



# 2022

Secretary of Defense  
Environmental Awards





Front cover: Oklahoma National Guardsmen move through the desert during a live-fire exercise at Fort Irwin, California.

# FOREWORD



The Department of Defense's (DoD) mission is to provide the military forces needed to deter war and ensure the Nation's security. To fulfill its mission in an increasingly complex security landscape, DoD must address the rising threat of climate change. As directed by President Biden in Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad*, the Department is deploying its full capacity to support a Government-wide approach to combat the climate crisis. DoD continues to incorporate climate considerations at all levels into processes, planning, and strategies including the forthcoming National Defense Strategy.

Strong environmental programs enable the Department to aggressively address the climate crisis. By operating more sustainably, DoD is more logistically agile and ready to respond to increasing climate-related incidents on its installations. Through improving energy efficiency, procuring sustainable goods and services, and tracking performance to enhance program effectiveness, the Department can extend the benefits of its actions well beyond the areas of environment and climate. The Department continues to promote the protection of human health and the environment while preserving operational capability under changing climate conditions. The DoD Components' shared commitment to environmental stewardship helps create a safer, more resilient, and more secure future.

Each year, the Secretary of Defense Environmental Awards formally recognize Service members and civilians across DoD who made significant strides to conserve the Nation's natural and cultural resources; protect human health and the environment; prevent or eliminate pollution at the source; clean up hazardous substances, pollutants or contaminants, and munitions; and incorporate environment, safety, and occupational health requirements into weapon systems acquisition. The 2022 awards honor installations, teams, and individuals for outstanding achievements occurring from October 1, 2019, through September 30, 2021, in the following categories: natural resources conservation, environmental quality, sustainability, environmental restoration, cultural resources management, and environmental excellence in weapon systems acquisition.

Congratulations to the 2022 Secretary of Defense Environmental Awards winners. I commend your commitment to promoting and implementing outstanding resilient and sustainable practices, and your accomplishments to safeguard the DoD mission.

A handwritten signature in black ink, appearing to read 'P. D. Cramer'.

Paul D. Cramer  
Performing the Duties of Assistant Secretary of  
Defense for Energy, Installations, and  
Environment

**Inside cover: Top Left: Air Force Wildland Fire Branch firefighter Nesa Yoko Rampernas conducts a prescribed burn at Joint Base San Antonio-Camp Bullis, Texas. Top Right: Marines drive an amphibious assault vehicle through the Nu'upia Ponds Wildlife Management Area at Marine Corps Base Hawaii, during Mud Ops, an annual effort to fight invasive plants and prepare wetlands for waterfowl. Middle Left: U.S. Marine Corps Lance Corporal Loren Brooks with Task Force Koa Moana 17 picks up trash on Betio Island, Tarawa Atoll, Kiribati. Middle Right: Fijian Army Sergeant Iowani Seru plants dilo trees with U.S. Army Specialists Lane Carty and Nathaniel Petenes near Nadi, Fiji. Bottom Left: Approximately 20 Navy and local community member volunteers participated in the oyster castle installation event at the Lafayette River Annex. Bottom Right: Air Force Staff Sergeant Daniel Walters drives an electric bicycle at Gowen Field in Boise, Idaho.**



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## ABOUT THE AWARDS

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### NATURAL RESOURCES CONSERVATION

(Small Installation & Individual/Team)

These awards recognize 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. Efforts may include 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 to ensure access to realistic combat environments while protecting ecosystems and the species that live there.

### ENVIRONMENTAL QUALITY

(Non-Industrial Installation & Individual/Team)

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 (RCRA), Safe Drinking Water Act, Toxic Substances Control 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

(Industrial Installation)

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

### ENVIRONMENTAL RESTORATION

(Installation & Individual/Team)

These awards recognize 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

(Large Installation)

This award recognizes 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 (NHOs), states, and other historic preservation stakeholders to protect cultural resources in a manner that sustains mission readiness as responsible stewards of our collective heritage.

### ENVIRONMENTAL EXCELLENCE IN WEAPON SYSTEMS ACQUISITION

(Individual/Team)

This award recognizes efforts to incorporate environment, safety, and occupational health (ESOH) requirements into a weapon systems acquisition program's system engineering, contracting, and decision-making processes. Adhering to these requirements enhances DoD's acquisition process by ensuring that weapon systems programs prioritize the safety of personnel and protection of the environment.

# MARINE CORPS BASE HAWAII

## Natural Resources Conservation, Small Installation Award



Marine Corps Base (MCB) Hawaii encompasses 4,500 acres on the island of Oahu and is rich with natural resources. MCB Hawaii's mission is to provide forward-based, sustainable training through operational facilities and services to support Operational Forces so that Marines and Sailors can accomplish their mission, while respecting the rich Hawaiian culture and biological diversity. The base supports over 20,000 personnel, including Marines, Sailors, family members, civilian and contract employees, and veterans. The installation's offshore environment provides protection and safety for species such as the humpback whale, a variety of sea turtles, and the critically endangered Hawaiian monk seal to feed, rest, and reproduce. MCB Hawaii is also the only Marine Corps installation with coral reef resources. MCB Hawaii's property supports 133 acres of wetlands and is home to four endangered Hawaiian waterbird species. The base Environmental Compliance and Protection Division exists to enhance overall mission readiness through natural resources conservation.

- MCB Hawaii has become a regular nesting habitat for Hawaiian sea turtles and hosted between 14 and 28 percent of all known nesting on Oahu, equating to the emergence of at least 1,468 sea turtles during the achievement period. Much of this success can be directly attributed to the natural resources staff's protection efforts including cordoning off every presumed nest with high-visibility rope and clear signage. In addition, natural resources staff nourished collaborative relationships with volunteers, Federal agencies, researchers, and DoD partners to protect nests and collect data that will improve adaptive management.
- MCB Hawaii executed six outreach events in 2021 during sea turtle nesting season. Ninety-two participants, including MCB Hawaii leadership, local officials, and elementary school students and their families, learned about sea turtle conservation. MCB Hawaii used these events to showcase sea turtle conservation and partnership culminating in an article published in the January-February 2022 edition of *Hana Hou!* magazine, the Hawaiian Airlines in-flight magazine.
- MCB Hawaii facilitated regular beach monitoring by volunteers who gave over 1,300 hours collectively during the 2020 and 2021 sea turtle nesting season. MCB Hawaii developed sea turtle nesting protocol; mitigated artificial light sources known to disorient sea turtles; conducted educational events reaching 92 participants across all age classes; produced and distributed thousands of outreach materials; and is pursuing research on detecting active nests using canines and/or ground penetrating radar.
- In June 2021, the National Oceanic and Atmospheric Administration (NOAA) selected MCB Hawaii as the top choice for the relocation of an adolescent monk seal named Lōli'i that had recently been weaned from his mother on Waikiki Beach. The move ensured protection of Loli'i and beachgoers. MCB Hawaii aided NOAA in logistical planning, execution, and subsequent data collection. Lōli'i is believed to be thriving to this day.
- To suppress invasive vegetation, natural resources staff teamed up with Marines Combat Assault Company in 2021 and supervised the annual "Mud Ops" training that involves maneuvering amphibious assault vehicles within the wetlands to support endangered waterbird nesting habitat, allowing natural resources management and military training to be one and the same.



Threatened Hawaiian green sea turtle basking on Pyramid Rock Beach, MCB Hawaii.



3rd Marine Regiment Combat Assault Company participating in annual "Mud Ops" training inside Nu'upia Ponds Wildlife Management Area.

# NAVAL AIR STATION PENSACOLA NATURAL RESOURCES TEAM, FLORIDA

*Natural Resources Conservation, Individual/Team Award*



As the Cradle of Naval Aviation, Naval Air Station Pensacola's mission is steadfast and can be accomplished while conserving, preserving, and managing its vast and rich natural resources. Naval Air Station Pensacola is the second-largest training operation in the Navy, with nearly 60,000 students graduating from training programs annually. Naval Air Station Pensacola employs over 23,000 personnel, and its economic impact on the local economy exceeds \$6 billion. The Naval Air Station Pensacola Natural Resources Team consists of Natural Resources Manager Mr. Michael Hardy and Area Forester Ms. Anna Lizana. Despite consisting of only two individuals, the team accomplishes an extraordinary amount of natural resources conservation work by utilizing partnerships, interns, and innovative and cost-effective approaches. The team is committed to providing innovative and cost-effective approaches to wildlife conservation, habitat restoration and enhancement, and sustainable forest management to support the military mission.

- Following Hurricane Sally in September 2020, the team assessed the installation and worked tirelessly to clean up the installation and restore natural resources. The team coordinated with the Public Works Department to address natural resources regulation and permitting concerns for all hurricane repair and cleanup projects; the team completed over 99 National Environmental Policy Act actions in Fiscal Year (FY) 2021 alone. The team supported an emergency timber salvage to recover hurricane-damaged timber, producing \$19,167 in income. Team members spent several weeks in the field evaluating hurricane-damaged timber and pushed the timber sale through at a record pace.
- The team partnered with Naval Air Station Whiting Field's Air Operations and its Natural Resources Manager to evaluate and remove timber to maintain clear zones for flight operations; the efforts improved flight safety and communications. The team calculated timber volumes to produce timber payment values. This effort provided \$109,951 to the Navy Forestry Account, which contributed to the site preparation of 93 acres at Whiting Field for longleaf pine reforestation.
- The team partnered with the Student Conservation Association, Gulf Coastal Plain Ecosystem Partnership (GCPEP), and U.S. Forest Service Cooperatives to complete prescribed burning on 681 acres to improve forest health, prevent wildfires, and improve habitat for protected species. The team constructed all fire breaks, developed burn plans, obtained burn authorization, and coordinated with multiple agencies and Air Operations.
- The team partnered with GCPEP through the U.S. Fish and Wildlife Service (USFWS) to treat 350 acres of invasive species at Naval Air Station Pensacola, Bronson Field, and Whiting Field. The team also treated 187 acres of invasive species in forested areas through two separate contracts. These treatments targeted Chinese tallow trees, Chinese privet, and cogon grass.
- The team coordinated with the USFWS to obtain nest removal permits and with the U.S. Department of Agriculture to complete nest monitoring when two bald eagle pairs nested at the airfield. The eaglets were allowed to fledge, and the team coordinated a permitted nest removal after the eaglets left the nest.



*Emergency timber salvage to recover hurricane-damaged timber and improve forest health following Hurricane Sally in September 2020.*



*The Naval Air Station Pensacola Natural Resources Team consists of Natural Resources Manager Mr. Michael Hardy (left) and Area Forester Ms. Anna Lizana (right).*

# SHAW AIR FORCE BASE, SOUTH CAROLINA

## Environmental Quality, Non-Industrial Installation Award



Shaw Air Force Base (AFB) in South Carolina is located seven miles west of Sumter, South Carolina, and encompasses 3,326 acres. It is home to the 20th Fighter Wing, the Department of the Air Force's largest F-16 "Fighting Falcon" combat wing, whose mission is to provide combat-ready airpower and airmen. The AFB employs 7,259 active-duty members, 764 civilians, and over 700 contractors. Merging mission and environmental stewardship, Shaw AFB has implemented an Environmental Management System (EMS). Shaw AFB employs a dynamic, EMS-centric Cross-Functional Team that engages personnel across a broad range of specialties. The Environmental Quality program oversees content and implementation of six installation-level management plans that instill procedures, best management practices, and controls on environmental aspects of the mission. In addition, Environmental Quality personnel conduct monthly internal inspections, review project designs and work requests, and manage compliance permits and registrations.

- Shaw installed a supervisory controls and data acquisition system to continuously monitor production and treatment from six drinking water wells that serve 10,000 airmen, dependents, civilians, and contractors. Separately, Shaw AFB constructed a \$3.2 million perfluorooctane sulfonate/perfluorooctanoic acid filtration system for its \$75 million groundwater treatment plant and is evaluating its legacy volatile organic compound treatment units and viability of newer systems.
- In FY21, Shaw AFB reduced its in-service underground storage tanks (USTs) by 42 percent. The base eliminated a gasoline storage requirement and consolidated diesel and jet fuel storage into two above-ground storage tank (AST) systems. The two environmentally safer AST systems replaced UST capacity of 48,000 gallons with only 11,000 gallons of above-ground storage.
- Shaw AFB maintains and operates a 1.2 million gallon per day wastewater treatment plant (WWTP), serving approximately 20,000 military, civilian, and contractor personnel. This mission-critical WWTP has operated without interruption or permit violation for more than 12 years. Monitoring of wastewater parameters are consistently 75 to 90 percent below the allowable limits of the National Pollutant Discharge Elimination System permit.
- During FY20-21, Shaw AFB completed 24 Requests for Environmental Impact Analyses, including an action for temporary bed-down of Kingpin, a tactical command/control unit that serves as lead control/reporting center, enabling air operations across U.S. Central Command. Shaw AFB completed Environmental Impact Assessment processes for \$434 million in mission-critical projects supporting Central Command, base security, and operations for the MQ-9 Reaper.
- Civil Engineer personnel, led by members of the Petroleum, Oils and Lubricants cross-functional team, repurposed two out-of-service petroleum storage tanks, eliminating a replacement cost of \$22,000 each. For the minor cost of material expenses, these tanks increased operations efficiency, saving approximately 1,000 man-hours per year, and allowed a \$230,000 R-11 refueler that had been taken out of operation to return to servicing aircraft.



Two newly installed ASTs that replaced three aging USTs in the Aerospace Ground Equipment yard.



Shaw AFB Plant Operator Mr. Tony Quercero and South Carolina Department of Health and Environmental Control Inspector Ms. Shemeka Galloway review the aerator basins at Shaw AFB's WWTP.



# AIR FORCE RADIOACTIVE RECYCLING AND DISPOSAL TEAM, WRIGHT-PATTERSON AIR FORCE BASE, OHIO

*Environmental Quality, Individual/Team Award*



The Air Force Radioactive Recycling and Disposal (AFRRAD) Team is located at Wright-Patterson AFB in Ohio. Wright-Patterson AFB provides operational support for more than 100 associated units, supporting on average 47,000 aircraft operations every year and providing a total economic impact to the State of Ohio of \$5.65 billion annually. The AFRRAD team resides within the 88th Civil Engineer Group's Environmental branch and has sole responsibility for low-level radioactive waste (LLRW) and low-level mixed waste disposal for the entire Department of the Air Force, and provides radioactive material (RAM) recycling services for DoD. AFRRAD is also the focal point for management and disposition of Air Force legacy radioactive waste from sites such as McClellan AFB and Davis-Monthan AFB. AFRRAD supports the Department of the Air Force Radiation Program mission to ensure the safe and regulatory-compliant use of all RAM required to support a combat-ready Air Force.

- The team provided 215 man-days of support for RAM management and disposal actions at numerous Air Force installations in the continental United States. Team members delivered a multitude of services ranging from inventorying, packaging, shipping, permit consultation, and oversight of contracted waste brokers, all of which minimized contract costs by \$1.2 million and resulted in over 123,000 pounds of LLRW disposed and 65,000 RAM items recycled.
- AFRRAD provided subject matter expertise to 137 installations for RAM oversight, management, and consultative services. AFRRAD provided the Navy with a RAM recycling outlet for chemical agent detection alarms, which reduced waste volumes by over 99 percent and recycled the radioactive sources. AFRRAD oversaw radioactive waste broker disposal services at 10 installations over 19 days to remove 7,140 RAM items.
- AFRRAD established written procedures for safe and efficient removal of radioactive sources from more than 12 makes/models of devices used for chemical agent and explosives detection by the DoD. Nearly 1,200 of these devices containing radioactive nickel-63 were transferred to Wright-Patterson AFB, disassembled by AFRRAD, and their radioactive sources packaged and sent for disposal. Other agencies and non-government radioactive waste processors have requested access to these procedures, recognized as a benchmark in the radioactive waste industry for waste minimization and operational efficiency at their facilities.
- During the historic closure of Bagram Airfield, Afghanistan, DoD personnel sent the AFRRAD team information and photographs of 27 items discovered at the Airfield labeled as radioactive. AFRRAD researched, identified, and validated an accurate LLRW inventory. In addition, the AFRRAD team instructed Bagram Airfield personnel on properly preparing the items for international shipment; authorized funding for transport; and coordinated among logistics personnel, the environmental coordinator, and the Radiation Safety Officer for removal of the items in nine days.
- AFRRAD fostered partnerships across the environmental community. The team partnered with Air Force Materiel Command headquarters logistics staff to develop the first Department of the Air Force-sponsored Department of Transportation Class 7 (radioactive) Specialist training. In FY21, AFRRAD assisted Federal, State, and local emergency response organizations in the planning and implementation an annual training exercise that covers determination, identification, and mitigation of radiological hazards.



Mr. Seth Walton disassembles a Navy Shipboard Chemical Agent Detector Alarm.



AFRRAD Team (from left to right): Mr. Brian Mitchell, Mr. Seth Walton, Mr. Christopher Anthony, and Mr. Zachary Olds.

# NAVAL WEAPONS STATION SEAL BEACH AND DETACHMENT FALLBROOK AND NORCO, CALIFORNIA

*Sustainability, Industrial Installation Award*



Naval Weapons Station Seal Beach, California, and its detachments in Fallbrook and Norco, California, are critical to the Navy's mission through ordnance storage and loading, missile maintenance, and weapons systems assessment, in support of the U.S. Pacific Fleet. The three southern California installations are consolidated under the command of Seal Beach. Natural resources stewardship for approximately 14,000 acres, including numerous endangered and sensitive habitats, has heightened leadership's focus on sustainability. With a culture of continuous improvement and ownership, all personnel help to reduce the installation's environmental footprint while simultaneously enhancing long-term readiness.

- The Naval Weapons Station Seal Beach and Detachment Fallbrook and Norco Hazardous Waste team performed an opportunity assessment in conjunction with the SMART Shop initiative to achieve the 10-percent reduction in Hazardous Waste annual goal. In calendar year (CY) 2020, the team reduced RCRA/non-RCRA waste by 21 percent from the CY19 baseline across all three installations. The team is tracking for greater than 30-percent reduction in CY21, surpassing installation objectives.
- The installation's Sustainable Solid Waste Program has consistently exceeded DoD waste diversion goals since FY19. During the achievement period, the team diverted over 2,720 tons of Construction and Demolition waste, providing the Navy with a total disposal cost avoidance of \$183,500. The effort resulted in a diversion rate of 91 percent, exceeding the DoD goal of 60 percent.
- The installation awarded the FY21 Utility Energy Services Contract to fund multiple projects identified by the three pillars of an energy security approach. Upon completion of

the projects, the installation saved an estimated \$430,202 a year on electricity, natural gas, and water conservation, and continues to work toward meeting installation sustainability and energy security objectives.

- Naval Weapons Station Seal Beach Environmental was awarded state grant funds to install multiple Private Owned Vehicle installation charging stations. From May 2020 through September 2021, the Navy Exchange electrified 5,504 kilowatt hours for charging electric vehicles. This action saved a total of 3,287 kilograms of greenhouse gases, which is equivalent to saving 690 gallons of gas that gasoline-powered vehicles would have used.
- The installation constructed Low Impact Developments (LIDs) to ensure all runoff from the parking area at the Seal Beach Reserve Center is contained on site and does not enter an adjacent drainage channel flowing to the Anaheim Bay. The newly installed LIDs provide over 40,000 cubic feet of water storage across the three installations and eliminate runoff from potential industrial operations.



The Naval Weapons Station Seal Beach Hazardous Waste Team (from left to right): Mr. Richard Wilson, Mr. Justin Wilhelm, and Mr. Steve Crandall.



Two Level 2 charging stations for Private Owned Vehicles at the installation's Navy Exchange.

# MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA

## *Environmental Restoration, Installation Award*



Located in Onslow County, North Carolina, MCB Camp Lejeune is a training base that covers more than 156,000 acres. The base consists of diverse environmental settings, including 72,000 acres of upland forests, 49,000 acres of wetlands, 26,000 acres of water, and 7,500 acres of developed land. Historical operations, storage, and disposal practices at Camp Lejeune resulted in environmental impacts to soil and groundwater. The base has actively engaged in environmental investigations and remediation programs since 1981, cleaning up over 500 sites to date. Camp Lejeune's Environmental Management Division leads the environmental compliance and restoration programs to manage 75 active sites. The base is supported by technical, acquisition, and legal professionals across the Naval Facilities Engineering Systems Command organization, and maintains collaborative relationships with a supportive local community and regulatory agencies including the North Carolina Department of Environmental Quality and the U.S. Environmental Protection Agency (EPA).

- During the achievement period, MCB Camp Lejeune was recognized by the EPA through publication of a Contaminated Site Clean-Up Information Green Remediation Focus Profile for implementing best management practices during cleanup activities. Best management practices included installing a new treatment system powered entirely by solar power; reusing 70 cubic yards of soil; recycling 7,530 pounds of metal; using passive sampling techniques to reduce remediation-derived waste; and using digital data capture devices in the field to reduce paper waste and increase efficiency. These best management practices saved over 52 metric tons of carbon dioxide emissions, which is equivalent to the carbon dioxide emissions from powering six homes for one year.
- In FY21, MCB Camp Lejeune updated its Base-wide Vapor Intrusion Evaluation, which identifies buildings where vapor intrusion may be occurring and evaluates potential risks to building occupants. During a field screening, the base identified volatile organic compounds from open-top tanks used during treatment plant operation. The base modified a treatment plant process to bypass open-top tanks, sending influent directly to a closed tank and mitigating potential volatile organic compound hazards in the air.
- In FY20-21, MCB Camp Lejeune evaluated the effectiveness of alternative treatment technologies at multiple sites to address contaminated groundwater and expedite site closure. The base used subgrade biogeochemical reactors to treat over 6 million gallons of groundwater, injected over 3,000 gallons of emulsified vegetable oil substrate as part of a bio barrier replenishment and recirculation system, and operated over 9,000 hours of air sparing. The team saved more than \$40,000 by reusing remediation equipment from a closed site.
- MCB Camp Lejeune shared lessons learned at a Clemson University symposium and a Design and Construction of Hazardous Waste Sites seminar. The presentations, respectively, were "Subgrade Biogeochemical Reactors to Treat Source Areas with Dense Non-Aqueous Phase Liquid" and "Ten Years of Optimization of the Environmental Restoration Program."
- The base supports Taskforce Florence for recovery efforts following Hurricane Florence, including sampling, risk screenings, munitions clearance, and vapor intrusion evaluations and mitigation to ensure protection of human health and the environment. In addition, the base reviews and supports planning for capital improvement projects to ensure they meet environmental site requirements and Navy and Marine Corps per- and polyfluoroalkyl substances guidance prior to and during military construction.



*(photo left) Field team member Mr. Matt McClanahan records sampling locations and surface water quality parameters digitally.*

*(photo right) This subgrade biogeochemical reactor treated approximately 93,000 gallons of groundwater at Installation Restoration Program Site 93.*



# GLENBROOK ROAD REMEDIAL ACTION TEAM, U.S. ARMY CORPS OF ENGINEERS NORTH ATLANTIC DIVISION, MARYLAND



## *Environmental Restoration, Individual/Team Award*

The Glenbrook Road Remedial Action Team achieved a historic milestone within the environmental restoration program by completing an extensive and complex remedial action at Glenbrook Road in Washington, DC. The team's purpose was the cleanup and restoration of a residential property containing a unique burial of discarded World War I experimental chemical warfare agents. Glenbrook Road is one of many private properties included in the Spring Valley Formerly Used Defense Site and is the largest waste burial area associated with work of the American University Experiment Station. Due to site history, condition, and location, the Glenbrook Road team faced daunting technical, engineering, health and safety, regulatory, and community relations challenges beyond those experienced by any other project in the history of the U.S. Army Corps of Engineers (USACE)-Baltimore environmental restoration program. The team met its goals of protecting human health and the environment by reducing risk in the safest manner possible, while achieving cleanup acceptance from regulators and the community.

- The team remediated, removed, or recovered 556 munition items, 2,139 pounds of laboratory debris, 53 intact and sealed glass containers of chemical agent, and 7,500 tons of contaminated soil. This was accomplished near occupied private properties, a major university campus, and public streets.
- The team partnered and interacted with stakeholders through a robust program management system. With support at all management levels, the team collaborated with internal offices as well as higher levels in USACE and the Department of the Army to ensure that all regulatory and legal requirements were met and that adequate funds were available for the Glenbrook Road cleanup. Collaboration with regulators and the community went above and beyond regulatory requirements; stakeholders had a comprehensive understanding of site hazards and the cleanup process, and decisions were reached with as much transparency and consensus as possible.
- The team researched and advocated the use of health standards not typically employed to include the Acute Exposure Guideline Levels standards developed by the EPA and Oak Ridge National Laboratory, and the temporary emergency exposure limits developed by the U.S. Department of Energy. This research provided quantitative safety planning that allowed for the development of detailed and precise airborne hazard modeling to protect workers and the public. This innovation can be used on other recovered chemical warfare materiel sites undergoing cleanup, should these hazards be encountered.
- The team made special efforts to transfer knowledge and innovation, opening the site to multiple individuals from other DoD agencies who came to work on some aspect of the project and who would go on to support other highly critical mission-essential DoD tasks. The team hosted numerous DoD engineering interns, West Point cadets, and foreign engineering officers who came to the site for in-depth briefings on technologies being employed and tours of the operation. The team engaged with interested members of the media to tell the Army's and DoD's side of the story on this project. One member of the media affiliated with the *New York Times* wrote several favorable articles about the project detailing the effort and commitment of the team.



*During the height of remedial efforts, a tent covered the Glenbrook Road Remedial Action site. The tent allowed the team to work safely and efficiently while they excavated and removed hazardous materials and contaminated soil.*



*Ordnance and Explosive Safety Specialist Mr. James Ennis prepares a 75 mm munitions debris item for cutting on a remotely operated bandsaw, February 2021. Cutting a munition item is part of the process to render a munition safe.*

# TEXAS ARMY NATIONAL GUARD

## Cultural Resources Management, Large Installation Award



Spread across nearly 269,000 square miles of Texas, the Texas Army National Guard encompasses 61 readiness centers, 20 Armed Forces Reserve Centers, four Army Aviation Support Facilities, five training sites, and the historic Camp Mabry headquarters. Texas has the largest joint force in the Nation, and the Texas Army National Guard's facilities to support these troops are located in both dense urban communities and rural areas. Cultural resources on the Texas Army National Guard's total 34,000 acres include prehistoric and historic archaeological sites; cultural landscapes, documents, buildings, and structures; American Indian traditional cultural properties (TCP); and previously collected prehistoric and historic artifacts from prior archaeological surveys.

- The cultural resources management program rehabilitated Building 1 at Camp Mabry, a World War II-era structure that now serves as offices and is a centerpiece of the historic district. The program worked with an architectural historian during the project planning and design through the construction phases. Both interior and exterior elements contributed to the building's historic eligibility, with features like a large truss system and original windows, but these features had to be integrated with modern antiterrorism protections. In addition, the historic building required major renovations to address structural problems. The program persevered and rebuilt Building 1 to historic standards with full State Historic Preservation Office (SHPO) concurrence.
- The Texas Army National Guard introduced a photopoint database for architectural and archaeological site monitoring that is linked to geographic information systems (GIS). Created in collaboration with a university team, the photopoint database establishes visual records of cultural sites to track impacts from fire, erosion, or other disturbances. The technology allows users to instantly upload cell or tablet photos to the database with embedded global positioning system coordinates. Access is currently limited to the GIS staff, environmental staff, Construction and Facility Management Office, and range control personnel, but the Texas Army National Guard is developing a web-based GIS portal that will expand access to Tribal or SHPO partners through a password-protected access point.
- The cultural resources management program developed a new Integrated Cultural Resources Management Plan (ICRMP) with goals and targets that align with the broader Texas Military Department Strategic Plan. By remodeling the ICRMP to align with the Strategic Plan, the cultural resources management program can now create trackable metrics that allow for accurate assessment and alignment with the training and readiness objectives of the Texas Army National Guard.
- The cultural resources management program is in the final stages of completing an overarching curation agreement that encompasses all facilities that hold Texas Army National Guard inventories. These facilities will now provide annual reports that integrate all Texas Army National Guard holdings using the same standards for cataloging and documentation. This will simplify the tracking of artifacts and create a single protocol for all collections moving forward.



The restored Building 1 at Camp Mabry.



Former Cultural Resources Manager Ms. Kristen Mt. Joy meets with Mescalero Apache Representatives Mr. Arden Comanche, Cultural Advisor, and Mr. Jacob Dukai, Cultural Specialist, during a hybrid consultation meeting at Camp Maxey, August 2021.

# C-130 PROGRAM OFFICE AND SUPPORT TEAM, ROBINS AIR FORCE BASE, GEORGIA



## *Environmental Excellence in Weapon Systems Acquisition, Individual/Team Award*

The U.S. Air Force issued its original design specification of the C-130 in 1951, and the remarkable C-130 remains in production today. The latest C-130, the C-130J, entered the inventory in February 1999. The weapon system meets warfighter/allied force operational needs by directly supporting the warfighting Combatant Commanders' airlift mission, including transporting payloads into and out of the combat theater without refueling; delivering cargo and personnel via airdrop and airland; augmenting aeromedical evacuation; and performing emergency nuclear transportation and other special missions. Throughout these uses, the C-130 platform continues to focus on improvements to environmental, safety, and health. The C-130 Program Office and Support Team consists of members of the C-130 Program Office, Air Force Life Cycle Management Center/EZVV, 402nd Aircraft Maintenance Group, Lockheed-Martin Aeronautics Company, and MEC Energy Services.

- The C-130 Team evaluated over 70 finish systems under an initiative to eliminate the use of hex-chrome in exterior finishing systems. From those efforts, team members identified five chrome-free finishes worthy of implementation. Now that qualification is complete, the Air Force is recommending a single production C-130J be finished on the exterior using one of the chrome-free systems for airworthiness assessment and fleet implementation. Once fully implemented, this will eliminate the use of hex-chrome epoxy primer from C-130J exterior finish systems; reduce by 2,000 pounds each year the Air Force Plant 6 EPA and Superfund Amendments and Reauthorization Act reportable hex-chrome; reduce hazardous material issues with life-cycle/maintenance of aircraft painting; and reduce employee exposure to this extremely hazardous material. These efforts will save \$10,000 per year on C-130J production, with a break-even in fewer than 13 years.
- Chromate sealants have been historically used during C-130 production in multiple corrosion prevention applications. The C-130 Team's six-year project to evaluate non-chromate corrosion inhibiting sealants resulted in the implementation of three alternatives. This significantly reduces worker exposure to a harmful carcinogen and detrimental impacts to the environment due to hex-chrome waste by eliminating 13,500 pounds of chromate waste annually and saving \$253,024 per year for the C-130 production line alone.
- The current primer reactivation requires surfaces to be scuff sanded, which increases personnel's risk of exposure to hex-chrome particulate matter. The C-130 Team found and implemented three products on the C-130J production line that eliminated the need for scuff sanding. This has reduced the risk of employee exposure to a harmful carcinogen and eliminated 500 pounds of hazardous chromated waste annually while saving \$551,933 per year, with a break-even in two months.
- The C-130J production interior finish system also contains high levels of hex-chrome, both in the conversion coating and primer. Focusing on newly available non-chrome primers and non-hex-chrome pretreatment combinations, the C-130 Team is working to implement an inner mold line finish stack-up completely free of hex-chrome. Eliminating hex-chrome from C-130J interior finish systems can reduce over 2,100 pounds of hex-chrome per year; reduce hazardous material issues with life-cycle/maintenance of aircraft painting; and reduce employee carcinogen exposure.



The C-130 Program Office and Support Team. Upper left picture (from left to right): Mr. Ryan Thompson, Mr. Kevin Detring, Mr. Alex Stovall, Ms. Heather Kuemmerle, and Ms. Kelly Grubbs. Upper right picture (from left to right): Mr. Mike Fogue, Mr. Scott Ward, Mr. Mike Ballard, Mr. Dallas Rhoad, Mr. Mike Surratt, Mr. Kevin Wilson, Mr. Joshua Gallo, Mr. Todd Lavender, Mr. Hutch Thompson, Mr. Al Lopez, Mr. Brad Gravot, and Mr. Perry Plaxico. Bottom picture (from left to right): Ms. Teresa Finke, Mr. Morgan Russell, Ms. Kelly McNamara, Mr. Dana Allen, Ms. Daniele Johnson, Mr. Tim Clendenin, and Ms. Emily Spilker.



Interior view of a production C-130J with new non-hex chrome finish.

# HONORABLE MENTIONS

## NATURAL RESOURCES CONSERVATION

Small Installation

- Woodville Training Site, Maine Army National Guard
- Naval Air Station Key West, Florida
- Wright-Patterson Air Force Base, Ohio

## NATURAL RESOURCES CONSERVATION

Individual/Team

- The Crane Protection Team, Nebraska Army National Guard
- Mr. John Holloway, Marine Corps Recruit Depot Parris Island, South Carolina
- Malmstrom Natural Resources Team, Malmstrom Air Force Base, Montana

## ENVIRONMENTAL QUALITY

Non-Industrial Installation

- Colorado Army National Guard
- Commander Fleet Activities, Chinhae, South Korea

## ENVIRONMENTAL QUALITY

Individual/Team

- Water Quality Team Fort Stewart/Hunter Army Airfield, Georgia
- Northwest Training and Testing Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement Team, Hawaii
- Dr. Takeharu Ikema, Marine Corps Base Camp Butler, Japan

## ENVIRONMENTAL RESTORATION

Installation

- Moody Air Force Base, Georgia

## ENVIRONMENTAL RESTORATION

Individual/Team

- Vieques Environmental Restoration Team, Vieques Naval Installation, Puerto Rico
- Environmental Restoration Program Perfluorooctane Sulfonate and Perfluorooctanoic Acid Team, Ellsworth Air Force Base, South Dakota

## CULTURAL RESOURCES MANAGEMENT

Large Installation

- Naval Air Station Fallon, Nevada
- Vandenberg Space Force Base, California

## ENVIRONMENTAL EXCELLENCE IN WEAPON SYSTEMS ACQUISITION

Individual/Team

- Long Range Discrimination Radar National Environmental Policy Act Team, Alaska

# JUDGES

**Volunteers from Federal and state agencies, private industries, academia, and non-governmental organizations served as judges for the 2022 Secretary of Defense Environmental Awards.**

**Greg Allen, Ph.D.**

*Environmental Scientist, Chesapeake Bay Program Office, U.S. Environmental Protection Agency*

**Stephen O. Andersen, Ph.D.**

*Director of Research, Institute for Governance & Sustainable Development*

**Melanie L. Berkemeyer, AIA, LEED AP, CDT**

*Design Manager, Bureau of Overseas Buildings Operations, U.S. Department of State*

**L. Peter Boice**

*Director (Ret), Natural Resources, Office of the Secretary of Defense, Department of Defense*

**Robert Dale Brown, Ph.D.**

*Dean (Ret), College of Natural Resources, North Carolina State University*

**Jason Britton Brown, Ph.D.**

*Engineer, Self-employed*

**Kathleen Callister**

*Manager, Resources Management Division, Interior Region 7, Upper Colorado Basin, Bureau of Reclamation*

**Joe Cascio**

*Co-Director and Research Professor, Environmental and Energy Management Institute, The George Washington University*

**Brian Clapp**

*Environmental Protection Specialist, Office of Chemical Safety and Pollution Prevention, U.S. Environmental Protection Agency*

**Heide-Marie Dudek, P.E.**

*Chief, Division of Environmental Remediation, New York State Department of Environmental Conservation*

**Jeffrey L. Durbin**

*Section 106 Program Manager and Deputy Federal Preservation Officer, National Park Service, U.S. Department of the Interior*

**Colby D. Duren, J.D., LL.M.**

*Director, Policy and Legal, National Congress of American Indians*

**Sherry A. Frear, RLA**

*Chief and Deputy Keeper, National Register of Historic Places and National Historic Landmarks Program, National Park Service, U.S. Department of the Interior*

**Kevin Andrew Funk**

*Supply Chain Risk Management Expert, Office of Government-wide Acquisition Policy, U.S. General Services Administration*

**Sally Gestautas**

*Global Chemical Substances Program Manager, Raytheon Technologies*

**Nancy Golden, Ph.D.**

*Fish and Wildlife Biologist, U.S. Fish and Wildlife Service*

**Lewis E. Gorman III**

*Board Member, U.S. Fish and Wildlife Service Retirees Association*

**Bradley R. Grams**

*Senior Analyst (Principal), Office of the Chief Financial Officer, U.S. Environmental Protection Agency*

**Philip W. Grone**

*Vice President, Government Affairs, National Elevator Industry, Inc.*

**Kathryn O'C. Gunkel, P.E.**

*President, Wildwood Environmental Engineering Consultants, Inc.*

**Emily Hammond**

*Deputy General Counsel for Litigation, Regulation, and Enforcement, U.S. Department of Energy; and Glen Earl Weston Research Professor of Law, The George Washington University*

**Carolyn Hanson**

*Deputy Executive Director, Environmental Council of the States*

**Christine Harada**

*Executive Director, Federal Permitting Improvement Steering Council*

**Gilbert E. Jones II**

*Deputy Chief, Emerging Talent Group, Office of the Assistant Director of National Intelligence for Human Capital, Office of the Director of National Intelligence*

**Emily A. Joseph**

*Director, Office of Restoration and Damage Assessment, U.S. Department of the Interior*

**Katharine R. Kerr**

*Program Analyst, Advisory Council on Historic Preservation*

**Fran Kremer, Ph.D.**

*Senior Scientist, U.S. Environmental Protection Agency*

**Michael T. Lesnick, Ph.D.**

*Senior Fellow, Meridian Institute*

**Jerrold A. Long, Ph.D., J.D.**

*Professor, The University of Idaho College of Law*

**Al M. McGartland, Ph.D.**

*Director, National Center for Environmental Economics, U.S. Environmental Protection Agency*

**Matthew G. McKinzie, Ph.D.**

*Senior Director, Climate and Clean Energy Program, Natural Resources Defense Council*



# JUDGES

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**J. Wayne Miller, Ph.D.**

*Adjunct Professor, Chemical & Environmental Engineering, University of California, Riverside*

**Michael J. Penders Esq.**

*Cyber Security Program Manager, TÜV SÜD Americas*

**Jonathan Pettit**

*Data Management Coordinator, Office of Emergency Management, U.S. Environmental Protection Agency*

**Meghann Quinn**

*Manager, Office of Pollution Prevention, Virginia Department of Environmental Quality*

**Russell V. Randle**

*Principal, Miles & Stockbridge*

**Charles Reyes**

*Associate Director, Association of State and Territorial Solid Waste Management Officials*

**Patricia Catherwood Reyes**

*Director, Interstate Technology Regulatory Council*

**Yann Risz**

*Co-Founder and Managing Director, Aligned Incentives*

**Ken Sandler, Ph.D.**

*Sustainability and Green Building Advisor, U.S. General Services Administration*

**Beth L. Savage**

*Director, Center for Historic Buildings and Federal Preservation Officer, Office of the Chief Architect, U.S. General Services Administration*

**Tim Sheehan**

*Engineering Fellow, Raytheon Technologies*

**Lenny Siegel**

*Executive Director, Center for Public Environmental Oversight*

**Katherine Slick**

*President, Advisory Council on Historic Preservation Foundation*

**Steven Grayson Smith, RADM U.S. Navy (Ret)**

*Volunteer Senior Advisor, Alliance for a Climate Resilient Earth*

**John H. Sprinkle, Jr., Ph.D.**

*Bureau Historian, National Park Service, U.S. Department of the Interior*

**G. Roger Stanley**

*Associate Professor, Department of Natural Sciences, San Antonio College*

**Scott Strickland**

*Deputy Director, Maryland Archaeological Conservation Lab*

**Peggy Tadej**

*Director of Community, Military, and Federal Facilities Partnerships, Northern Virginia Regional Commission*

**Mervyn L. Tano**

*President, International Institute for Indigenous Resource Management*

**Noeleen A. Tillman**

*Chief Operating Officer, Blue Star Families*

**Richard Wagner, AIA, Ph.D.**

*Principal, David H. Gleason Associates, Inc. Architects*

**David Widawsky, Ph.D.**

*Director, Data Gathering and Analysis Division, Office of Chemical Safety and Pollution Prevention, U.S. Environmental Protection Agency*

# PAST WINNERS

## Natural Resources Conservation

2021 Eglin Air Force Base, Florida  
 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 & Fort Story, Virginia  
 2001 Naval Weapons Station Charleston, South Carolina  
 2000 U.S. Army Training Center & Fort Jackson, South Carolina  
 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  
 1971 Tyndall Air Force Base, Florida  
 1970 Camp Pickett, Virginia  
 1969 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

2021 Marine Corps Air Station Camp Pendleton, California  
 2021 Yokota Air Base, Japan  
 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  
 2017 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)  
 2011 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 United States Army Garrison Bamberg, Germany  
 2008 Naval Air Engineering Station Lakehurst, New Jersey  
 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  
 1999 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 USAF 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  
 1979 Fort Sill, Oklahoma  
 1978 Marine Corps Base Camp Pendleton, California  
 1977 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)

2021 U.S. Army Garrison Fort Polk, Louisiana  
 2021 Naval Supply Systems Command, Weapon Systems Support, Pennsylvania  
 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

# PAST WINNERS

- 2015 Minnesota Army National Guard Sustainability Team, Minnesota
- 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, Virginia
- 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, Virginia
- 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 Pinon 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

- 2021 Shaw Air Force Base, South Carolina
- 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 Vieques 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, Utah
- 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, California
- 1996 Naval Air Station Cecil Field, Florida
- 1995 Naval Air Station Whidbey Island, Washington

## Cultural Resources Management

- 2021 Naval Base Point Loma, California
- 2021 Mr. Thomas E. Penders, Patrick Space Force Base, Florida
- 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
- 2017 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
- 2011 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 Pinon Canyon Maneuver Site, Colorado

## Environmental Excellence in Weapon Systems 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, Ohio
- 2013 Counterfeit Refrigerant Impact Team, Tank Automotive Research, Development and Engineering Center, Michigan
- 2012 Stryker Brigade Combat Team – Warren, Michigan
- 2011 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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