



Jan 10, 2018

Department of Defense  
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

# DoD CHESAPEAKE BAY PROGRAM JOURNAL

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

## Integration: The 'Two-for-One' Deal

By Sarah Diebel, DoD Chesapeake Bay Program Coordinator



PHOTO FROM FORT INDIANTOWN GAP

As we approach the new calendar year, the 2018 federal fiscal year is already well underway. The New Year will continue to bring budget challenges and it remains very important that Department of Defense (DoD) installations leverage available dollars to strategically implement projects that balance the military mission and the environment. One of the key components of the DoD Chesapeake Bay Program (DoD CBP) mission considers the integration of restoration, pollution prevention, and stewardship initiatives for the Chesapeake Bay into DoD's daily mission of providing the military forces needed to deter war and protect the security of the United States.

In the context of the Chesapeake Bay, the primary focus is on water quality due to the regulatory nature of the Chesapeake Bay total maximum daily load (CB TMDL), yet there are other Outcomes of the 2014 Chesapeake Bay Agreement that partners also committed to achieve. Results of EPA's 2017 Midpoint Assessment are right around the corner, and the Chesapeake Bay Partnership is now beginning to consider approaches that could be integrated into Phase III Watershed Implementation Plans (WIPs) that not only achieve water quality objectives but also other Agreement Outcomes. In other words, what are the Outcome relationships that offer a two-for-one deal to get the biggest bang for the buck?

From our annual best management practice (BMP) data call, the DoD CBP identified that many installations only reported stormwater management practices strictly from construction or compliance programs. However, there are many other types of projects beyond those programs, such as those implemented through

an installation's Natural Resources Management Program, that are approved for CB TMDL credit and unequivocally support other Agreement Outcomes. Examples include the implementation of natural best management practices (BMPs), such as stream and shoreline restoration and wetland enhancement or rehabilitation, which provide multiple benefits—and multiple benefits translate to greater positive impacts.

In this journal, we begin to brush the surface on this integration and multi-benefit concept. Articles discuss tools to identify BMPs and projects that provide multiple benefits and highlight examples of the opportunities and challenges to implement natural resource BMPs at DoD installations in the Chesapeake Bay. Most if not all of those engaged in Chesapeake Bay protection and restoration realize the cost of compliance is not cheap, but it's the cost of doing business. Therefore, we must determine the best use of fiscal and environmental resources to meet regulatory requirements and look for opportunities.

The DoD CBP thanks the following installations and individuals that contributed information and content for this journal, including:

- Mark Sievers, Tetra Tech
- Rachel McAnallen, John Selstrom, Patricia Gray, and James Hilbert, Joint Base Andrews
- Thomas Olexa, Naval Weapons Station Yorktown

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# Considering the Many Benefits of Natural Resource BMPs

By Mark Sievers and Steve Dressing, Tetra Tech, Inc.

Stormwater BMPs are an effective way to reduce the amount of pollutants, such as nutrients and sediment, in stormwater runoff. Many of these practices also provide other benefits—or co-benefits—that extend beyond water quality improvements, such as improving natural resources or enhancing citizen stewardship. A number of stormwater BMPs with potential co-benefits to natural resources can receive CB TMDL reduction credit and can be easily implemented by DoD installations, including constructed wetlands, stream restoration, urban shoreline management, urban forest buffers, and bioretention facilities.

## Constructed Wetlands

Constructed wetlands are created to catch and store runoff so that pollutants can be naturally treated through physical, chemical, and bioprocessing mechanisms. Wetlands can directly benefit wildlife populations and enhance protected lands by reducing nutrient and sediment loads to downstream water bodies, which expands their habitable area. Wetlands also provide flood control/mitigation and resilience by storing excess stormwater runoff created by storm events. In addition to environmental benefits, wetlands can create opportunities for passive recreation, such as walking and wildlife viewing, and education about stormwater benefits and habitat/ecology.

## Urban Forest Buffers

Urban forest buffers are 35-foot wide or wider areas of trees and shrubs established along the shore of a body of water. These buffers protect water quality by trapping and filtering nutrients and sediment from runoff from upslope areas. They also help stabilize stream banks, which reduces erosion and further enhances stream health. The shade the buffers provide can improve the energy efficiency of nearby buildings and reduce runoff and stream water temperatures. Forest buffers also moderate the volume of storm runoff and provide habitat for a variety of plant and animal species. This practice is also likely to benefit air quality, largely through carbon sequestration.

## Stream Restoration

Stream restoration projects control erosion and reduce sediment and nutrient loads by stabilizing stream banks and channels. They also directly benefit aquatic habitat health and riparian habitat. Like constructed

wetlands, stream restoration provides flood control/mitigation and creates recreation and educational opportunities, while potentially improving fish populations, aesthetics, and property values.

## Bioretention Facilities

Bioretention facilities, like rain gardens and bioswales, are generally filled with engineered topsoil, mulch, and vegetation that reduce contaminants by filtering them out or through biological

or biochemical reactions. Depending on the plants selected, bioretention facilities can provide a habitat and foraging resource for a variety of species. For example, as described in the DoD CBP Fall 2017 journal, rain gardens installed at Arlington National Cemetery to naturally filter stormwater also contain thriving perennials, which attract pollinators to the area. Because bioretention facilities are commonly installed around private homes and



PHOTO BY TETRA TECH

Small constructed wetland designed and constructed in the city of Griffin, Georgia.



housing complexes, they also provide an excellent opportunity to increase citizen stewardship through placement of educational signs and are often more aesthetically pleasing stormwater solutions.

### Urban Shoreline Management

Urban shoreline management uses a mix of vegetation and structural techniques to reduce shoreline erosion in tidal areas. For example, living shorelines provide better natural resource benefits than traditional shoreline hardening techniques because they mimic the natural environment. These practices can help protect the shore from storm surges and flooding, while also directly improving aquatic habitat and benefiting aquatic organisms. Living shorelines can also improve aesthetics and provide additional recreation (e.g., wildlife viewing and fishing) and educational opportunities.

A BMP's potential to generate co-benefits depends on the effects it creates. For example, BMPs that reduce stormwater runoff can reduce stream velocity, which can decrease erosion and benefit aquatic habitat.

### Potential Cost Savings

As reported in the Spring 2014 issue of the DoD CBP journal, the DoD spent \$6.7 million on projects to recover habitat in fiscal years 2013 and 2014 combined. An additional \$109 million was spent in the same period on projects to restore clean water. The BMPs described above can simultaneously receive nutrient and sediment load reduction credit for the CB TMDL (<https://www.epa.gov/chesapeake-bay-tmdl>) and meet the requirements of the Sikes Act ([https://www.fws.gov/fisheries/sikes\\_act/](https://www.fws.gov/fisheries/sikes_act/))—potentially resulting in cost savings for DoD facilities.

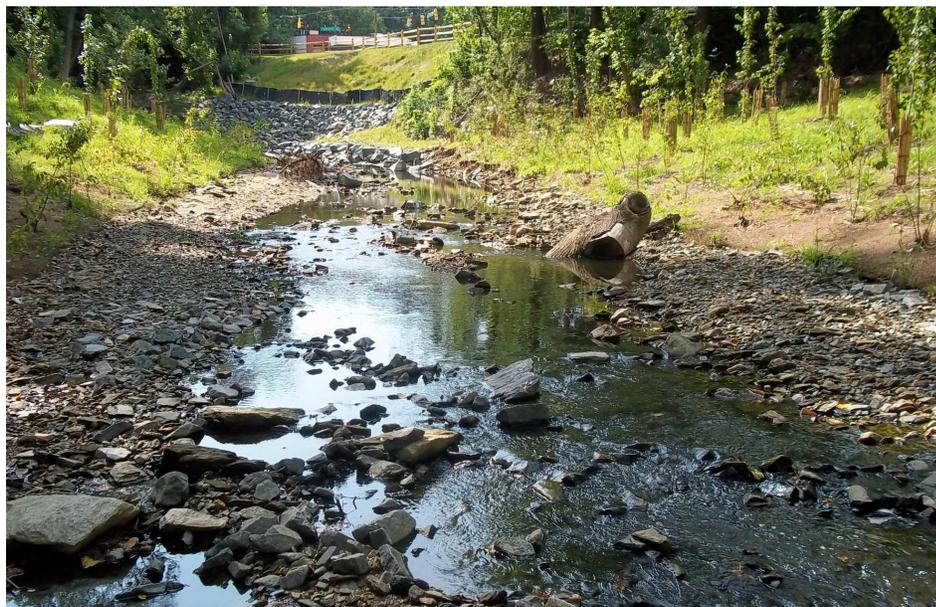


PHOTO BY TETRA TECH

Completed stream restoration project, with riparian buffer plantings along Coquelin Run in Chevy Chase, MD.



PHOTO BY JOINT BASE LANGLEY-EUSTIS

The Chesapeake Bay Program recently highlighted shoreline restoration projects at Naval Weapons Station Yorktown, Cheatham Annex, and Joint Base Langley-Eustis

### Other Multi-Benefit BMPs

In 2016, the Chesapeake Bay Trust funded a study to explore the co-benefits of a wide range of BMPs, such as impact to groundwater recharge or subaquatic vegetation. The study can be downloaded at: <http://cast.chesapeakebay.net/Documentation/Optimization>.

In addition, the co-benefits of urban tree canopy were described in the DoD CBP Winter 2017 journal. This issue can be downloaded at: <http://www.denix.osd.mil/chesapeake/library/newsletters/dod-chesapeake-bay-program-winter-2016-2017-newsletter/>.



# Protecting Natural Resources and Military Readiness

By Rachel McAnallen, Joint Base Andrews



PHOTO FROM JOHN SELSTROM

Shown above is the groundbreaking ceremony for the Piscataway Mitigation site. The landowner, at center, used the proceeds from the sale of the conservation easement to repair the historical home in the background.

Wetlands are prized for a number of beneficial functions from recharging and discharging groundwater to reducing flood damage, providing habitat for fish and shellfish, retaining and naturally filtering contaminants from surface water runoff, and providing areas with recreational, educational, and visual appeal.

Sometimes, impacts to wetlands on military installations are unavoidable. However, over the last decade, great innovation has been blossoming at Joint Base Andrews (JBA)—as a result of what, at first, appeared to be a head-on collision of the military mission and legal environmental requirements. Despite challenges, JBA found a creative solution to conserve natural resources, while putting the military mission first.

The Sikes Act (16 U.S.C. 670(c)(1)) allows military installations to establish cooperative agreements with other organizations

to provide for the maintenance and improvement of natural resources off military installations if the purpose is to relieve or eliminate current or anticipated challenges that could restrict, impede, or otherwise interfere with current or anticipated military activities. Additionally, 10 U.S.C. 2684(a), *Agreements to limit encroachments and other constraints on military training, testing, and operations*, provides DoD the authority to “enter into an agreement with an eligible entity... to address the use or development of real property in the vicinity of, or ecologically related to, a military installation or military airspace.” Together, the two legal authorities provide a mechanism to relieve wetland encroachment onto military installations.

JBA has finalized two agreements using these legal authorities, and for the first time in U.S. Air Force history, is using the Sikes

Act authority to establish an “Umbrella Mitigation Bank Instrument” in Maryland. The origins of JBA’s success with wetland mitigation and wetland mitigation banking can be traced back to nearly 10 years ago, when JBA first applied for a Clean Water Act (CWA) Section 404 permit for repairing its West Runway.

For the first time in U.S. Air Force history, JBA is successfully utilizing a cooperative agreement of military and legal environmental requirements to conserve natural resources while putting the military mission first.



In 2009, grappling with aging runways, airfield flooding, and Bird Aircraft Strike Hazard attractants, JBA conducted a wetland delineation of its airfield. The U.S. Army Corps of Engineers (USACE) delineated approximately 300 acres of wetlands inside the airfield via desktop methods. To replace and improve drainage of its West Runway, JBA secured CWA Section 404 permits from Maryland Department of the Environment and USACE. The permits required JBA to provide mitigation for permanent impacts to 12 acres of nontidal wetlands.

The next several years were fraught with complexities: completing runway repair work, while identifying a potential mitigation site; obtaining regulator and local approval of the selected mitigation site; performing National Environmental Policy Act (NEPA) analysis and Environmental Baseline Surveys; hiring an experienced wetland conservation and restoration contractor, GreenVest LLC; coordinating with landowners to purchase an easement for the mitigation site; seeking funding; and creating the initial Cooperative Agreement. Ultimately, as a result of the West Runway repair project’s unavoidable impacts to 12 acres of wetland, an additional 62 acres of wetland were preserved, created, and enhanced at the “Piscataway Creek Mitigation Site.” The cost was about \$3.4 million. As a bonus, the landowner used the proceeds of the Conservation Easement to preserve his historically significant boyhood home on the Piscataway Creek Mitigation Site.

Throughout this long process, JBA realized that an action similar to the Piscataway Creek Mitigation Site would likely be needed for the permanent wetland impacts of several other upcoming projects. Instead of waiting until the day when CWA Section 404 permits would drive further wetland mitigation action for future projects, JBA re-delineated the airfield’s wetland using field methods. This more accurate boots-on-the-ground delineation reduced the total jurisdictional wetlands on the airfield from 300 acres to 70 acres, resulting in reduced financial liability from wetland impacts.

Then, in a contract through the USACE funded by the JBA 11th Civil Engineer Squadron, GreenVest identified and studied an additional 81 acres of land, which was

named the “Mattawoman Creek Mitigation Site.” In 2017, JBA, the Air Force Legal Operations Agency, Secretary of Air Force General Counsel, and the Air Force Civil Engineer Center drafted a second Cooperative Agreement with GreenTrust Alliance, a non-profit affiliate of GreenVest, using the Sikes Act and 10 U.S.C. 2684(a) authorities.

Under the Mattawoman Creek Cooperative Agreement the Air Force Civil Engineer Center would award additional funding to GreenTrust to design, obtain permitting and a Conservation Easement for, and construct the Mattawoman Creek Mitigation Site (MCMS), which would generate 42 mitigation credits to be “banked” for future credit toward JBA projects. Upon completion of the MCMS, additional funding will be placed in an escrow account managed by GreenTrust over a mandatory 7- to 10-year wetland maintenance, monitoring, and stewardship period, to be released contingent with the newly created wetlands’ survival.

Concurrent with the MCMS development, JBA worked with USACE and GreenVest to create an Umbrella Mitigation Banking Instrument (UMBI), dependent on Interagency Review Team (IRT) approval of the wetland design. Release of wetland credits from the UMBI would be negotiated based on future critical project milestones and IRT approval. The UMBI authority is available for future JBA needs, and with permission, other DoD installations in Maryland.

JBA’s story demonstrates that first, accurate wetland delineation is critical. Second, Cooperative Agreements can provide wetland mitigation capability for military projects. Finally, an UMBI models proactive installation planning by allowing off-installation wetland restoration and conservation to meet future operational requirements. For JBA, these resulted in a win-win situation: JBA increased the value and function of its wetlands while putting America’s Airfield first.



*These photos capture the conditions at the Piscataway Creek site during (top right) and after (bottom right) completion. At left is a photo of a tree planted as a part of the wetland project.*

PHOTOS FROM JOHN SELSTROM



# When Environmental & Mission Priorities Conflict

By Sarah Diebel, DoD Chesapeake Bay Program Coordinator



PHOTO BY MCB HAWAII

*Natural BMPs provide many benefits, but without proper planning, they can create hazards for military operations.*

Meeting the goals of the Chesapeake Bay Total Maximum Daily Load (TMDL) by 2025 is primarily in the hands of local implementers, including Department of Defense (DoD) installations. Land restrictions, fiscal responsibilities, compliance with regulation and permits, and, above all, mission requirements are key considerations as environmental managers develop plans and implementation schedules. With an extensive amount of impervious surface, installations are looking for opportunities to install best management practices in areas that do not currently have any stormwater management or on sites with open space that could be retrofitted with stormwater features that have higher nutrient and sediment reduction efficiencies.

Recently, stormwater compliance managers identified a potential location to install a constructed wetland as part of their overall plan to meet their required nutrient and

sediment loads. Specifically, the open space, when retrofitted, could treat 118 acres of stormwater runoff and reduce phosphorus loads into the Chesapeake Bay by approximately 100 pounds per year.

The DoD CBP recently began promoting the need for coordination among installation natural resource and stormwater compliance managers since many projects identified in an Integrated Natural Resources Management Plan (INRMP) also facilitate nutrient and sediment reductions required by many stormwater permits. This overall coordination can ultimately assist with the most efficient and best use of declining environmental resources. As mentioned in the opening article, the Chesapeake Bay Partnership is also considering implementation of certain types of BMPs that maximize co-benefits to support achieving other Chesapeake Bay Agreement Goals and Outcomes such as Forest Buffers, Tree Canopy, and Wetlands.

Therefore, this constructed wetland at face value would seem to check all of the boxes associated with the “multi-benefit” concept:

- Stormwater permit compliance to reduce nutrients and sediment
- Sikes Act and INRMP objectives
- Wetlands gain
- Flood mitigation and control

As the compliance managers began to assess the surrounding area, it became evident that the proposed area was also within a 10,000-foot radius of the airport runway and fairly close to helicopter operations. Therefore, mission requirements associated with Bird/Wildlife Aircraft Strike Hazard (BASH) prevention needed consideration since this type of BMP would potentially increase the likelihood to attract hazardous species.

Bird/wildlife strikes are a significant threat to flight safety. The well-known event from the Hudson River incident clearly demonstrates

the extreme potential for human casualties and asset loss. The primary role of every military aviation installation is to provide a safe flying environment. Managing wildlife habitat is part of the safety equation.

Therefore, DoD's goal as it relates to BASH is to manage birds and their habitats in ways that reduce BASH risks while ensuring mission and conservation objectives are met. Several priorities to achieve this goal include:

- Ensure habitat management and Avian Protection Plans do not jeopardize airfield operations, mission safety or capability.
- Improve reporting of BASH incidents (bird strikes) to Air Force and Navy Safety centers, and other appropriate entities.
- Help develop/update installation BASH plans to keep federally protected species away from areas that may pose an airspace hazard.
- Investigate and encourage the use of technologies that reduce BASH risks (e.g., radar, acoustics).
- Facilitate communication among air safety, operations, and natural resources managers to achieve common management objectives.
- Promote research to develop BASH guidelines for specific habitats and species.
- Foster communication and coordination regarding BASH among the Military Departments' air safety centers.

While the project may not move forward as planned, solutions could include changes to the design that meet CB TMDL requirements and/or identify an alternate location.

Ending on a positive note, the success in this case example is that the initial coordination with the appropriate installation personnel ensured mission requirements and safety were made the highest priority.



PHOTO FROM FINE ART AMERICA

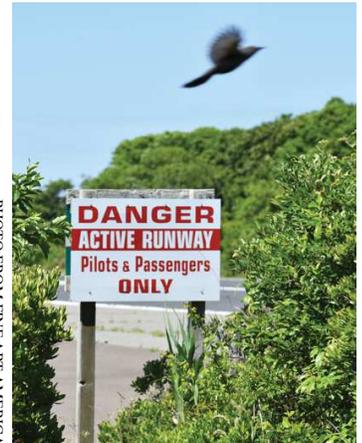


PHOTO FROM MONTAUK AIRPORT



PHOTO FROM JOINT BASE LANGLEY EUSTIS



PHOTO FROM SHORE BIRD CONTROL



PHOTO FROM GANNETT CDN

Canada geese, sea gulls, and turkey vultures are among the species that create hazards for military aircraft, including helicopters and jets.

### Learning More

To learn more about bird conservation and BASH programs at DoD installations, see the Department of Defense Partners in Flight fact sheet available at [http://www.dodnaturalresources.net/files/DoD\\_PIF\\_Strategic\\_Plan\\_Fact\\_Sheet\\_BASH\\_10Oct12.pdf](http://www.dodnaturalresources.net/files/DoD_PIF_Strategic_Plan_Fact_Sheet_BASH_10Oct12.pdf)



# Bringing Better Site Design into the 21st Century

By Michelle Karpaitis, Brown and Caldwell

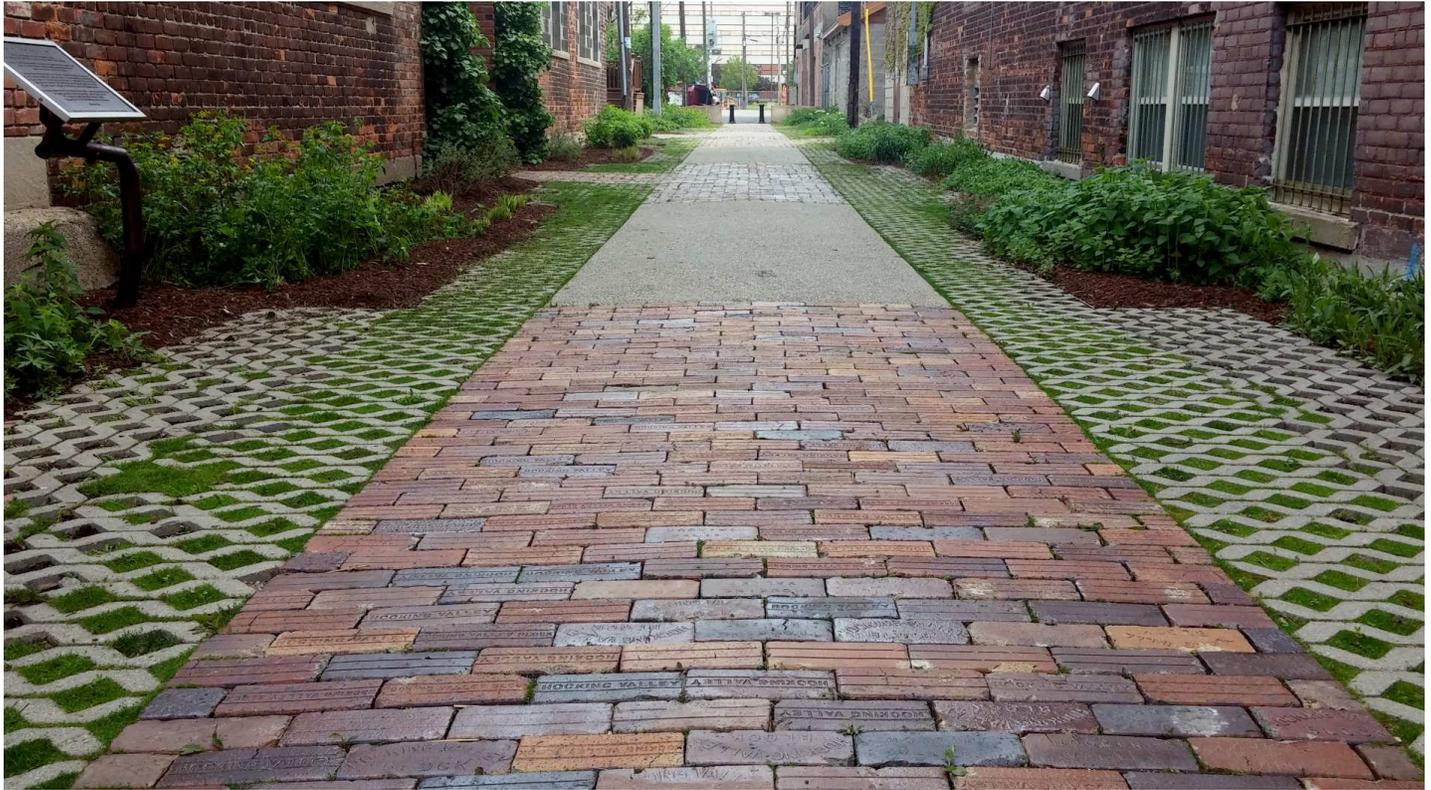


PHOTO FROM GREEN GARAGE DETROIT

Low impact design and green infrastructure, such as permeable pavers to infiltrate and treat rainwater, can be implemented in creative ways in a variety of locations, such as the green alley shown here.

Green infrastructure, low impact development, and runoff reduction: synonymous terms often used interchangeably to describe environmentally sensitive yet economically effective ways to develop land. As a leader in the conservation and preservation of the Chesapeake Bay, the Department of Defense (DoD) and its installations have implemented these best management practices (BMPs) and other types of green infrastructure to comply with regulations, such as the Chesapeake Bay total maximum daily load (CB TMDL). Despite unique site requirements and limitations, DoD installations have found innovative ways to incorporate BMPs and environmental site design principles in new and re-development sites while maintaining mission readiness.

## The Better Site Design Handbook

The Center for Watershed Protection (CWP) is a nonprofit organization founded in 1992 and committed to conserving and preserving streams, rivers, lakes, wetlands, and bays from the effects of land development. Over the years, the organization has become a leader in stormwater management and watershed planning. In 1998, the CWP published the Better Site Design Handbook (Handbook) that, based on the input of a diverse panel of site planning professionals, outlined 22 development principles that promote environmentally conscious and economically viable development through reducing impervious cover, conserving natural areas, and reducing stormwater runoff.

Included in the Handbook is a tool used to review local development regulations—the Code and Ordinance Worksheet (COW)—that compares local codes and regulations with the development principles defined by the CWP and allows modifications to those development requirements which could lead to enhanced site design. In other cases, codes and ordinances, such as grading requirements and minimum road widths, can be barriers to implementing better site design principles. With the COW, users are able to identify those regulations that impede the ability to implement low impact design.

The Environmental Protection Agency (EPA) implemented a rule in Phase II municipal separate storm sewer systems (MS4) permits. The rule recognizes that



local code and ordinance changes to reduce impervious cover and protect natural areas can be considered “non-structural BMPs.” Some states, including Maryland and West Virginia, require MS4s to evaluate their local codes to remove barriers that prevent better site design. For non-traditional MS4s like military installations, communities with local TMDLs, or growing communities trying to prevent combined sewer overflows, the COW could serve as a tool to aid in resiliency or sustainability planning and reduce construction costs that result in safer streets and more open space.

### Bringing the Handbook into the 21st Century

Since the original release of the Handbook, there has been a shift in stormwater management philosophy. Previously, stormwater management focused on the diversion of stormwater by combined sewer systems to treatment facilities where it was treated and released to downstream waterways. Today, the guiding principle of stormwater management is to reduce runoff and treat the stormwater at its source.

The Handbook is being updated to reflect these changes in how stormwater is managed. The CWP convened the Local Site Planning Roundtable to propose changes and modifications. The updated Handbook with input from local site planning experts will be released in 2018 to include greater flexibility for different types of development, updated research on principles and benchmarks, and an online web-accessible format.

### How to Use the COW Tool

As mentioned above, the COW tool evaluates existing codes, ordinances, and regulations at the local, state, and federal level within four categories:

1. Residential Streets and Parking Lots (Principles 1–10)
2. Lot Development (Principles 11–16)
3. Conservation of Natural Areas (Principles 17–22)
4. Runoff Reduction

Before using the COW tool, the user should gather ordinances and other

### Typical questions from the COW tool

- Is land conservation or impervious cover reduction a major goal or objective of the open space design ordinance?
- Can rooftop runoff be discharged to yard areas?
- Is there a stream buffer ordinance in the community?
- Are permeable paving materials allowable on low-use streets?

relevant documents, identify the authorities who administer rules, and determine whether the site is rural, suburban, urban, or highly urban. Regulations and other documents should then be reviewed and responses entered into the COW tool about how those regulations align with the development principles. Responses to the questions are entered in the COW tool as “Yes”, “No”, “N/A”, or “Codes are Silent”.

### Interpreting the Results

More “Yes” responses indicate that local regulations already address and include many of the model development principles. Line items answered with “No” and “Codes are Silent” could be evaluated to determine if changes can be made to the code, ordinance, or regulation. Short- and long-term action items, as well as plans for adoption of code changes, can be developed from the results.

Unlike local communities, DoD installations have specific mission requirements that may restrict implementation of some low impact design practices. The Unified Facilities Criteria (UFC) outlines low impact development requirements for military departments, defense agencies, and DoD field activities. The UFC also provides technical criteria, requirements, and references for planning and design of projects to comply with requirements

under Section 438 of the Energy Independence and Security Act (EISA). In combination with UFC 1-200-01, these documents provide codes and criteria for typical building and system design.

The COW could offer a way for environmental managers to consider potential opportunities within existing regulations to achieve the development principles outlined in the Handbook for DoD projects. For instance, the COW awards a higher score if a minimum percentage of a parking lot is required to be landscaped or if the use of bioretention areas or other BMPs are allowed within landscaped areas and setbacks in parking lots. After a review of all applicable codes and regulations, if those practices are allowed in parking lot design at DoD installations, then they represent an opportunity to implement an environmentally-friendly practice identified by the CWP. In addition, because landscaped areas improve stormwater quality, they may provide CB TMDL credit. The Handbook provides facts, case studies, and challenges for each principle with an analysis of the benefits that may be used to justify its use. The updated Handbook is another tool available for DoD installations to find creative solutions that allow the convergence of mission readiness, regulatory compliance, and environmental leadership and stewardship.

### Learning More

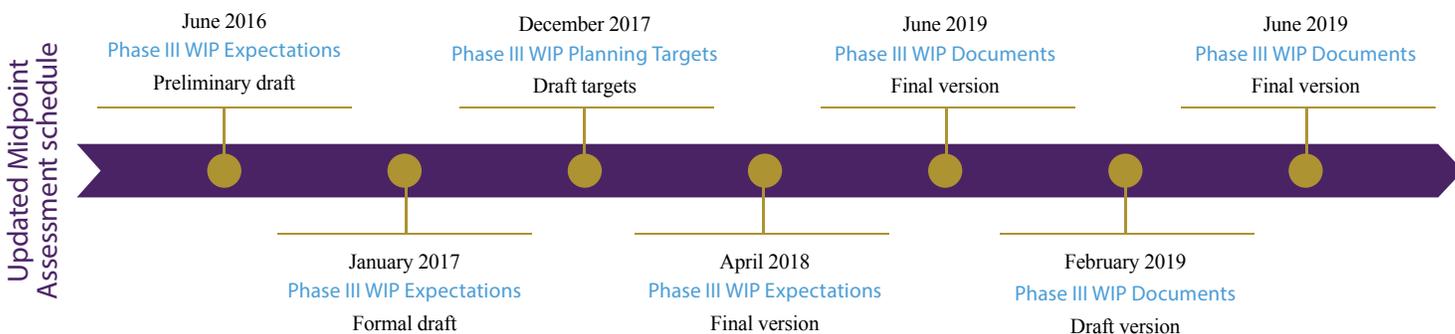
The updated version of the COW will be posted on the Center for Watershed Protection website by January 2018. Smart Growth America and the EPA’s Water Quality Scorecard are additional resources available that address environmentally sustainable development and green infrastructure approaches. More resources can be found in the resources section of the updated COW document.



# Midpoint Assessment Updates

By Stephanie Smith, Brown and Caldwell

Before the end of 2017, the Chesapeake Bay Partnership will make several key decisions regarding the 2017 Midpoint Assessment (MPA) for the CB TMDL and Phase III WIPs, which will be developed by the jurisdictions in 2019. The MPA will evaluate whether the seven Chesapeake Bay jurisdictions—and cumulatively the Bay watershed—have achieved 60 percent progress toward reducing nutrient and sediment pollution. In addition, the MPA includes other updates related to the Phase 6 Chesapeake Bay Watershed Model, Phase III WIPs, 2017 progress and 2025 planning targets, two-year milestones, local area planning goals and federal facility targets, BMP Expert Panels, and trends from regional and local monitoring data.



The Chesapeake Bay Partnership has revised the Midpoint Assessment calendar and Phase III WIP development schedule to align with the expected completion of the Phase III WIP planning targets, which should be finalized in April 2018. Based on these changes, the Phase III WIP documents will be complete in June of 2019.

The Water Quality Goal Implementation Team met on December 4th to reach consensus on its recommendations to the Principal Staff Committee (PSC). The PSC will make final decisions on December 18th and 19th regarding:



Conowingo Dam



Climate Change



Accounting for Growth

Many of the upcoming decisions will help drive the development of the Phase III WIP planning targets, which will be finalized in the summer of 2018. First, the CBP must define the assimilative capacity of the Chesapeake Bay, which is the total load of pollutants the Bay can receive and still meet dissolved oxygen water quality standards. The loads are then distributed among the state basins in the Bay based on three principles:

1. Loads must result in water quality attainment;
2. Areas that contribute the most, do the most; and
3. Jurisdictions receive credit for past implementation

As part of this process, the Partnership will re-define the relative effectiveness of state basins in the Chesapeake Bay (i.e. Potomac, York, James). The relative effectiveness values are then plotted against No Action and E3 (everything by everyone, everywhere) scenarios to define the level of effort for each geographic area. This change in relative effectiveness values will translate into new planning targets, local area planning

goals, and strategies in the Phase III WIPs.

In December, the Partnership will address three outstanding elements pertaining to the development of Phase III WIPs: Conowingo Dam infill, climate change, and accounting for growth. For the Conowingo Dam, the Partnership's decision will address who is responsible for the additional loads, how those loads will be distributed, and when the reductions associated with the increased loads will be achieved. The Partnership will also provide guidance for jurisdictions to incorporate either qualitative, quantitative, or both approaches to climate change in Phase III WIP development. Decisions will also define the minimum standard of implementation and level of flexibility for jurisdictions in the implementation of climate change policies. Lastly, the Partnership will decide if Phase III WIPs should incorporate 2025 forecasted conditions to account for growth, or if growth will be incorporated by other means. The DoD CBP will report on those decisions in the Spring 2018 Journal.



# 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 July 27, 2017, to review progress on restoration and protection efforts around the watershed.

## Living Shorelines

Donnie Seward from AECOM discussed the benefits of living shoreline projects in the context of the environmental, social, and economic benefits. Among other benefits, living shorelines combat shoreline erosion, improve water quality, and provide habitat for wildlife.

## High-Performance Stormwater BMPs

Corey Simonpietri presented several systems offered by ACF Environmental that provide enhanced stormwater treatment. The specific products included: FocalPoint Biofiltration Systems, Lidmat and Lidmix specialized media filter, and open-joint pavers for pervious pavements.

## Inspections & Maintenance in the Upcoming FY2018 DoD CBP Datacall

In FY18, the BMP datacall and BMP reporting to Bay jurisdictions will require complete records of inspection and maintenance of BMPs. Installations were advised to prepare in advance of next year's request by dividing consolidated BMP records into individual records, compiling information about past inspections and maintenance, documenting inspection and maintenance performed in the next year, and leveraging existing BMP records, particularly those associated with MS4 permit requirements. The DoD CBP indicated that assistance to installations for preparing this information for the FY18 BMP datacall by:

- Providing Red/Yellow/Greenlight BMP crediting reports, which will identify the BMPs accepted by the jurisdiction and the BMP names assigned in the state's nomenclature;
- Providing BMP credit duration information;
- Highlighting BMPs in the datacall in danger of losing credit if inspection data is not provided; and
- Providing information about BMP verification procedures.

DoD CBP will be working with CBAT members to develop a strategy to assess installations' current status on documenting BMP inspection and maintenance information before next year's datacall.

## 2017 Midpoint Assessment and Phase III WIPs

The Chesapeake Bay Partnership has updated the calendar for the MPA. See page ten for more information about the schedule and upcoming decisions.

## DoD CBP Updates

- The DoD CBP is developing a prioritization matrix of potential actions for DoD involvement in the MAP.
- The 2017 Progress Reporting BMP datacall is complete. The DoD CBP thanked all installations for their participation.
- The DoD CBP reviewed EPA's Two-Year Milestone Guide and submitted comments on 31 October.
- The DoD CBP is developing 2018/2019 BMP implementation and programmatic water quality milestones.
- The DoD CBP will be working on the annual report to Maryland on wastewater treatment plant compliance and Chesapeake Bay, related projects, the BMP crediting report (described above), and DoD CB TMDL progress evaluation, which all begin in the spring of 2018.



One system offered by ACF Environmental is the Focal Point Biofiltration System, which provides enhanced infiltration of stormwater through the engineered media.

PHOTO BY ACF ENVIRONMENTAL



AECOM constructed a living shoreline at Money Point along the Elizabeth River in Chesapeake, Virginia.

PHOTO FROM ELIZABETH RIVER PROJECT



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

## Check it Out

Decision Support Tools and a Framework for Climate-smart Restoration, OneNOAA Science Seminar Series. Thursday, January 25, 2018, 2:00 to 3:00 PM EST. For more information: <https://www.nodc.noaa.gov/seminars/>

2018 REPI Challenge Request for Pre-proposals Now Available. Due by 8:00 p.m. EST, Friday, January 26, 2018. For more information: <http://www.usendowment.org/rfps/repichallenge.html>

National Stormwater Calculator for Managing Runoff Using Green Infrastructure EPA Webinar. Wednesday, January 31, 2018, 2:00 to 3:00 PM EST. For more information: <https://www.epa.gov/water-research/water-research-webinar-series>

Can You Hear Me Now? Addressing Noise Impacts in Your REPI Partnership. Wednesday, January 31, 2018, 1:00 PM to 2:30 PM EST. For more information: <http://www.repi.mil/Resources/Webinars/ModuleID/84948/ItemID/2388/mctl/EventDetails/>

CBAT Quarterly Conference Call, Thursday, January 25, 2018, 10:00am to 12:00pm EDT. Agenda topics include DoD CBP datacall results, EPA assessment of DoD progress implementation, and Midpoint Assessment and DoD CBP updates.

For more information, contact Sarah Diebel at [sarah.diebel@navy.mil](mailto: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>

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>.

