

DoD CHESAPEAKE BAY PROGRAM

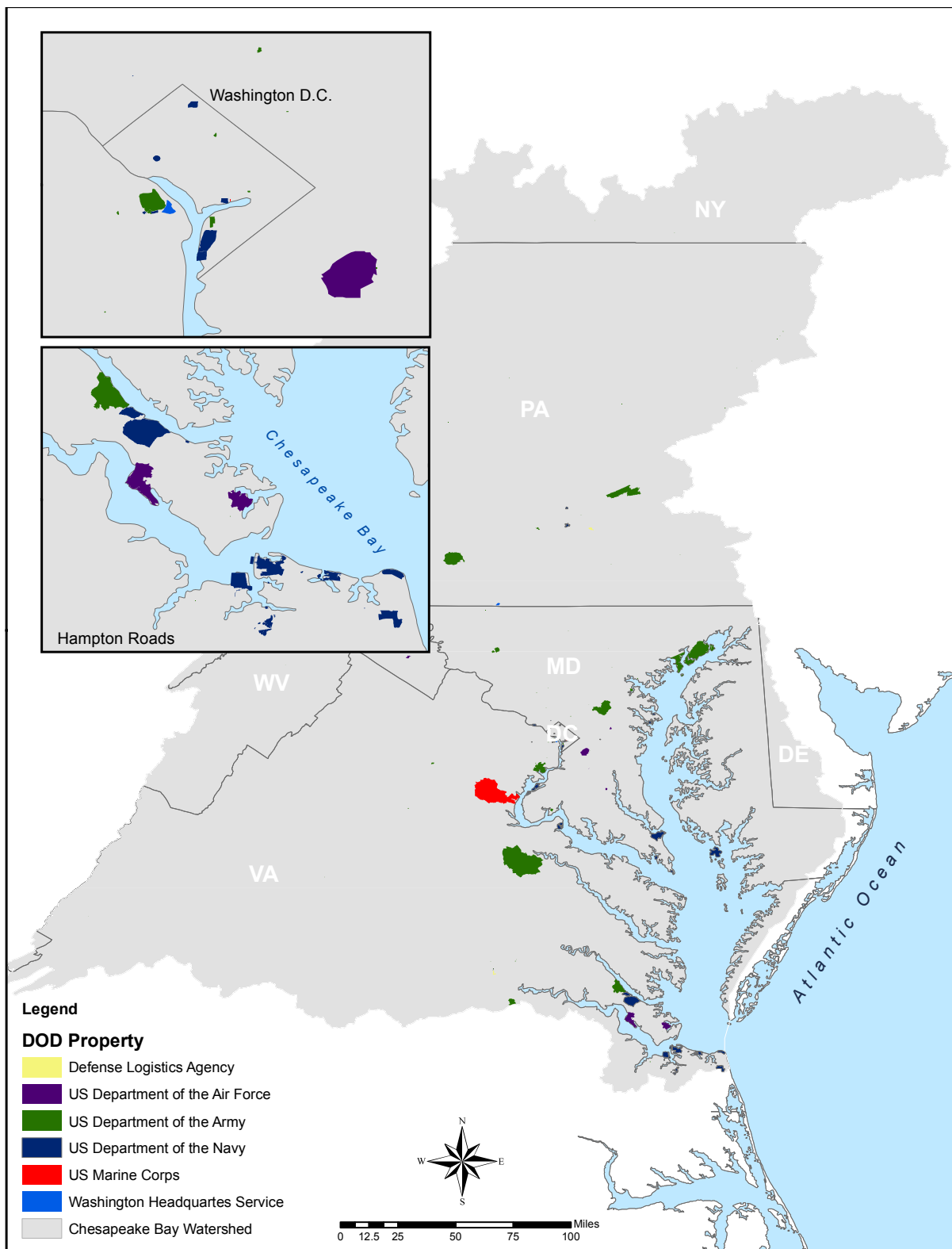
FY2015 Annual Progress Report

April 2016





DoD Properties within the Chesapeake Bay Watershed



Overview and Background of the U.S. Department of Defense Chesapeake Bay Program



The U.S. Department of Defense (DoD) was the first federal agency to become formally involved in the Chesapeake Bay restoration effort. The joint program is managed by Commander, Navy Region Mid-Atlantic within the Regional Environmental Coordination (REC) office for the U.S. Environmental Protection Agency (USEPA), Region III. The DoD Chesapeake Bay Program (CBP) leads the coordination with the Deputy Assistant Secretary of the Navy for the Environment, REC, military services, federal agencies, and all Bay Jurisdictions. The DoD CBP team represents DoD throughout the Chesapeake Bay Program Partnership; formulates initiatives for Chesapeake Bay agreements; develops partnerships with other federal and state agencies, local governments, and non-profit organizations; promotes cross-agency information sharing; tracks and reports progress; and coordinates DoD positions related to Chesapeake Bay policy development.

In 2009, Executive Order (EO) 13508, Chesapeake Bay Protection and Restoration, was signed to create a new level of federal interagency leadership, actions and accountability. The EO 13508 Strategy for Protecting and Restoring the Chesapeake Bay Watershed (EO 13508 Strategy) established a framework of four specific goals: restore clean water, recover habitat, sustain fish and wildlife, and conserve land and increase public access, as well as 12 supporting strategies. To track progress, participating federal agencies have been required to release annual action plans and progress reports.

In 2014, the Chesapeake Bay Watershed Agreement (the Agreement) was signed by CBP partners to provide a more collaborative and goal-oriented plan for protecting and restoring the watershed. The Agreement identifies collective commitments for restoring and protecting the watershed through ten goals and 29 outcomes. The goals formulate high-level commitments, and the outcomes articulate more defined, time-sensitive, measurable targets that correlate success with each of the goals.



DoD implemented an integration process to address and report on both the EO 13508 and the Agreement using projects and budget appropriations reported by installations. Budget appropriations for fiscal year (FY) 2015 are categorized by EO 13508 goals, and FY2016 and FY2017 projects are categorized into the various goals and outcomes of the Agreement.

This report highlights DoD's FY2015 key accomplishments, FY2014 and FY2015 programmatic milestone progress, and future planning efforts.



DoD Chesapeake Bay Accomplishments

Management Strategy and 2016-2017 Two-Year Work Plan Development

With the signing of the Agreement, the Partnership's goal implementation teams were charged with developing management strategies for each outcome and drafting two year work plans. Each management strategy explains the current efforts underway, gaps that would limit achievement of the outcome, and an approach to monitor, assess, and report progress. The two-year work plans summarize the specific commitments, short-term actions, and resources required for success. EPA, which represents the federal government, requested federal agencies identify participants for the development of the Management Strategies. DoD remained consistent with its commitments to focus on Water Quality, Land Conservation, and Vital Habitats, and noted other outcomes where the Department would be able to provide data or information. DoD submitted 18 additional commitments for inclusion in the work plans developed in partnership with goal implementation teams.

Outreach Coordinator

The DoD REC office added a new Outreach Program Coordinator to enhance and expand outreach initiatives with federal and state partners.



Photo Source: Mary Shively



Photo Source: U.S. Navy photo by MC 3rd Class Heath Zeigler (Released)

DoD Supporting Watershed Implementation Plans (WIPs)

EPA identified necessary improvements to federal facility best management practice (BMP) planning and progress reporting during the agency's evaluation of the 2012-2013 milestones. The Partnership agreed to establish the Federal Facilities Targets Action Team (FFTAT) with representatives from Bay jurisdictions and federal agencies, including DoD. *The Chesapeake Bay Program Protocol for Setting Targets, Planning BMPs and Reporting Progress for Federal Facilities and Lands* (the Protocol) includes key elements related to identification of the federal facilities where targets will be assigned, necessary data, methodologies for development of targets, expectations for implementing reductions in pollutants, progress reporting processes, and linkages to two-year water quality milestones.

For the specific purpose of setting federal facility targets, DoD identified and provided a complete inventory of facilities in the watershed. This included reporting facility land use, historical BMP implementation, and FY2015 BMP progress implementation to each jurisdiction and the USEPA Chesapeake Bay Program Office. Additionally, 27 installations are currently signed up to use the Chesapeake Bay Facility Assessment Scenario Tool (BayFAST) to develop implementation plans, while other installations developed their own databases to track BMPs for annual reporting.

Due to the success of enhanced collaboration between federal and state agencies demonstrated through the FFTAT, the Partnership agreed to formalize a Federal Facilities Workgroup under the Water Quality Goal Implementation Team. The DoD currently co-chairs this group with the Commonwealth of Virginia. The joint workgroup provides direction on water quality improvements related to federal facilities.



DoD Chesapeake Bay Accomplishments

EO 13508 FY2015 Programmatic Milestone Update and Investment

Water Quality Programmatic Milestones

DoD will continue to work with key partners to support watershed implementation plans, update installation land use information and improve available tools for installations to determine or plan for future load allocations and expected load reductions.

Complete.

DoD identified and provided a complete inventory of facilities in the watershed, updated and reported facility land uses, historical BMP implementation and BMP implementation progress to each Jurisdiction and the USEPA Chesapeake Bay Program Office. DoD will continue to work with key partners to support WIPs, update information when needed, and assist with improving available tools for installations to determine or plan for future load allocations and expected load reductions beyond this milestone period.

In FY2015, DoD recorded a total of 422 projects totaling more than \$115 million to support Chesapeake Bay restoration efforts based on information provided by installations through annual reporting. Nearly 115 construction projects incorporated Energy Independence and Security Act Section 438 requirements into the design.

As part of the DoD's continued support of the EO 13508 goals and commitments towards restoration of the Chesapeake Bay watershed, DoD has invested more than \$343 million during the last five fiscal years. The table below shows funding per goal category and supporting strategy for FY2015. Project examples and highlights are identified in the FY2015 Project Highlights and Successes section of this report.

To increase accountability under the EO 13508 Strategy, federal agencies establish milestones every two years that include actions intended to demonstrate progress toward measurable environmental goals. DoD established several milestone commitments for the 2014-2015 milestone period.

Water Quality Programmatic Milestones

Develop and implement a stormwater BMP Operation and Maintenance policy to meet permit and water quality requirements for the Navy consideration by the other Services.

Complete/Bay-wide Integration.

DoD supported the CBP Partnership development and approval of the basin-wide BMP verification framework, establishing the Protocol through which agency partners ensure practices, treatments and technologies resulting in reductions of nitrogen, phosphorus, or sediment pollutant loads are implemented and operating correctly. DoD is using and will continue to use the state programs for tracking, verifying and reporting BMPs.

DoD Chesapeake Bay Accomplishments



EO 13508 Goal/Supporting Strategy	FY2015 Funding Totals
Restore Clean Water	\$102,944,622
Recover Habitat	\$7,675,905
Sustain Fish and Wildlife	\$2,513,728
Conserve Land and Increase Public Access	\$1,645,000
Expand Citizen Stewardship	\$380,934
Implementation and Accountability	\$95,427
Climate Change	\$30,000
TOTAL	\$115,285,615

Conserve Land and Increase Public Access Programmatic Milestone

DoD will continue to identify opportunities to conserve priority landscapes around DoD installations in the Chesapeake Bay watershed, through programs such as the Readiness Environmental Protection Integration (REPI).

Ongoing.

The REPI Program, funded \$1.6M land preservation and conservation easements at Fort A.P. Hill, MCB Quantico, and NAS Patuxent River Atlantic Test Range. Since the 2011 REPI Report to Congress, a total of 16,901 acres has been protected at DoD installations within the Chesapeake Bay watershed.

Water Quality Programmatic Milestones

Continue to participate in and support Chesapeake Bay jurisdictions' municipal separate storm sewer system (MS4) regulation development to assist installations in responding to permit requirements of the Chesapeake Bay total maximum daily load (TMDL).

Complete for Virginia and Pennsylvania installations. Ongoing for Maryland Installations.

Installations in Virginia and Pennsylvania with current MS4 permits completed Chesapeake Bay TMDL pollution reduction plans using data from the BMP opportunity assessments describing planned implementation of BMPs to reduce nutrient and sediment loads. DoD continues to partner with Maryland in its draft development of a Phase II MS4 general permit.



FY2015 Project Highlights and Successes

Abundant Life

Navy installed a large array of more than 75 acoustic telemetry receivers in the lower Chesapeake Bay and its tributaries in December 2012. This array tracks Atlantic sturgeon implanted with acoustic transmitters by various researchers and organizations. Currently, there are approximately 1,200 Atlantic sturgeon implanted with acoustic transmitters along the Atlantic coast. In 2014, the Navy initiated an ongoing project to implant Atlantic sturgeon in the Pamunkey River, a tributary of the York River, with acoustic transmitters in collaboration with the National Marine Fisheries Service and Chesapeake Scientific that led to the identification of a new spawning population of this species.



Photo Source: Sarah Rider, NAVFAC Atlantic



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ACRES OF SAV PLANTED



Photo Source: Sybille Vega, Fort Belvoir

Fort Belvoir is conducting periphyton and macroinvertebrate surveys at five installation stream reaches to determine their ability to support aquatic life and to assess current health conditions of the stream and plan for future fish forage and habitat projects.

3,190

NET WETLAND ACRES CREATED OR ENHANCED





Photo Source: Tim Stamps, MCB Quantico

Marine Corps Base (MCB) Quantico Quantico planted 50 acres of wildlife forage crops and eight acres of permanent multipurpose woodland cover crops. The conservation planting replaced tall fescue with flowering forage species such as ladino clover (*Trifolium repens*) and plants in the mustard (*Brassicaceae*) family. The conservation plantings provide higher protein value for foraging animals, such as deer and turkey, and also provide pollinator habitat during flowering seasons.



6,625
TREES PLANTED

87.5

MILES OF RIPARIAN
FOREST BUFFER ADDED



Joint Base Langley-Eustis (Eustis) evaluates hair samples left behind on wetland platforms to determine the presence of nutria (*Myocastor coypus*). This allows installation staff to estimate projected damage related to mission impacts. Nutria cause destruction through burrowing that weakens levees, dams, and roadbeds, contributing to stream erosion. The rodents are also known to feed on swamp vegetation, which affects the habitat of native species.



Photo Source: Tim Christensen, Joint Base Langley-Eustis



FY2015 Project Highlights and Successes

Clean Water



Photo Source: Larry Dolinger, Defense Logistics Agency

Defense Distribution Center Susquehanna spent \$19 million converting the installation's heating boilers from oil to natural gas, reducing air deposition of nitrogen oxides. This project was undertaken to meet water quality goals of the Chesapeake Bay.

800+ BMP OPPORTUNITIES
IDENTIFIED AT NAVFAC
HAMPTON ROADS FACILITIES ALONE
AND 47 CONCEPTUAL DESIGNS
COMPLETED FOR
NEW BMPS.



**ENHANCING
CONSTRUCTION
STORMWATER INSPECTION
PROGRAM** TO ENSURE
CONSTRUCTION SITE OPERATORS
COMPLY WITH EROSION
AND SEDIMENT CONTROL
REQUIREMENTS TO PROTECT
STREAMS, RIVERS AND WETLANDS.



Fort Indiantown Gap constructed a 40-acre cap over a former landfill. This project involved regrading and installing a final cover system of 18 inches of soil covered by 6 inches of erosion protection. Engineers also installed stormwater management control features around the cap. The next phase of remediation will include planting native trees, shrubs, and grasses.

\$103 MILLION FUNDED IN
PROJECTS TO PROTECT AND
RESTORE CLEAN WATER.

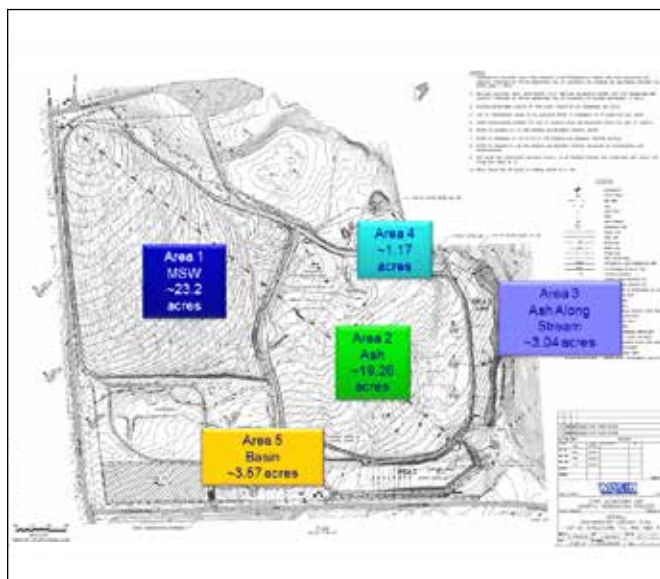


Photo Source: Dreama O'Neal, PA Army National Guard



Photo Source: Roberta Person, NAVFAC Washington

Naval Support Activity Washington-Naval Support Facility Carderock, conducted a feasibility study that included topographic, geotechnical, and utility surveys in support of new conceptual designs for BMPs at the installation. From these surveys, water resource staff can plan for new BMP construction and retrofits to manage stormwater runoff.

Stormwater design templates and a BMP retrofit sizing calculator was developed by **NAVFAC Washington** and Maryland Department of Environment to evaluate compliance with stormwater management regulations and design standards when implementing standard types of BMPs. These standard templates and calculator will help streamline the project review and permitting processes and reduce duplicate submittals.

DEVELOPED A STORMWATER MANAGEMENT DATABASE TO DOCUMENT INSPECTIONS COMPLETED ANNUALLY. THE DATABASE TRACKS ALL BMPs AND INSPECTION RECORDS.



As part of **Adelphi Laboratory Center's** water conservation initiative, the installation designed a rainwater collection system for cooling towers. The system intercepts rooftop runoff and transfers it to the cooling tower system. The project saves \$3,857 in operation costs and 796,000 gallons of water per year.



Photo Source: Bridget Kelly Butcher, Adelphi Laboratory Center



FY2015 Project Highlights and Successes

Climate Change

Washington Headquarters Services (WHS) evaluated past and potential future climate change vulnerabilities at the Pentagon Reservation, including specific stressors such as flooding due to storm surge, precipitation, extreme temperatures, drought, wildfire, wind, and sea level rise.

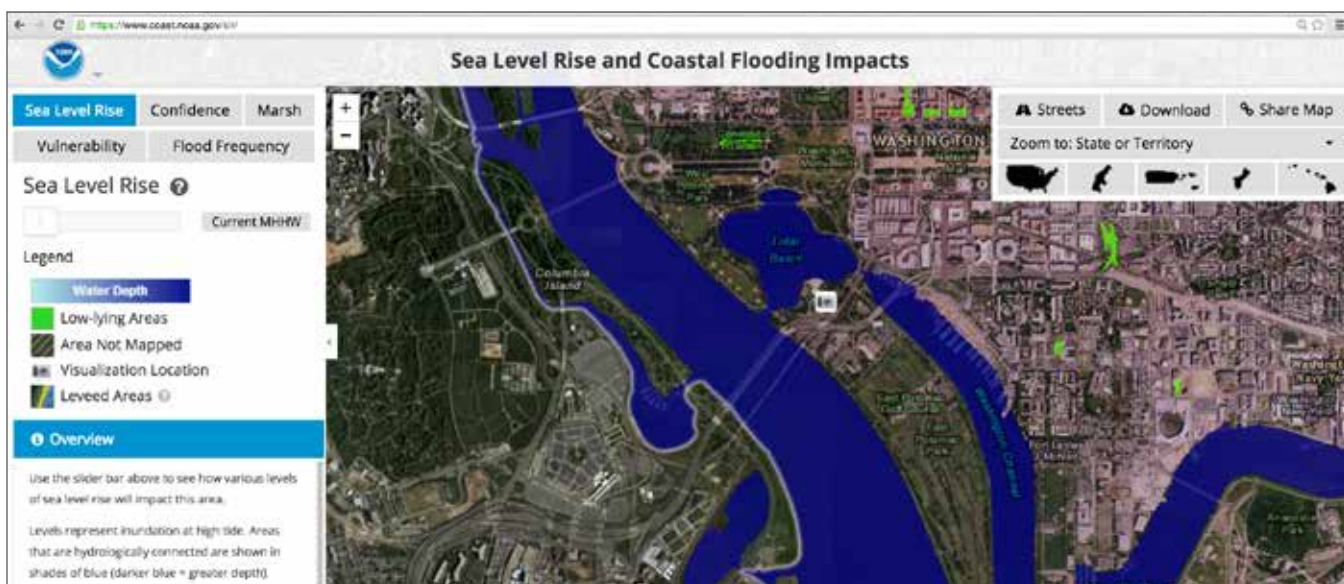


Image Source: Lauren Scott, ERG Environmental Consultants



Photo Source: DoD Chesapeake Bay Program

Naval Air Station Patuxent River and Atlantic Test Range are home to the Navy's premier aircraft research, development, test, and evaluation complex. This installation developed a cohesive partnership with the Chesapeake Conservancy, the U.S. Fish and Wildlife Service, the Natural Resources Conservation Service, the states of Maryland and Delaware, and the Conservation Fund to protect 2,259 acres of forests, wetlands, and farmland along the Nanticoke River. REPI's \$1 million investment and other partner contributions are working to conserve the last remaining unprotected areas within a larger 8,500-acre wildlife corridor lying beneath the Navy's airspace in the upper Chesapeake Bay. (www.repi.mil/).

A stylized illustration of a pond with blue water and yellow pine trees on a dark blue background. The trees are arranged in a row, with some in the foreground and others in the background. The water is represented by three wavy lines.

Fort A.P. Hill finalized a land conservation project to permanently protect the ecologically and historically important Mt. Sion property. In partnership with The Trust for Public Land, The Conservation Fund, and The Virginia Outdoors Foundation, this undeveloped property contains more than 750 acres of contiguous hardwood and pine forests classified by the Virginia Department of Forestry as "High Conservation Value" due to their intact nature, location near other ecological resources, and the potential risk for residential development. The easement permanently protects 150 acres of wetlands and 90 acres of riparian protection areas.

A photograph of a dirt road or path winding through a forest. The trees are tall and thin, with bare branches, suggesting a late autumn or winter setting. The ground is covered in fallen leaves and pine needles. The sky is visible in the distance, showing a clear blue color.

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FY2015 Project Highlights and Successes

Engaged Communities



Photo Source: Jennifer Tabor, Naval Station Norfolk

In celebration of the National Arbor Day, **Naval Station (NAVSTA) Norfolk** held a ceremony at the Willoughby Child Development Center, where children from the center and NAVSTA Norfolk executive staff planted trees. A Department of Forestry representative gave a presentation about the importance of trees.

28,000 VOLUNTEERS, INCLUDING SERVICEMEN AND WOMEN, THROUGH VOLUNTARY PARTICIPATION IN PROGRAMS SUCH AS NATIONAL PUBLIC LANDS DAY, EARTH DAY OR CLEAN THE BAY DAY.



Photo Provided by Pam Couch, Fort Belvoir

The **Accotink Bay Environmental Education Center** located on Fort Belvoir provides natural resource educational activities for elementary school students, such as naturalist-guided canoe and kayak trips, educational fishing clinics, Earth Day celebrations, nature hikes in the Accotink Bay Wildlife Refuge, educational support to local Eagle, Boy and Girl Scout programs, and fishing line recycling programs. The Educational Center also serves to promote programs such as Chesapeake Bay, stormwater management, and fish and wildlife protection to installation staff and the public.



Image Source: Lauren Scott, ERG Environmental Consultants

Fort Indiantown Gap enhanced wildlife trails to reduce erosion and sediment transport. The trails are used for military training as well as by the public.

Pentagon's Environmental, Sustainability, and Energy Branch hosted an Earth Day event that included a variety of exhibitor tables. Information about stormwater and low impact development was featured at one of the tables. Additionally, participants developed handouts on the MS4 permit specifically for this event.



Photo Source: Lauren Scott, ERG



Future Initiatives and Impacts

Programmatic Milestones

DoD will continue to participate in and chair the Federal Facilities Workgroup to enhance collaborative efforts within the Chesapeake Bay Program Partnership.

DoD will support, to the extent practicable, the Protocol for Setting Targets, Planning BMPs, and Reporting Progress for Federal Facilities and Lands, and identify approaches to track reductions from regulated and non-regulated land uses.

DoD will continue to participate in jurisdictions' WIP processes by providing installation implementation and disseminating jurisdiction information throughout DoD to support effective implementation of future Phase III WIP expectations.

DoD will continue, through the REPI Program, to identify opportunities to conserve priority landscapes around DoD installation in the Chesapeake Bay watershed.

2016 - 2017 Two-Year Milestones

Federal agencies establish milestones every two years that include actions intended to demonstrate progress. For the 2016-2017 milestone period, DoD submitted planned BMP implementation to Bay jurisdictions totaling \$42 million. DoD also established several programmatic milestone commitments.

Chesapeake Bay Restoration and Protection Act of 2014 (CBARA)

With the promulgation of CBARA, the director of the Office of Management and Budget (OMB) is required to submit an annual financial report to Congress containing an interagency crosscut budget for restoration activities in the Chesapeake Bay watershed. The report details the accounting of funds received and obligated by each federal agency for restoration activities; the accounting from each state of all funds received and obligated from a federal agency for restoration activities; and a description of each of the proposed federal and state restoration activities.

The Partnership will discuss the appropriate responses to requests for accurate and consistent budgeting and funding information to support CBARA, the Agreement, and other accountability products.



Photo Source: BMP Photo by Kelly Duckworth



2016-2017 Projected Funding

Based on information collected from the military Services, the following table provides FY2016 and FY2017 projected funding totals. This information provides awareness on priorities and promotes cross-cut data sharing with other partner agencies.

AGREEMENT CATEGORIES	FY2016 PROJECTED FUNDING TOTALS	FY2017 PROJECTED FUNDING TOTALS
Abundant Life	\$8,638,878	\$3,845,908
Clean Water	\$47,202,873	\$38,435,877
Conserved Land	\$14,200,000	\$7,400,000
Engaged Communities	\$530,876	\$460,963
Climate Change	\$149,333	\$0
TOTAL	\$70,721,960	\$50,142,748

Chesapeake Bay TMDL and 2017 Mid-Point Assessment

The Chesapeake Bay TMDL calls for an assessment in 2017 to review progress toward meeting nutrient and sediment reductions.

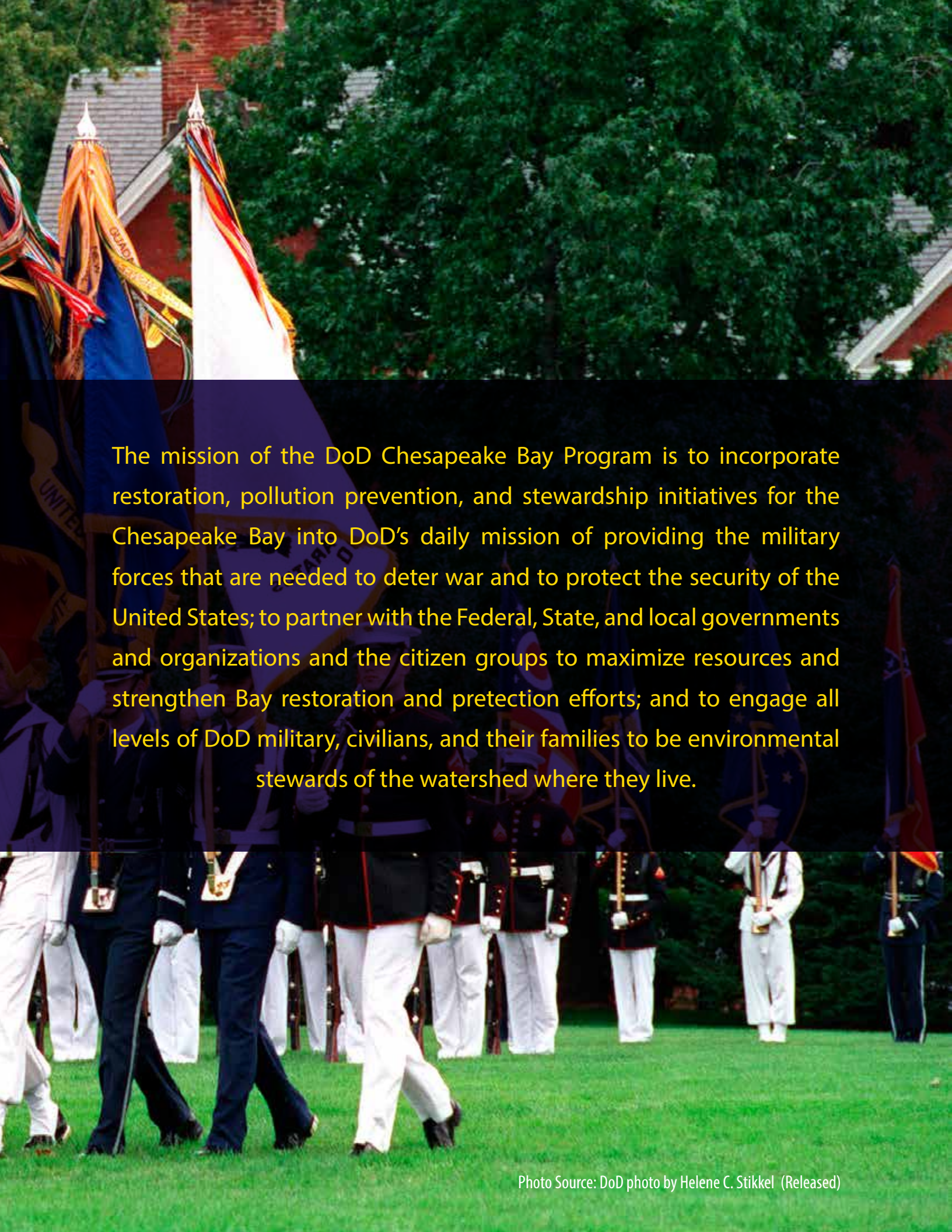
DoD priorities will include reviewing modeling tools to ensure input of accurate data, assessing revised nutrient and sediment targets based on new land use and property boundary data, and identifying level of participation and accountability for input into the Phase III WIPs of jurisdictions.

Because DoD also completed a significant number of BMP opportunity assessments, DoD will continue to design BMP concepts, develop construction documentation, and program for BMP retrofits and construction.

With the Partnership's approval of a BMP verification framework, DoD will need to engage with jurisdictions to ensure the framework is feasible to adequately address how those practices are inspected, functioning, and maintained in alignment with the state programs.

While the new accountability framework established by EO 13508 and Chesapeake Bay TMDL poses a challenge for DoD, future assessments will identify focus areas for higher levels of implementation, opportunities for local partnering and encouragement of innovation.



The image is a composite. The top half shows a large American flag with its stars and stripes, partially obscured by a dark, semi-transparent overlay. The bottom half shows a marching band in uniform, including white pants, dark jackets, and hats, marching on a green lawn. The text is overlaid on the dark area in the center.

The mission of the DoD Chesapeake Bay Program is to incorporate restoration, pollution prevention, and stewardship initiatives for the Chesapeake Bay into DoD's daily mission of providing the military forces that are needed to deter war and to protect the security of the United States; to partner with the Federal, State, and local governments and organizations and the citizen groups to maximize resources and strengthen Bay restoration and protection efforts; and to engage all levels of DoD military, civilians, and their families to be environmental stewards of the watershed where they live.



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