



# DoD CHESAPEAKE BAY PROGRAM JOURNAL

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

## Expanded Chesapeake Bay Program Executive Council Signs New 2014 Chesapeake Bay Agreement

June was a significant month for the Chesapeake Bay Program Partnership and on 16 June 2014 the Executive Council held their annual meeting as the official signing ceremony of the new Chesapeake Bay Agreement. Signatories to the new Agreement now include the governors from Virginia, Maryland, Pennsylvania, West Virginia, New York and Delaware, the Mayor of the District of Columbia, the EPA Administrator, and the Chesapeake Bay Commission Chairman. Representatives from other federal agencies including NOAA, FWS, NPS, USDA, USGS were also in attendance. During the first half of the meeting, EPA provided the annual State of the Bay report, which included updates



2014 Chesapeake Bay Executive Council members at Maryland State House.

Photo taken June 16, 2014: <https://www.flickr.com/photos/29388462@N06/14468005943/>

## DoD Chesapeake Bay Program Updates

By: Sarah Diebel

*Chesapeake Bay Total Maximum Daily Load (TMDL)/Milestone Evaluations*

On 26 June 2014, EPA Region 3 released its evaluations of the Bay Jurisdictions' and Federal Agency 2012-2013 Progress and 2014-2015 Milestones. Collectively, the Bay jurisdictions are on track to meet the phosphorus and sediment reduction commitments outlined in the Chesapeake Bay TMDL. According to the assessments, further reductions are needed for nitrogen if jurisdictions are to stay on track to meet their 2017 and 2025 goals. The full evaluations are posted on the Chesapeake Bay TMDL website: <http://www.epa.gov/chesapeakebaytmdl/>.

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## Mark Your Calendars!

The FY2014 Chesapeake Bay Program Annual Datacall will be released to installation Service Leads on **28 August 2014**.

Installations will have 7 weeks to complete the datacall. The FINAL due date will be **17 October 2014**.

The next Chesapeake Bay Action Team (CBAT) meeting will be **13 August 2014** at 1000.

on EPA funding to support states and local government and programmatic initiatives including restoring monitoring network funds, supporting goal implementation teams, best management expert panels and verification, modeling tools, and integrating climate change considerations into management strategies. Each of the Advisory Committees (Citizen's, Local Government, and Scientific/Technical) provided recommendations to the EC and indicated a need for training programs, increases in staffing, and developing protocols for reporting, tracking and verification. Governor O'Malley also announced that within 90 days each of the signatories will identify which management strategies they plan to participate in and develop within a year. The DoD Chesapeake Bay Program will be coordinating with the Services and EPA to identify management strategies and beginning the next stage of the Agreement.

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REC Chesapeake Bay Program staff attended the quarterly Chesapeake Bay Commission (CBC) meeting on 8-9 May 2014 and presented an overview of the DoD Chesapeake Bay Program, including the FY13 accomplishments, current challenges, and future initiatives. The Commission expressed interest in two items: (1) DoD’s progress toward meeting the Chesapeake Bay total maximum daily load (TMDL); and (2) DoD policy on the payment of stormwater fees. We explained that construction of stormwater best management practices (BMPs) will be a challenge to fund and execute in accordance with stormwater permit deadlines and some of the planned projects are falling within the MILCON arena, which will prolong funding and execution of these efforts. We highlighted that DoD installation budgets remain pressurized and projects to construct stormwater BMPs have to compete with other projects required to support mission readiness. We were also asked about Navy policy on stormwater fee payment and whether any DoD facility has paid state or local stormwater fees. Staff explained that there is an established policy that requires the payment of stormwater fees.

EPA received a report from the Chesapeake Bay Foundation (CBF) in light of the five year anniversary of President Obama’s EO 13508 Chesapeake Bay Protection and Restoration from 2009. A letter along with the report was sent to the EPA Administrator requesting a meeting with members of the Federal Leadership Committee (FLC) to further discuss and identify strategies that could accelerate actions related to water quality and the Chesapeake Bay TMDL. The report assessed federal progress with a focus on the water quality strategy actions and the Chesapeake Bay TMDL using red, yellow, and green light metrics based on the annual EO 13508 progress reports submitted by the FLC. The report acknowledged several DoD initiatives that focus on our efforts to support the Chesapeake Bay TMDL (DoD was the only federal agency commended in this area), but it also contained several inaccuracies that we clarified in our response. Some of the inaccuracies include DoD as the largest federal landowner in the watershed, federal agencies’ refusal to pay stormwater fees, and failure to implement EPA guidance to address nonpoint source pollution from federal land management activities in the watershed. Our responses were used to advance a coordinated federal response back to CBF lead by EPA. The final consolidated set of responses and agreement to meet with CBF and invite other FLC-D members will be submitted by the EPA Region 3 Administrator.

## Environmental Stewardship around the Bay - Earth Day, Clean the Bay Day and More!

By: MAJ La’Shawna D. Waller

The National Guard Bureau (NGB) first celebrated Earth Day in 2002. This year, NGB participated in the 44th Earth Day celebration with an exciting event for personnel and their families on 24 April 2014 at Arlington Hall Station. The NGB Earth Day celebration occurred in conjunction with Take Your Child to Work Day, observed nationally to encourage children to explore future opportunities in the work-force and during the Month of the Military Child. This year’s theme was “Lend a Hand, Save Our Land.” Three hundred children registered for the event focusing on educating NGB children, staff, and guests on the value of being good stewards to the environment through practicing sustainability in everyday life. More than 30 vendors and exhibitors highlighted the latest examples of green technology and products, healthy eating, and energy conservation. Some of the highlights for this year’s event included: Hybrid Pedals who displayed the latest in solar and electric bicycles; a lunchtime assembly with the Energy Hog from Alliance to Save Energy and healthy brown-bag lunches from Revolution Foods; an assembly with Leesburg Animal Park explaining the Threat to Conservation to endangered species; hands on archaeology excavations and exhibits; Spectacular Science with indoor fireworks from Mad Science of Washington; and Month of the Military Child joined with Operation Military Kids to create Seed Bombs.

This was the debut of the Beauty of Nature Drawing Contest and the Capture of the Earth Photo Contest returned for a second year. Voting was open to the Arlington Hall Personnel and was conducted via Facebook to encourage maximum participation. Brigadier General Bobeck, enjoyed a breakfast with all the youth contestants and he was also the host for the Kick Off Program.

The Army National Guard (ARNG) Environmental Programs Division hosted the annual event, which included more than 100 volunteers from Joint Staff, Army and Air Guard. The event proved to be an exciting and educational opportunity and allowed all participants to get a glimpse of the wide reach of sustainability and the Army’s goal to meet current as well as future mission requirements worldwide, while safeguarding human health, improving quality of life, and enhancing the natural environment.



Children celebrate Earth Day and Take your Child to Work Day at NGB Arlington Hall Station.

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## At Hampton Roads Installations

By: *Deron Benton*

The 26th Annual Clean the Bay Day was held on 7 June 2014 at nine locations in the Hampton Roads area. A total of 854 people participated in the event (active duty, families, and civilians), cleaning more than 230 miles of shoreline and picking up more than 6 tons (12,865 lbs.) of litter and debris. Cleanups were held at Naval Station Norfolk, Naval Support Activity Hampton Roads, Lafayette River Annex, Joint Expeditionary Base Little Creek - Fort Story (at both Little Creek and Fort Story), Naval Air Station Oceana, NAS Oceana Dam Neck Annex, Naval Weapons Station Yorktown, and Cheatham Annex. Bravo Zulu to the Installation Coordinators and Zone Captains who worked tirelessly to ensure that the event was a success and to the volunteers who freely gave their time and energy to better the bases, the Chesapeake Bay, and the environment.



Volunteers help during the 26th annual Clean the Bay Day at Naval Weapons Station Yorktown.

## At MCB Quantico

By: *Major Peter Baker*

MCB Quantico does a base-wide clean-up on Earth Day every year. The Natural Resources and Environmental Affairs office coordinates the shoreline cleanup efforts. This year, for the shoreline cleanup event, thirty-five people, including twenty Marines participated and collected a total of 10,500 pounds of solid waste. The following is a breakdown of what was collected during the cleanup.

- Trash/Refuse - 4,400 lbs.
- Recyclables - 3,900 lbs.
- Tires - 2,000 lbs. - most of these came out of the Potomac or along the shore
- Scrap Metal - 200 lbs.



Approximately 200 pounds of tires were collected from the Potomac River with help from the Raids and Recon unit.



Marines walk the shoreline at MCB Quantico to collect trash from the Potomac River.



# EPA Assessment of Federal Agencies' 2012-2013 Water Quality Progress and WIP Support and 2014-2015 Milestone Commitments to Reduce Nitrogen, Phosphorus and Sediment



## Overview

The U.S. Environmental Protection Agency (EPA) is providing an assessment of the progress made by federal agencies toward meeting 2012-2013 water quality milestones set forth under the *Chesapeake Bay Executive Order 13508 (EO) Strategy*, as well as activities to help jurisdictions meet their milestones and Watershed Implementation Plan (WIP) commitments. This assessment also provides an overview of 2014-2015 federal milestone commitments and ideas for future improvements to federal agency coordination with the jurisdictions.

## Federal Facilities in the Chesapeake Bay Watershed

The Clean Water Act Section 117(f), directs federal agencies that own or operate a facility within the Chesapeake Bay watershed to participate in restoration programs. Additionally, the Chesapeake Bay Total Maximum Daily Load (Bay TMDL) and the EO Strategy direct federal agencies to participate in pollution reduction programs to achieve the goal of a restored Chesapeake Bay. In 2011, EPA issued the *Guide for Federal Lands and Facilities' Role in Chesapeake Bay Jurisdictions' Phase II Watershed Implementation Plans*, describing expectations for coordination with jurisdictions and participation in WIP implementation and the *Guide for Chesapeake Bay Water Quality Two-year Milestones*, describing expectations for development of water quality milestones and coordination with jurisdictions on milestones for individual federal facilities.

Progress made during the Phase II WIP development process to engage the Bay jurisdictions and federal agencies continues; however more interaction and coordination is needed.

## 2012-2013 Water Quality Progress and WIP Support and 2014-2015 Milestone Review

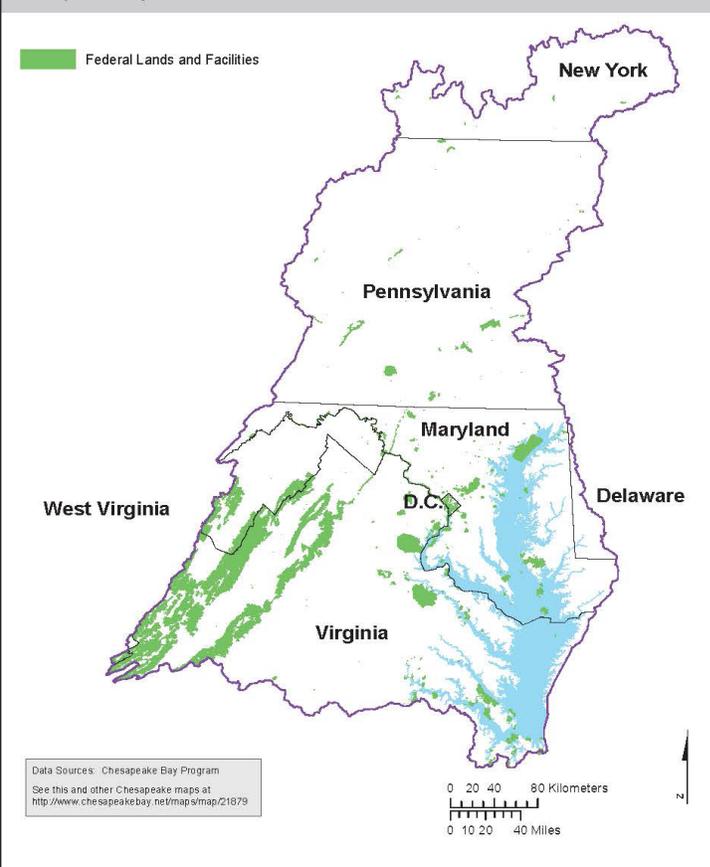
The EPA review of federal agencies' 2012-2013 Water Quality Progress, support of Bay jurisdictions Watershed Implementation Plans (WIPs) and 2014-2015 Milestone commitments outlines active federal agency participation in the restoration of the Chesapeake Bay and the advancement of shared goals and outcomes. Federal agencies remain committed to working with Bay jurisdictions, but recognize improvements can be made in coordination and on the ground implementation.

## Strengths

- EPA manages the Chesapeake Bay TMDL accountability framework, including working with the Bay jurisdictions on progress reports related to 2012-2013 milestones and plans for the 2014-2015 milestone period
- EPA worked with federal agencies to develop the planning tool Bay Facility Assessment Scenario Tool (BayFAST) to allow federal agencies to estimate current loads from individual facilities and pollutant reductions from various BMP scenarios

## Federal Lands and Facilities

Chesapeake Bay Watershed



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### Strengths (continued)

- Integrated some federal facility progress data into Bay jurisdictions' 2013 progress submissions (NPS, GSA, DoD)
- DoD continued work with Bay jurisdictions as they revise and implement revisions to stormwater permits
- DoD conducted stormwater assessments at many installations in the Bay watershed to identify appropriate BMPs to reduce pollutant loadings
- NPS, FWS, NASA, GSA, and DoD considered the Energy Independence and Security Act (EISA) standard across a total of approximately 174 construction projects in the watershed
- EPA completed an analysis of wastewater data for the 9 municipal and 2 industrial significant federal agency wastewater treatment plants (WWTPs) in the Bay watershed
- Through the Clean Air Act, EPA further reduced atmospheric nitrogen deposition by 2.5 million pounds between 2009-2013
- USDA completed stream restoration at the Beltsville Agricultural Research Center expected to reduce sediment inflow by 11 million pounds over the life of the three biofiltration areas built near dairy and swine facilities
- USDA National Resources Conservation Service (NRCS) released report showing voluntary conservation efforts on cultivated croplands is working in the Chesapeake Bay watershed
- USGS will assess progress made in the showcase watersheds including information on water quality conditions and changes
- EPA will conduct animal feeding operation (AFO) reviews in 2 jurisdictions, 6 AFO/CAFO program assessments, and 2 assessments of CAFO permits and associated Nutrient Management Plans
- EPA will provide funding to support expert BMP panels to develop and/or update effectiveness estimates for agricultural practices
- FWS, USGS and EPA issued a joint toxics report on the extent and severity of toxic contaminants in the watershed

### Shortfalls

- EPA deferred revisions to the national stormwater rule; an alternative course of action to develop proposals to strengthen the stormwater program in 2014-2015 was determined
- The DoD BMP Operations and Maintenance Policy was deferred to 2014-2015 to ensure the policy is focused on the results of the BMP assessments being completed

### Issues to Address

- Develop pollution reduction plans (PRPs) based on results of the DoD stormwater opportunity assessments and stormwater improvement plans to support Pennsylvania, Virginia and Maryland permits and WIPs
- Continue upgrades to two significant WWTPs operated by DoD to achieve target effluent concentrations
- EPA proactively work with Bay jurisdictions to improve communication with federal facilities and their data collection methods for 2014 progress and beyond
- While there was some BMP progress reporting by federal facilities in 2012-2013, EPA expects this to improve, particularly with the availability of BayFAST in 2014

### Federal Actions and Assistance

Federal activities have the potential to have significant environmental outcomes, require significant resources, or directly support the jurisdictions in meeting Watershed Implementation Plan (WIP) commitments. Federal agencies have a responsibility to ensure BMPs are properly installed, maintained, tracked and reported, which the new BayFAST tool will help facilitate.

The Chesapeake Bay Program's Federal Facilities Team will continue to provide a forum for federal agency environmental coordinators to communicate with EPA, each other and the Bay jurisdictions to achieve clarity of TMDL-related expectations and find the most efficient way to manage the collection and provision of needed information.

For full details of EPA's assessment of Federal Agencies' 2012-2013 water quality progress and WIP support and 2014-2015 milestone commitments, please see the [Federal Full Evaluation Report](#).



# Chesapeake Stormwater Network's Urban Stream Restoration Overview – Presentation for Four New Protocols for Calculating Credits

By: Katie Perkins, P.E., Michael Baker Jr., Inc.

The Chesapeake Bay Stormwater Training Partnership (CBSTP) held a webcast on April 24, 2014 addressing Urban Stream Restoration. In this webcast, representatives from the Center for Watershed Protection and District Department of the Environment discussed protocols to determine the credits that can be applied for stream restoration associated with sediment and nutrient reduction goals in the Chesapeake Bay. This article is meant for a general overview to Urban Stream Restoration projects. Installations should review these protocols when completing a stream restoration projects to ensure they are gaining the proper credits they earned.

By definition, an urban stream is a natural waterway that flows through a heavily populated area and past techniques involved in urban stream restoration included lining streambeds with concrete or other hardscape materials and/or diverting the stream into culverts and storm drains. Chesapeake Bay jurisdictions have pioneered new, more natural, restoration methodologies such as natural channel design, regenerative stormwater conveyance, and removal of legacy sediments. These types of practices, when applied to a stream, improve water quality and assist in meeting nutrient and sediment load reduction targets as required by the Chesapeake Bay Total Maximum Daily Load (TMDL).

Bill Stack, with the Center for Watershed Protection, discussed the process by which the protocols were developed. After reviewing literature and developing a draft set of protocols, the expert panel conducted a pilot project with consultants, governments and local agencies using actual stream data and sites. Based on their research review, the expert Panel crafted four general protocols that can be used to define the pollutant load reductions associated with individual stream restoration projects. The following protocols apply for smaller 0 – 3rd order stream reaches not simulated in the Chesapeake Bay Watershed Model (CBWM). These protocols do not apply to sections of streams that are tidally influenced. Lisa Fraley-McNeal, also from the Center for Watershed Protection, explained the four (4) protocols which are defined below. These protocols are listed verbatim in the “Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects” approved on May 13, 2013. Further criteria of how to calculate the mass reduction credits are explained in a step by step process in the referenced report.

**Protocol 1:** *Credit for Prevented Sediment during Storm Flow -- This protocol provides an annual mass nutrient and sediment reduction credit for qualifying stream restoration practices that prevent channel or bank erosion that would otherwise be delivered downstream from an actively enlarging or incising urban stream.*

**Protocol 2:** *Credit for Instream and Riparian Nutrient Processing during Base Flow -- This protocol provides an annual mass nitrogen reduction credit for qualifying projects that include design features to promote denitrification during base flow. Qualifying projects receive credit under Protocol 1 and use this protocol to determine enhanced nitrogen removal through denitrification within the stream channel during base flow conditions. The credit is applied to a “theoretical” box where denitrification occurs through increased hyporheic zone exchange for that portion of the channel with hydrologic connectivity to the adjacent riparian floodplain.*

**Protocol 3:** *Credit for Floodplain Reconnection Volume-- This protocol provides an annual mass sediment and nutrient reduction credit for qualifying projects that reconnect stream channels to their floodplain over a wide range of storm events. Qualifying projects receive credit for sediment and nutrient removal under Protocol 1 and use this protocol to determine enhanced sediment and nutrient removal through floodplain wetland connection. A wetland-like treatment is used to compute the load reduction attributable to floodplain deposition, plant uptake, denitrification and other biological and physical processes.*

**Protocol 4:** *Credit for Dry Channel RSC as an Upland Stormwater Retrofit-- This protocol computes an annual nutrient and sediment reduction rate for the contributing drainage area to a qualifying dry channel RSC project. The rate is determined by the volume of stormwater treatment provided in the upland area using the retrofit rate adjustor curves developed by the Stormwater Retrofit Expert Panel (WQGIT, 2014).*

As part of the Final Recommendation of the Expert Panel report on Stream Restoration, a “test-drive” section was approved by the panel. The panel acknowledges that the protocols recommended are new, somewhat complex and will require project-based interpretation on the part of the practitioners and regulators (WQGIT, 2014). Consequently, a six-month “test-drive” period was allowed to test the protocols on real world projects. John Burch then presented a test-drive project where the four protocols were used to assess Nash Run, an impaired stream currently being restored in a Washington, D.C neighborhood. Nash Run was selected due to number of erosion monitoring stations along the stream and readily available information. This data advantage was used to quantify an accurate credit when evaluating each of the four protocols. Upon completion of the four protocol calculations, it was determined the first three protocols gave similar accurate credits, whereas the fourth protocol yielded a low value, thus a smaller credit. Burch stressed how this new method is much more accurate for reporting to the states than the historical calculations.

To view the archived version of the webinar, to learn more about upcoming webinars or learn more about the Chesapeake Stormwater Network visit <http://chesapeakestormwater.net/>.



## Maryland Environmental Partnership Meeting Recap

By: Will Bullard

A meeting of the partnership was held on 3 June at the Maryland Department of Environment (MDE) office in Baltimore. Representatives from MDE, EPA, military service RECs and approximately 20 DoD facilities participated for updates and/or discussion on a number of topics. MDE had been working with two state agencies in a pilot project to develop an MOU and submittal requirements that would allow MDE to designate sediment control and stormwater management approval authority to the agencies IAW Maryland HB97 which was approved last year. HB97 also allowed designation of authority to federal agencies and MDE will forward information and examples from the pilot projects to DoD representatives for their consideration in the near future.

MDE anticipated completing an initial draft of the Phase II MS4 General Permit in July. The permit will apply to developed properties in urban areas that are  $\geq 5$  acres in size and there will be a restoration requirement to upgrade stormwater treatment on 20% of a facility's impervious area that does not meet current development/redevelopment standards. Stormwater retrofits completed after 2006 are eligible for credit. The completion date is the end of the permit term (5 years). A plan will be required one year after the permit effective date. The improvements can be made on property outside the MS4 area and outside the installation boundary. The only constraint would be that offsite retrofits were in the same 8 digit HUC watershed. A recently reissued industrial stormwater GP also has a 20% impervious surface stormwater restoration requirement. For purposes of stormwater permit compliance, federal facilities that have both the industrial and MS4 stormwater permits would only need to meet the larger restoration requirement but not both. However, a facility load reduction requirement for

the Chesapeake Bay Program (CBP) based on all developed land within the facility may still require additional nutrient sediment reductions.

MDE sent out guidance explaining the opportunity to identify BMPs that were previously unreported, or in some way deficient, in order to receive proper credit for the pollutant load reductions associated with those practices. This historical BMP Clean-up process involved two steps. The first step was a test submittal, to help work out practical technical issues and was due 30 June 2014. The second step was a final submittal to permanently update the State's historical BMP inventory and that was due 29 May 2014. Historical BMPs include those installed back to 1985.

There was also mention that representatives from the Army, Navy and Air Force met recently with staff from Maryland Department of Natural Resources and the MDE for update and discussion on implementation of the 2013 Maryland Coastal Zone Management Act (CZMA) Memorandum of Agreement (MOU) between DoD and MD. There were preliminary discussions about the possibility of creating a DoD wetland bank to mitigate DoD wetland disturbances. DoD believes there may be advantages to both Maryland and DoD installations with the creation of a banking program. Few details were discussed and it was agreed to have further discussions on the wetlands bank idea at the next CZMA MOU meeting.

The next Maryland Environmental Partnership meeting is scheduled for 14 October 2014. For questions, contact Will Bullard.



## Maryland Pollution Prevention Partnership



DOD/DON Chesapeake Bay Program Office  
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## Check it Out:

### August 18-19 - 2014 Bioretention Summit: Ask the Researcher - University of the District of Columbia

Bioretention design, construction, and maintenance continue to evolve as the practice has become the most popular small-site stormwater control measure in much of the United States. However, design standards, construction specifications, and maintenance plans for bioretention often lag behind what recent applied and lab research has discovered. The purpose of this training is to deliver the most up-to-date research-based information that will lead to perhaps dramatic improvements in how bioretention cells are credited by regulators, designed by engineers and landscape architects, and built and maintained by contractors and maintenance personnel. To register, visit: [http://www.bae.ncsu.edu/stormwater/training/bioretention\\_summit.html](http://www.bae.ncsu.edu/stormwater/training/bioretention_summit.html)

### September 24-25 - Mid-Atlantic Regional Water Conference - Shepherdstown, WV

Don't miss this truly exceptional event focused on the region's future water infrastructure challenges and solutions!  
For more information: <http://www.midatlanticwc.com/>

### September 26-28 - 9th Annual Chesapeake Watershed Forum - Shepherdstown, WV

The Chesapeake Watershed Forum is a conference that brings together representatives from local watershed organizations and local governments to learn the latest restoration science and direction, network with other groups facing similar challenges, and be inspired to continue the work of preserving and restoring the Chesapeake Bay Watershed.  
For more information: <https://allianceforthebay.org/our-work/engaging-local-communities/chesapeake-watershed-forum/>

### October 6 - Pesticides & The Chesapeake Bay Watershed Project - Reistertown, MD

Join us for the eighth annual meeting that will once again bring together project participants & people committed to protecting the Chesapeake watershed and restoring the Bay. The meeting will focus on recent research regarding pesticide impacts on the Bay, bees and human health -- as well as on future efforts on all three fronts.  
For more information: <http://www.mdpestnet.org/projects/pesticides-and-the-chesapeake-bay-watershed/>

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