

# DoD Chesapeake Bay Program

## Fiscal Year 2019 Annual Progress Report

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Department of Defense  
OFFICE OF PREPUBLICATION AND SECURITY REVIEW





# Introduction

PHOTO PROVIDED BY THE OFFICE OF THE ADMIRAL



## To our readers,

It is my pleasure as the lead agent for all military services in the Chesapeake Bay watershed to welcome you to the 2019 Annual Progress Report for the Department of Defense (DoD) Chesapeake Bay Program (CBP).

Over 50 DoD installations share the Chesapeake Bay watershed with thousands of local communities and the Bay's many species of wildlife. As a protector of the nation and a steward of its resources, DoD has a responsibility to the mission, supporting the warfighter, and the environment. We recognize that these responsibilities can and must co-exist.

This report highlights how DoD has successfully integrated its military, regulatory, and environmental objectives in fiscal year 2019. From projects and success stories at individual installations to the ongoing leadership of the DoD CBP, DoD continues to lead by example. Within these pages, you will see how this leadership is demonstrated in the day-to-day work of our dedicated staff. One key highlight of DoD's leadership in 2019 is the Chesapeake Bay Commanders' Conference.

The Chesapeake Bay Commanders' Conference brought together installation commanders, DoD military and civilian leaders, and key state and federal partners from across the Chesapeake Bay. The conference presentations centered on the day's theme: One Mission, Shared Leadership, Continuing Commitment.

The day-long conference successfully communicated DoD's role in the Chesapeake Bay restoration and the work that lies ahead to meet our commitments. We also celebrated our successes—innovative projects, proactive initiatives, and productive partnerships—with the intent to build on those successes moving forward.

The restoration of the Chesapeake Bay will be part of DoD's enduring legacy as a tenant and steward of the watershed. As the contents of this report demonstrate, we consider this responsibility a serious one and remain committed to action and to the restoration of one of our nation's greatest natural ecosystems.

Rear Admiral Charles W. Rock  
Commander, Navy Region Mid-Atlantic



U.S. NAVY PHOTO BY PETTY OFFICER 3RD CLASS JOSHUA M. TOLBERT

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# The Year at a Glance



In Fiscal Year (FY) 2019, installations funded \$65 million (M) in projects that benefit the Bay. These efforts advance the goals and outcomes of the 2014 Chesapeake Bay Watershed Agreement and further the ability of the Department of Defense (DoD) to test, train, and operate under realistic conditions in the watershed. Installations have continued to emphasize co-benefits of projects to achieve multiple Bay goals, in addition to multiple objectives at each installation.

The following metrics highlight just a few of the overall accomplishments by DoD in FY2019 that contributed to abundant life, clean water, engaged communities, and conserved lands.

## FY2019 Project Funding \$65.6M | 732 projects

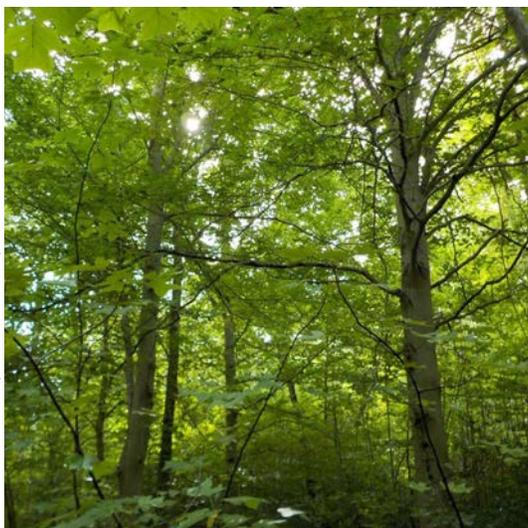
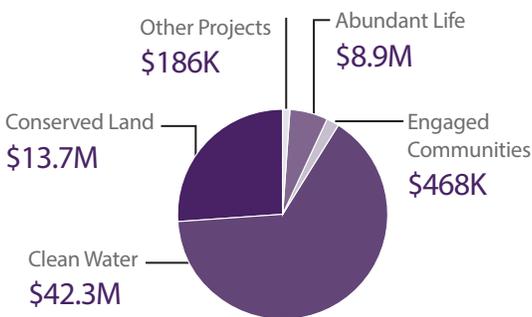
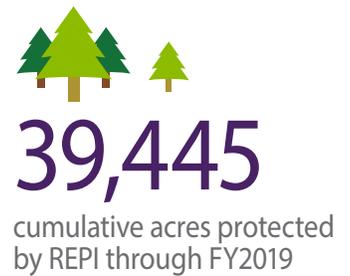


PHOTO BY KATHY BAKER, STAFFORD COUNTY, VA

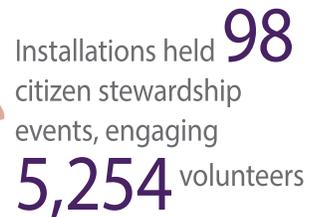
## To Promote Abundant Life:



## To Increase Conserved Lands:



## To Build Engaged Communities:



## To Provide Clean Water:

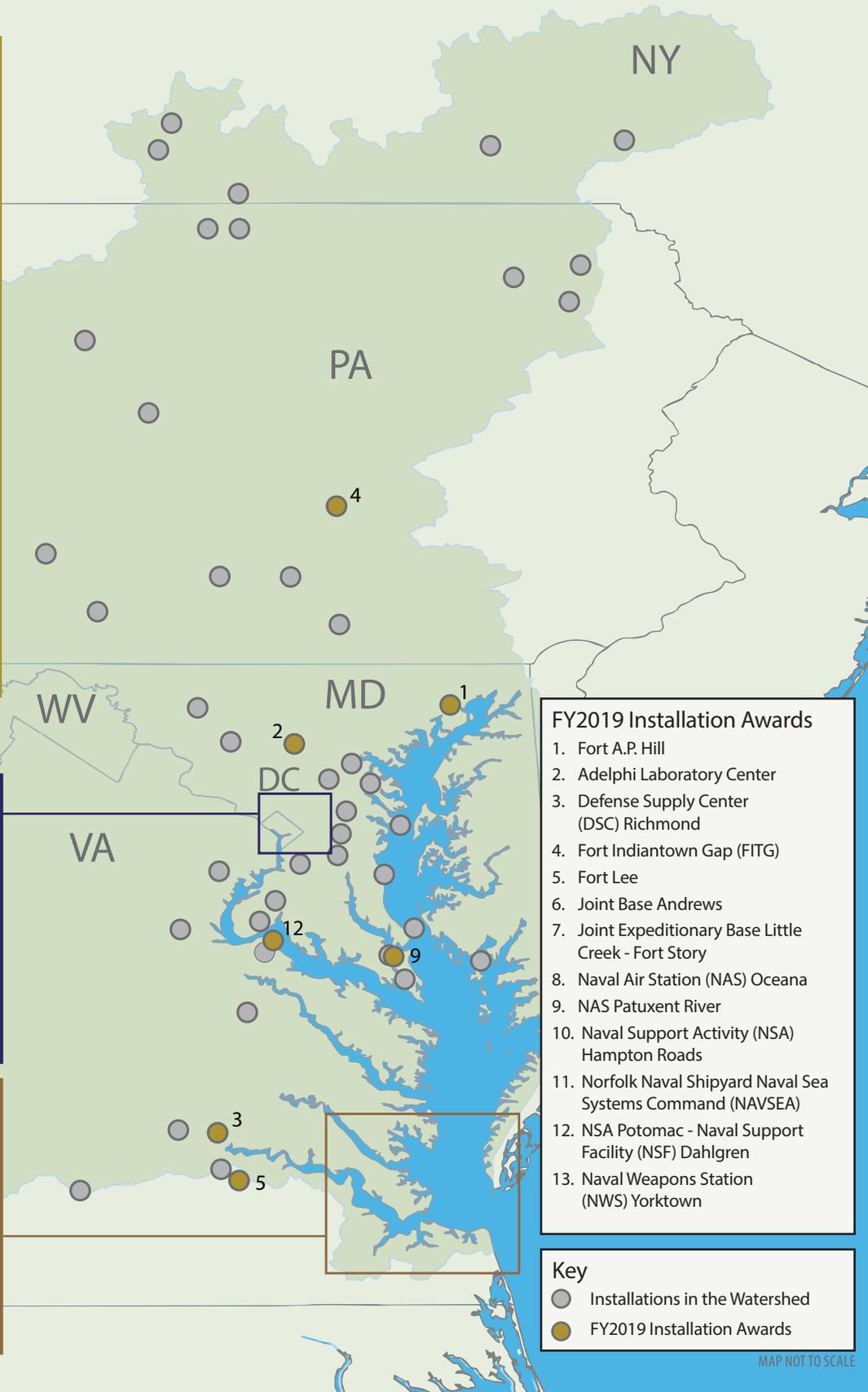
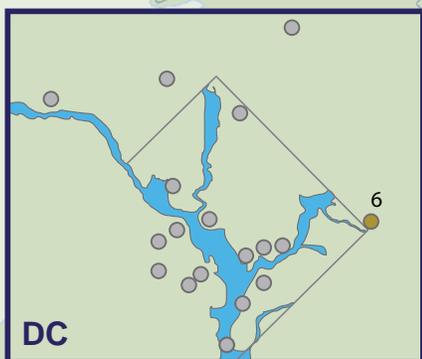




# DoD in the Chesapeake Bay Watershed

## FY2019 Installation Awards

Of the over 50 main installations located across five states and the District of Columbia in the Chesapeake Bay watershed, 13 have been recognized or received awards for an environmental project or program. From operational awards for wastewater treatment facilities to recognition for sustainable practices, these installations demonstrate their commitment through their actions.



- ### FY2019 Installation Awards
1. Fort A.P. Hill
  2. Adelphi Laboratory Center
  3. Defense Supply Center (DSC) Richmond
  4. Fort Indiantown Gap (FITG)
  5. Fort Lee
  6. Joint Base Andrews
  7. Joint Expeditionary Base Little Creek - Fort Story
  8. Naval Air Station (NAS) Oceana
  9. NAS Patuxent River
  10. Naval Support Activity (NSA) Hampton Roads
  11. Norfolk Naval Shipyard Naval Sea Systems Command (NAVSEA)
  12. NSA Potomac - Naval Support Facility (NSF) Dahlgren
  13. Naval Weapons Station (NWS) Yorktown

### Key

- Installations in the Watershed
- FY2019 Installation Awards

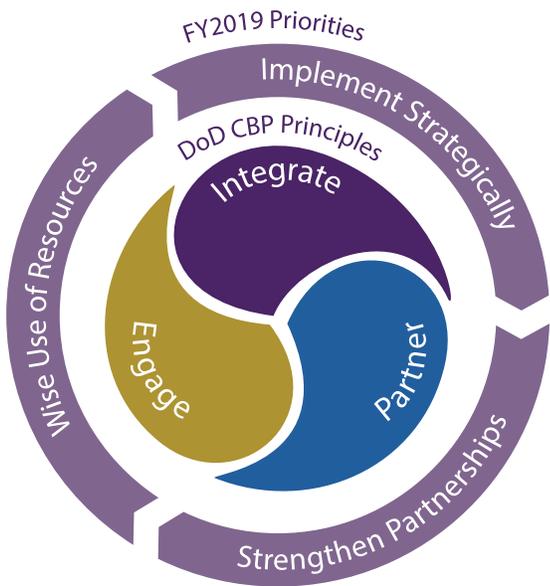
MAP NOT TO SCALE



## The DoD CBP Mission

At the core of the DoD Chesapeake Bay Program (CBP) mission are the essential principles to **Integrate, Partner, and Engage** in order to restore and protect the Bay while ensuring military readiness.

In FY2019, DoD focused on the priorities of implementing strategically, strengthening partnerships, and wisely using its limited resources. These priorities align with and support the DoD CBP mission in the Chesapeake Bay watershed.



**Integrate:** The DoD CBP reports BMP implementation on behalf of installations, assesses their progress, and provides tools and resources to assist them in reaching water quality goals. These efforts allow DoD to implement its program strategically and make the best use of limited land and fiscal resources.

**Partner:** The DoD CBP is a vital and active stakeholder within the Chesapeake Bay Program Partnership (Partnership) and partners with other community and non-profit organizations. DoD regularly collaborates with outside entities through stakeholder groups and as a part of mutually beneficial projects.

**Engage:** The DoD CBP promotes information-sharing and collaboration within DoD. We are also actively involved in stewardship and outreach activities across DoD and within surrounding communities. The partnerships created by these joint initiatives build momentum toward shared restoration goals in the watershed.

PHOTO BY MASS COMMUNICATION SPECIALIST 2ND CLASS EVAN THOMPSON



### For More Information

In 1984, DoD became one of the first federal agencies to formally engage in the Chesapeake Bay restoration, only one year after the signing of the first Chesapeake Bay Agreement, which established the Partnership.

To learn more about the history of the Partnership and DoD's involvement, please refer to past Annual Progress Reports, which can be found on the DoD CBP DENIX webpage at:

<https://www.denix.osd.mil/chesapeake/dod-cbp-annual-progress-reports/>



# Implement Strategically

DoD has an ongoing commitment to improve water quality in the Chesapeake Bay by reducing the nutrients and sediment from its installations that reach creeks and rivers and ultimately discharge into the Bay. The 2018-2019 work plan documents DoD's commitments and includes actions, targets, timelines, and costs for each identified outcome. Outcomes include citizen stewardship, fish habitat, local leadership, oysters, protected lands, public access, submerged aquatic vegetation (SAV), urban tree canopy, water quality, and wetlands.

DoD strategically implemented the work plan in order to meet, and in some cases, exceed its commitments. Several accomplishments were identified as items that were key to DoD's success:



PHOTO BY MASS COMMUNICATION SPECIALIST SEAMAN TATYANA M. FREEMAN.

DoD provided thorough narratives with strategies to meet the agency's federal planning goals for each jurisdiction's **Phase III Watershed Implementation Plan (WIP)**.



PHOTO BY JENNY TOLBERT, JBM-HH

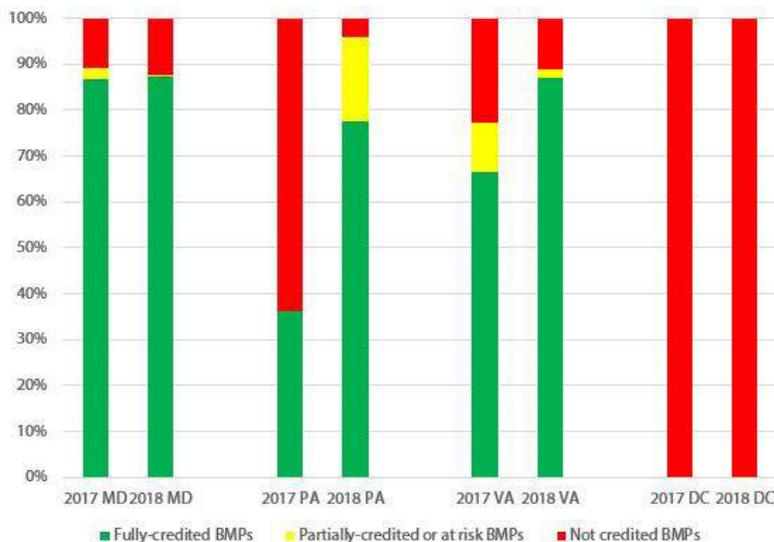
DoD invested \$29.5M in BMP implementation in SY2019. The **\$53.2M total investment** in 2018-2019 exceeded the DoD's \$45M goal by almost 20%.



PHOTO BY MATT RATH, CBP

DoD successfully funded and executed an **in-depth progress assessment** for DoD installations in Maryland, Virginia, Pennsylvania, and Washington, D.C.

## Confirming DoD Progress in CAST



DoD created an **innovative tool** to assess whether BMPs, as reported by DoD, are credited in the Chesapeake Assessment Scenario Tool (CAST). These BMP crediting reports have led to significant improvements in the rate of BMPs credited and attributed to DoD in the Partnership's annual progress scenario. In particular, Pennsylvania saw a substantial increase in BMPs credited to DoD installations between 2017 and 2018.



In SY2019, the DoD CBP further strengthened partnerships within the DoD and actively participated in stakeholder work groups and goal implementation teams across the watershed. The DoD CBP also engages in activities with stakeholders through both DoD-led and external initiatives, such as:

- ✓ Collaborating with surrounding communities and organizations through programs like the REPI program and Joint Land Use Studies.
- ✓ Partnering with the Maryland Grows Oysters program and the Chesapeake Bay Foundation to grow oyster spat in the waters of DoD installations in Maryland and Virginia. After they have matured, the spat are transferred to oyster beds in key tributaries of the Chesapeake Bay.
- ✓ Communicating and collaborating between the military services through the DoD's Chesapeake Bay Action Team (CBAT).
- ✓ Connecting leaders from installations, DoD, the Partnership, federal agencies, and jurisdictions at the DoD Chesapeake Bay Commanders' Conference. Multiple networking opportunities offered throughout the event fostered communication and partnership among the 18 commanding officers, seven state representatives, and other regional representatives in attendance.

## In FY2019, DoD staff continued participation and leadership in the following Partnership workgroups and teams:

- Federal Facility Workgroup
- Water Quality Goal Implementation Team
- Sustainable Fisheries Goal Implementation Team: Inter-Agency Oyster Teams in Maryland and Virginia
- Habitat Goal Implementation Team: Wetlands and SAV Workgroups
- Communications Workgroup
- Climate Resiliency Workgroup



PHOTO BY KEVIN DU BOIS, DOD CBP

## Leveraging Partnerships for Shared Goals

NWS Yorktown (VA) provides critical fleet ordnance support for the Navy and shares almost 14 miles of shoreline with the National Park Service. In 2019, NWS Yorktown and the Virginia Institute of Marine Science (VIMS) were awarded a grant through the Chesapeake Bay Trust to design a living shoreline at Penniman Spit. The proposed living shoreline, oyster restoration, and force protection design is one of several projects being considered for the 2020 DoD REPI Challenge. Pictured at left are staff from NWS Yorktown, VIMS, and the Navy MIDLANT EV - Planning and Conservation exploring potential sites for oyster restoration in the waters off the installation.



# Wise Use of Limited Resources

Environmental programs at DoD installations must balance environmental and regulatory objectives with the DoD's mission — to preserve military readiness and support the warfighter. Resource limitations require strategic and careful considerations to most effectively accomplish these objectives. Specific challenges installations face can include:

- ✓ Environmental conditions that might negatively impact military operations, such as bird air strike hazards (BASH)
- ✓ Limited open space and fiscal resources
- ✓ Vulnerability to more frequent flooding and extreme weather events, particularly for installations located along or near the coast

Installations find this balance by identifying projects that achieve multiple environmental objectives, in addition achieving military mission. By prioritizing projects that integrate the co-benefits shown in the graphic below, DoD makes the best use of limited resources.



PHOTO BY CARMICHAEL PATTON, JOINT BASE LANGLEY EUSTIS (LANGLEY)



## Climate Impact Study

Identifying actions needed to sustain climate resilience and preserve military readiness is a challenge faced by installations. A study is underway at Joint Base Langley-Eustis (Langley) (VA) to assess the facility's vulnerability to extreme weather events. Prior to recent drainage improvements, large portions of the airfield were routinely submerged under tidal surge or stormwater runoff. Combined influence from sea level rise and subsidence have increased the portion of base infrastructure vulnerable to flooding. The conclusions of this study will provide solutions to mitigate such impacts and support DoD's mission.



The restoration of the Chesapeake Bay encompasses more than water quality improvement. The Chesapeake Bay Watershed Agreement also includes a range of other goals with outcomes that the Partnership strives to meet in concert with the end of the Chesapeake Bay total maximum daily load (TMDL) implementation timeline. Installation activities support a range of benefits across the Partnership’s management strategy bins, which include Abundant Life, Conserved Land, Engaged Communities, Clean Water, and Climate Resilience.

Projects implemented through other DoD programs, not directly related to the Chesapeake Bay, may also support Chesapeake Bay outcomes, particularly Clean Water. For example, projects funded by INRMPs, which document an installation’s strategy to protect natural resources within its fence line, can provide water quality benefits. Other routine activities, like sweeping of runways and parking lots and limiting fertilization of grass lawns, also support water quality, in addition to providing operational benefits for the installation.

Acknowledging that environmental projects have multiple benefits, each project highlighted on the following pages includes a series of icons to indicate the co-benefits it provides. The co-benefits listed to the right were selected to align with DoD objectives and adapted from a list of recognized co-benefits developed by the Partnership.



PHOTOS BY JENNY TOLBERT, JBM-HH

## Street Sweeping

Joint Base Myer-Henderson Hall (JBM-HH) has conducted street sweeping for over 20 years. The installation sweeps roads and parking lots weekly, typically on weekends when traffic is reduced. By utilizing a regenerative air vacuum, like the one shown here, the sweeping reduces nutrient and sediment loads that reach local waterways.

## Project Co-Benefit Categories



### Habitat

- » Biodiversity & Habitat
- » Fish Passage
- » Stream Health
- » Submerged Aquatic Vegetation
- » Wetlands



### Healthy Watersheds

- » Healthy Watersheds
- » Land Use Methods & Metrics



### Sustainable Fisheries

- » Fish Habitat
- » Oysters



### Water Quality

- » Bacteria Loads
- » Energy Efficiency
- » Flood Control/ Mitigation
- » Forest Buffers
- » Groundwater Recharge
- » Recreation



### Climate Resilience



### Citizen Stewardship



### Protected Lands



# Abundant Life

Ecosystems rich with abundant life are the cornerstone of the Chesapeake Bay watershed. They support a diversity of flora and fauna and increase the joy we take from the places we live and work.

In FY2019, installations enhanced and restored habitat for wildlife, promoted the preservation and growth of wetlands, provided management of invasive plants, and conducted surveys to assess the health of key indicator plant and animal species. Furthermore, ongoing efforts to track the presence and extent of wetlands, SAV, and riparian buffers at DoD installations provide valuable information about ecosystem and habitat health.

Successful wildlife and plant communities depend on a healthy environment. Therefore, projects that support abundant life also benefit other components of the local ecosystem, such as water quality, stream health, and sensitive species like oysters and fish. Additionally, small-scale improvements contribute to the overall health of the larger watersheds in which DoD installations are located. The four projects highlighted on the following page demonstrate the multi-faceted benefits of abundant life projects at DoD installations.

## By the Numbers:



**\$8.9M** invested in Abundant Life projects

**43,904**

total acres of protected wetlands across installations



**8,585** acres of SAV at installations

**64,998**

trees planted at 9 installations



**7** oyster projects for reef restoration in waters around installations



## Supporting Important Pollinators

One way that DoD installations are supporting the growth of natural habitats is through pollinator projects across the Chesapeake Bay. These projects, such as ones undertaken by NAS Patuxent River (MD), the Naval Research Lab (MD), the Army Reserve National Guard (MD), Fort A.P. Hill (VA), DSC Richmond (VA), and NSF Indian Head (MD), convert areas of fescue/non-native plant species to warm season grasses and forbs with the emphasis on promoting pollinator habitat. These habitats support pollinator species of concern, such as bees and monarch butterflies.

PHOTO BY STACEY ROSENQUIST, ARLINGTON NATIONAL CEMETERY



## Monitoring New Oyster Beds

**NSA Annapolis (MD)** is consulting with the Maryland Oyster Recovery Partnership to aid the success of oyster habitat restoration. In FY2019, Carr, Mill, and College Creeks were mapped using sonar. If analysis of the sonar data determines that oyster reefs are present, samples will be analyzed to assess existing fauna. In 2020, sonde probes will collect a range of physical and chemical water quality parameters.



Oysters



Stream Health



Healthy Watershed



PHOTO BY KATHARINE SEGUIN, NSA ANNAPOLIS

## Attracting a Variety of Pollinators

A 250-square-foot garden now sustains over 100 plants that attract pollinators, including bees, butterflies, and birds, near the entrance of the **Naval Research Lab (DC)**. The placement and use of native plants that flower at different times of the year provide urban habitat for pollinators. As a certified Wildlife Habitat by the National Wildlife Federation, the garden meets specific criteria of food, water, cover, and native plants available to wildlife.



Multiple



PHOTO BY NAVAL RESEARCH LABORATORY PUBLIC AFFAIRS OFFICE

## Volunteering to Accomplish Natural Resources Projects

The **Letterkenny Army Depot (PA)** natural resources office, in conjunction with the Letterkenny Rod and Gun Club, organizes volunteer groups to support natural resources projects. The program began over 50 years ago to support fish and wildlife management on the installation. Between July 2018 and June 2019, 367 volunteers donated 11,676 hours in support of the natural resources program. Volunteers are granted additional access to hunt and/or fish to thank them for their service.



Fish Habitat



Citizen Stewardship



PHOTO BY LETTERKENNY ARMY DEPOT NATURAL RESOURCES OFFICE

## Assessing Resilience and Wetland Vulnerability

**Aberdeen Proving Ground (APG) (MD)**, in cooperation with the US Geological Survey, is addressing sea level rise and storm effects on wetlands and low-lying areas for climate preparedness and resilience. In FY2018 and FY2019, APG installed six surface elevation tables to measure changes in water level. The data will be utilized to provide more accurate estimates of potential sea level rise. They will also undertake further monitoring with sensors mounted to pre-installed brackets to assess the time, extent, and magnitude of storm surge during extreme weather.



Wetlands



Multiple



Climate Resilience



PHOTO BY LYNCH, J. C., P. HENSEL, AND D. R. CAHOON, 2015, NATURAL RESOURCE REPORT NPS/NCBN/NRR



# Conserved Land

Conserving land with ecological, historical, and community value is integral to maintaining a healthy ecosystem and vibrant culture. In FY2019, installations in the Chesapeake Bay watershed conserved over 4,000 acres through the REPI program. In all, 13 installations with active REPI partnerships continue to combat incompatible land uses and encroachment, protect mission readiness, and preserve wildlife habitat and natural environments.

Protecting lands from development provides value to the installation and surrounding ecosystem, including wildlife habitat, recreation opportunities, climate adaptation, and groundwater recharge. Furthermore, by excluding these lands from future development, DoD preserves the natural processes that improve water quality. Recognizing these shared benefits for DoD and neighboring communities, installations frequently partner with municipal, state, and non-profit entities to purchase and conserve parcels of ecological or historical significance.

The projects on the next page demonstrate the range of partnerships and types of landscapes protected around DoD installations.

## By the Numbers:



**\$13.7M** invested in Conserved Land projects

**4,038**

acres protected around DoD installations in FY2019 through the REPI program



**7** installations worked to conserve new areas of land



**39,445**

cumulative acres protected through the REPI program

## Building Climate Resilience with REPI

In FY2019, Congress expanded the REPI program authority to include agreements that maintain or improve the resilience of military installations. Resilience refers to the ability of an installation to prepare and recover from extreme weather or other changes in environmental conditions.

At the 2019 Chesapeake Bay Commanders' Conference, Ms. Jaime Simon discussed the expanded authority and other potential opportunities for installations to access REPI funds. Her presentation led to audience discussion on enhanced REPI funding for FY2020 and beyond.



PHOTO BY KEVIN DU BOIS, DOD CBP



## Supporting the Army Compatible Use Buffer (ACUB) Program

Eight parcels totaling 564 acres were conserved by the ACUB program at **Fort Indiantown Gap (PA)**. The program protects the Eastern Army National Guard Aviation Training Site. The projects maintain the group's mission; provide a safety buffer for training missions; minimize noise, smoke, and dust complaints; and also protect habitat and water features.

- Multiple
- Forest Buffers
- Healthy Watershed
- Protected Lands
- Climate Resilience



PHOTO BY CARVATECH USA

## Protecting NAS Patuxent River Land

In FY2019, 2,514 acres were protected beneath Navy airspace (**NAS Patuxent River and the Atlantic Test Ranges**) in Maryland, Delaware, and Virginia with REPI funds. Benefits include the conservation of core habitat for bird species and the once-endangered Delmarva fox squirrel; protection from development; and the preservation of water resources, wetland buffers areas, and coastlines in the watershed.

- Multiple
- Forest Buffers
- Healthy Watershed
- Protected Lands
- Climate Resilience



PHOTO BY BRITTANY MARSHALL, NAVFAC WASHINGTON

## Protecting Oysters and Conserving the Land

The Mt. Zion (Cowart) property includes 310 protected waterfront acres near **NSF Dahlgren and NAS Patuxent River (MD)**. The easement permanently protects the surrounding woodlands and waterfront from development and minimizes potential encroachment. The open fields will continue to be farmed for livestock and crops, and the forest will be preserved as habitat, as well as a buffer for several thousand acres of oyster-planting waters.

- Multiple
- Forest Buffers
- Healthy Watershed
- Protected Lands
- Oysters
- Climate Resilience



PHOTO BY BRITTANY MARSHALL, NAVFAC WASHINGTON

## Preserving the McClevey Farm

The McClevey Farm easement conserves over 80 acres of forest, including a perennial stream and wetlands, through the REPI program partnership with Stafford County and the Virginia Land Conservation Foundation. The easement maintains the rural character and open space near **Marine Corps Base Quantico (VA)**, including habitat for bird and orchid species.

- Multiple
- Forest Buffers
- Healthy Watershed
- Protected Lands
- Climate Resilience



PHOTO BY KATHY BAKER, STAFFORD COUNTY PLANNING AND ZONING



# Engaged Communities

Environmental education and outreach activities improve environmental literacy, build awareness of the benefits of a healthy Bay, and inspire a solidarity of purpose and action to restore the Bay watershed. By engaging citizens, students, warfighters, and the extended military community, DoD installations also promote active stewardship of natural resources.

Over 20 installations in the Chesapeake Bay provide access and recreational activities that strengthen appreciation for a healthy Chesapeake Bay. Members of the DoD public can hunt, fish, hike, and bicycle at the 204 public access sites found among the rich natural environments at DoD installations across the watershed.

In FY2019, DoD installations hosted a variety of volunteer-based events, such as Clean the Bay Day, Clean the Base Day, Arbor Day, Earth Day, and Public Lands Day. Through these events, installations provided opportunities to engage in stewardship activities that contributed to the physical restoration of the watershed.

DoD staff also host or participate in education and outreach events featuring topics like pollution prevention, sustainable practices, recycling, and stormwater management.

Informed and engaged citizens can become invaluable partners. The cumulative impact of individual changes can reap significant benefits and co-benefits for the Chesapeake Bay, as demonstrated through the projects on the following page.

## By the Numbers:



**98** citizen stewardship events



**36** installations with volunteer programs



**5,254**

volunteers at citizen stewardship events



**Over 25,000**

pounds of trash removed by DoD volunteers during clean-up events

## Embracing Environmental Stewardship through Clean the Bay Day

Each year, the DoD joins thousands of Virginians to descend on the rivers, streams, and beaches of the Chesapeake Bay watershed and remove harmful litter and debris.

DoD volunteers were responsible for removing roughly half of all the debris cleared during Clean the Bay Day activities in Hampton Roads in FY2019. For the first time, two installations in Maryland also participated in local Clean the Bay Day activities.



PHOTO BY KARRIE FREEMAN, NSA BETHESDA



## Promoting Stewardship on Earth Day

**Norfolk Naval Shipyard (NAVSEA) (VA)** hosted an Earth Day event with over 800 shipyard employees and more than 20 local environmental organizations. Visitors engaged with community groups including Lynnhaven River Now, Evelyn's Wildlife Refuge, the Elizabeth River Project, Dominion Energy, and the Norfolk Beekeepers Association. Over 320 employees made pledges to properly dispose of household hazardous waste, use reusable bags, opt for green cleaning products, or use a reusable water bottle.



Citizen Stewardship



PHOTO BY BROOK ZELLER, NORFOLK NAVAL SHIPYARD

## Inspiring Children to Engage with Nature at the Youth Fishing Derby

**NSF Indian Head (MD)** hosted a youth fishing derby at the Stump Neck Annex Area 8 Pond. This annual event allows children to learn about fishing techniques and ethics while having fun. Derby participants are dependents of active duty, civilian, and contractor personnel that have access to the installation. This year, approximately 30 children under the age of 15 participated.



Citizen Stewardship



Recreation



PHOTO BY COREY MCCABE, NSF INDIAN HEAD

## Providing Access to Nature at Fort Belvoir

**Fort Belvoir (VA)** maintains approximately 14 miles of hiking trails throughout its special natural areas. To improve the conditions of these hiking trails, several repairs and improvements were completed in FY2019. The Basin Trail was rerouted to avoid wet areas and provide a more stable path for hikers, trails were marked using a color-coded system for easier navigation, and repairs were made to various foot bridges and substrate to provide drier and safer trail conditions.



Citizen Stewardship



PHOTO BY MONICA MUNDRIK, FORT BELVOIR

## Bringing the Military Community Together on Earth Day

By combining its Earth Day and Bring Your Child to Work Day celebrations, **NSA Mechanicsburg (PA)** has brought environmental awareness and education to audiences of all ages for over 20 years. Its 2019 Earth Day activities included edible models demonstrating the impact of spills on the environment, informational lessons about key pollinator species, and clean-up of the installation's stormwater BMPs.



Citizen Stewardship



Water Quality



PHOTO BY CHRIS CLEAVER, NSA MECHANICSBURG PUBLIC AFFAIRS OFFICE



# Clean Water

Reducing excess nutrients, sediment, and toxic contaminants is critical to create safe and healthy waters for all life. Through Executive Order 13508, DoD is required to establish milestones that lead to the reduction of nutrient and sediment loads.

Because DoD is the largest federal owner of developed land in the watershed and operates several significant wastewater treatment plants, substantial reductions come from those sources. Through implementation of stormwater pollution control practices and enhanced nutrient removal, DoD has successfully reduced the pollutant loads from these sources.

DoD installations also control large tracts of natural land within their fence lines. Projects intended to enhance the quality of those natural resources also provide cleaner water. Each year, DoD installations restore thousands of feet of streams and shorelines, enhancing habitat, providing recreation, and improving water quality.

Installations with limited land or fiscal resources must sometimes find creative solutions. By identifying projects with other co-benefits, such as flood protection and stream health, or projects that use existing under-utilized land, installations have succeeded within these constraints, as demonstrated on the next page.

## By the Numbers:



**\$42.3M** invested in Clean Water projects



**7,969** LF of streambank restored



**785** LF of shoreline restored

**290**

new acres of impervious surface treatment



**351**

BMPs constructed in SY2019

### Creating Co-Benefits with Wetlands Expansion

The DoD expands the benefits of clean water and climate resilience through projects such as the spotted turtle habitat enhancement at NSA Indian Head. This project created approximately three acres of non-tidal wetland habitat to promote the conservation of spotted turtles, a federal candidate species under the Endangered Species Act.



PHOTO BY CHRIS PETERSEN, NSA HAMPTON ROADS NORTHWEST ANNEX



## Reducing Nutrients from Agricultural Land

**NAS Oceana (VA)** leases 480 acres of agricultural land, including 290 acres in the Chesapeake Bay watershed, for crop cultivation. To reduce the pollutants discharged from the leased land, lessees are required to follow a soil and water conservation plan, which minimizes tillage and mowing, requires the use of cover crops, reduces use of pesticides, and otherwise implements measures to improve the quality of the soil and water in and near the plots.



Healthy Watershed



Water Quality (Multiple)



PHOTO BY NAS OCEANA AG PROGRAM

## Designing Stream Restoration and Other BMPs with Co-Benefits

**Defense Distribution Depot Susquehanna (PA)** completed several projects that provide multiple environmental co-benefits, as well as pollutant reduction credit. At the six selected sites, the installation implemented a combination of the following measures: Natural Channel Design (NCD) stream restoration, floodplain reconnection, habitat enhancement, floating treatment wetlands, and supplemental runoff capture from impervious areas. The projects will result in 2,385 LF of NCD restored stream.



Flood Control



Stream Health



Climate Resilience



PHOTO BY TOM GRAUPENSPERGER, DEWBERRY

## Collecting Rainwater for Beneficial Reuse

The roofing membrane of the **Scranton Army Ammunition Plant (PA)** utilizes 2.23 acres of roof space to capture rainwater and deliver it to three 23,688-gallon storage tanks. The collected rainwater is used as make-up water for the production cooling tower. Future projects will redirect additional roof drains to the rainwater collection system. These additional tie-ins will add 30,000 square feet of collection space and capture approximately 16,000 gallons of additional rainwater from a one-inch rain event.



Multiple

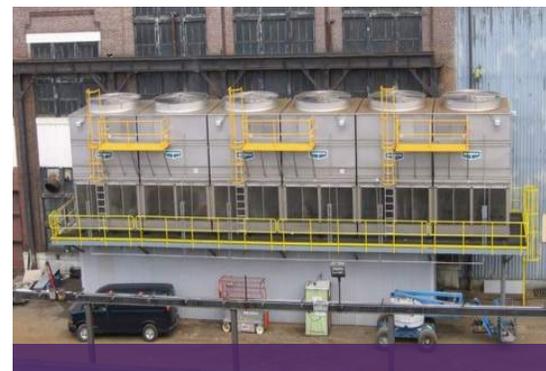


PHOTO BY RICHARD P. HANSEN, SCRANTON ARMY AMMUNITION PLANT

## Constructing Urban BMPs with Limited Land

In FY2019, **JBM-HH (VA)** completed the construction of four small-scale structural BMPs: permeable pavers, a small two-tiered bioswale, a bioretention area, and bioswales in and near multiple parking areas. JBM-HH partnered with the Army Corps of Engineers to conduct annual BMP inspections to evaluate their performance and maintenance needs. The inspection program allows BMP deficiencies to be promptly identified and addressed, ensuring ongoing treatment of stormwater runoff.



Multiple



PHOTO BY JENNY TOLBERT, JBM-HH



# Looking Ahead

Through FY2019, much focus was given to the development and completion of the jurisdictions' Phase III WIPs. With those strategy documents now in place, DoD can shift attention to other priorities. Looking ahead, installations reported over \$39M in planned projects that will support Abundant Life, Clean Water, Conserved Land, and Engaged Communities in FY2020.

In addition, the DoD CBP will evaluate its program, its focus, and how it communicates within and outside of DoD in the next fiscal year. This self-reflection will be used to institute improvements to better serve key audiences. The DoD CBP will also continue to promote projects that meet multiple water quality, natural resources, and resilience objectives. Above all, DoD's focus is its military mission, to deter war and protect the security of our nation. The next two pages will describe the integration of DoD's environmental and defense objectives.



PHOTO BY SEAMAN IMANI DANIELS, U.S. NAVY

Captain Christopher Culp, commanding officer at Naval Medical Center Portsmouth, and Rachel Donegan, the installation's environmental program manager, plant a bush for Arbor Day 2019.

## Future Goals and Priorities

### Abundant Life

DoD will continue to support efforts to conserve, protect, and enhance the wildlife, habitat, and natural resources found in and around DoD installations. Specific goals include:

- ✓ Support funding of \$47M in currently unfunded INRMP projects with water quality co-benefits
- ✓ Assist with aerial SAV surveys and continue to explore opportunities to use satellite imagery to map SAV while eliminating potential conflicts in restricted military airspace
- ✓ Find harmony between wildlife and mission-related activities
- ✓ Assess new oyster restoration BMP protocols and their potential to help installations meet TMDL goals

### Clean Water

DoD will continue its ongoing efforts to meet the commitments to water quality improvement and federal planning goals.

- ✓ Installations plan to implement \$45.1M in BMP construction for FY2020-2021
- ✓ DoD will continue to maintain and update its annual progress evaluation, 2025 BMP implementation plan, and BMP crediting reports
- ✓ DoD will focus on implementation of BMPs with higher removal efficiency for total nitrogen
- ✓ Recognizing that many installations have limited space to implement BMPs, DoD will promote the use of programmatic BMPs and other natural BMPs to reduce impacts to lands used to support the mission



PHOTO BY WILL PARSON, CBP

## Conserved Lands

Conserving land around DoD installations can include co-benefits for water quality, natural resources, and, with the expanded REPI authority that came into effect in FY2019, climate resilience.

- ✓ In FY2020, DoD will continue to support installations seeking funds to conserve land with the primary benefit of preventing encroachment or incompatible uses near DoD facilities
- ✓ Installations have requested \$15.9M in FY2020 and \$15.4M in FY2021 REPI proposals
- ✓ DoD installations will continue to seek opportunities to partner with other entities on projects related to land conservation, through programs including ACUB, the Sentinel Landscapes program, and others

## Engaged Communities

DoD supports the efforts of installations to increase education and participation opportunities in their communities.

- ✓ In FY2020, the DoD will promote greater participation in Clean the Bay Day, encouraging participation across all Bay watershed jurisdictions
- ✓ The DoD CBP will implement changes to its outreach products, tools, and strategies based on input from DoD stakeholders, including the CBAT and participants at the Chesapeake Bay Commanders' Conference. The DoD CBP outreach materials include quarterly fact sheets and journals, informational pamphlets and brochures, the DoD CBP webpage, and this annual progress report. Many of the outreach documents can be found at: <https://www.denix.osd.mil/chesapeake/home/>

## Climate Resilience

The DoD CBP supports installation efforts to assess and correct vulnerability to flooding and more extreme weather events, along with natural resource projects that provide climate resilience benefits. DoD will also track Partnership decisions regarding the impact of climate change on BMP performance. These impacts are expected to be quantified in the jurisdictions' two-year milestones beginning in 2022.



BOTTOM PHOTO BY LAUREN BADER, JOINT BASE ANDREWS.



# DoD Chesapeake Bay Program

## Fiscal Year 2019 DoD Chesapeake Bay Program Annual Progress Report



### Acknowledgments

This report would not have been possible without the concerted efforts of a myriad of dedicated and motivated people who work every day to improve the quality of the environment throughout the Chesapeake Bay and its watershed, particularly the environmental staff of the DoD Chesapeake Bay installations. The activities that take place at the various DoD installations are generally not visible to the public. This report is intended to highlight some of the accomplishments by DoD personnel and provide context to the activities occurring within one of the largest landholders in the watershed.

The DoD CBP is jointly managed by Commander, Navy Region Mid-Atlantic within the Regional Environmental Coordination office and led by the Deputy Assistant Secretary of the Navy for Environment.