



DoD CHESAPEAKE BAY PROGRAM JOURNAL

PROTECTING THE CHESAPEAKE BAY FOR MILITARY READINESS, FOR OUR COMMUNITY, FOR FUTURE GENERATIONS

After the Midpoint Assessment - Now onto 2025

By Sarah Diebel, DoD Chesapeake Bay Program Coordinator

Last year marked the midpoint of Chesapeake Bay total maximum daily load (CB TMDL) implementation, requiring 60 percent of nitrogen, phosphorus, and sediment reductions in the Bay. Although this milestone is past, activity associated with the Midpoint Assessment still continues. In 2018, the U.S. Environmental Protection Agency (EPA) will release final expectations, which will incorporate decisions on how to address the Conowingo Dam, Accounting for Growth, and Climate Change. In addition, the Partnership will finalize and release Planning Targets in May to inform the development of Phase III Watershed Implementation Plans (WIPs). The Phase III WIPs are expected to be complete in June 2019.

(FY) 2017 Chesapeake Bay progress when our annual report is released in the spring, so stay tuned!

As DoD looks to 2025, we will continue to work toward our regulatory obligations to manage stormwater and evaluate additional goals assigned at the local level. Specific initiatives in the next year include BMP crediting reports to determine which previously-reported BMPs were accepted by the jurisdictions and the Bay Model; an analysis of past BMP implementation and DoD's midpoint goals; and an analysis of planned projects toward 2025 goals and the additional effort needed to achieve those goals. This issue provides more insight into recent decisions by the Partnership, upcoming approaches in the development of local area planning goals and Phase III WIPs, and other news demonstrating how installations continue to support Chesapeake Bay protection and restoration.

The DoD CBP thanks all of the installations, commands and individuals who contributed content for this journal, including:

- Ron Holcomb, Joint Base Langley-Eustis
- Kevin DuBois, NAVFAC Mid-Atlantic
- Stacey Rosenquist, Arlington National Cemetery (ANC)
- Susan Conner, U.S. Army Corps of Engineers
- Brian Powell and Dave Cotnoir, NAVFAC Mid-Atlantic



The Local Government Engagement Initiative has released an updated timeline for Phase III WIP development.

Find a full version of the timeline at https://www.chesapeakebay.net/channel_files/24426/wipschedule_infographic_v3.pdf

In December, the Chesapeake Bay Program Partnership (Partnership) approved the suite of modeling tools associated with the Phase 6 version of the Chesapeake Bay Watershed Model (Bay Model), which incorporates the latest science, modeling technology, and data. Among the tools is the Chesapeake Bay Assessment Scenario Tool (CAST), an online version of the Bay Model that will allow decision-makers to develop scenarios and analyze their progress. More importantly, the updated tools will allow the Department of Defense (DoD) to use state-reported data to measure DoD's progress towards meeting CB TMDL goals. This year, installations reported 163 progress BMPs and almost 500 BMPs planned for implementation in the 2018 and 2019 progress years. We will have more details on all of DoD's fiscal year

IN THIS ISSUE

Navy and Military Installations Recognized by the Elizabeth River Project.....	2
Joint Base Langley-Eustis Taking on BMP Operation, Maintenance, & Verification.....	4
ANC Continues to Focus on Sustainability	5
Communication Package Released for Bay Modeling Tools.....	5
Holistic Analysis of Benefits of Green Infrastructure.....	6
Virginia Releases Phase II MS4 Rulemaking.....	7
Local Area Planning Goals: Defining Expectations.....	8
Midpoint Assessment Updates.....	10
Chesapeake Bay Action Team Updates	11
Check it Out.....	12



Navy and Military Installations Recognized by the Elizabeth River Project

By Kevin DuBois, NAVFAC Mid-Atlantic Environmental Planning Section

With the significant amount of industrial and military activity occurring along the banks of the Elizabeth River, the river's health depends on leadership and initiatives that reduce pollution and restore wildlife. Each year, the Elizabeth River Project recognizes business and government facilities for voluntarily reducing pollution, reducing energy use, and restoring and conserving wildlife habitat near the river.

The Elizabeth River Project recognizes three levels of achievement:

Commitment Level, which recognizes facilities that contribute to either pollution prevention or wildlife habitat enhancement.

Achievement Level, which recognizes facilities that contribute to both pollution prevention and wildlife habitat.

Model Level, which recognizes facilities that demonstrate exceptional accomplishments and leadership

in environmental stewardship in pollution prevention and wildlife habitat enhancement.

Many DoD installations were recognized and received awards in 2018, including:

Naval Station Norfolk

The base was recognized for Sustained Distinguished Performance at the Model Level after completing the first year of a new energy "derby" in which tenants and departments compete to reduce energy consumption. Marine Air Group Four Nine, Detachment Delta won "race 1," reducing energy use by 16 percent. The base also established a reuse program for high-demand items such as tri-wall shipping containers for tenants at no cost.

Naval Support Activity Hampton Roads Naval Medical Center Portsmouth

The nation's oldest hospital was recognized for Sustained Distinguished Performance

at the Model Level and inducted into the Inside Business River Star Hall of Fame. The base installed a food waste digester to reduce landfill waste by 146,000 pounds annually and a new disinfection system at the maternity ward to reduce wastewater. Volunteers continued oyster gardening and established a new pollinator garden with native plants.

Norfolk Naval Shipyard

The installation was recognized for Sustained Distinguished Performance at the Model Level for completing sewer system upgrades and expanding recycling efforts. As part of Earth Day education and outreach, the installation promoted sustainability at work and at home, with over 500 workers voluntarily pledging to reduce water and electricity use.

U.S. Army Corps of Engineers

The site of the U.S. Army Corps of Engineers Norfolk District headquarters is a premier destination for oyster restoration



U.S. NAVY PHOTO BY MASS COMMUNICATION SPECIALIST SEAMAN VICTORIA GRANADO/RELEASED

with more variety of oyster habitats than any other River Star. The installation was recognized for Sustained Distinguished Performance at the Model Level for adding three biogenic oyster structures, six reef balls, 25 "oyster bergs," and 10 oyster castles, each demonstrating a different approach to oyster restoration.

Naval Support Activity Hampton Roads, Lafayette River Annex

This engineering arm of the Navy was recognized for Sustained Distinguished Performance at the Achievement Level for reducing natural gas consumption by 51 percent over the prior year. The base also added over half an acre of green space by demolishing a building and enhancing the shoreline buffer with native trees and shrubs.

To read more about the River Star Awards, please check out the River Stars 2018 Inside Business brochure at: <https://elizabethriver.org/sites/default/files/Inside%20Business%20-%20%20River%20Stars%202018.pdf>

In Pursuit of Excellence

This year's awards continue a tradition of excellence from military installations in the Hampton Roads region. In 2017 and 2018, the Elizabeth River Project has recognized the efforts of military installations to protect and preserve the Elizabeth River. In addition to Naval Support Activity Hampton Roads, Portsmouth Annex, which was honored as the River Star Business Hall of Fame Winner for 2018, Norfolk Naval Shipyard was recognized as the 2017 Hall of Fame Winner. Since the early 2000s, Norfolk Naval Shipyard has worked with the Elizabeth River Project and other partners to transform a series of landfills into 70 acres of new wetlands and wildlife meadows. Norfolk Naval Shipyard has also implemented a range of green infrastructure, stormwater BMPs, and energy-efficient practices to improve stormwater management, reduce pollution, and reduce energy use in and around installation facilities.

To learn more about the Naval Support Activity Hampton Roads Naval Medical Center Portsmouth and Norfolk Naval Shipyard, check out the videos at the following links.

Portsmouth: <https://www.youtube.com/watch?v=O7j3haElZxl>

Norfolk Naval Shipyard: <https://www.youtube.com/watch?v=ksCgybnroQ8>



PHOTO RELEASED AND PROVIDED BY SUSAN CONNER, USACE

At the headquarters of the Norfolk District of the U.S. Army Corps of Engineers, an oyster restoration project (shown here) is one of many environmental improvements completed by the Norfolk District.



Joint Base Langley-Eustis Taking on BMP Maintenance, Operation, and Verification

By Ron Holcomb, Joint Base Langley-Eustis Water Program Manager

Joint Base Langley-Eustis (JBLE) is taking on stormwater BMP operation and maintenance (O&M) with a project that includes inspections, ranking, and full accounting of BMPs at the installation.

As part of the project, JBLE contracted an architectural and engineering firm to perform field inspections of structural stormwater BMPs and prepare an inspection and maintenance plan for both the Langley and Eustis sites.

The BMP inventory inspection data was collected by developing comprehensive checklists for various types of BMPs, including bioretention facilities, dry detention basins, swales, wetlands, infiltration basins, and others. Specific questions were developed for the various components of the BMP such as:

- Is there trash, sediment, or debris present at or obstructing the inlet?
- Is there evidence of erosion at the inlet or undercutting of riprap?
- Has the riprap or stabilization become clogged or covered in sediment?
- Is there undesirable vegetation present?
- Has sediment accumulated to a depth greater than the original design sediment storage depth?
- Do the plants need pruning?
- Is there evidence of water standing longer than five days after a storm event?
- Are there bare areas where there should be vegetation?

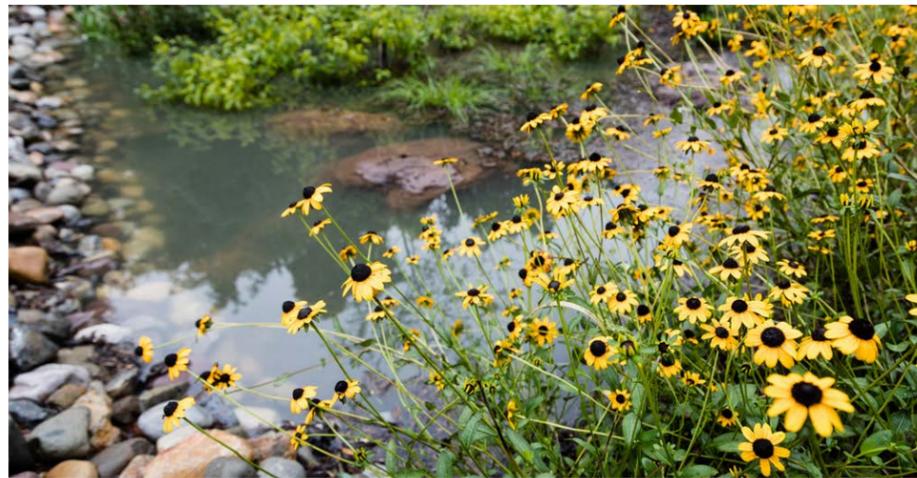
Inventory results were entered into a software program called SURVEY123. From there, the program assesses the BMPs on a grading or ranking scale of A through F, where F is failing and A is in proper working order.

The initial field work conducted by installation personnel and contractors determined that none of JBLE's BMPs were failing. The software is also



Members of Joint Base Langley-Eustis clean out a storm drain at Fort Eustis, Va., April 21, 2015. The team cleaned several storm drains on the installation and installed a water filtering system as a part of Earth Week. Cleaning the drains and installing the new system will clean the water that flows into local Virginia waterways.

PHOTO BY STAFF SGT. NAYASHA STANNARD, U.S. AIR FORCE



Structural BMPs, such the bioretention facility shown here, must be regularly inspected and maintained.

PHOTO BY WILL PARSON, CHESAPEAKE BAY PROGRAM

being used to map the perimeter of the BMP and obtain valuable geographic information system (GIS) data for mapping JBLE's municipal separate storm sewer systems (MS4) permit boundary.

While none of the BMPs scored an F, some did score lower for various reasons. A preliminary report will be released later this month that will address the lowest-scored BMPs. The report will be used to leverage funding for maintenance of these BMPs into the Base Operations Services contract.

Arlington National Cemetery Continues to Focus on Sustainability

By Stacey Rosenquist, Arlington National Cemetery

Arlington National Cemetery continues to focus on incorporating sustainability in its environmental designs and explore new ways to implement sustainable solutions through new products and techniques. The cemetery's permeable pavement and rain gardens are two visible designs that demonstrate this focus.

Permeable Pavement

Permeable pavement is a method of paving that allows stormwater to seep into the ground rather than flowing into storm drains, waterways, and eventually the Chesapeake Bay. Permeable pavement is used for the walkway along Eisenhower and Meigs Drive. Benefits of permeable pavement include treatment of runoff, increased groundwater infiltration and recharge, local flood control, water quality improvement, reduced soil erosion, increased traction, reduced splash-up in trafficked areas, less cracking in winter conditions, less snow plowing, and other advantages over traditional pavement systems.

Rain Gardens

A rain garden is a planted depression that allows rainwater runoff the opportunity to be absorbed from impervious urban areas, such as roofs, driveways, walkways, parking lots, and compacted lawn areas.



Arlington National Cemetery continues to focus on sustainability in its environmental designs.

PHOTO BY OLIVIER GIRON, CHESAPEAKE BAY PROGRAM

Arlington National Cemetery currently has three rain gardens, located in an employee parking lot in the south end of the cemetery near the 123 Gate. Many more rain gardens are in planning phases and will be planted over the next few years.

Snow collects pollutants as it melts and runs off roofs, driveways, and lawns. These pollutants, like oil, salt, fertilizer, and

pesticides, run down the storm drain into the Potomac River and Chesapeake Bay. Water captured in the rain gardens soaks or infiltrates into the ground, allowing it to be used by nearby plants and trees. In addition, a rain garden is a beautiful feature for its surroundings, creates habitat for birds and beneficial insects, and reduces pest and harmful insects.

Communication Package Released for Bay Modeling Tools



The Chesapeake Bay Program (CBP) recently released informational materials on topics related to the Midpoint Assessment and Phase III WIP development. These new resources include information about the suite of models approved by the Partnership in December, which use the latest scientific and monitoring data to simulate conditions in the Bay.

You can find more information about the Model and Phase 6 updates in these fact sheets:

https://www.chesapeakebay.net/documents/Phase_6_Modeling_Tools_1-page_factsheet_12-18-17.pdf

https://www.chesapeakebay.net/documents/Model_Fact_Sheet_v2.pdf

For more information about the CBP's state-of-the-art suite of modeling tools, visit the Chesapeake Bay Program blog:

https://www.chesapeakebay.net/news/blog/updated_tools_help_address_pollution_and_plan_for_the_future

Or watch a video at this link: https://www.chesapeakebay.net/discover/bay-101/bay_101_monitoring_and_modeling_the_chesapeake_bay



Holistically Analyzing Benefits of Green Infrastructure

By Stephanie Smith, Brown and Caldwell

In 2016, the CBP Office commissioned a report from the Environmental Finance Center (EFC) to examine the co-benefits of green infrastructure practices, including economic benefits of avoided costs. In October 2017, the report was completed and released to the public.

Green infrastructure practices can provide many diverse benefits to local communities, including flood and heat island mitigation, recreational opportunities, stormwater management, and even improved health outcomes. However, co-benefits, such as recreation, are often excluded when decision-makers weigh project alternatives through a benefit-cost analysis (BCA), in favor of direct benefits, such as stormwater treatment, which can be tied directly to a regulatory driver.

The EFC report found that, in the right circumstances, BCA can help decision-makers identify BMPs that provide the most utility for the local community. However, two significant barriers often prevent consideration of the multiple benefits of stormwater management. First, the primary goal of many local stormwater programs is to achieve stormwater treatment goals cost-effectively, so ancillary benefits are not considered. Second, typical compliance structures



PHOTO BY MATT RATH, CHESAPEAKE BAY PROGRAM

A parking lot at the U.S. Naval Academy in Annapolis, MD, features a rain garden. In addition to treating stormwater, green infrastructure practices can improve physical and mental health, air quality, and aesthetics.

prevent or discourage decision-makers from considering other benefits beyond the practice's capacity to treat stormwater.

BCA can overcome these barriers when green infrastructure implementation is effectively coordinated with other community priorities. In this way, the community can see the effect of green infrastructure implementation on other objectives, such as greater access to recreation and property value enhancements. Considering the triple bottom line—environmental, social,

and economic impacts—can provide a framework to fully assess the range of benefits from green infrastructure.

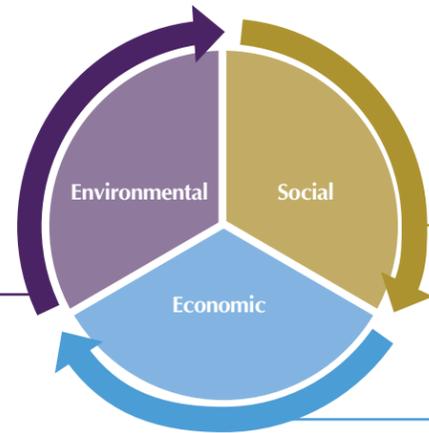
The EFC report is intended to provide guidance for local communities to define the benefits of green infrastructure and establish a framework to incorporate co-benefits in a stormwater program.

To read the report in full, visit: <https://erams.com/UWIN/wp-content/uploads/2018/01/EFC-Holistic-Benefits-GI-Report-10.12.17-Reduced5.pdf>

Triple Bottom Line and Co-benefits

Beyond water quality...

- Improved air quality
- Reduced greenhouse gas emissions
- Habitat restoration



Beyond aesthetics...

- Recreation opportunities
- Reductions in crime
- Increased beautification
- Improved health & well being
- Enhanced social cohesion

Beyond cost savings...

- Job creation
- Redevelopment
- Increased property values
- Infrastructure sustainment

Evaluating a project's triple bottom line impacts can account for the multiple benefits of stormwater projects beyond stormwater treatment. Graphic adapted from EFC report, "Holistically Analyzing Benefits of Green Infrastructure."



Virginia Releases Rulemaking for Re-issuance of Small Phase II MS4 General Permit

By Brian Powell and Dave Cotnoir, NAVFAC MIDLANT Senior Water Program Managers

The Virginia Department of Environmental Quality (VA DEQ) has proposed a rulemaking regarding the General Virginia Pollution Discharge Elimination System (VPDES) Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4s), Virginia Administrative Code 9VAC25-890, to amend and reissue the existing general permit, which expires on June 30, 2018.

The general permit governs local governments and state and federal agencies that discharge stormwater from MS4s located within the Census Urbanized Area as determined by the Bureau of Census. Changes to the existing general permit include the addition of specific and measurable requirements resulting from EPA's Remand Rule and revisions to clarify permit requirements and correct typographical errors.

Substantive changes include:

- Revising the permit in accordance with EPA's small MS4 federal regulations (Small MS4 Remand Rule) promulgated on January 9, 2017 to ensure conditions are clear, specific, and measurable.
 - Revising registration statement requirements to eliminate submittal of the permittee's MS4 Program Plan;
 - Including more specific BMPs and strategies for implementation as part of the permit; and
 - Removing requirement for VA DEQ to approve MS4 Program Plans and TMDL Action Plans.
- Requiring permittees to provide MS4 maps in a geographic information system (GIS) file or PDF format.
- Streamlining Construction Site Stormwater Runoff Control and Post Construction Stormwater Management for New Development and Development on Prior Developed

Lands by incorporating existing Erosion and Sediment Control and Virginia Stormwater Management Program regulations by reference.

- Revising existing and new source load reductions to be implemented during the permit term for permittees discharging to the Chesapeake Bay watershed in accordance with the Bay TMDL and Phase II WIP. More specifically, the MS4 permit will require 35 percent reductions for new and existing sources. Lastly, installations will be required to estimate the date for when they intend to achieve nitrogen, phosphorus, and sediment waste load allocations.
- Adding a requirement that Local

TMDL Action Plans be made available for public review.

- Proposing definitions for MS4 Regulated Service Area and Pollutant of Concern.

Multiple installations are covered by these permits. Therefore, understanding the changes now will help prepare for administering the new permit, particularly since the revisions are expected to be finalized in May 2018 and Registration Statements and Chesapeake Bay TMDL Action Plans will be due June 1, 2018. More information can be found on the VA DEQ MS4 website: <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/MS4Permits.aspx>



PHOTO BY WILL PARSON, CHESAPEAKE BAY PROGRAM

Small MS4s in Virginia will be subject to the re-issued permit, which will be finalized in May 2018.



Local Area Planning Goals: Defining Expectations

By Stephanie Smith, Brown and Caldwell

In the Phase III WIPs, jurisdictions within the Bay watershed will define the loads of nutrients and sediment that each major watershed and source sector—such as agriculture, wastewater, and urban stormwater—can discharge to the Bay. Each source sector will be expected to achieve those target loads by 2025 to comply with the Bay TMDL.

As a part of each WIP, jurisdictions must develop local area planning goals that set measurable targets for local partners at a finer geographic scale. Though these goals are not enforceable requirements, the local area planning goals and engagement strategies defined in the WIPs will guide jurisdictions and local and regional partners in defining the role of each partner and ensuring that sufficient awareness and technical capacity exist to reach the jurisdiction’s allocations. Combined with the implementation of BMPs since 1985 and planned enhancements to existing programs, local area planning goals are an essential piece of the strategy to reach the Chesapeake Bay TMDL 2025 planning targets.

Across the Chesapeake Bay watershed, jurisdictions are working with stakeholders to define the process that will be used to develop local area planning goals. As a part of that process, jurisdictions and the CBP will also need to identify the tools, training, and assistance to help local and regional partners reach their goals. Based on the process used in Pennsylvania, the considerations for jurisdictions as they develop local area planning goals may include the following:

- Translate load allocations for the Chesapeake Bay to the edge of stream loads
- Select a scale for the goals
- Define the goals, including expected effort
- Engage local and regional stakeholders to meet local area planning goals

The following provides an overview of some of these key considerations. More guidance on the requirements can be found in the recommendations of the Local Area Planning Goals Task Force and the Interim Phase III WIP Expectations.



Local area planning goals are an essential part of a jurisdiction’s strategy to reach 2025 targets. Adapted from the Pennsylvania Department of Environmental Protection (PA DEP) presentation to the Local Government Engagement Initiative on January 16, 2018.

Selecting a Scale

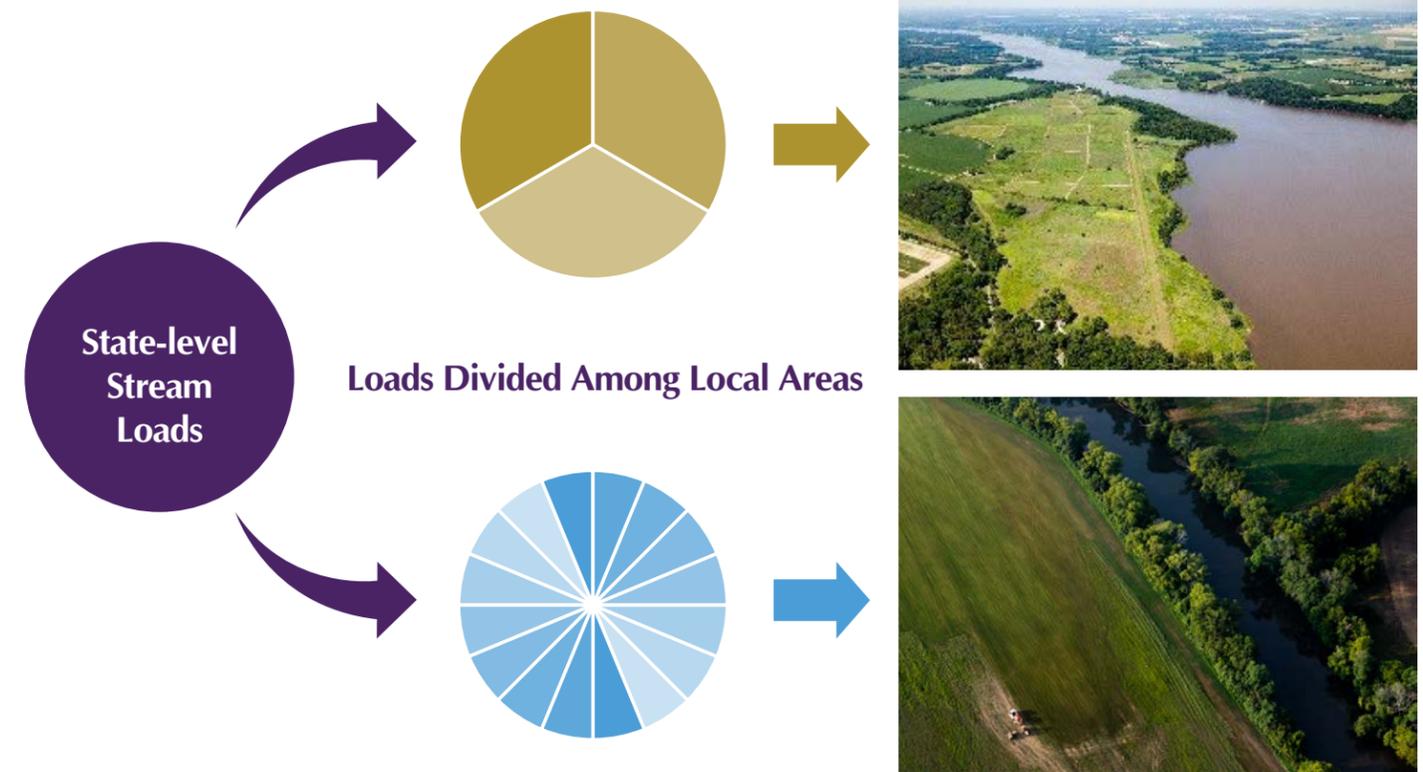
Jurisdictions must decide which scale to use when assigning responsibility among local areas. Local area planning goals may be aligned with various geographies: natural boundaries, such as watersheds, or administrative boundaries from cities, counties, soil and water conservation districts, or regional entities. In most Phase II WIPs, local area targets were defined for administrative areas, such as cities and counties. Jurisdictions must decide if they will also define targets this way in the Phase III WIPs.

Natural boundaries may seem to be a logical choice because they correspond to the extents within which natural processes occur. However, natural boundaries rarely align with administrative boundaries, which has the potential to complicate who is responsible for the restoration effort. Therefore, additional coordination may be necessary if natural boundaries encompass multiple administrative entities. If goals are assigned by administrative boundaries, stakeholders can address their respective local area goals individually or within the existing management structures of regional entities.

Defining the Goals

Jurisdictions must also select how to express local area planning goals. They may include programmatic goals, such as ordinances or post-construction performance standards, with specific implementation, oversight, and enforceable requirements; numeric reductions or maximum load goals; or other measures, such as percent reduction of existing loads, flow-based targets, percentage of BMP implementation by land use, and more.

After the scale is selected, jurisdictions must decide how to divide the goals among the local areas. For example, Pennsylvania’s



Jurisdictions must decide which scale to use when assigning responsibility among local areas. Adapted from the PA DEP presentation.

Phase III WIP Steering Committee analyzed two alternative methods for county-level goals: the division of nutrient reduction targets as an equal percent reduction (equal effort) or prioritized based on a similar methodology to state planning goals where areas with the greatest potential impact in reducing pollutants do more than areas with a smaller impact. Through additional analysis, the Steering Committee found that the level of effort required by the highest-impact areas when given an additional 20 percent reduction approached infeasibility (i.e. E3 or everything, everywhere, by everyone). Therefore, the methodology used to determine level of effort is a key consideration for jurisdictions as they define these goals.

Engaging Stakeholders

Jurisdictions are also developing engagement strategies to involve stakeholders in the development of local area planning goals. Once that process is complete, jurisdictions will provide information about resources and tools for local and regional partners to plan and implement programs to meet 2025 goals. These strategies include leveraging technical resources and tools from state, federal, and non-governmental organizations, which may be useful for environmental managers and installation staff.

As local stakeholders, DoD installations will more than likely have local area planning goals or be part of larger local areas with defined goals. Though the DoD CBP will play an active role in this process on behalf of installations, technical resources available from the jurisdictions, EPA, and non-governmental organizations will provide the greatest value for decision-makers at each installation. Also, because individual installations may have different goals based on the strategy selected by the jurisdictions, environmental managers should remain up to date on the local area planning goals in their jurisdiction in addition to the DoD CBP’s involvement.

For more information about local area planning goals, visit the webpage for the Local Government Engagement Initiative (https://www.chesapeakebay.net/who/group/local_government_engagement_initiative) or your jurisdiction’s Phase III WIP outreach point of contact.



Midpoint Assessment Updates

By Stephanie Smith, Brown and Caldwell

The Principals' Staff Committee (PSC), which serves as policy advisor to the Executive Council and Management Board of the Partnership, met in December to review key decisions necessary for the Midpoint Assessment and future development of the Phase III WIPs by the jurisdictions. The decisions from the December meeting relate to four elements of the Midpoint Assessment: Phase III WIP development and draft planning targets, accounting for growth, the Conowingo Dam, and climate change.

Draft Planning Targets

First, the PSC agreed to adopt the Phase 6 suite of modeling tools for the development of Phase III WIPs. In addition, the PSC approved the release of the draft Phase III planning targets, included below, as a starting point for the Partnership review process. Though the distribution of nitrogen and phosphorus loads among the jurisdictions may shift, it is not anticipated that the Bay-wide target loads will change. However, the planning targets for West Virginia and New York will reflect the same adjustments provided during the establishment of the 2010 Bay TMDL allocations. The EPA, the Water Quality Goal Implementation Team (WQGIT), and the Modeling Workgroup will coordinate to determine the source of those additional nutrient loads and the impacts to the assimilative capacity of the Bay. The planning targets will be finalized in May 2018.

	NY	PA	MD	WV	DC	DE	VA	Bay
Nitrogen Planning Target* (millions of pounds)	11.59	73.18	45.30	8.35	2.43	4.59	55.82	201.25
Phosphorus Planning Target* (millions of pounds)	0.606	3.073	3.604	0.456	0.130	0.120	6.186	14.173

*These are the draft planning targets. Draft targets are subject to change as a result of the Partnership's review. Final planning targets scheduled to be completed in May 2018. Draft planning targets were sourced from materials from the Principals' Staff Committee meeting, December 19, 2017.

Accounting for Growth

The PSC approved the recommendation of the WQGIT to use the 2025 forecasted conditions, or the Current Zoning scenario, to account for growth in the development and implementation of the jurisdictions' Phase III WIPs and two-year milestones. The two-year milestones will be modified to accommodate for changes in observed growth data.

Conowingo Dam

The PSC decided to develop a separate Phase III WIP for the Conowingo Dam to account for the increased loads caused by the loss of the dam's capacity to trap nutrients and sediments. The implementation of BMPs by Pennsylvania installations will count toward the Pennsylvania planning targets, not the Conowingo target. All jurisdictions will participate in the development of the WIP, which may extend beyond the 2025 end point for the Bay TMDL.

Climate Change

In the Phase III WIPs, the PSC agreed to incorporate narrative strategies to address climate change and provide states with the flexibility to account for it quantitatively. The PSC also agreed that more science is needed to understand the effects of climate change on nutrient loads and BMP efficiencies, in addition to other impacts. It is expected that numeric strategies will be incorporated in the two-year milestones starting in 2022.



PHOTO BY DAVE HARBRAY JOURNAL

Increased nutrient and sediment loads caused by infill of the Conowingo Dam, shown here, will be addressed through a separate WIP.

Chesapeake Bay Action Team Updates

By Hee Jea Hall, Brown and Caldwell

Members of the Chesapeake Bay Action Team (CBAT) convened for their quarterly meeting on January 26, 2018, to review progress on restoration and protection efforts around the watershed.

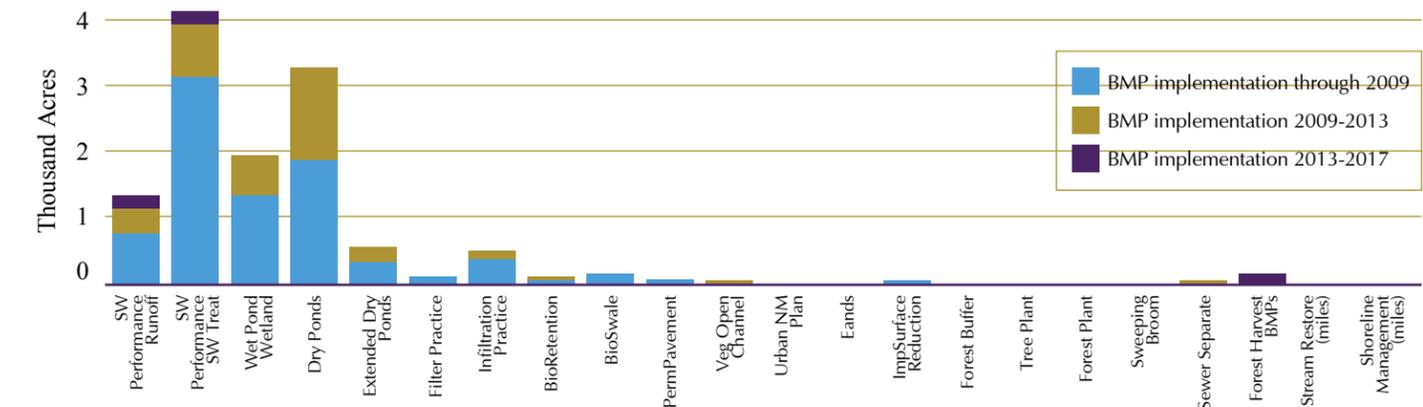
Federal and DoD Implementation in Phase 5.3.2 and Phase 6 Watershed Models

Jeff Sweeney with the EPA CBP Office discussed federal and DoD implementation of BMPs extracted from the Phase 6 Model and the impact of those BMPs on nutrient loads to the Chesapeake Bay between 1985 and 2017. Unlike the Phase 5.3.2 Model, the Phase 6 Model can isolate federal- and DoD-reported data; the results will be used to inform the jurisdictions' Phase III WIPs.

DoD facilities represent 0.9 percent of the Chesapeake Bay watershed area, including most of the developed land controlled by federal facilities. Based on information extracted from the model, DoD has reported more BMP implementation data than other federal agencies, with a significant increase in implementation between 2009 and 2013. Despite BMP implementation, model outputs indicate that ongoing development has led to an increase in loads from developed areas. EPA explained that to achieve load reductions, federal facilities should implement effective performance standards on new development, retrofit existing development, and conserve forest and wetlands—efforts that many DoD installations are already doing because of MS4 regulations, EISA Section 438, and low impact development policies.

FY2017 Datacall Results and Outcomes

Stephanie Smith with Brown and Caldwell presented the results of the annual BMP datacall and the Projects & Indicators (P&I) datacall. In FY2017, \$88 million was funded for projects. The largest portion of funding was allocated for clean water projects, which includes \$14.8 million in FY2017 funds for BMPs. In addition, four installations completed oyster reef or gardening



This figure shows BMP implementation in thousands of acres at federal facilities through 2017. Graph adapted from CBAT presentation by Jeff Sweeney, EPA on January 26, 2018.

projects. Through FY2017, more than 27,400 cumulative acres are protected in and around DoD installations through the Readiness and Environmental Protection Integration (REPI) Program, including an additional 3,210 acres protected in FY2017. In total, 38 installations reported that they had a volunteer program and 147 events with 4,454 volunteers were held at DoD installations in FY2017. Through the datacall, DoD also collected information about planned BMPs, which will be used to estimate the investment in BMP implementation for 2018–2019 (\$45 million goal) and the load reductions achieved by DoD installations. The results of the datacall will be used to develop the FY2017 Annual Progress Report, Red/Yellow/Green Light crediting reports, DoD CBP's internal progress assessment, 2018–2019 goal implementation team workplans, 2018 Chesapeake Bay Accountability and Restoration Act reporting, conference presentations, and outreach events.

CB TMDL 2017 Midpoint Assessment and DoD Chesapeake Bay Program Updates

For information about the Midpoint Assessment, see the write-up on page 10.

Other program updates include:

- The Sustainable Fisheries GIT has recommended the St. Mary's and York Rivers in Maryland and Virginia become two new tributaries for oyster restoration.
- A subcommittee of the Clean Water Act Services Steering Committee has been formed to address funding of BMP operations and maintenance at DoD installations. The subcommittee will review facility codes and develop a maintenance plan to include BMPs in the facilities sustainment model.
- The Bay Barometer was released in January by the CBP.



1510 Gilbert Street
Building N-26, Room 3300
Norfolk, VA 23511
DoD/DoN Chesapeake Bay Program Office

✓ Check it Out

DoD Chesapeake Bay Program's FY2017 Annual Progress Report. To be released in April 2018.

Federal Facilities Workgroup Conference Call.
April 10, 2018, 10 AM - 12 PM

Earth Day. April 22, 2018. For more information about Earth Day events near you, check with your installation or local government website.

Chesapeake Bay Week. April 23-29, 2018. Chesapeake Bay week offers programming that spotlights the history, heritage, and splendor of the Chesapeake Bay. For more information: <http://www.mpt.org/programs/chesapeakebayweek/>

Choose Clean Water Conference. May 22-23, 2018. Conference will be held in Lancaster, Pennsylvania.

Clean the Bay Day. Saturday, June 2, 2018.

2018 Sustaining Military Readiness Conference. August 13-16, 2018. Conference will be held in St. Louis Missouri.

CBAT Quarterly Conference Call. Thursday, April 26, 2018, 10 AM - 12 PM. For more information, contact Sarah Diebel at sarah.diebel@navy.mil or 757.341.0383.

Attend: Norfolk Naval Station, Building N 26 Room 3303
Call In: 1.866.749.3638 / Passcode: 7362645
Web Connect: <https://conference.apps.mil/webconf/quarterlyCBAT>

2018 REPI Webinar Series. For more information about REPI webinars: http://www.repi.mil/Portals/44/Documents/Webinars/2018_REPI_Webinar_Series_Schedule_13FEB18.pdf?ver=2018-02-13-155045-997

Chesapeake Watershed Forum Resources. The resources from the 2017 Chesapeake Watershed Forum are now available. For more information: <https://allianceforthebay.us11.list-manage.com/track/click?u=5be1791a8c53e39126d9d1251&id=ceffbcef2c&e=80e1b6fa75>.

This newsletter is produced by Brown and Caldwell under NAVFAC Atlantic A E Contract N62470 14 D 9022 for Support of Safe Drinking Water Act and Clean Water Act Environmental Compliance Program. For more information or to be added to the email distribution list, please contact the DoD Chesapeake Bay Program: <http://www.denix.osd.mil/chesapeake/home>.

