-12J Huron. Yokota AB is located on the island of Honshu, Japan, approximately 28 miles northwest of Tokyo. The base is surrounded by densely populated urban areas. It occupies 1,750 acres of land and lies within the political boundaries of five municipalities. Except for approximately 15 acres of natural habitat at the extreme southern

During FY 2019-2020, Yokota AB managed 13 programs with 9 members and a \$2 million budget. In addition, it supported a total of 32 units and 18 geographically separate units within a \$9 billion infrastructure. To reduce one-time shop ramp-ups for inspections, the installation employed a new environmental inspection process. By performing more frequent inspections spread throughout the year, the team created a smoother and more balanced annual workload. In FY 2020, Yokota AB conducted 174 environmental inspections and identified or corrected 17 out of 19 significant discrepancies, which increased environmental compliance by 90 percent.

boundary of the installation, the entirety of Yokota AB has been urbanized.

- Yokota AB hosted quarterly Environmental Management System Cross-Functional Team meetings, coordinated with 33 squadrons, and shared information with wing leadership. As a result, the installation fully conformed with International Organization for Standardization 14001 requirements. Also, Yokota AB fostered a community outreach program and completed 86 bilingual environmental awareness briefings for 2,600 Yokota AB military and civilian personnel. Furthermore, 80 percent of the flight attended advanced training, attained 10 new environmental certifications, and had no significant negative findings in unit effectiveness inspections.
- Force, and the Government of Japan collaborated to launch a \$167 million Energy Savings Performance Contract (ESPC) and leveraged 22-year cost shares. This ESPC decreased energy and utility costs by \$15 million per year. In addition, a revamped flood light project upgraded 27 light poles with 196 light-emitting diode ramp lights. This project significantly increased visibility while slashing energy costs \$65,000 each year. Also, the installation's approach to managing heating, ventilation, and air conditioning and light use is on track to save \$30 million and 11,000 British thermal units annually.
- Yokota AB championed a joint Earth Day event that included the planting of a memorial weeping cherry tree with the Japan Air Self-Defense Force. The installation also hosted six ecological tours at Tama Hills, a recreation area in Inagi, Japan, which serves Yokota and nearby installations. The tours helped showcase the Air Force's conservation policy and efforts to an audience of 150 Japanese citizens along with installation service members.



U.S. civilians, U.S. military personnel, and Japan Air Self-Defense Force personnel pick up litter on the streets bordering Yokota AB during an annual Earth Day community clean up event.



Mr. Yoshitaka Yamaguchi leads one of six ecological tours held at Tama Hills to demonstrate the Air Force's conservation policy and the U.S. Forces Japan environmental engagement strategy.

## U.S. ARMY GARRISON FORT POLK, LOUISIANA

Sustainability, Non-Industrial Installation Award



Located in the dense woodlands of West Central Louisiana and encompassing over 240,000 acres, Fort Polk is home to the Joint Readiness Training Center (JRTC), the Army's only Combat Training Center that also deploys combat units. Fort Polk's mission is "to train Soldiers and when ordered, deploy those Soldiers worldwide." The JRTC and Fort Polk are home to one brigade combat team and four separate, deployable combat battalions, with additional support units and organizations. Approximately 43,649 soldiers, civilians, and family members live and work at the JRTC and Fort Polk. In addition, more than 67,000 military retirees live in the five parishes that surround the JRTC and Fort Polk. Fort Polk implements sustainability practices and principles, which enhance training opportunities, ensure long-term availability of training areas, and improve the quality of life for military and civilian personnel and their families.

- Fort Polk's Energy and Water programs use advanced technologies to reduce energy and water use; increase the installation's resilience through renewable onsite resources; and reduce greenhouse gas emissions from transportation, facilities, and construction. Focusing on energy resilience, efficiency, awareness, and ethos, Fort Polk invested \$13 million in advanced technology projects during FY 2019-2020 to expand upon micro grids, energy storage, electric vehicles, building control integration, and infrastructure improvements.
- Fort Polk continually works to integrate sustainability practices into master planning and has participated in several Area Development Plans workshops. Fort Polk renovated the Bayne-Jones Army Community Hospital medical center with aesthetic designs that reduce heating and cooling costs by 20 percent. The building also features efficient low-emissivity glass, heat-resistant roofing, floors made from recycled materials and renewable resources, and low-volatile organic compound paint. In addition, Fort Polk has 18 projects registered with the U.S. Green Buildings Council and requires all new building construction to meet Leadership in Energy and Environmental Design requirements.
- Fort Polk implemented resource-efficient management practices that increase the quantity of material recycled.

- The environmental staff works with installation organizations to increase the quantity of solid waste diverted from landfills through recycling and reuse. In addition, environmental staff members train installation personnel to become Recycling Coordinators who then serve as liaisons to the environmental staff on recycling issues. In FY 2019-2020, Fort Polk diverted nearly 16,000 tons of waste from disposal in state landfills. Fort Polk also created a sustainable use program for disposed green waste. The Christmas Tree Recycling Program staged trees throughout open-wooded spaces for use as quail habitat and aquatic habitat. This initiative successfully diverted nearly 3,000 pounds of green waste from entering the landfill.
- Fort Polk directs a multimedia marketing and environmental education outreach program that includes Facebook, videos, mascots, skits, and events that effectively communicate environmental sustainability awareness. Installation leadership participates in the environmental outreach events to bring awareness and encourage service members and the public to participate in the environmental community. In FY 2019-2020, the combined training and outreach efforts reached over 8,200 military, family members, and civilian personnel.



Fort Polk's Sustainability Program supports Army missions while protecting natural resources. Fort Polk implements sustainability practices and principles to enhance training opportunities and ensure long-term availability of training areas. Sustainability practices have reduced lifecycle costs, increased unit performance, and enabled cost avoidance, which directly supports the installation's training mission.



Each year the JRTC and Fort Polk celebrate Earth Day. Qualified Recycling Program proceeds helped purchase catfish to stock ponds for the annual Youth Catfish Derby conducted during Operation Earth Friendly. Operation Earth Friendly is a week-long event that highlights the installation's commitment to environmental stewardship.

# NAVAL SUPPLY SYSTEMS COMMAND, WEAPON SYSTEMS SUPPORT, PENNSYLVANIA

NAVAL SUPPLY SYSTEMS COMMAND WEAPON SYSTEMS SUPPORT

Sustainability, Individual/Team Award

Naval Supply Systems Command, Weapon Systems Support (NAVSUP WSS) provides supplies, services, and quality-of-life support to the Navy and Joint Warfighter. It exercises centralized control of more than 375,000 different line items of repair parts, components, and assemblies providing global logistics support. Through a research and development project funded by the Navy's Environmental Sustainability Development to Integration program, NAVSUP WSS formed a multi-functional team to develop the "Navy Enterprise Wide HAZMAT Standardization and Minimization of General Use Consumables" project. Through this project, the team conducted pilots to demonstrate that U.S. Navy installations could increase the purchase of more environmentally friendly HAZMAT substitutions using new tools and procedures. The team consisted of representatives from Naval Facilities Engineering Systems Command (NAVFAC) Environmental, NAVFAC Safety, NAVFAC Engineering and Expeditionary Warfare Center, Bureau of Medicine and Surgery, Commander Navy Installation Command Safety, and NAVSUP Fleet Logistics Centers as well as NAVSUP WSS. The project demonstrated a process that standardized procurement of consumable general use HAZMAT and tools that guided end users, supply personnel, safety, and environmental service providers in the selection of environmentally preferred products at shore-based facilities.

- The NAVSUP WSS team created a new fast-track ordering process using the newly fielded WSS Hazardous Material Management Tool. This automated approvals of the purchase of sustainable products from the Navy-wide Green Authorized Use List consisting of sustainable products that anyone at any Navy base can order. The team also published new standard operating procedures and technical guidance, which provided instructions on how to fast-track product orders. One hundred percent of end-of-pilot survey respondents said that the new ordering system was more efficient than the normal ordering process.
- The team identified existing Safer Choice products in the Navy supply system and added 118 more, increasing the number of Safer Choice products available for purchase by over 300 percent. The team conducted market research and published a list of local vendors that carried specific Safer Choice items and created a cleaner category/Safer Choice crosswalk quick-reference guide. This guide let users know what Safer Choice cleaners were available for their needs and where to purchase them.
- The team's Clean with Green community outreach program, which informed people about the benefits of purchasing Safer Choice cleaners, potentially reached 34,000 service members, their families, and civilians on the two pilot sites. NAVSUP WSS presented on the pilot and benefits of Safer Choice products to a national and international audience at the Navy Ashore Hazardous Material Managers Annual Meeting in November 2019 and the DoD Joint Safety and Environmental Professional Development Symposium in April 2020. These two briefings reached an audience of over 150 active duty and Navy civilians in the HAZMAT community.
- The U.S. Environmental Protection Agency (EPA) awarded NAVSUP WSS its Safer Choice Partner of the Year honor for advancing the use of safer and more sustainable cleaning chemicals.



(photo left) NAVSUP WSS Team. Top Row L-R: Andrea Finely, Todd Heintzelman, Renata Laing. Middle Row L-R: Dave Sapp, Nino Giambrone, Nil Sivakumar. Bottom Row L-R: Shane Dreese, James Pilkington, Linda Christensen.

(photo right) Mr. Todd W. Heintzelman, Environmental Protection Specialist, receives the EPA's Safer Choice Partner of the Year 2020 Award on behalf of NAVSUP WSS.



### SHAW AIR FORCE BASE, SOUTH CAROLINA

Environmental Restoration, Installation Award



Shaw AFB, located 7 miles west of Sumter and 36 miles east of Columbia, encompasses approximately 3,326 acres and is surrounded by a semi-rural area consisting of wooded and agricultural lands. Shaw AFB operates two satellite properties, Poinsett Electronic Combat Range, a 12,521-acre parcel 7.5 miles south of the base, and Wateree Recreation Area, a 26-acre parcel 30 miles north of the base. Shaw AFB is home to the 20th Fighter Wing, the Air Force's largest F-16 "Fighting Falcon" combat wing, whose mission is to provide combat-ready airpower and airmen. The AFB provides essential services to the surrounding community through a variety of activities, facilities, and programs. The base supports more than 8,500 military and civilian employees, 11,000 family members on base, and 15,000 military members and retirees off base, providing a \$1.8 billion total economic impact annually in South Carolina. The Remedial Project Manager and a full-time contractor oversee the Shaw AFB Environmental Restoration Program, with support from project teams from the Air Force Civil Engineer Center, U.S. Army Corps of Engineers, South Carolina Department of Health and Environmental Control, base leaders, and subject-matter experts. The program's primary focus is to clean up hazardous wastes from past aircraft operation and maintenance activities that have resulted in soil and groundwater contamination.

- Shaw AFB was one of the first bases to complete two years of intensive Installation Strategic Acquisition Planning. This new process resulted in the early award of a multi-year \$16.3 million Optimized Remediation Contract in August 2020, which replaced three expiring contracts totaling \$32 million. The 3 performance-based restoration projects achieved a record 10 site closeouts, 2 Response Completes milestones, and 11 optimized remedies. Six sites achieved dramatic reductions in groundwater plume footprints, giving them the opportunity to achieve Response Complete milestones under the new contract.
- The Environmental Restoration Program expanded a 1997 10-extraction well pump-and-treat system that treats a 2-mile-long by 1-mile-wide chlorinated solvent plume that has migrated off base. The team increased the number of extraction wells to 23, installed a second air stripper to double treatment capacity to 1,200 gallons per minute, drilled 38 new re-injection wells, and centralized the deep groundwater treatment of 3 large chlorinated solvent plumes, covering nearly one-third of the base's total footprint. The re-injection capabilities return more than 850,000 gallons of clean treated water back into the deep groundwater source and force contaminated water closer to a down gradient extraction well. This system is projected to reduce the 180-year estimated cleanup period by 50 to 75 percent.
- Cleanup period by 50 to 75 percent.

  Welcome to the 20th Fighter Wing
  PROVIDING COMBAT READY AIRPOWER TO MEET ANY CHALLENGE, ANY TIME, ANYWHERE

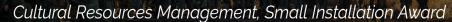
Shaw AFB is home to the 20th Fighter Wing, the Air Force's largest F-16 "Fighting Falcon" combat wing, whose mission is to provide combat-ready airpower and airmen.

- The Environmental Restoration Program uses innovative technology to address challenging cleanups. The base's main pump, treat, and inject system could not contain a deep trichloroethene (TCE) and tetrachloroethene (PCE) plume, and it migrated beyond the base boundary. The program conducted a demonstration project using a BOS 100® treatment barrier, a Trap & Treat® in situ remediation technology designed to degrade chlorinated solvents. BOS 100 aqueous slurries were injected into 130 temporary injection points, proactively intercepting and treating the TCE/PCE plume's leading edge to prevent further uncontrolled impacts to lands down-gradient from the base. The first semi-annual performance monitoring report recorded an average 38-percent reduction in TCE/PCE levels passing through the 20-year barrier.
- The Environmental Restoration Program developed a solution to clean up a contaminant plume beneath an airfield where aircraft weapons systems are parked, without affecting mission readiness or compromising the pavement structure. The team installed 2 3-inch high-density polyethylene injection pipes, horizontally drilled at a record 1,919 feet and 2,069 feet in length. The horizontal pipes inject atmospheric air for treatment just below the plume and 60 feet below the surface. This technology will reduce cleanup time by a decade without impacting flight operations.



Department of the Air Force environmental restoration contractors use a geoprobe rotary sonic drill rig to drill a small diameter pipe into the ground at Sans Souci Farm in Sumter, South Carolina, March 7, 2019. The pipes are conduits for the precise injection of the BOS 100 product.

### **NAVAL BASE POINT LOMA, CALIFORNIA**





Naval Base Point Loma (NBPL) is in San Diego, California, and consists of three main campuses: NBPL Peninsula, NBPL Harbor Drive, and NBPL Old Town, as well as other areas located throughout San Diego County. NBPL supports 70 U.S. Pacific Fleet afloat and shore-based tenant commands headquartered on the base. The base is home to a high density of historic and prehistoric cultural resources. NBPL has surveyed and evaluated all buildings, structures, and objects on the installation to determine their eligibility for listing in the National Register of Historic Places (NRHP). In addition, NBPL has completed archaeological surveys of 100 percent of the installation's main cantonment. The base contains 4 individually NRHP-eligible properties, 22 archaeological sites, and 2 historic districts with 68 total contributors.

- The NBPL Cultural Resources Management (CRM) program worked with NBPL's Environmental Division, facilities, and security to complete a long-delayed hallmark project: rehabilitating the Post Exchange and Gymnasium (Building 158), a premier historic structure on the base. Through delegated authority from a Programmatic Agreement between NBPL, the California State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation, facilities planners and CRM program staff designed a plan to update the building in compliance with the original 1990s SHPO concurrence for no adverse effect to historic properties. The updated design was consistent with historic preservation guidelines without sacrificing modern requirements or occupant needs. Contractors, historic building architects, design managers, and construction managers worked closely with CRM program staff to retain the building's historic character and features while providing a modern workspace for the new occupant, NBPL's Security Department.
- NBPL supported San Diego Family Housing (SDFH), the Navy's Public-Private Venture partner in Navy Region Southwest, in building a tot lot for the Admiral Hartman Military Family Housing site located in a Late Prehistoric Kumeyaay Village known as La Rinconada De Jamo. NBPL archaeologist and CRM program manager Jessica Porter-Rodriguez assisted SDFH with

- developing a Monitoring and Discovery Plan and necessary tribal consultation. The NBPL CRM program served as the interface between SDFH, Installation Environmental and Command staff, and the tribes that participated in consultation. The CRM program also provided required documentation and monitoring plan templates, and drafted consultation correspondence to secure compliance with Section 106 of the National Historic Preservation Act (NHPA). As a result, the tot lot project successfully navigated the execution phase and broke ground in October 2020.
- The NBPL CRM program facilitated the adaptive reuse of two historic shore batteries as a training range for Explosive Ordnance Disposal (EOD) Training and Evaluation Unit One (EODTEU-1). The adaptive reuse of historic structures made it possible to train on detection, identification, and safe rendering, and to create conditions warfighters might encounter in the field, such as laboratories, equipment repair shops, caves, and villages. Working with NBPL CRM program specialists, EODTEU-1 contracted with a team of design experts to convert Battery Whistler (built in 1916) into an Afghan village, and to convert the interior of Battery Woodward (built in 1943) into simulated caves. These historic structures became a premier training range for EOD personnel prior to deployment.



NBPL's Building 158 circa 1912. Built in 1908 as the Post Exchange and Gymnasium for Fort Rosecrans, this Colonial Revival brick building continues to serve the Navy's mission at NBPL.



Admiral Hartman Military Family Housing tot lot construction October 2020. The CRM program facilitated the development of new recreational facilities through archaeological survey and monitoring at the Admiral Hartman Military Family Housing site.

# MR. THOMAS E. PENDERS, PATRICK SPACE FORCE BASE, FLORIDA

Cultural Resources Management, Individual/Team Award



Mr. Thomas E. Penders is the Cultural Resources Manager and Archaeologist for the 45th Space Wing. He supports mission-related activities at Cape Canaveral Space Force Station, Patrick Space Force Base, Malabar Transmitter Annex, and the Jonathan Dickinson Missile Tracking Annex. These installations cover over 19,000 acres and represent the most significant aspects of the U.S. space program's history and future. Mr. Penders is the manager for more than 500 cultural resources, including prehistoric and historical archaeological sites, missile sites, launch complexes, the Man in Space National Historic Landmark (NHL) District, World War II resources, cemeteries, a lighthouse, and historic missiles. He regularly conducts consultations with Federally recognized tribes; is significantly involved in NEPA planning activities, consultations, and documentation; and consistently works five years ahead of proposed construction projects to resolve cultural issues so they do not delay project designs or construction.

- Mr. Penders led six archaeological surveys, saving the 45th Space Wing an estimated \$480,000. His surveys paved the way for the use of lands for the development of critical defense and launch programs identified in the 45th Space Wing General Plan while complying with the NHPA and Archaeological Resources Protection Act.
- Mr. Penders was the first person to obtain approval from the Florida State Historic Preservation Office for laser scanning as an improved technique for Historic American Building Survey/Historic American Engineering Record recordation. To maximize available funds and efficiently comply with the NHPA, Mr. Penders initiated a six-year program to conduct high-definition, three-dimensional laser scanning of six NHL launch complexes as well as launch-related facilities slated for demolition or reuse. The scanning surveys are the most advanced technology available to preserve history, and they saved the Air Force \$80,000 per launch complex compared to the traditional recordation methods.
- Mr. Penders wrote the 45th Space Wing's Integrated Cultural Resources Management Plan (ICRMP) and conducted all annual reviews. In 2020, he completed the 5-year ICRMP update himself, saving \$85,000 in contract costs.
- Mr. Penders partners with the University of Central Florida Department of Anthropology to enable students to participate in the Cape Canaveral Archaeological Mitigation Project, a 10year plan to assess and report on NRHP-eligible archaeological sites. This partnership allows students to gain experience conducting archaeological surveys, excavations, cemetery documentation, and artifact analysis, and saves the Air Force approximately \$300,000 each year.
- Mr. Penders developed an in-house program to improve eight historic cemeteries at Cape Canaveral Space Force Station that have suffered from years of neglect. He took a multidisciplined approach to mark unmarked graves with permanent grave markers, replace fences, and repair broken markers. His efforts saved the Air Force \$100,000 and were greatly appreciated by the families of those buried in the cemeteries.



Mr. Thomas E. Penders, Cultural Resources Manager for the 45th Space Wing.





These before and after images of Harold W. Butler's grave show the dramatic effects of proper cleaning techniques.

#### **HONORABLE MENTIONS**

#### NATURAL RESOURCES CONSERVATION

Large Installation

- Fort Stewart/Hunter Army Airfield, Georgia
- Naval Weapons Station Yorktown, Virginia

#### **ENVIRONMENTAL QUALITY**

Industrial Installation

Naval Station Everett, Washington

#### **ENVIRONMENTAL QUALITY**

Overseas Installation

Naval Support Activity, Bahrain

#### **SUSTAINABILITY**

Non-Industrial Installation

- Naval Base San Diego, California
- Marine Corps Air Ground Combat Center, Twentynine Palms, California

#### **SUSTAINABILITY**

Individual/Team

- Sustainability Team, Minnesota Army National Guard
- Climate Change Adaptation and Resilience Team, Marine Corps Recruit Depot Parris Island, South Carolina
- Environmental Element Sustainability Team, Whiteman Air Force Base, Missouri
- X-Band Radar Liquid Conditioning & Circulating System Modernization Team, Redstone Arsenal, Alabama

#### **ENVIRONMENTAL RESTORATION**

Installation

- Formerly Used Defense Site, Cape Prominence Aircraft Warning Service Station, U.S. Army Corps of Engineers, Alaska District
- Naval Air Station Joint Reserve Base Willow Grove, Pennsylvania
- Marine Corps Base Camp Lejeune, North Carolina

#### **CULTURAL RESOURCES MANAGEMENT**

Small Installation

- Camp Umatilla, Oregon Army National Guard
- Marine Corps Logistics Base Barstow, California
- Schriever Air Force Base, Colorado

#### **CULTURAL RESOURCES MANAGEMENT**

Individual/Team

- Cultural Resources Management Team, Fort Stewart/Hunter Army Airfield, Georgia
- Guam Cultural Resources Team, Marine Corps Base Camp Blaz
- Cultural Resources Management Team, Marine Corps Base Hawaii

#### **JUDGES**

Volunteers from Federal and state agencies, private industries, academia, and non-governmental organizations served as judges for the 2021 Secretary of Defense **Environmental Awards.** 

#### L. Peter Boice

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Enterprise Risk and Sustainability Director, Lockheed Martin

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Chair, Cherry Hill Environmental Board

#### Philip W. Grone

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National Military Lands Conservation Coordinator, Fish and Aquatic Conservation, U.S. Fish and Wildlife Service

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Adjunct Professor, University of California, Riverside

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Federal Preservation Officer, U.S. Department of Veterans Affairs

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Director, Interstate Technology Regulatory Council

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#### Bruce A. Stein, Ph.D.

Chief Scientist and Associate Vice President, National Wildlife Federation

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#### Mervyn L. Tano

President, International Institute for Indigenous Resource Management

#### **Denise Thaller**

Director, Environmental Management Division, National Aeronautics and Space Administration

#### Tobin N. Tracey, AIA

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Principal, Widell Preservation Services, LLC

#### Calvin F. Williams

Assistant Administrator, Strategic Infrastructure, National Aeronautics and Space Administration Headquarters

#### Ken Zarker

Manager, Pollution Prevention and Regulatory Assistance Section, Department of Ecology, Washington State University

#### **PAST WINNERS**

#### **Natural Resources Conservation**

- 2020 Fort Custer Training Center, Michigan Army National Guard
- 2020 Conservation-Training Enhancement Team, Camp Ripley, Minnesota Army National Guard
- 2019 Eglin Air Force Base, Florida
- 2018 Hawaii Army National Guard
- 2018 Natural Resources Conservation Team, Naval Base Ventura County, California
- 2017 Camp Ripley, Minnesota Army National Guard
- 2016 Camp Dawson Army Training Site, West Virginia Army National Guard
- 2016 Fort McCoy Natural Resources Branch, Wisconsin
- 2015 Camp Blanding Joint Training Center, Florida Army National Guard Florida
- 2014 Marine Corps Base Hawaii
- 2014 Eglin Air Force Base, Natural Resources Team, Florida
- 2013 Naval Base Coronado, California
- 2012 U.S. Army Garrison Hawaii, Oahu Army Natural Resource Program Team
- 2012 Marine Corps Base Hawaii
- 2011 Eglin Air Force Base, Florida
- 2010 Fort Custer Training Center, Michigan Army National Guard
- 2010 Mr. Stephen M. Seiber, Eglin Air Force Base, Florida
- 2009 Camp Ripley Maneuver and Training Center, Minnesota
- 2008 Naval Weapons Station, Seal Beach, California
- 2008 Fort Indiantown Gap Training Center, Pennsylvania Army National Guard
- 2007 Arnold Air Force Base. Tennessee
- 2006 Minnesota Army National Guard Natural Resources Conservation Team, Camp Ripley
- 2006 Marine Corps Base Hawaii
- 2005 Fort Drum, New York
- 2004 Columbus Air Force Base, Mississippi
- 2003 U.S. Army Intelligence Center and Fort Huachuca, Arizona
- 2002 U.S. Army Transportation Center, Fort Eustis and Fort Story, Virginia
- 2001 Naval Weapons Station Charleston, South Carolina
- 2000 U.S. Army Training Center & Fort Jackson, South
- 2000 Hawaii Army National Guard
- 1999 Camp Ripley, Army National Guard, Minnesota
- 1999 U.S. Army Garrison, Fort Belvoir, Virginia
- 1998 Fort Stewart/Hunter Army Airfield, Georgia
- 1998 Naval Submarine Base Kings Bay, Georgia
- 1997 Marine Corps Base Camp Pendleton, California
- 1997 Naval Surface Warfare Center, Indian Head, Maryland
- 1996 Tyndall Air Force Base, Florida
- 1996 Marine Corps Base Hawaii
- 1995 Naval Air Warfare Center, Patuxent River, Maryland
- 1994 Eglin Air Force Base, Florida
- 1993 Twin Cities Army Ammunition Plant, Minnesota
- 1992 Marine Corps Base Camp Lejeune, North Carolina
- 1991 Fort Belvoir, Virginia
- 1990 Fort Sill, Oklahoma
- 1989 F.E. Warren Air Force Base, Wyoming
- 1988 Goldwater Air Force Range, Arizona
- 1987 New Boston Air Force Station, New York

- 1986 Beale Air Force Base, California
- 1985 Robins Air Force Base, Georgia
- 1984 Fort Huachuca, Arizona
- 1983 Indian Island Annex, Keyport, Naval Engineering Station, Washington
- 1982 Fort McCoy, Wisconsin
- 1981 Tobyhanna Army Depot, Pennsylvania
- 1980 Fort Huachuca, Arizona
- 1979 Naval Air Station Chase Field, Texas
- 1978 Fort Sill, Oklahoma
- 1977 Griffiss Air Force Base, New York
- 1976 Marine Corps Base Camp Lejeune, North Carolina
- 1975 Barksdale Air Force Base, Louisiana
- 1974 Fort Campbell, Kentucky
- 1973 Marine Corps Base Camp Lejeune, North Carolina
- 1972 Marine Corps Base Camp Pendleton, California
- Tyndall Air Force Base, Florida
- Camp Pickett, Virginia
- Marine Corps Base Camp Lejeune, North Carolina
- 1968 Red River Army Depot, Texas
- 1967 Fort Rucker, Alabama
- 1966 Naval Weapons Station Yorktown, Virginia
- 1965 Tyndall Air Force Base, Florida
- 1964 Eglin Air Force Base, Florida
- 1963 Fort Knox, Kentucky

#### **Environmental Quality**

- 2020 Marine Corps Air Station Miramar, California
- 2020 Environmental Information Management System Team, U.S. Fleet Forces Command, Virginia
- 2019 Wisconsin Army National Guard
- 2019 Marine Corps Base Camp Smedley D. Butler, Okinawa, Japan
- 2018 Fort Hood, Texas
- 2018 Mr. Frederick A. Javier, 1st Special Operations Civil Engineer Squadron, Hurlburt Field, Florida
- Marine Corps Logistics Base Barstow, California
- 2017 U.S. Army Garrison Bavaria, Germany
- 2016 Marine Corps Air Ground Combat Center Twentynine Palms, California
- 2016 Eglin Air Force Base Environmental Quality Team, Florida
- 2015 Robins Air Force Base, Georgia
- 2015 Marine Corps Base Camp Smedley D. Butler, Japan
- 2014 Fort Hood, Texas
- 2014 Environmental Quality Team, Minnesota Army National Guard
- 2013 78th Civil Engineer Group, Robins Air Force Base, Georgia
- 2013 Marine Corps Base Camp Smedley D. Butler, Japan
- 2012 Fort Hood, Texas
- 2012 Fort Hood Recycle Team, Texas, and Naval Supply Fleet Logistics Center, Pearl Harbor, Hawaii (tie)
- U.S. Army Garrison Grafenwoehr, Germany
- 2011 Defense Supply Center, Richmond, Virginia
- 2010 Marine Corps Base Hawaii
- 2010 Mr. Awni M. Almasri, Naval Facilities Engineering Command Europe Africa Southwest Asia
- 2009 Environmental Management Division, Hill Air Force Base, Utah
- 2009 U.S. Army Garrison Bamberg, Germany
- 2008 Naval Air Engineering Station Lakehurst, New
- 2008 Hill Air Force Base, Utah

- 2007 Tinker Air Force Base, Oklahoma
- 2007 Marine Corps Base Camp Smedley D. Butler, Japan
- 2006 Team Dyess, Dyess Air Force Base, Texas
- 2006 Fort Campbell, Kentucky
- 2005 Naval Air Depot Cherry Point, North Carolina
- 2005 Misawa Air Base, Japan
- 2004 U.S. Naval Support Activity Bahrain
- 2003 Tinker Air Force Base, Oklahoma
- 2003 Marine Corps Base Camp Smedley D. Butler, Okinawa, Japan
- 2002 Air Armament Center, Eglin Air Force Base, Florida
- 2001 Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility, Hawaii
- 2001 Marine Corps Base Camp Butler, Okinawa, Japan
- 2000 Patrick Air Force Base, Florida
- 2000 Marine Corps Base Hawaii
- 1999 Indian Head Division, Naval Surface Warfare Center, Maryland
- Luke Air Force Base, Arizona
- 1998 Naval Aviation Depot North Island, California
- 1998 Fort Sill, Oklahoma
- 1997 Naval Surface Warfare Center, Indian Head, Maryland
- 1997 Luke Air Force Base, Arizona
- 1996 Eglin Air Force Base, Florida
- 1996 Hurlburt Field, Florida
- 1995 Robins Air Force Base, Georgia
- 1994 Fort Campbell, Kentucky
- 1993 Hill Air Force Base, Utah
- 1992 Naval Air Station Patuxent River, Maryland
- 1991 Tinker Air Force Base, Oklahoma
- 1990 McChord Air Force Base, Washington
- 1989 Tooele Army Depot, Utah
- 1989 Vandenberg Air Force Base, California
- 1987 Pine Bluff Arsenal, Arkansas
- 1986 Fort Lewis, Washington
- 1985 Marine Corps Air Station Kaneohe Bay, Hawaii
- 1984 Luke Air Force Base, Arizona
- 1983 Fort McClellan, Alabama
- 1982 Hill Air Force Base, Utah
- 1981 Marine Corps Base Camp Lejeune, North Carolina
- 1980 McClellan Air Force Base, California
- Fort Sill, Oklahoma
- 1978 Marine Corps Base Camp Pendleton, California
- Marine Corps Air Station Kaneohe Bay, Hawaii
- 1976 Naval Air Training Center Patuxent River, Maryland
- 1975 Eglin Air Force Base, Florida
- 1974 Fort Sill, Oklahoma

#### **Sustainability (formerly Pollution** Prevention)

- 2020 Naval Base Kitsap, Washington
- 2019 Marine Corps Air Station Miramar, California
- 2019 East Campus Reclaimed Water Team, National
- Security Agency, Fort Meade, Maryland 2018 Marine Corps Logistics Base Barstow, California
- 2017 Eglin Air Force Base, Florida
- 2017 Mr. Jeffery D. Schone, Luke Air Force Base, Arizona
- 2016 Marine Corps Support Facility Blount Island, Florida
- 2015 Marine Corps Air Ground Combat Center Twentynine Palms, California
- 2015 Minnesota Army National Guard Sustainability Team, Minnesota

#### **PAST WINNERS**

- 2014 Naval Weapons Station Seal Beach, California
- 2013 673rd Air Base Wing, Joint Base Elmendorf-Richardson, Alaska
- 2013 Ms. Dorenda Coleman, Arizona Army National Guard
- 2012 Scranton Army Ammunition Plant, Pennsylvania
- 2011 Joint Base Lewis-McChord, Washington
- 2011 The Exchange Corporate Sustainability Program, Army and Air Force Exchange Service, Texas
- 2010 Fleet Readiness Center Southwest, California
- 2009 Naval Air Station Whidbey Island, Washington
- 2009 14th Civil Engineer Squadron Pollution Prevention Team, Columbus Air Force Base, Mississippi
- 2008 Robins Air Force Base, Georgia
- 2007 Marine Corps Base Hawaii
- 2007 Pollution Prevention Afloat Team, Naval Sea Systems Command, Washington, DC
- 2006 Tinker Air Force Base, Oklahoma
- 2005 Commander, Navy Region Mid-Atlantic, Norfolk,
- 2004 Robins Air Force Base, Georgia
- 2003 Naval Air Station Whidbey Island, Washington
- 2002 Warner Robins Air Logistics Center, Robins Air Force Base, Georgia
- 2001 U.S. Army Transportation Center and Fort Eustis,
- 2000 Radford Army Ammunition Plant, Virginia
- 2000 HQ III Corps and Fort Hood, Texas
- 1999 Robins Air Force Base, Georgia
- 1999 Marine Corps Base Hawaii
- 1998 Robins Air Force Base, Georgia
- 1998 Fort Carson and Piñon Canyon Maneuver Site, Colorado
- 1997 Corpus Christi Army Depot, Texas
- 1997 Fort Lewis, Washington
- 1996 Robins Air Force Base, Georgia
- 1996 Dyess Air Force Base, Texas
- 1995 Kelly Air Force Base, Texas
- 1995 Naval Construction Battalion Center, Port Hueneme, California
- 1994 Tinker Air Force Base, Oklahoma
- 1993 Navy Aviation Depot, Florida

#### **Environmental Restoration**

- 2020 Camp Edwards, Joint Base Cape Cod, Massachusetts Army National Guard
- 2020 Vieques Environmental Restoration Team, Puerto Rico
- 2019 Naval Base Ventura County, California
- 2018 Vandenberg Air Force Base, California
- 2018 Viegues Environmental Restoration Team, Puerto Rico
- 2017 Travis Air Force Base, California
- 2016 Beale Air Force Base, California
- 2016 Vieques Environmental Restoration Program Team, Puerto Rico
- 2015 Marine Corps Base Camp Lejeune, North Carolina
- 2014 Marine Corps Installation East, Marine Corps Base Camp Lejeune, North Carolina
- 2014 Naval Air Station Cecil Field Base Realignment and Closure Cleanup Team, Florida
- 2013 U.S. Army Garrison Aberdeen Proving Ground, Directorate of Public Works, Maryland

- 2012 Former Mare Island Naval Shipyard, California
- 2012 75th Civil Engineering Group, Hill Air Force Base,
- 2011 Cape Canaveral Air Force Station, Florida
- 2010 Hill Air Force Base Utah
- 2010 Ms. Regina Dixon Butler, Patrick Air Force Base, Florida
- 2009 Defense Depot, Memphis, Tennessee
- 2008 Seymour Johnson Air Force Base, North Carolina
- 2008 Marine Corps Air Station Cherry Point Partnering Team, North Carolina
- 2007 Dover Air Force Base, Delaware
- 2006 Fort Lewis, Washington
- 2006 Pyramid Lake Torpedo and Bombing Range Remediation Project, U.S. Army Corps of Engineers, Sacramento District
- 2005 Naval Facilities Engineering Command Pacific, Hawaii, and Keesler Air Force Base, Mississippi (tie)
- 2004 Tinker Air Force Base, Oklahoma
- 2003 Hill Air Force Base, Utah
- 2002 F.E. Warren Air Force Base, Wyoming
- 2001 Offutt Air Force Base, Nebraska
- 2000 Elmendorf Air Force Base, Alaska
- 1999 Naval Air Engineering Station Lakehurst, New Jersey
- 1998 Riverbank Army Ammunition Plant, California
- 1997 Naval Air Station North Island, San Diego,
- 1996 Naval Air Station Cecil Field, Florida
- 1995 Naval Air Station Whidbey Island, Washington

#### Cultural Resources Management

- 2020 Naval Air Weapons Station China Lake, California
- 2019 Washington Army National Guard
- 2019 Ms. Rita McCarty, Mississippi Army National Guard
- 2018 Camp Ripley, Minnesota Army National Guard
- 2017 Commander, Fleet Activities, Yokosuka, Japan
- Cultural Resources Management Team, Alabama Army National Guard
- 2016 White Sands Missile Range, New Mexico
- 2015 U.S. Army Garrison Picatinny Arsenal, New Jersey
- 2015 Dr. Paul R. Green, U.S. Air Force Civil Engineer Center Virginia
- 2014 Fort Wainwright, Alaska
- 2013 Marine Corps Air Station Beaufort, South Carolina
- 2013 Ms. June Noelani Cleghorn, Marine Corps Base Hawaii
- 2012 30th Space Wing, Vandenberg Air Force Base, California
- 2011 88th Air Base Wing Civil Engineering Directorate, Environmental Branch, Wright-Patterson Air Force Base, Ohio
- Cultural Resources Management Team, Eglin Air Force Base, Florida
- 2010 Camp Guernsey, Wyoming Army National Guard
- 2009 Vandenberg Air Force Base, California
- 2009 Fort Drum Cultural Resources Team, Fort Drum, New York
- 2008 Redstone Arsenal, Alabama
- 2007 Mr. Gary M. O'Donnell, Hickam Air Force Base, Hawaii
- 2007 Fort Drum, New York
- 2006 Naval Air Weapons Station China Lake, California

- 2005 Marine Corps Recruit Depot Parris Island, South Carolina, and 15th Airlift Wing, Hickam Air Force Base, Hawaii (tie)
- 2004 Marine Air Ground Task Force Training Command, Twentynine Palms, California
- 2003 Texas Army National Guard Cultural Resources Management Office, Texas
- 2002 Commander Navy Region Mid-Atlantic, Hampton Roads, Virginia
- 2001 U.S. Army Air Defense Artillery Center and Fort Bliss, Texas
- 2000 Fort Riley, Kansas
- 1999 Vandenberg Air Force Base, California
- 1998 Fort Hood, Texas
- 1996 Fort Carson and Piñon Canyon Maneuver Site, Colorado

#### **Environmental Excellence in Weapon System Acquisition**

- 2020 F-35 Joint Program Office, Wright-Patterson Air Force Base, Ohio
- 2019 Tagnite Technical Working Group, U.S. Army Research Laboratory, Aberdeen Proving Ground, Maryland
- 2018 Combat Rescue Helicopter Program Environment, Safety, and Occupational Health Team, Wright-Patterson Air Force Base, Ohio
- 2017 Chromium-Free Wash Primer Replacement Team, U.S. Army Research Laboratory, Aberdeen Proving Ground, Maryland
- 2016 KC-46 Program Environment, Safety, and Occupational Health Team, Wright-Patterson Air Force Base, Ohio
- 2015 Halon Extinguisher Replacement Program for Aviation Weapon Systems Integrated Product Team, Redstone Arsenal, Alabama
- 2014 Air Force Life Cycle Management Center F-35 Environmental, Safety, and Occupational Health Support Team, Wright-Patterson Air Force Base,
- 2013 Counterfeit Refrigerant Impact Team, Tank Automotive Research, Development and Engineering Center, Michigan
- 2012 Stryker Brigade Combat Team Warren, Michigan
- Sustainable Painting Operations for the Total Army, Aberdeen Proving Ground, Maryland
- 2010 Aeronautical Systems Center Environmental and Occupational Health Team, Wright-Patterson Air Force Base, Ohio
- 2008 Fairchild Air Base, Washington
- 2006 C-17 Pollution Prevention Integrated Product Team, Wright-Patterson Air Force Base, Ohio

#### Special Recognition Environmental **Management Systems Implementation**

2006 Defense Logistics Agency Environmental Management Systems Team





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