



DoD CHESAPEAKE BAY PROGRAM JOURNAL

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

News from the Chesapeake Bay Coordinator

By: *Eddie DuRant, NAVFAC Midlant*

Within the Chesapeake Bay (Bay) watershed, between 1985 and 2005, the human population grew by approximately 3 million, from 13.5 million to approximately 17 million. The Bay watershed’s population is currently estimated to grow by about 157,000 people per year with experts predicting that the human population in the Bay watershed will increase to nearly 20 million by 2030. This population growth and resulting urban sprawl exert pressures, which can lead to incompatible development around military installations thus limiting DoD’s ability to conduct mission-essential testing and training. In addition, development near or adjacent to military installations sometimes destroys or displaces native plant and animal species, resulting in military installations becoming islands of refuge for threatened and endangered species thus further restricting an installation’s operations.

In 2003, the U.S. Department of Defense (DoD) created the Readiness and Environmental Protection Initiative (REPI) to address incompatible development pressures near and adjacent to installations throughout the U.S. The REPI program supports cost-sharing partnerships authorized by Congress, between the DoD Services, private conservation groups, and state and local governments to protect military test and training capabilities and conserve land. The REPI program provides funding for the military to work with state and local governments, non-governmental organizations, and willing land owners to help prevent encroachment of test and training areas. The funding leverages public/private partnerships and additional financial commitments to promote innovative land conservation solutions that benefit both military readiness and the environment. The REPI program enables the military to work with willing partners who help provide cost-sharing land conservation solutions to limit incompatible development and protect valuable open space and habitat around key military test and training areas. Preserving these buffers around military installations allows DoD to avoid much more costly alternatives, such as training workarounds or investments to replace existing test and training capability, while enhancing relationships with communities and preserving the environment.

DoD’s ability to deploy and support operational forces, perform realistic live-fire training, and conduct weapons system testing is vital to maintaining military readiness. Warfighter readiness depends upon maintaining the capabilities of all of DoD’s installations, ranges, and training spaces that are the platform for conducting daily

operations, realistic training, and effective weapon system testing. However, incompatible land uses threaten these activities. If military installations are to remain active and contributing economic participants in their communities, the installations must have the space necessary to successfully accomplish their test and training missions. Therefore, efforts to limit incompatible development and preserve habitat are vital to maintaining readiness and protecting valuable national assets. REPI projects deliver multiple benefits and show the power of innovative partnerships in the following ways:

- Enhances military readiness by limiting incompatible development near military installations
- Protects valuable habitat and provided opportunities for endangered species recovery
- Preserves open space, working farms, and forestland that add value to surrounding communities
- Strengthens military-community relationships
- Spurs collaboration with other Federal land conservation programs

By promoting innovative land conservation solutions that benefit both military readiness and the environment, the REPI program ensures that our military can conduct effective and realistic test, training, and operations now and into the future. REPI or other buffer projects near or adjacent to an installation is initiated locally at the installation level. Additionally, each DoD Service manages a comprehensive portfolio of buffer projects for their installations and is not required to submit all of those buffer projects for REPI funding. Each DoD Service may fund projects independent of REPI funding and implements all buffer projects through respective encroachment management programs.

REPI projects help diverse groups come together to meet mutual interests. DoD wants to protect key test and

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Governor's Environmental Excellence Awards

The application period for the 2013 awards program is now open!

Applications for the 2013 Governor's Environmental Excellence Awards will be accepted until 5 p.m. on Friday, November 30, 2012. For 2013, there are two categories of awards: sustainability and land conservation.



The sustainability category is new for 2013 and replaces the previous categories of environmental program and environmental project. The land conservation category will continue to have two types of applications: land conservation project and land conservation program.

Sustainability Program: This category replaces the environmental program and environmental project categories used in previous years and is intended to provide recognition to organizations or facilities that can document the success of their sustainability program by providing evidence of:

- A culture of environmental sustainability;
- Recent accomplishments related to reducing their environmental footprint; and,
- A commitment to future sustainability-oriented actions.

Land Conservation: As in previous years, land conservation applications will be considered in two areas, project and program.

- Project: recognizing specific land conservation projects completed during 2012; and,
- Program: recognizing exemplary land conservation programs within the Commonwealth.

To be considered, each applicant must have a record of sustained compliance.

All applications will be submitted on-line, although applicants are allowed to send supporting documentation separately. Applications can be found at: <http://www.deq.virginia.gov/Programs/PollutionPrevention/GovernorsEnvironmentalExcellenceAwards.aspx>

Questions about the application or submission process should be directed to Sharon Baxter at 804-698-4344 or Sharon.Baxter@deq.virginia.gov.

2012 Clean the Bay Day Success at Navy Installations

By: Kelly Duckworth, Michael Baker Jr., Inc.

On June 2, 2012, volunteers participated in the 24th annual Hampton Roads Clean the Bay Day. Historically, Clean the Bay Day was started by a small group of concerned citizens in Virginia Beach who decided they weren't going to allow their waterways to continue to deteriorate any longer. This program has since grown into one of the largest volunteer efforts in Virginia, with localities and concerned organizations joining in from all over the Commonwealth.

The 2012 Clean the Bay Day results from the Navy were very note-worthy. The Navy provided over 1,100 volunteers who collected approximately 20,000 pounds of trash and debris from 54.3 miles of shoreline at Navy installations across Hampton Roads. Eddie DuRant, the DoD Chesapeake Bay Program Coordinator said, "I am proud of all the volunteers (military and civilian) that came out on a beautiful Saturday morning to participate. All in all the efforts that they put forth paid dividends in removing and responsibly disposing of a significant volume of trash and debris from shorelines at our installations."

Among the most common items collected were cigarette butts, plastics bottles bags, and wood debris. Some of the most unusual items collected were a person-sized ball of fishing twine, a rat-trap, 1/2 of an Engine block and a \$50 dollar bill. It really does "pay" to Clean the Bay.



Of the 334 volunteers that participated at Naval Station Norfolk, 55% were from the military.



62 Volunteers participated in the 2012 Clean the Bay Day from the USS Kearsarge.



News from the Chesapeake Bay Coordinator (continued)

training areas in order to ensure the readiness of America's military. State and local governments may want to protect valuable open space and habitat or ensure the viability and economic benefits of an installation. A land trust, conservation group or environmental organization typically wants to conserve unique habitat or open space. A local farmer, rancher or owner of a private forest may want to preserve a treasured way of life as well as conserve the land from urban development. REPI projects near or adjacent to military installations within the Bay watershed conserve priority landscapes which contribute to meeting the Executive Order 13508 Strategy for Protecting and Restoring the Chesapeake Bay Watershed (EO 13508 Strategy) Land Conservation Outcome under the Conserve Land and Increase Public Access Goal to "protect an additional two million acres of land throughout the watershed identified as high conservation priorities at the federal, state or local level by 2025, including 695,000 acres of forest land of highest value for maintaining water quality."

The DoD Chesapeake Bay Program Office supported OSD during the 2011 update of the REPI Program Guide to fulfill a DoD commitment in the EO 13508 Strategy to provide extra points for REPI projects located in the Bay watershed. The program guide asks the question "Is this REPI project part of a broader, regional planning effort such as Chesapeake Bay Program?" If the answer is "Yes," the project receives additional points during the ranking of projects from across the country. The DoD Chesapeake Bay Program Office arranged a brief for the Chesapeake Bay Commission on the REPI program and the benefits REPI projects bring to the Commission's members' states and communities. Additionally, the DoD Chesapeake Bay Program Office is available to assist installations in the preparation of REPI project proposals within the Bay watershed.

Please visit www.repi.mil for more information on the DoD REPI program.

Employees Implement Conservation Program at NRL's Chesapeake Bay Detachment

First published by the NRL Public Affairs and Media on June 14, 2012

Employees representing the Safety Branch and Environmental Section of the Naval Research Laboratory have recently planted tree and shrub seedlings in support of a state-wide Maryland Department of Natural Resources (DNR) environmental program. The planting activity was conducted at NRL's Chesapeake Bay Detachment in Maryland, by a group of eight "hardy" employees.

The tree-planting event held on March 25, was coordinated by NRL's Environmental Section. The day started at 8 a.m. with the volunteers unloading supplies and attending a "quick" lesson on the fine art of planting seedlings. The volunteers were grouped into teams of two, in order to cover the large planting area assigned for the day's activity. After a healthy amount of digging, the volunteers planted all the seedlings that included mulching and installing tree protectors to discourage animals from disturbing the seedlings. Most of the volunteers worked through the day enabling the project to end just after 4 p.m. All participants left the planting site both dirty and tired, but satisfied with their accomplishment.

In total, they planted approximately 100 trees and shrubs in support of the statewide conservation effort. Organizers of this event offer a special note of thanks to the Maryland Department of Natural Resources and the John S. Ayton State Forest Tree Nursery, for providing NRL with the seedlings at a greatly reduced price.

"As an environmental protection specialist, I am always on the look-out for opportunities to expand the command's

environmental efforts. These plantings will serve as windbreaks, reduce runoff and erosion of sediment and harmful nutrients into the Chesapeake Bay, and provide a beautiful backdrop for CBD employees to enjoy. It's great to be able to participate in an effort that supports the Command's stewardship of this important water body," concluded Ms. Michele Hepler, NRL's Natural Resources Program Manager.



Joe Pawlovich and Michele Hepler install a protective casement on a sapling.

According to Joe Pawlovich, head of NRL's Safety Branch, "Planting these one-year old seedlings will increase the NRL-CBD riparian forested buffers, helping NRL fulfill its obligations under the Sikes Act, Clean Water Act, and Executive Order 13508, Chesapeake Bay Protection and Restoration of May 2009." The plantings consisted of approximately 25 black gums, 25 red maples, 25 river birch and 25 button bushes. Riparian forests, including their undergrowth, provide essential wildlife habitat to a variety of creatures such as birds, squirrels and deer. Riparian forests are also important in reducing soil erosion and reduce nitrogen and phosphorous levels in nearby waterways. Excessive nitrogen and phosphorous

in water bodies results in excessive algae growth which blocks out light from aquatic grasses that serve as important nurseries for young organisms such as fish and crabs. As the algae decays, the dissolved oxygen, necessary for fish and other aquatic organisms, is depleted. "Riparian forested buffers make use of some of these nutrients before they reach the waters of the Chesapeake Bay Watershed thus enhancing water quality," explains Pawlovich.



The Filterra® Bioretention Systems – A Natural Solution for Stormwater Filtration

By: Kelly Duckworth, Michael Baker Jr., Inc.

On May 31, 2012, professionals from government agencies and contractors gathered at the Richmond International Raceway to learn about the newest technology in permeable pavers and filtration systems. Filterra's® pitch to the audience was their application is the urban solution for Low Impact Development (LID). In fact, using their PICP (permeable interlocking concrete paver), BioPave™, with their filtration standard system equates to two types of BMPs into one LID stormwater management system.

The Chesapeake Bay TMDL takes priority for most of us. In fact, improving water quality may be the number one way to reduce nutrients, sediment, and other pollutants to meet the extensive goals set by Executive Order (EO) 13508. Dealing with excess stormwater is a concern to all installations because eventually, runoff water flows into our already impaired waters and affects the military's mission.

Dr. Bill Hunt with the North Carolina State University's Department of Biological and Agricultural Engineering posed a question to the audience, "does permeable pavement reduce runoff" and he simply answered, "yes, it has been proven many times."

Dr. Hunt's extensive research and maintenance of permeable pavers has proven that 98% stormwater runoff with some type of sump can be eliminated. Of course, there are many factors such as gap space percentage and the type of paver used (concrete grid paver vs. PICP), however, his research shows that pavers in general pulls out most phosphorus in stormwater runoff. In order for nitrogen, which is harder to be removed, a type of filtration system must be combined with the permeable paver for reduction.

So how does the Filterra® standard filtration system work? This system is similar in concept to bioretention in its function and application but has been optimized for high volume/flow treatment and high pollutant removal. Stormwater runoff enters the system through a curb-inlet opening and flows through a specially designed filter media mixture contained in a landscaped concrete container. The filter media captures and immobilizes pollutants; those pollutants are then decomposed, volatilized and incorporated into the biomass of the system's micro/macro fauna and flora. Stormwater runoff flows through the media and into an underdrain system at the bottom of the container, where the treated water is discharged. Filterra® presented expected pollutant removal ranges (based on third party labs and field studies) of:

TSS Removal:	85%
Phosphorus Removal:	60 to 70%
Nitrogen Removal:	43%

Installations can consider using the Biopave™ PICP, which is designed for heavy duty vehicular traffic (joint/void design). Additionally, they meet stormwater quantity and quality performance under VADCR Stormwater Design Specification No. 7. Filterra® is working with VADCR to get their standard filtration system specification approved before July 1, 2014 stormwater management regulations take effect. When the Biopave™ and the Filterra® standard filtration system are combined together, the system creates a wearing surface that fully detains, conveys and treats up through Q10 storm events. Some of the positive aspects of the system include their applicability for stormwater retrofits and LEED credits. Just like any other type of LID, they do require maintenance.

The cost and maintenance of the Biopave™ Stormwater Management System does vary. The life cycle cost of the system can be as high as 50 years. Additionally, maintenance is required to prevent clogging of the pavers via street sweeping. Filterra® offers the first year of maintenance for free with any unit purchased and annual contracts that range from \$325 to \$800.



Above is the standard look of the Biopave™ Stormwater Management System (PICP plus Filterra system) that would be ideal for streetscapes, parking lots, urban and industrial settings.

DoD has used the Filterra® standard filtration system at the Pentagon and other installations throughout the watershed. In 2007, DoD retrofitted the Pentagon Secure Bypass parking lot that treats stormwater flowing into the Potomac River watershed. A total of 11 units were installed with a traditional curb inlet bypass along the roadway to maximize parking.

With all things considered, the Biopave™ Stormwater Management System is a great system to consider in support of implementing the Chesapeake Bay TMDLs. More information, including their white paper, can be found at www.filterra.com.



Recap of Chesapeake Bay Action Team Conference Call – August 29, 2012

By: Michael Baker Jr., Inc.

Executive Order Action Plan and Progress Report

This year under the direction of the Federal Office of Directors (FOD) and Office of Management and Budget (OMB), it was decided to expedite the publication of the EO 13508 2013 Annual Action Plan. Previous versions of the action plan were project specific under various goal areas and supporting strategies from each agency. By direction from DASN-E office, DoD will be providing similar text from last year's action plan under the Restore Clean Water goal and Conserve Land and Public Access goals. They include supporting Bay jurisdictions MS4 regulation development and continuing stormwater management assessments at installations throughout the Bay watershed for the purpose of complying with permits that will incorporate requirements of the TMDL/WIPs. Within the water quality two-year milestones for 2012 -2013, DoD is developing a BMP operation and maintenance policy for each military service. Under Conserve Land and Increase Public Access goal, as part of the REPI program, DoD will continue to conserve priority landscapes around DoD installations in the Bay watershed. DoD will also conserve land at DoD installations where compatible with military mission as described in the installation integrated resource management plan. DoD has also provided appropriations numbers for the each of the goal areas and supporting strategies. The Final Action Plan submittal is scheduled for November 2012. The publication of the Progress Report is expected in calendar year 2013. Information for the progress report will be collected via the new Federal Funding Inventory database.

Chesapeake Bay State Updates

Maryland – The MS4 permit conditions and revisions are expected by the end of the year. Installations will be able to make comments at that time.

Currently working with MDE to submit BMP inventories and assessments in order for DoD to receive credit for the BMPs that have been constructed, which will account towards reductions.

D.C. – Stormwater regulations are out for comment. If you have not had the chance to look through them, please do so. Please coordinate comments with your appropriate service RECs and forward comments to Melanie Frisch, (melanie.frisch@navy.mil).

Virginia – Working on the Memorandum of Understanding (MOU). Recall the MOU is being developed as a result of the State removing the federal disparate treatment issue from their Watershed Implementation Plan. The workgroup has conducted conference calls to discuss the overall MOU. Virginia DCR provided a list of concepts and those concepts are being vetted to the Virginia Installations for review. It is expected that the MOU will not commit DOD to additional requirements for the installations, therefore, showcase and provide complete information when requested. A plan-of-action and milestones document for the MOU was sent to the group and each of the services need to provide input. Please provide comments to Sarah Diebel, (sarah.diebel@navy.mil).

DoD Bay Program Updates

- The Bay Program received two functional mock ups for the DENIX website. The mock-ups will go to each of the services for review. Its intent is to be a resource for all installations. OSD has assigned Eddie DuRant to post and archive information
- The Draft FY11 Strategic Action Plan was sent to the services for review and comment. Comments were due to Melanie Frisch by September 14, 2012.
- Chesapeake Bay Program/CBAT logo is under development. During the November CBAT meeting, expect to be captivated!
- The Commander's Conference final justification was signed by Commander, Navy Region Mid-Atlantic (CNRMA). It is tentatively scheduled for November 27, 2012 at USMCB Quantico in Quantico, Virginia. There is currently a moratorium on conference hosting/attendance. It is yet to be determined if the moratorium will be lifted in time for the conference, therefore, the Commander's Conference may be pushed again into 2013. The conference will be geared to the Commanders at installations to provide awareness of the Bay Program with focus on the EO 13508 and the TMDL.

Federal Funding Inventory Database

A Microsoft Access database interface was chosen. It leverages existing software, it is less expensive to implement and maintain, and does not require any additional software to install. All records or information that is input into the database will be stored at the installation level and program level. The Access database is user-friendly, thus allowing all data calls to be incorporated into one database and is easier to fill out than scrolling through Excel spreadsheets.

There are three components of the database: General Information, Baseline Installation Information and the Federal Funding Inventory. Once the database is received – it will be blank. Supplemental data including previous questionnaires will be given to the user for reference.

The Federal Funding Inventory is the portion where the user will input their projects. Appendix F of the EO 13508 Strategy was adapted to easily define which goal or supporting strategy the project applies. The database was purposely designed to not save projects without funding included.

The future of the FFI Database will include archiving completed projects (ability to mark a project as complete and it will be stored in the main database). It will allow the user to update current/previous projects.

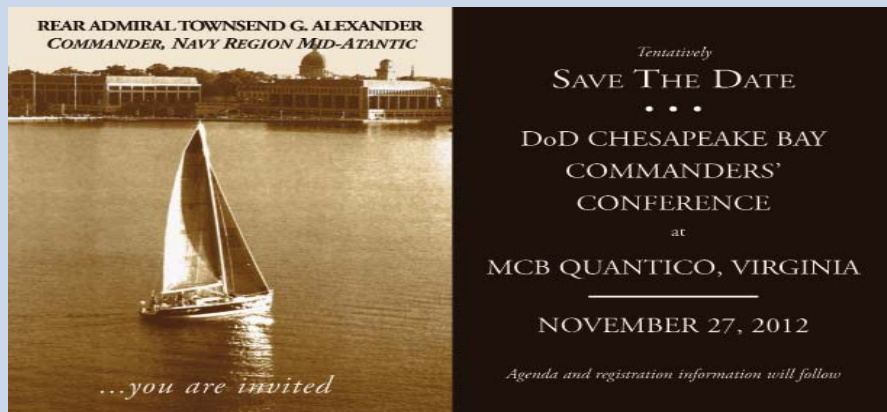
This database will be distributed to the services in late October. A training module will be sent out within a week of its release. Baker will also be providing three opportunities for webinar training beginning in early November. More information will be forthcoming.

NEXT CBAT CONFERENCE CALL: November TBD



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

Check it Out:



Center for Watershed Protection Conference, October 8-10, 2012, Baltimore, MD

Since 1992, the CWP worked in numerous communities to provide practical solutions for responsible land and water management, with the goals of providing sound scientific research, advancing state-of-the art practices, ensuring practitioners have the right tools, and promoting widespread implementation of the most effective watershed management techniques. The Center is planning the first Watershed and Stormwater Conference in celebration of the Center's 20 year anniversary and the launch of the Association of Watershed and Stormwater Professionals (AWSPs). To register: <http://www.cwp2012event.awsp.org/>

Alliance for the Chesapeake Bay, September 28-30, 2012, Shepherdstown, WV

The Chesapeake Watershed Forum is a three day/two night conference held in Shepherdstown, WV 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. To register: <https://allianceforthebay.org/initiatives/connecting-people/chesapeake-watershed-forum/>

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