SUMMER 2016

DoD Chesapeake Bay Program Journal

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

Meet the Newest DoD CBP Coordinator

By: Adam Wright, DoD Chesapeake Bay Program Coordinator

Hi, my name is Adam Wright, and I would like to take this opportunity to introduce myself. In June, I came onboard as a DoD Chesapeake Bay Program Coordinator in the DoD Regional Environmental Coordination Office here in Norfolk, Virginia.

I am fortunate to be able to bring many years of cross-media environmental management experience to the Chesapeake Bay Program team. Starting with a B.S. in Environmental Science from the University of Massachusetts in 1986, I worked in the private sector doing environmental compliance and contracting work until 1992, when I became an Environmental Analyst at the Massachusetts Department of Environmental Protection (MA DEP). At MA DEP, I held positions that developed my technical knowledge, as well as my public outreach and risk communication skills. Some of the more interesting projects I worked on in the Western Massachusetts region included responding to oil and hazardous material spills to land and waterways, fish kills, investigation and initial response to contaminated drinking water wells, and managing PCB contaminated soil investigation and cleanup at dozens of residential properties.

From 2005 to 2015, I worked as the Environmental Manager at the Vermont Air National Guard, an operational F-16 base associated with the Air Force Air Combat Command. As the primary management official responsible for maintaining the base in compliance with all federal, state and local Environmental requirements, I forged strong working relationships with U.S. Environmental Protection Agency, U.S. Fish and Wildlife, and Vermont Agency of Natural Resources personnel, as well as with local tribal leaders and municipal stormwater, wastewater and solid waste utility managers. I also served as the local subject matter expert on the National Environmental Policy Act process and potential impacts addressed in two Environmental Impact Statements (EISs), and during assessment and cleanup of six Defense Environmental Restoration Program sites on and off the base. Extensive public outreach and coordination opportunities during the public involvement phase of an F-35A operational basing EIS allowed me to hone my public speaking, risk communication, and consensus building skills.

In 2015, I came to Norfolk to pursue new career opportunities with the Naval Facilities Engineering Command, spending most of the last year working on storage tank issues at Naval facilities in Hampton Roads. I live in Norfolk, and drive, walk or ride by the Chesapeake Bay on a daily basis. I am inspired to make a difference for this wonderful resource, and I look forward to working with all of you as we do our part to restore the Chesapeake Bay.

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Forestry at Aberdeen Proving Ground

By: Nicole L. Hernandez, P.E., Aberdeen Proving Ground

Aberdeen Proving Ground (APG) has over 18,000 acres of forested area on the Chesapeake Bay, more than six times the amount of forested area (~3,000 acres) that existed at APG when it was first established in 1917. Natural regeneration has been on-going at APG since its founding, where the area was primarily agricultural, to a point where APG is considered the second largest single owner of forest resources in Maryland. As much of the installation land has been allowed to re-forest, it now provides riparian buffers that serve to stabilize shorelines and improve water quality. The natural regeneration benefit and subsequent tree canopy development to the Bay ecosystem, through reduction of total suspended solids, nitrogen and phosphorus from stormwater runoff, has been considerable. However, due to years of inattention many areas of APG have large amounts of natural fuel load which, if not managed, could lead to adverse impacts to mission and to the urban wildland interface.

Photo by Department of Natural Resources: Aberdeen Proving Ground partnered with Firewise Communities Program and the Department of Natural Resources to use mechanical maintenance to clear an area that was identified as high potential for a wildfire/community interface. [Top photo BEFORE, bottom photo AFTER]

The large amount of forested areas sets APG apart from other Army test facilities as a unique outdoor testing platform for the Army. A combination of weather conditions and forested, grassland, and marsh habitats creates environmental conditions that resemble 80 percent of worldwide climates and habitats. These conditions lead to a clockwork of season and vegetation change cycles that are critical to Army testers at APG. Testers use these known factors to realistically assess how programs and equipment will perform for soldiers in the field in various environmental and climatic conditions. In addition, the natural character of the installation continues to make it a vital habitat for waterfowl, fish, bald eagles, deer, and many other animals and plants. The APG Department of Public Works Environmental Division (DPW-ENV) manages the forests as a natural resource for multiple uses, including military training, sustainable yield of renewable resources, scientific research, education, and recreation while keeping an Army mission focus.

In order to support the Army mission and surrounding communities, forested areas were surveyed for natural fuel loads to identify needed implementation of fuel load reduction efforts due to recognized risks for wildland fires. In 2016, APG has completed two separate actions for fuel load management to address identified risks including mechanical maintenance of a firebreak along the installation boundary near a densely populated area and implementation of controlled burns on military range areas. Both actions were conducted during advantageous meteorological conditions to minimize adverse impacts on the ecology of APG as well as nearby populations.

Mechanical Maintenance partnership with Firewise Communities Program

Through a cooperative agreement with the Department of Natural Resources (DNR), APG has partnered with Firewise Communities Program (Firewise), a program co-sponsored by the USDA Forest Service, the US Department of the Interior and the National Association of State Foresters, to complete mechanical clearing of an area that was identified as APG's highest potential for a wildfire/community interface. Firewise was on-site at Van Bibber Treatment Plant in Edgewood, MD on 15 March 2016 to complete mechanical clearing of an installation area of excessive fuel load near a residential community and create a firebreak between the community and the forested area. DPW-ENV is working with Firewise to develop plans to address additional areas on the installation. The partnership with Firewise was vital to completing this mechanical maintenance.

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Combating Emerging Invasive Species

By: Lindsey Kellar, Michael Baker International

On 11 July 2016, the Mid-Atlantic Early Detection Network hosted a workshop on Emerging Invasive Species at the National Wildlife Visitor Center in Laurel, Maryland. The purpose of the workshop was to inform the audience of the detrimental effects that invasive species have on freshwater, marine, and terrestrial ecosystems, and to discuss approaches to combat invasive species. Speakers at the workshop included the following experts:

- Jil Swearingen, Mid-Atlantic Early Detection Network Coordinator
- Hilary Smith, U.S. Department of the Interior, Invasive Species Coordinator
- Robert Tichenor, U.S. Department of Agriculture
- Mary Kay Malinoski, University of Maryland Extension Entomologist
- David Clements, University of Maryland Extension
- Vanessa Beauchamp, Towson University
- Chuck Bargeron, University of Georgia, Center for Invasive Species and Ecosystem Health

The Early Detection and Rapid Response (EDRR) initiative can be implemented on a national level to quickly eradicate new invasive species before they take over an ecosystem. The key component of this initiative is to determine the locations of new invasive species. Smartphone applications developed by Chuck Bargeron can be used to report sightings of invasive species around the country to pinpoint their locations and provide researchers with insights on the spread of harmful non-native species.

Invasive Species

"An invasive species is an alien species whose introduction is likely to cause economic or environmental harm or harm to human health" (Executive Order 13112). They originate from other regions of the world with similar climates and enter the United States through packing materials, shipping containers, cargo ships, and crop contaminants, or were brought here deliberately. The globalization of trade is a major contributor to the increase of invasive species around the world. Invasive species can quickly wreak havoc on an established ecosystem because they out-compete other species, are not affected by native pests and diseases, reproduce easily, and are easily spread.

Some emerging invasive species within the Mid-Atlantic region include the Asian Long-horned Beetle, Boxwood Blight, and Wavyleaf Basketgrass. The Asian Long-horned Beetle arrived in the United States from China through wood packing materials. This beetle develops inside living trees (most commonly Maple trees) and creates large abscesses in the tree when it emerges. Boxwood Blight is an invasive plant pathogen that attacks and defoliates boxwoods and any other plant within this family. Wavyleaf Basketgrass was first sighted in Patapsco Valley State Park in Maryland and is thought to have originated from a similar plant species found in Russia. This plant is shade tolerant and possesses extremely sticky seeds with high germination rates. It can travel for weeks on animals and humans and still establish seedlings in new locations. These characteristics have allowed it to take over forest ground cover.

Early Detection and Rapid Response

Methods to eradicate invasive species include manual control (hand-pulling, digging, etc.), chemical control (pesticides, herbicides, etc.), fire control, and biological control (releasing an animal, plant, or fungus that will dominate the invasive species). These methods are very effective if they are implemented when an invasive species is first spotted and the population is small.

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[1] Asian Longhorned Beetle | http://www.in.gov/dnr/entomolo/images/albcolor.gif

[2] Wavyleaf Basketgrass | https://www.pecva.org/library/images/plants/invasives/wavyleaf_basketgrass/wb_bloom_patch_large.jpg

[3] Boxwood Blight Defoliation | http://massnrc.org/pests/pestFAQsheets/popup_images/KAitkenhead_IMG_0074suffruticosa_defoliation.JPG

[4] Boxwood Blight | http://massnrc.org/pests/pestFAQsheets/popup_images/Boxwood_Blight_Figure_14_left_Douglas_cropped.JPG

Combating Emerging Invasive Species

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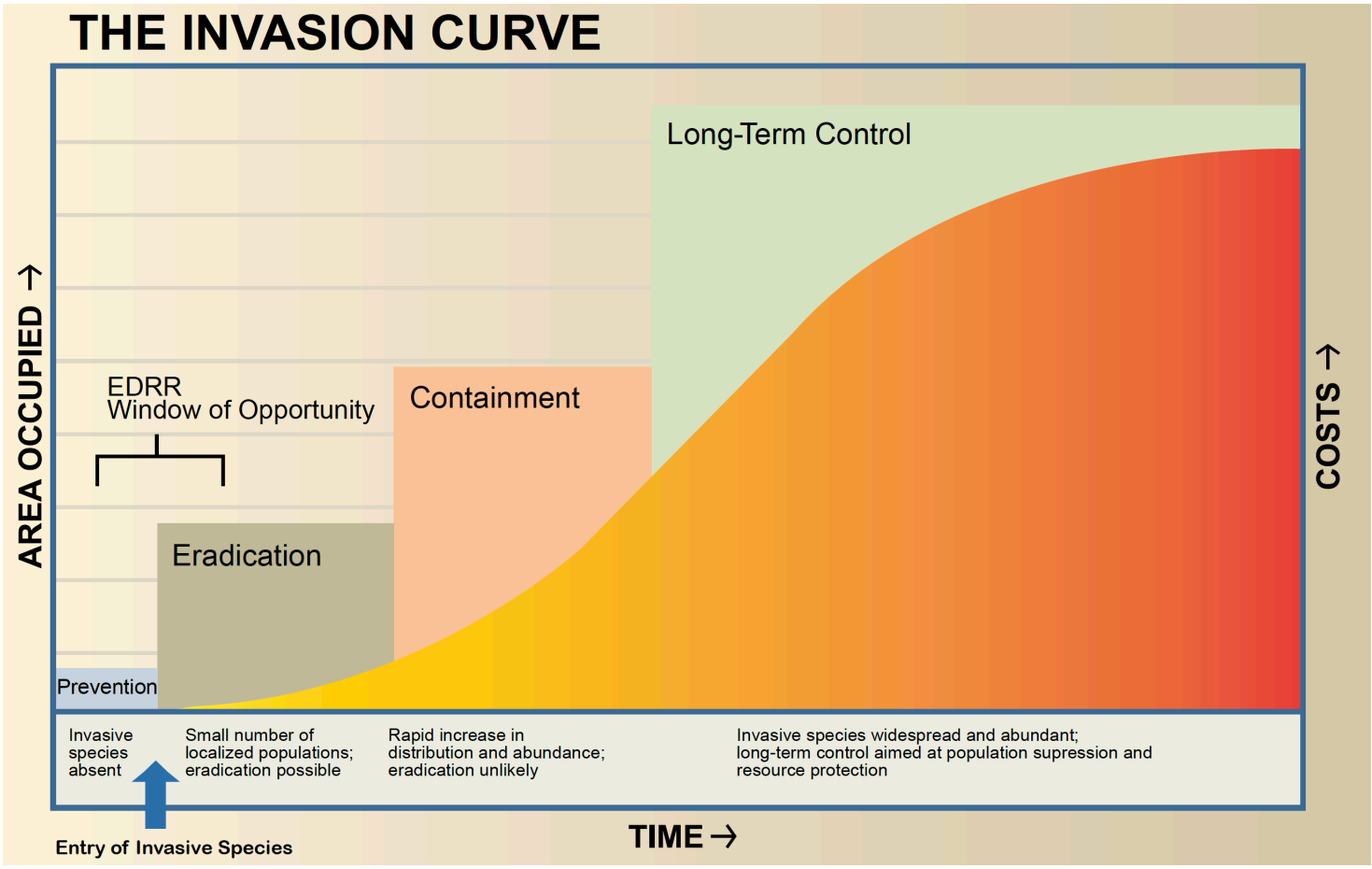
Unfortunately, as time passes the invasive species spreads and becomes more established, which makes eradication methods too expensive to be performed. Because of this it is critical to act immediately when invasive species have been spotted.

The U.S. Department of the Interior is developing a national framework for EDRR. In the past, invasive species were often detected shortly after their arrival to the United States. However, a lack of understanding of the impacts, a shortage of regulatory authority to address the issue, and/or deficient funding often prevented lead agencies from responding in a timely manner.

The proposed EDRR framework focuses on being prepared to act when an invasive species has emerged; early detection of the species; rapid assessment to determine the distribution, abundance, and harmful impacts of the species; and rapid response to eradicate it.

The following recommendations were established for a national EDRR Framework:

1. Establish a National EDRR Task Force and designate a National EDRR Coordinator within the National Invasive Species Council (NISC) structure to address invasive species that affect priority landscapes and aquatic areas.
2. Convene high-level decision makers and senior budget officials within NISC agencies to better align funding or guide the formation of more effective funding mechanisms to support preparedness and emergency response activities.
3. Incorporate EDRR action into NISC agency programs and partnerships at national, regional, and local scales.
4. Advance multiple pilot EDRR initiatives in priority landscapes and aquatic areas.
5. Foster the development and application of EDRR capabilities, including analytical technologies, decision-making tools, and best practices.



Source: Safeguarding America's Lands and Waters from Invasive Species: A National Framework for Early Detection and Rapid Response

Data Collection & Reporting with Smartphone Applications

The University of Georgia, Center for Invasive Species and Ecosystem Health has developed a series of smartphone applications that can be used to report sightings of invasive species around the country to help aid the Early Detection initiative

The app most relevant to the Chesapeake Bay is the "Mid-Atlantic Early Detection Network" app. Within the app, users can access invasive species guides on their smartphones, take photos of the invasive species, and file a field sighting report complete with their latitudinal and longitudinal coordinates.

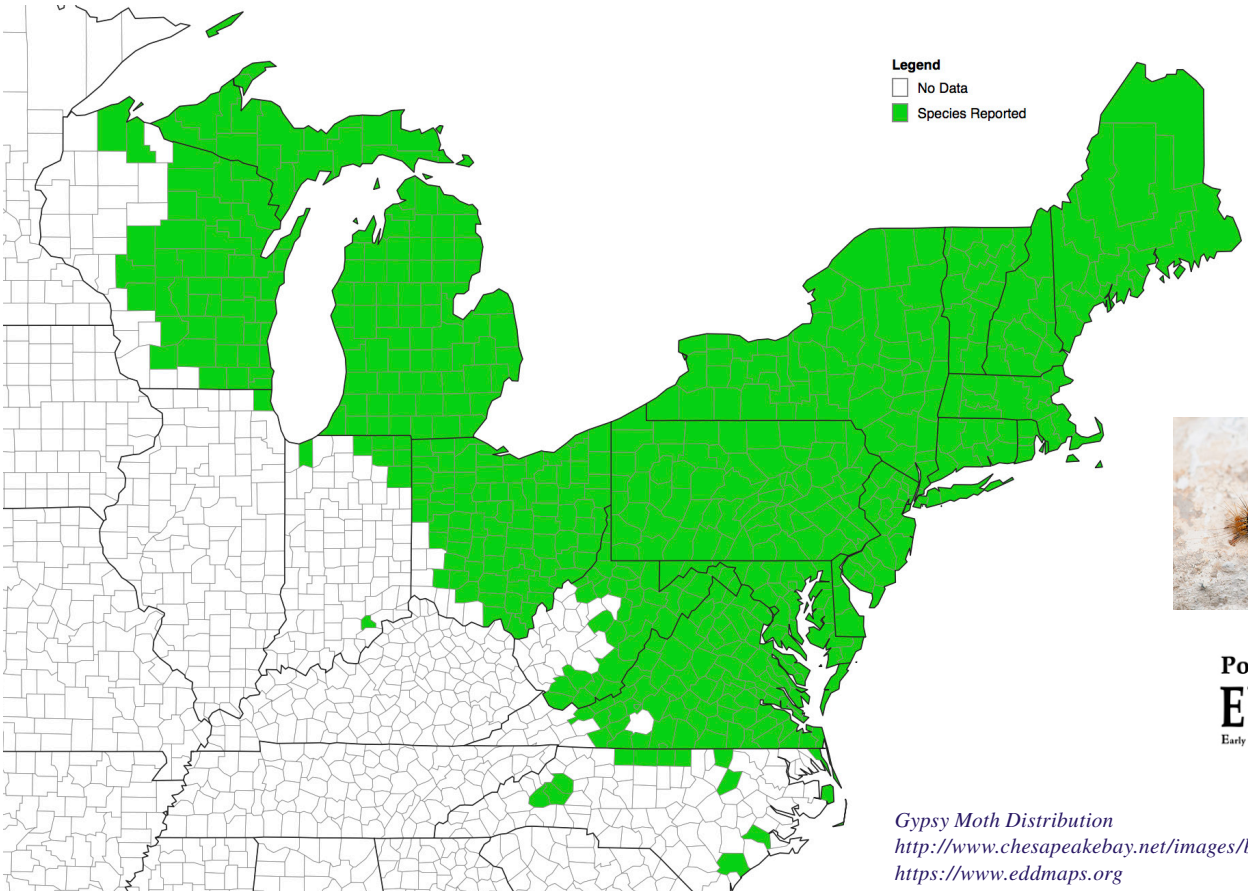
After a report has been verified, it can be viewed within the app or on EDDMaps.org, and is used to create a distribution map of the invasive species throughout the United States.

As members of the Department of Defense Chesapeake Bay Program, we strive to uphold the quality of the Chesapeake Bay's ecosystem. We can do our part in combating invasive species by ensuring we do not contaminate our clothes with invasive species seeds or insects when completing on-site fieldwork at installations, and reporting invasive species sightings. And, although most Bay watershed DoD installations have an invasive species inventory, the Early Detection initiative can be used to gain a better understanding of what invasive species are prevalent within the Chesapeake Bay Watershed and to help each installation with their own control and monitoring programs.

More Links:

https://www.eddmaps.org/midatlantic/

https://www.doi.gov/sites/doi.gov/files/National%20EDRR%20Framework.pdf



Powered by EDDMapS
Early Detection & Distribution Mapping System

Gypsy Moth Distribution
http://www.chesapeakebay.net/images/blog/april_23_big10.jpg
https://www.eddmaps.org

Installation Management Command Chesapeake Bay TMDL Project

By Elisa Ortiz (USAEC) *& Richard Morris* (IMCOM)

Each day, Army installations play a critical role in restoring and protecting the waters of the Chesapeake Bay and its tidal tributaries. Restoring the water quality of this vital and scenic resource is a challenging task requiring U.S. Army Installation Management Command (IMCOM) dedication and commitment to the development and use of best management practices.

The Chesapeake Bay Watershed encompasses nine IMCOM installations in Maryland, Pennsylvania, Virginia, and the District of Columbia.

The U.S. Environmental Protection Agency's (EPA) total maximum daily load (TMDL), established in 2010, is considered the largest and most complex TMDL. The limits are designed to meet water quality standards for dissolved oxygen, water clarity, underwater bay grasses and chlorophyll-a, which indicates algae levels.

Pollutants enter the bay from various sources, such as agricultural operations, urban runoff via stormwater drains, wastewater facilities, septic systems, and air pollution, as well as other sources.

The Army strives to be proactive by executing stormwater best management practices, or BMPs, on Army Garrisons and facilities to ensure day-to-day operations are consistent with TMDL requirements and minimize impacts on the Chesapeake Bay. A stormwater BMP is intended to infiltrate or otherwise treat stormwater runoff, therefore reducing the overall discharge and level of pollutants entering a waterbody.

The BMPs implemented on a garrison can include structural BMPs, such as, bioretentions and sand filters. In addition, non-structural BMPs, such as street sweeping and reforestation are also being implemented.

Each garrison is unique (e.g. soil conditions, tenant activities), requiring a team of professionals in various disciplines to assess and determine the optimal BMP for each site.

Over the last several years, the Army focused on conducting pollution reduction opportunity assessments, collecting accurate land use data, inventorying existing BMPs, identifying areas of interest for optimal pollutant reduction, and designing and constructing BMPs to improve water quality.

The IMCOM dedicated an additional $8M to develop and implement stormwater BMPs in fiscal year (FY) 2016 for its garrisons and annexes in the Chesapeake Bay watershed: Aberdeen Proving Ground, Adelphi Laboratory Center, Carlisle Barracks, Fort George G. Meade, Fort Detrick, Fort Belvoir, Fort Lee, Joint Base Myer-Henderson Hall and Fort Lesley J. McNair.

Photo by Stephen Porch: The completed perimeter sand filter structure from AOI 3 (Kenner Army Medical Clinic) at Fort Lee.

The Chesapeake Bay program is a team effort. The Army Office of the Assistant Chief of Staff for Installation Management, Environmental Division conducts the overall Army program oversight. The U.S. Army Environmental Command (USAEC), provides technical execution oversight of the program to IMCOM. The U.S. Army Corps of Engineers' (USACE) Baltimore District completes the designs and constructs the BMPs.

In FY17, IMCOM plans include additional funding to help ensure each garrison in the Chesapeake Bay watershed can meet the Chesapeake Bay TMDL requirements outlined in the municipal separate storm water sewer system (MS4) permit. The initial focus was ensuring the Virginia installations complete and receive Virginia Department of Environmental Quality (VADEQ) approval on Chesapeake Bay TMDL action plans.

Virginia garrisons that discharge stormwater in accordance with a MS4 Permit have a special provision requiring the development of a Chesapeake Bay TMDL Action Plan. This plan outlines how the garrison will meet pollution reductions over the next three permit cycles.

The USAEC worked with the different garrisons and USACE Baltimore to develop a specific plan for each garrison. Stormwater BMPs detailed in the plans include bioretention, grass swales, rooftop disconnects, pavement removal and infiltration trenches. Then USAEC staff coordinated with all stakeholders to ensure comments were addressed in a timely manner. The VADEQ-approved action plans, which include both structural and non-structural BMPs, will serve as the template for BMP implementation to meet pollution reduction requirements.

Currently construction of stormwater BMPs are underway at Fort Lee with additionally sites in the 100% Design Phase. Design is underway and it is anticipated that construction at Joint Base Myer Henderson Hall will start in the fall.

The next phase of the project will be BMP design and construction at Maryland and Pennsylvania garrisons. IMCOM is proactively moving forward with identifying target areas for pollution removal, completing designs, and awarding construction contracts in 2016. Several sites have been identified at each garrison and received approval from the garrison's master planning office to move forward with construction.

Because BMP planning, design and construction are occurring simultaneously at multiple garrisons, consistent communication between stakeholders is critical to the success of the project.

Adaptability is also important. A few of the BMPs required re-design following confirmation of site conditions (e.g. unknown utilities, soil conditions & safety requirements). The team worked proactively to get the re-designs completed to keep the project on track.

The future of the project is to continue stormwater BMP design/construction at the various IMCOM garrisons. Additionally, IMCOM will continue to share "lessons learned" with other federal stakeholders as the project develops.

IMCOM has made significant progress towards meeting the pollution reduction requirements for the Chesapeake Bay area installations, and if the current path is sustained, IMCOM anticipates all pollution reduction practices will be in place prior to the 2025 goal.

Chesapeake Bay Action Team (CBAT) Updates

By: Kelly Duckworth, Michael Baker International

Chesapeake Bay Monitoring 2.0: Water Quality Trends in the Tidal Portions of the Chesapeake Bay

Rebecca Murphy with the University of Maryland, spoke to the CBAT on computing and evaluating long-term trends in water quality throughout the Chesapeake Bay Watershed. This involves using generalized additive models (GAMs) and other statistical techniques to explore the dynamics of various parameters, such as nutrients, chlorophyll-a, dissolved oxygen, water clarity, temperature and salinity within the watershed. By collecting data and analyzing these long-term trends will inform management strategies to improve water quality and enhance CBP models.

Murphy's work will help federal facilities understand the link between watershed actions and estuary water quality. This allows facilities to (1) target effective management actions at individual sites and (2) explain responses, or the lack of a response, to different management actions. The results from her work could also provide a detailed output of water quality stations near federal facilities.

There are currently 150 long-term monitoring stations within the watershed that have been sampled once or twice a month since the 1980s. Therefore, the datasets can show broad, long-term trends or provide input for specific analyses at a particular monitoring site. Examples of total tidal datasets for various parameters, such as total phosphorus at various stations, were described. The GAM can be used to test hypotheses that link watershed loads or climate to water quality to generate a statistical confidence measure to determine the cause for increased or decreased parameters.

Murphy's next step will be to normalize these trends against river flow. Looking at the large-scale variation of seasonal precipitation will also give an indication of the trends particular to a management action. At present, all of the data shown in the presentation go back as far as 1999. In the upcoming year, data going back to the 1980s will be analyzed.

Monitoring Nutrient and Suspended Sediment Conditions in Small (Urban) Watersheds

John Jastram with USGS spoke to the CBAT on local scale nutrient and sediment monitoring projects that focus on utilizing continuous water quality monitoring to improve nutrient and sediment load estimation for application in small urban watersheds. He explained how the monitoring scale is proportional to the watershed scale; therefore, monitoring smaller scale watersheds requires finer scale data. A finer scale is needed to accurately show rapidly changing conditions on a hydrograph, which will detect and describe changes in data.

The approach to capturing storm data is called intensive monitoring and includes three different techniques. The first technique gathers data through continuous record stream gages that operate at five to fifteen minute intervals to measure water level and streamflow. The second technique is continuous water quality monitoring, which also operates at five to fifteen minute intervals to measure turbidity, pH, water temperature, and dissolved oxygen. Finally, data are captured through nutrient and sediment sampling through either manual or automated samplers. Combining these techniques, called turbidity threshold sampling, optimizes the sample collection at each site.

In Fairfax County, Virginia, a network of 20 small watersheds (<5 square miles) is being monitored to evaluate the relationships between water quality conditions and Best Management Practice (BMP) implementation and activity. The results of these data can then be used to analyze other similar sites that are monitored less intensively. The monitoring approach includes five intensive monitoring stations and fifteen other trend monitoring stations. Additionally, these monitoring stations satisfy Fairfax County's MS4 requirements. In 2014, a report was published that summarized five years of data through water quality characterizations that estimated sediment loads and yields. The data were also compared to other Chesapeake Bay tributaries in other urban areas. The next report is anticipated to begin in 2017 and will include a decade of data that assesses trends and responses to BMP implementation. Visit http://va.water.usgs.gov/fairfax for more information.

Jastram also presented an example in the Hampton Roads region that assessed urban nutrient and sediment yields in the Coastal Plain. This area was chosen due to the lack of loading rates limits needed for the calibration of the Chesapeake Bay Watershed Model and associated TMDL. Working with the Hampton Roads Planning District Commission and Hampton Roads Sanitation District, sampling will continue through 2020. The approach includes 12 intensive monitoring stations that encompass 50 to 100 acres each. This work also satisfies the MS4 monitoring requirements within the jurisdictions. Visit http://va.water.usgs.gov/HRstormwater for more information.

FY16 DoD Chesapeake Bay Datacall

Historical and Progress BMPs

This first portion of the data call (phase 1) was released on 28 July 2016, and was due on 25 August 2016. In a final opportunity, installations are to review their historical BMP spreadsheets to capture any data gaps and/or add historical BMPs for DoD credit. All historical data will be resubmitted to the jurisdictions. For Progress BMPs (07/01/15 through 06/30/16), installations are to update the status of all BMPs listed as Planned on the spreadsheets.

Land Use Data Entry for Low Vegetation Land Use Classifications

Installations will also receive an email with a link to update installation's data via the USGS Federal Facilities Editor Tool.

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The USGS has released the Tool for use, but we recommend participating in an upcoming training webinar in early September (date TBD) before finalizing installation input. The Tool will be open for input until 23 September 2016. USGS will be asking for percentages of low vegetation land use classifications. If you do not have agriculture on your installation, then the only two pieces of information to be edited are mixed open and turf. The specific definitions for land use classes are included in the editor tool and instructions. A default percentage of mixed open and turf classification will be automatically assigned if the installation does not provide the information. The default ratio is 65% turf and 35% mixed open.

DoD CBP Datacall Phase 2

Phase 2 of the datacall will include the Project and Installation Indicator sections. Installations can expect improved Excel data validation. This portion of the data call will be due 19 October 2016. Data call leads need to ensure access to DENIX in order to obtain their installation's files. More detail will be presented in the training sessions that will be offered for this datacall phase.

DoD Chesapeake Bay Program Updates

Chesapeake Bay Accountability and Recovery Act of 2014

Under the Chesapeake Bay Accountability and Restoration Act of 2014 (CBARA), the Director of the Office of Management and Budget (OMB) is required to submit to Congress an annual financial report by 30 September containing an interagency crosscut budget for Federal restoration activities with funding amounts of $300,000 that protect, conserve, or restore living resources, habitat, water resources, or water quality in the Chesapeake Bay watershed. The DoD CBP provided a response to the OMB budget data request and is awaiting their comments.

Revised 2017 Mid-Point Assessment Schedule and EPA Expectations

The Partnership agreed on a revised Mid-Point Assessment schedule for the EPA Phase III WIP expectations, Jurisdictional Planning Targets, and Draft/Final Phase III WIPs. All Phase 6 data inputs, with the exception of land use, is due 30 September 2016 with the final Phase III WIPs due to the EPA in December 2018. Additionally, the EPA released a draft set of expectations to the Partnership for Phase III WIPs. Stay tuned as this topic is a proposed for the next CBAT

Local Area Task Force

DoD CBP continues to participate on the Local Area Targets Task Force, which will provide recommendations on how local area targets should be developed. DoD participation is aimed at ensuring jurisdictions assign local area targets, similar to how EPA and the jurisdictions did for federal facilities, and answering technical questions. DoD CBP Coordinator, Sarah Diebel, presented during the last task force meeting to demonstrate how targets were set for federal facilities and she had the opportunity to communicate DoD priorities related to implementation and equitability assurance.

Outreach

Krista Parra was approached by EPA PAO to visit Hampton Roads area installations to do a walkthrough of projects that positively affect the Bay and have beneficial/multiple uses. EPA wants to do a federal facilities highlight of environmental stewardship within the Bay outside of EPA efforts. Please contact Krista Parra if you are interested in showcasing your installation.

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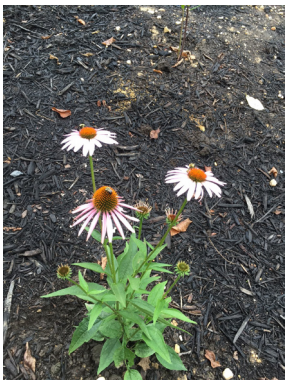
Controlled Burns in Installation Range Areas

Controlled burns were re-initiated at APG this spring. The burns were conducted in conjunction with Army Test Center and the APG Department of Emergency Services to reduce the frequency of wildland fires, maintain line of sight at ranges, and reduce the spread of phragmites in specific range areas. During these burns, 900 total acres of military testing and training range areas were burned. The controlled burns were a success as the ranges were cleared from excessive fuel load and did not impact nearby populations or forested areas. All controlled burns at APG are implemented in accordance with the Installation Wildland Fire Management Plan, the purpose of which, in part, is to address potential wildland fire risks while sustaining mission landscape for testing and training activities. Controlled burns are the best way to maintain military range areas due to unexploded ordnance concerns throughout APG, as well as minimizing vehicle disturbance which would cause additional erosion. Burns are coordinated through natural resource managers to ensure they do not cause damage beyond the ecological benefits of the burn, which include returning nutrients to the environment, controlling invasive species and pests and improving habitats for specific desired species. A pre-burn ecological assessment was completed and quarterly post-burn monitoring will continue for three years to assess the impacts and effectiveness of the controlled burns.

Photo by Aberdeen Test Center: Control burns were conducted at Aberdeen Proving Ground in March and April 2016 to reduce accidental wildfires, maintain Army range areas for mission activity and reduce the spread of phragmites in specific range areas.

U.S. Army Garrison Adelphi Laboratory Center Pollinator Garden Project

By Bridget Kelly Butcher, Conservation Specialist, U.S. Army Garrison Adelphi Laboratory Center



Photos by Bridget Kelly-Butcher and Dave Choat: All photographs are associated with the planting event in celebration of National Pollinator Week at U.S. Army Garrison Adelphi Laboratory Center.

On 22 June 2016, the U.S. Army Garrison Adelphi Laboratory Center's (ALC) Directorate of Public Works Environmental Division created a Pollinator Garden containing 60 plants near the installation's front gate. The planting event was done in celebration of National Pollinator Week, 20-26 June 2016.

Nearly 75% of all native plants in the world require pollination by an animal. Pollinators are also responsible for one in every three bites of food we take, and increase our nation's crop values each year by more than 15 billion dollars. In response to pollinator losses, in June 2014, President Obama issued a memorandum establishing a Pollinator Health Task Force. The Task Force released the National Strategy to Promote the Health of Honey Bees and Other Pollinators (the Strategy) in May 2015.

The Pollinator Garden allows ALC to play its part in implementing the Strategy by increasing pollinator habitat on the installation. The following pollinator friendly species were used in the garden and some of the fauna they benefit are listed below:

- Aster (Symphyotrichum oblingifolium): bees and the silvery checkerspot butterfly (Chlosyne nycteis)
- Bee balm (Monarda disdyma): bees, humming birds, and butterflies
- Blazing star (Liatrias spicata): bees, humming birds, and butterflies
- Butterfly weed (Asclepias tuberose): monarch butterfly (Danaus plexippus) host and nectar and bees
- Joe-pye weed (Eupatorium purpureum): bees, song birds and butterflies
- Native purple coneflower (Euchinacea purpurea Magnus): song birds, hummingbirds, butterflies, and bees
- Swamp milkweed (Asclepais incarnate): monarch butterfly host and nectar, hummingbirds, and bees.

The ALC Pollinator Garden was certified as a Monarch Waystation (monarch habitat) by Monarch Watch in July 2016. Monarch Waystations are places that provide resources necessary for monarchs to produce successive generations and sustain their migration. Without milkweeds throughout their spring and summer breeding areas in North America, monarchs would not be able to produce the successive generations that culminate in the migration each fall. Similarly, without nectar from flowers, these fall migratory monarch butterflies would be unable to make their long journey to overwintering grounds in Mexico. The need for host plants for larvae and energy sources for adults applies to all monarch and butterfly populations around the world.

According to Monarch Watch, there have been 14,429 habitats registered as Monarch Waystations. A list of all of these habitats can be viewed via the Monarch Waystation Registry - there's even a map (based on habitat postal codes, not precise locations) to see all of the habitats that have been created in your area: bit.ly/monarch-waystations.

Photo by Bridget Kelly-Butcher: Volunteers planters at U.S. Army Garrison Adelphi Laboratory Center during the planting event in celebration of National Pollinator Week.

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

Check it Out

October 20, 2016: Interpreting climate change with National Network for Ocean and Climate Change Interpretation (NNOCCI)

NNOCCI is building the capacity of informal educators to increase public understanding of climate change and its impacts. Educators and scientists from across the country are currently learning to use special techniques to address science literacy and promote public dialogue. At the same time, these training series are developing a community of practice that will aim to sustain a resilient national infrastructure for educators and scientists. (Registration will open in August 2016)

February 7 and 8, 2017 - Planning and Facilitating Collaborative Meetings

Participants will learn how to: determine if a collaborative process is appropriate; select people with the skill sets needed to fill each meeting role; use appropriate process tools and techniques to address meeting objectives; enhance facilitation skills with practice using simple tools; manage conflict in meetings through a greater understanding of group dynamics; and identify disruptive behaviors in group processes and practice strategies to deal with them. (Registration will open in November 2016)

May 15, 16 and 17, 2017 - Wetland Delineation Course

This short course is intended for professional wetland delineators, federal, state, and local agency personnel, research staff, wetland managers, and others with an interest or professional investment in wetland boundary identification. The course will provide an in-depth review of this currently accepted wetland delineation protocol for the Coastal Plain region. The 3-day curriculum covers all aspects of wetland delineation in the Coastal Plain region, and will include classroom and field activities. (Registration will open in February 2017)

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