

# DoD Chesapeake Bay Program

## Fiscal Year 2017 Annual Progress Report

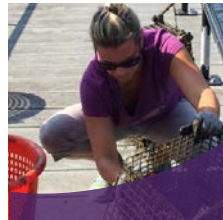


*The sun rises over Mattawoman Creek at Naval Support Facility South Potomac - Indian Head in Maryland. This photo was selected as the winner of the 2018 DoD CBP photo contest.*



# Introduction

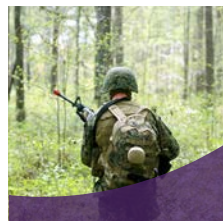
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**Abundant Life**.....9  
DoD supports abundant life through protection of fish passage and habitat, oyster restoration, wetlands, submerged aquatic vegetation (SAV), riparian forest buffers, and urban tree canopy (UTC) at DoD facilities.



**Clean Water**.....11  
DoD helps to improve water quality by supporting development of jurisdictions' watershed implementation plans through planning and implementing stormwater management practices, upgrading wastewater treatment plants, and improving stormwater system infrastructure that reduces nutrients and sediment.



**Conserved Lands** .....13  
Through the Readiness and Environmental Protection Integration (REPI) and Compatible Land Use programs, DoD supports the conservation of priority landscapes around DoD facilities by partnering with land trusts and local governments.



**Engaged Communities** .....15  
DoD supports public access and environmental awareness through its commitment to providing opportunities for citizen stewardship, local leadership, and public access at DoD installations.

The U.S. Department of Defense (DoD) was one of the first federal departments to be formally involved in the Chesapeake Bay watershed restoration effort.

DoD continues to evaluate areas where its programs align with the Goals of the Chesapeake Bay through collective efforts of numerous installations throughout the watershed. Issues central to improving the Bay's health include sustaining **Abundant Life**, restoring **Clean Water**, **Conserving Land** and **Engaging Communities**.

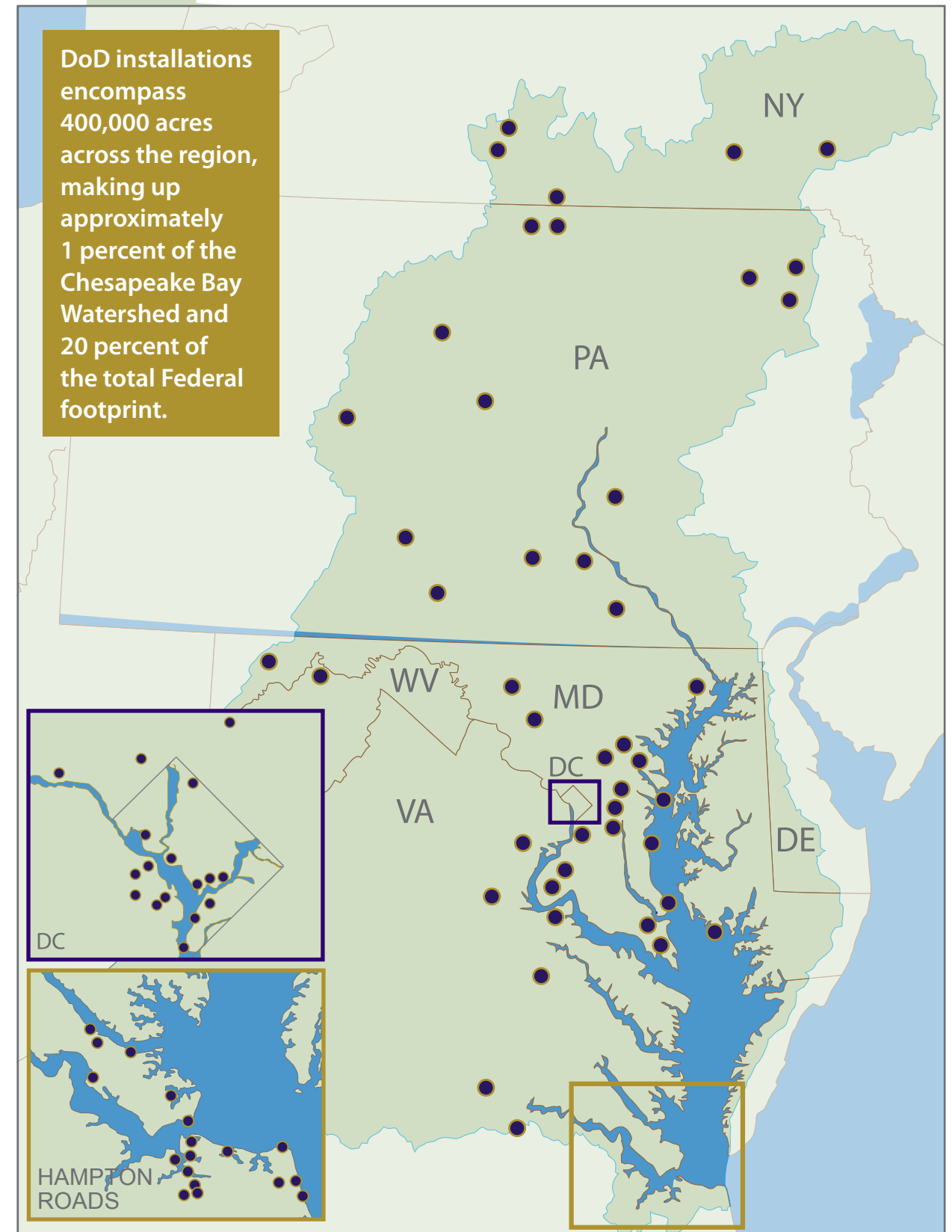
This report highlights those specific efforts to lead by example in supporting the Goals and Outcomes of the 2014 Chesapeake Bay Watershed Agreement and Executive Order 13508 during FY2017.



PHOTO RELEASED AND PROVIDED BY RACHELLARIE

▲ The Air Force Memorial is visible behind a rain garden at Arlington National Cemetery in Arlington, Virginia.

# DoD in the Chesapeake Bay Watershed





# DoD & the Chesapeake Bay Program



The Chesapeake Bay Program Partnership (Partnership), formed in 1983, leads restoration and protection efforts across the Bay watershed. The DoD Chesapeake Bay Program (CBP), managed by the Navy, represents the DoD in the Partnership by leading coordination for the military services on Chesapeake Bay agreements; developing partnerships with other federal and state agencies, local governments, and non-profit organizations; promoting cross-agency information sharing; tracking and reporting progress; and coordinating DoD positions related to Chesapeake Bay policy.

The timeline below provides notable highlights within the Chesapeake Bay watershed's history, including policy and regulatory actions, DoD CBP initiatives, and important metric accomplishments by DoD and the CBP.

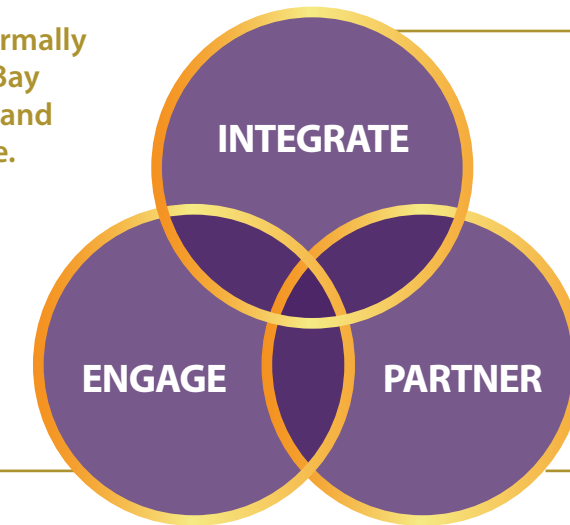


MARINE CORPS PHOTO BY LANCE CPL. JUAN A. SOTO-DELGADO

# DoD & the Chesapeake Bay Program

## DoD Leading by Example

The DoD was one of the first federal departments to be formally involved in the Chesapeake Bay watershed restoration effort and continues to lead by example.

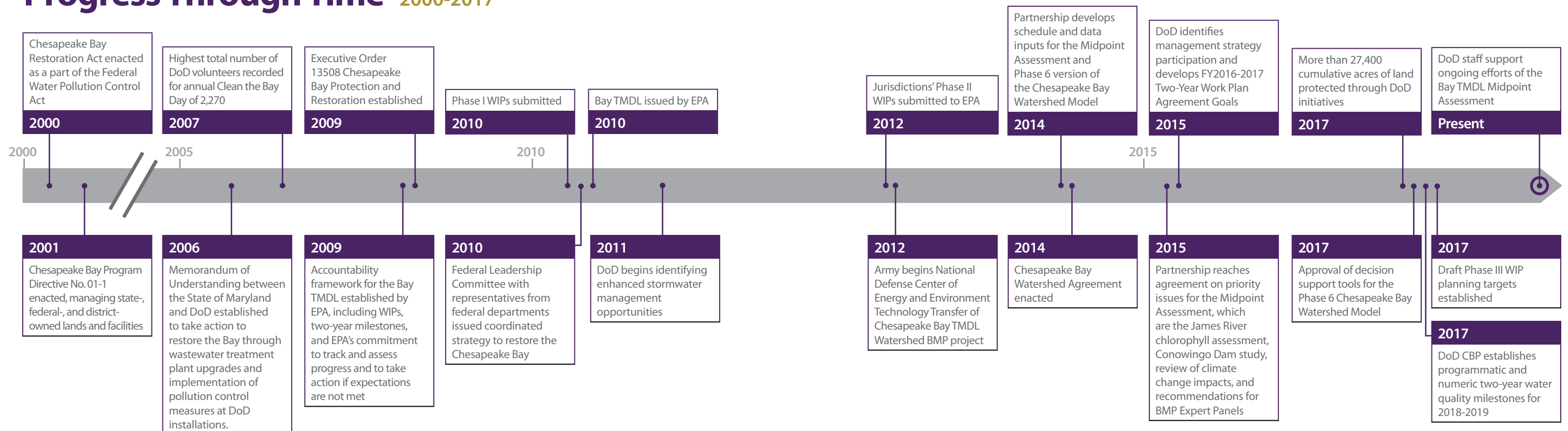


Integrate restoration, pollution prevention, and stewardship initiatives for the Bay into DoD's daily mission

Engage all levels of DoD military, civilians, and their families to be environmental stewards of the watershed where they live

Partner with federal, state, and local governments and citizen groups to maximize resources and strengthen Bay restoration and protection efforts

## Progress Through Time 2000-2017





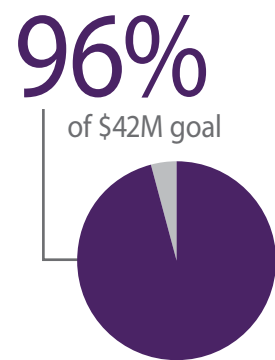
The 2016-2017 Two-Year Programmatic Milestones and Work Plan, developed in 2015, define specific program commitments and short-term actions align with the work of each of the Partnership Goal Implementation Teams (GITs). To measure progress, the DoD CBP conducted an in-depth process of collecting, reviewing, and reporting stormwater management practices and installation projects across the watershed.

In addition to the milestones developed specifically for and by DoD, the department supported actions developed within the Federal Facilities Workgroup (FFWG). Such actions included coordination with EPA and the jurisdictions to identify and map all federal facility boundaries and ensure a process was in place to provide an accurate and complete record of best management practice (BMP) implementation data annually.

**The DoD CBP is responsible for reporting progress for all DoD Service Components, which includes 130 installations and annexes in six states encompassing 400,000 acres.**

The full list of federal water quality milestones is provided at <http://executiveorder.chesapeakebay.net>

### By the Numbers



Progress has been made over the past two years with many performance targets met or exceeded as demonstrated through completion of programmatic actions and metrics that support key indicators of restoration in the Chesapeake Bay.

The following list provides the final status of DoD's 2016 - 2017 Two-year Water Quality Programmatic Milestones ~~developed in 2015~~.

- ✓ **Enhance collaboration with FFWG.** DoD co-chaired the FFWG with the Commonwealth of Virginia. Workgroup activities led to greater participation of federal agencies supporting the Midpoint Assessment.
- ✓ **Identify approaches to track reductions.** Refined data collection processes improved the success of historical and progress BMP reporting. As a result, BMPs implemented by DoD in 2016 and 2017 treat more than 284 acres of impervious surface.
- ✓ **Support jurisdictions and EPA in Watershed Implementation Plan (WIP) development and Phase III WIP expectations.** DoD CBP facilitated routine meetings with installations and developed materials about the WIP development process for DoD Components, Resource Sponsors, and installation staff.
- ✓ **Identify opportunities to conserve priority landscapes around installations.** Eleven installations now maintain active partnerships to protect land from incompatible land uses and preserve valuable landscapes.



PHOTO RELEASED AND PROVIDED BY DAVE CHOAT

▲ Panorama photo of a dry pond at Adelphi Laboratory Center.



# FY2017 Key Accomplishments

The overall management of the DoD CBP is guided by the long-term goals of the 2014 Agreement and Executive Order (EO) 13508. While 2017 fiscal uncertainties created multiple challenges, the DoD continued to focus on programmatic actions to build upon the great work completed in years past. Notable successes in FY2017 include:

**Leadership.** Co-chaired the FFWG; maintained active involvement in the Water Quality, Sustainable Fisheries, and Vital Habitats GITs and Stream Health, SAV, Wetlands, and Watershed Technical workgroups; and released four informational fact sheets for installation staff and DoD leadership, including a "Commander's Guide to the Chesapeake Bay," which provided an overview of how DoD program and mission requirements align with CBP goals.

**Improved Progress Tracking.** Continued improvements to the data collection and validation methods provided a robust accounting of BMPs, which represent DoD's overall progress toward Chesapeake Bay Total Maximum Daily Load (TMDL) goals. DoD worked with installations to identify common types of BMPs that were eligible for credit and not previously reported.

**Collaborative Outreach.** Conducted numerous outreach events at local Earth Day celebrations, festivals, and conferences and provided interviews about Earth Day, climate resiliency, and other projects to share information about DoD initiatives with the public through local radio stations and universities. In addition, DoD CBP publications highlighted updates to the Midpoint Assessment and Phase III WIP development, public access and stewardship on DoD installations, and wildlife diversity in the Chesapeake Bay watershed.

**Strengthened Partnerships.** Strengthened existing partnerships with military installations, state agencies, local communities, and other organizations across the Bay watershed by participating in development of several municipal separate storm sewer system (MS4) permits, including those in Virginia and Maryland.



PHOTO BY WILL PARSON, CHESAPEAKE BAY PROGRAM

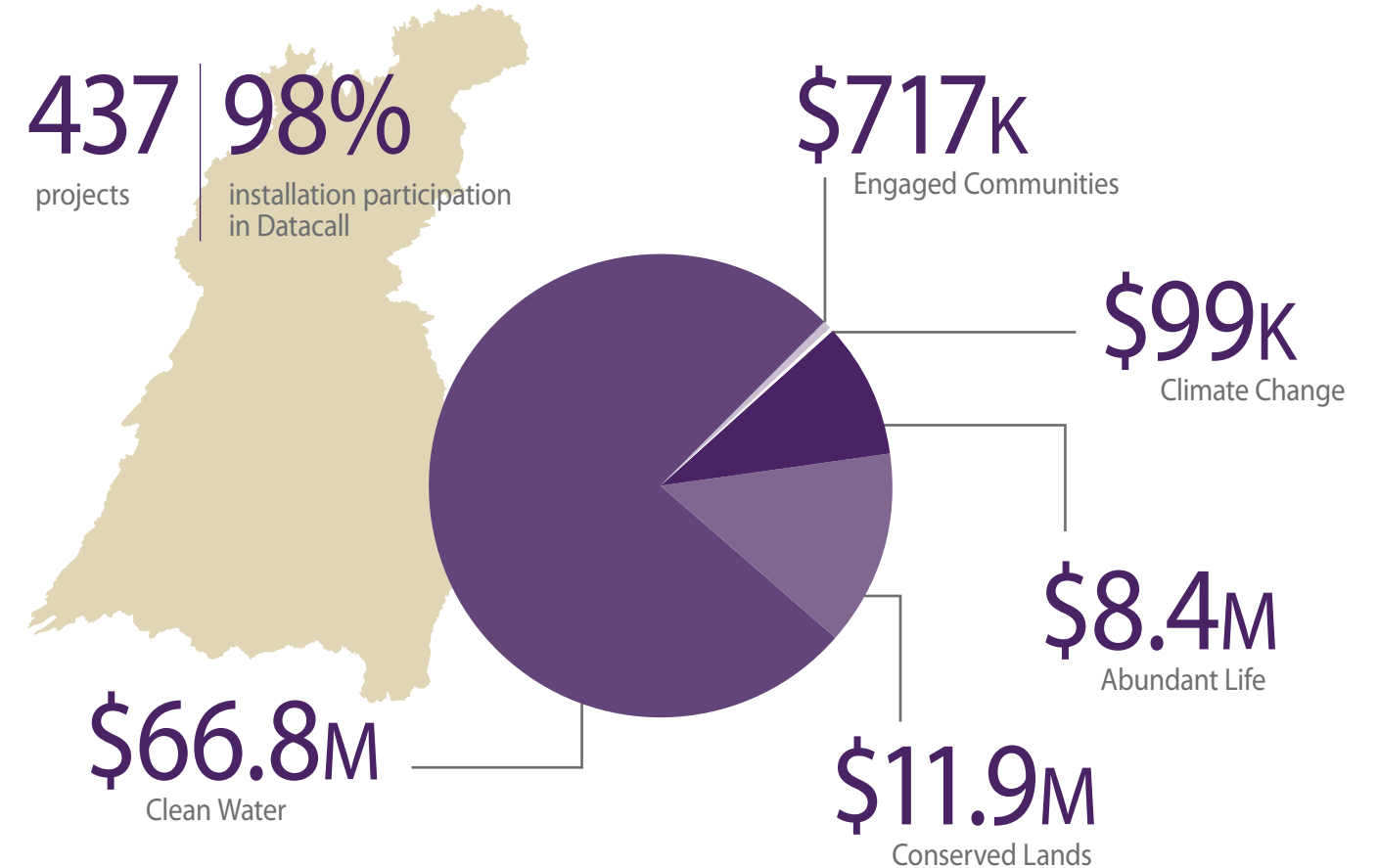
## DoD and EPA Partnership

In FY2016-2017, Joint Base Langley-Eustis restored more than 3,000 feet of vulnerable Virginia shoreline, with plans to restore 1,100 more in the coming years. The restoration provides natural flood protection and habitat for animals including declining species like the Diamondback Terrapin. For more information, check out [EPA's video](#) about the project, which also includes additional information on how Cheatham Annex is also working to restore their shoreline.

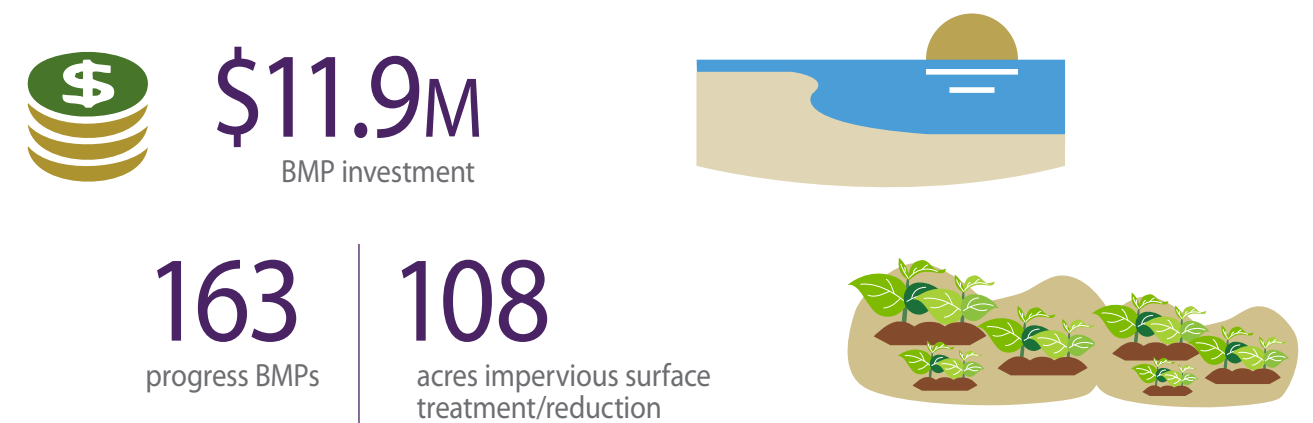


# FY2017 Key Accomplishments

## FY2017 Funding \$88M



## BMP Implementation and Reporting





The Chesapeake Bay Watershed Agreement aims to support sustainable fish and shellfish populations and restore habitats for native and migratory species. The following activities and project highlights demonstrate how DoD installations supported the living resources of the Chesapeake Bay.

## → Oysters

**PARTNERED** with the Maryland Oyster Grows Oysters Program, Chesapeake Bay Foundation, and local schools to complete spat generation and transfer at four installations.

## → Fish Habitat & Passage

**GUIDED** integrated natural resources planning and project implementation by conducting three fish surveys to assess species of interest at two installations.

## → Wetlands

**MINIMIZED** construction-related impacts by completing wetland delineations and mapping to improve the accuracy of wetland data.

## → Urban Tree Canopy

**HOSTED** Arbor Day and other tree planting events at 25 DoD installations to promote the military community's awareness and knowledge of UTC.

## → Submerged Aquatic Vegetation

**SUPPORTED** the Virginia Institute of Marine Science by providing escorted access to restricted air space above installations to determine SAV coverage around DoD installations.



PHOTO RELEASED AND PROVIDED BY ART SILVER

▲ A volunteer holds a baby snapper turtle found at Joint Base Langley-Eustis.



PHOTO RELEASED AND PROVIDED BY DEIDRE DEROIA

## Sounding out Northern Long-Eared Bats

**Aberdeen Proving Ground** conducted surveys of Northern Long-Eared Bats (NLEB) across the installation's 40,000 acres as part of the Integrated Natural Resources Management Plan (INRMP). The NLEB is federally listed as a threatened species under the Endangered Species Act.



PHOTO RELEASED AND PROVIDED BY JOHN SELSTROM

## Balancing mission readiness and wetland protection

**Joint Base Andrews** finalized a cooperative agreement to establish a conservation easement as a unique approach for off-base wetland mitigation as a result of development needed to maintain mission readiness. Piscataway Creek Mitigation Site preserved a total of 62 acres of non-tidal wetlands to mitigate unavoidable impacts expected from planned projects on the base.



PHOTO RELEASED AND PROVIDED BY LINDA HICKS

## Restoring oysters in the Chesapeake Bay

Members from NAVFAC Mid Atlantic and NAVFAC LANT assisted PWD NSA HR environmental personnel in removing oysters that the **NSA Hampton Roads – Lafayette River Complex** has been growing in cages on the pier for delivery to the Chesapeake Bay Foundation. The oysters were placed on established reefs in the Lafayette River and Paradise Creek in support of the DoD partnership in helping restore oysters in the Chesapeake Bay watershed.

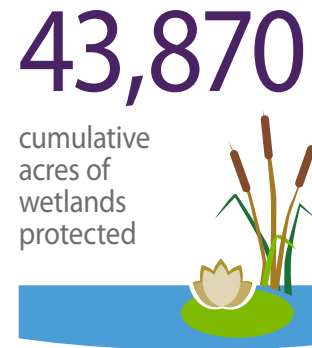


PHOTO RELEASED AND PROVIDED BY SETH BERRY

## Conserving birds and their habitats

As part of the greater MAPS (Monitoring Avian Productivity & Survivorship) program across all DoD installations, **Naval Support Activity (NSA) South Potomac Indian Head** monitored bird reproduction and survival rates at two sites on the installation with an emphasis on neo-tropical migratory birds such as the wood thrush shown here. Collected data provides valuable insight into the habitat conditions required to ensure that training and activities do not negatively impact bird species.

### By the Numbers





Reducing excess nutrients, sediment, and toxic contaminants is critical to creating safe, healthy waters for animals and people. The following activities and project highlights demonstrate how DoD installations supported improving water quality in the Chesapeake Bay specifically related to meeting the goals of the Chesapeake Bay TMDL.

## → Water Quality

**COLLABORATED** with Bay jurisdictions to provide historical, FY2017 BMP progress, and planned FY2018 and FY2019 BMP data.

**UPDATED** Maryland Department of Environment on compliance and upgrade status for DoD-owned wastewater treatment plants.

**CO-CHAIRING** the FFWG and maintained an active membership on the Water Quality GIT, leading to critical decisions for the Midpoint Assessment and Phase III WIPs, including finalizing the Phase 6 suite of modeling tools.

**SUPPORTED** implementation of Phase III WIP expectations through routine communication with installation environmental personnel; distribution of quarterly newsletters; and development of fact sheets on stream restoration, urban tree canopy expansion, and roadside ditch retrofit opportunities.



PHOTO RELEASED AND PROVIDED BY JAMIYO MACK

▲ Stormwater BMP located at Naval Support Activity Annapolis along Carr Creek. To the left is the stormwater discharge point and to the right is an automatic sampler used to collect samples for compliance monitoring.



PHOTO RELEASED AND PROVIDED BY KYLE B. RUSSELL

### Coming together to restore critical shoreline

Volunteers at **Joint Expeditionary Base Little Creek-Fort Story** dedicated 368 hours of volunteer time on National Public Lands Day to plant 15,900 American beachgrass sprigs to help stabilize the installation's sand dunes. The dunes play an important role in protecting inland areas from coastal water intrusion and intense storms.



PHOTO RELEASED AND PROVIDED BY MATTHEW MILLER

### Planting trees for clean water

**Letterkenny Army Depot** planted 2,500 trees in an area damaged by Hurricane Sandy. Several thousand acres of trees were knocked down during the storm, which left the area vulnerable to wildfire and erosion, were removed through a timber harvest. The plantings will help reduce erosion, improve water quality, and increase thermal cover for wildlife.



PHOTO RELEASED AND PROVIDED BY BILLY EDWARDS

### Implementing innovative ways to reduce stormwater pollution

**Fort Lee** converted 3.25 acres of existing grass on the installation's two golf courses to a species of grass that requires less water, fertilizer, and pesticide. Annual herbicide and pesticide applications have been reduced from 20 to 7 per year, and overall water use has been reduced by 25 percent.



PHOTO RELEASED AND PROVIDED BY RACHEL LARUE

### Restoring streambanks at Arlington National Cemetery

At **Arlington National Cemetery**, more than 1,900 linear feet of degraded streambank were restored to ease streambank erosion, reconnected the stream to its original floodplain, and restore the balance of flow and sediment in the stream.

## By the Numbers

  
**\$66.8M**  
invested in Clean Water projects

**3,700**  
feet of shoreline and streambank restored



**108**  
acres of impervious surface treated by progress BMPs



**\$14.8M**  
funded for BMPs



Conserving lands with ecological, historical, and community value is integral to maintaining a healthy ecosystem and vibrant culture. The following activities and project highlights demonstrate how DoD installations supported conserving priority landscapes.

## → Protected Lands

**CONSERVED** over 3,200 acres in FY2017, making a cumulative total of over 27,000 acres conserved by DoD in the Chesapeake Bay watershed since program inception in 2002.

**MAINTAINED** active REPI partnerships at eleven installations to combat incompatible land uses, conserve landscapes, and protect mission readiness. Installations with active REPI partnerships include:

- Naval Support Facility Indian Head, Maryland
- Naval Weapons Station Yorktown, Virginia
- Naval Support Facility Dahlgren, Virginia
- Naval Air Station Patuxent River and the Atlantic Test Range, Maryland
- Joint Base Andrews, Maryland
- Naval Air Station Oceana, Virginia
- Marine Corps Base Quantico, Virginia
- Fort A.P. Hill, Virginia
- Aberdeen Proving Ground, Maryland
- Fort Indiantown Gap, Pennsylvania
- Joint Base Langley-Eustis, Virginia



AIR FORCE PHOTO BY AIRMAN 1ST CLASS KAYLEE DUBOIS

▲ Conserved lands, such as the forest shown here at Joint Base Langley Eustis, can provide a location for training, protect the installation from encroachment or incompatible land use, and preserve wildlife habitat and natural environments.



PHOTO RELEASED AND PROVIDED BY JASON R. APPEGATE

## Preserving treasured Virginia landscape

Permanent protection was secured for more than 780 acres of Virginia land as a result of **Fort A.P. Hill's** continued efforts through the REPI and Army Compatible Use Buffer (ACUB) programs. The protected areas include the 525-acre Davis Farm, a working farm with wetland resources and 2 miles of shoreline along Rappahannock River, some of which includes 200 acres of mature forested wetlands. Fort A.P. Hill was also awarded the 2017 Governor's Environmental Excellence Gold Award for land conservation.



PHOTO RELEASED AND PROVIDED BY LINDSAY TEMPINSON

## Protecting waterfront along St. Mary's River

**NAS Patuxent River** partnered with the Maryland Department of Natural Resources and St. Mary's County to protect 163 acres of prized waterfront along the Patuxent River. The property was purchased using County and REPI funds. While the County now owns and manages the property, the Navy was granted a sole easement to limit future development. With its 1,700 feet of shoreline, protected cove, and 500 feet of beach on the Patuxent River, Snow Hill Park provides the community with water access and a multitude of recreational opportunities.



U.S. AIR FORCE PHOTO/SENIOR MASTER SGT. KEITH REED

## Conserving land around Joint Base Langley-Eustis

**Joint Base Langley-Eustis** purchased nearly 24 acres of property near the installation to prevent incompatible land use and protect the area's wildlife habitat.



PHOTO PROVIDED AND RELEASED BY ERIC TENNYSON, ONEIDA TOTAL INTEGRATED ENTERPRISES, INC.

## Reclaiming natural lands

**Defense Supply Center Richmond** converted five acres of impervious surface at a former open shed area to turf grass, restoring the area to its natural condition and increasing habitat for area species including the Blue Grosbeak and the Blackpoll warbler.

## By the Numbers



**\$11.9M**  
invested in Conserved Lands projects

**27,478** acres protected around DoD installations



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





Long-term success of the Chesapeake Bay restoration depends on active engagement at the local scale among citizens, students, and leaders. The following activities and project highlights demonstrate how DoD installations supported education and stewardship, local leadership, and public access in the Chesapeake Bay.

## → Citizen Stewardship

**PROMOTED** and hosted many volunteer-based events on military installations, such as Clean the Bay Day, Clean the Base Day, Arbor Day, Earth Day, and Public Lands Day. In 2017, 38 installations participated in a volunteer program.



PHOTO SOURCE: COLORADO STATE UNIVERSITY, CENTER FOR ENVIRONMENTAL MANAGEMENT

## → Local Leadership

**EDUCATED** and exchanged information with installation environmental directors, water program managers, and natural resource managers through routine meetings and publications, including the quarterly Journal and fact sheets, such as the "Commander's Guide to the Chesapeake Bay."

## → Public Access

**MAINTAINED** and upgraded public access sites at installations throughout the watershed, which provided those authorized with access to marinas, trails, hunting and fishing programs, and other recreational opportunities.

▲ USAG Fort Lee Commander, the city of Petersburg's Mayor and the DPW Director celebrated the start of their teams' cooperative efforts in the clean-up and beautification of Patton Park.



PHOTO RELEASED AND PROVIDED BY LINDSAY BOUGHTON

## Coming together for a cleaner Bay

**Camp Peary** partnered with their 4-H Club to celebrate Clean the Bay Day. During the event, 40 adult and children volunteers collected litter and debris from three miles of shoreline along the York River. Together, the group removed approximately 750 pounds of litter and debris.



PHOTO RELEASED AND PROVIDED BY FORT GEORGE G. MEADE PUBLIC AFFAIRS

## Working together to reduce stormwater pollution impacts

On National Public Lands Day, **Fort George G. Meade** engaged volunteers to provide needed maintenance for stormwater BMPs and educate event attendees about stormwater pollution. Volunteers also replaced plants that had died due to weed proliferation with new Black-eyed Susan and switchgrass.



PHOTO RELEASED AND PROVIDED BY JOINT BASE ANACOSTIA-BOLLING MWR

## Protecting the Potomac waterfront

**Joint Base Anacostia-Bolling** hosted an Earth Day event, during which volunteers collected 84 bags of recyclable material, 86 bags of trash, and approximately 45 pounds of bulk trash from six different zones along the Potomac waterfront. Sponsors included the Anacostia Watershed Society and DCwater.com.



PHOTO RELEASED AND PROVIDED BY JAMES MACKIE

## Engaging the public through recreation

**U.S. Army Garrison Adelphi Laboratory Center Blossom Point Research Facility** hosted a Becoming an Outdoor Woman (BOW) White-tailed Deer Hunting Workshop. This two-day event gives women introductory experiences and instruction on deer biology, tracking, and tree stand and fire arms safety, helping to increase the connection between the surrounding land and the event's attendees.

### By the Numbers

**\$717k**  
invested in Engaged Communities projects

**147**  
citizen stewardship events held

**12k**  
volunteers participated in DoD stewardship events

**4.4k**  
volunteers participated in DoD stewardship events

**69%**  
of installations with active volunteer programs



The past year marked the halfway point of the Bay TMDL. Significant progress was realized in several key efforts that will lay the foundation for DoD to continue to support Agreement goals and build on prior commitments and activities. With the availability of new decision-making tools and the establishment of additional partnerships with local and state entities, DoD is well-positioned to actively support the Partnership through 2025.

### Priorities over the next two years include:

**Report BMP implementation progress** with the goal of investing \$45M in BMP implementation at DoD facilities throughout the Bay watershed in the 2018 and 2019 progress years.

**Implement natural resource BMPs**, including constructed wetlands, stream restoration, urban shoreline management, and urban forest buffers, which provide additional benefits beyond water quality, such as enhanced wildlife habitat and healthier watersheds.

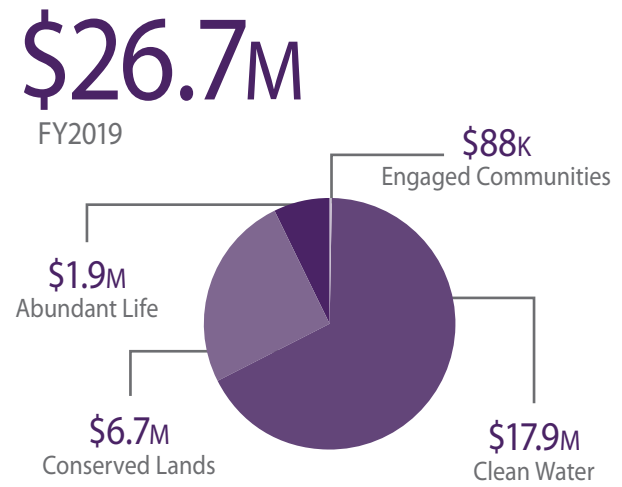
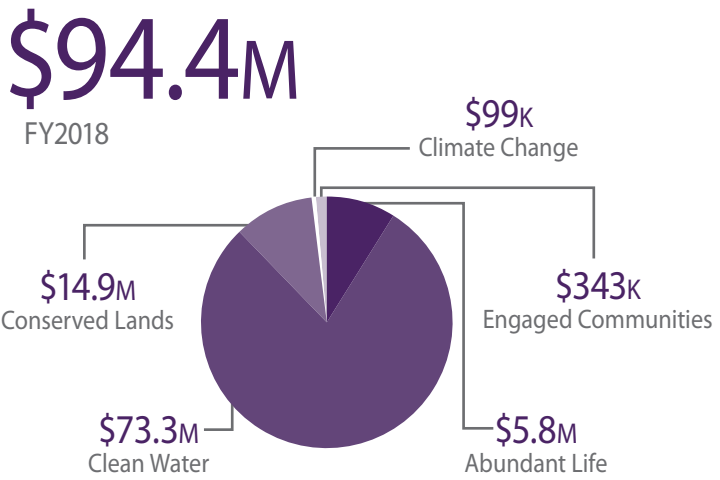
**Develop BMP Crediting Reports and conduct a DoD Chesapeake Bay TMDL Progress Evaluation** to assess credit and progress achieved through past implementation toward planning targets and regulatory requirements.

**Continue to support the development of Phase III WIPs at the local level** through established workgroups and new partnerships. DoD will disseminate information from each jurisdiction to installations to support effective implementation of future Phase III WIP expectations.

**Participate in the development of new and revised stormwater regulations** in the Bay watershed, including the reissuance of Virginia's and Maryland's Small (Phase II) MS4 permits.

**Develop draft 2025 Implementation Plans** to evaluate DoD's progress towards 2025 goals and the additional implementation needed to meet 2025 federal facilities targets and reductions required by National Pollutant Discharge Elimination System (NPDES) permits.

## By the Numbers FY2018 and FY2019 Planned Funding



In 2018 and 2019, DoD has planned key initiatives in support of the Partnership and the development of the Phase III WIP. The timeline below highlights some of these efforts.

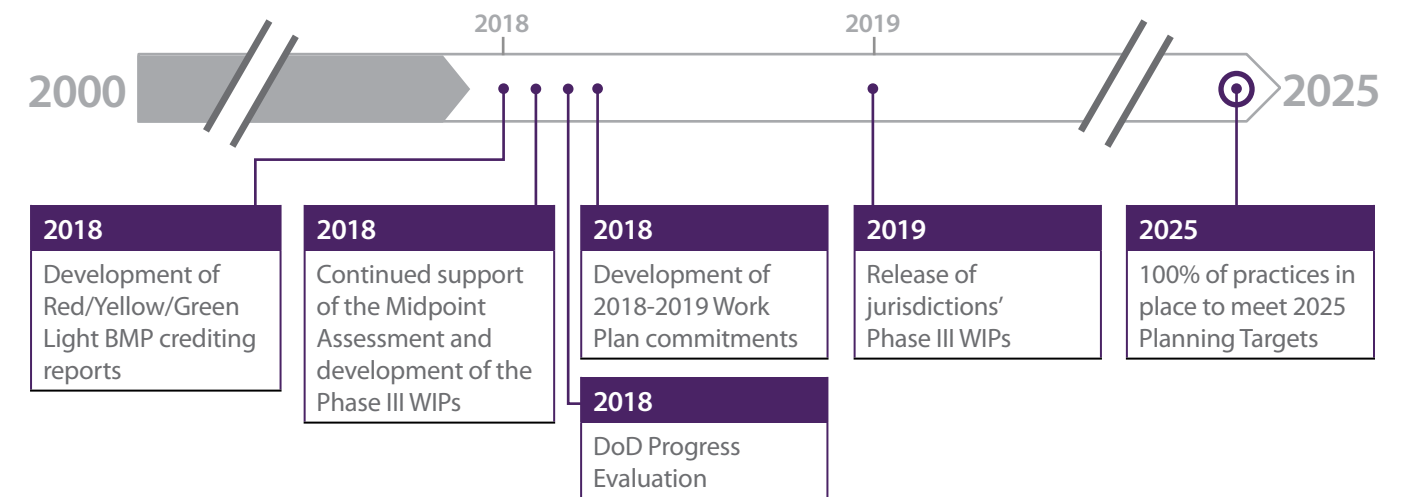


PHOTO PROVIDED AND RELEASED BY DOD CHESAPEAKE BAY PROGRAM

▲ An osprey tagged at NWS Yorktown Cheatham Annex prepares to take flight.



# DoD Chesapeake Bay Program

## Fiscal Year 2017 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 Department of Defense Chesapeake Bay Installations. The activities that take place at the various Department of Defense installations are generally not visible to the public. This report is intended to highlight some of the accomplishments by Department of Defense personnel and provide context to the activities that are 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.