Chesapeake Bay Commission
Briefing for CBP Executive Council – June 3, 2010

Overview

As the legislative arm of the Bay Program, the Chesapeake Bay Commission continues to be active in a variety of legislative and policy initiatives concerning the health of the Chesapeake at both the state and federal levels. While supporting traditional funding sources, the Commission continues to focus on exploring a variety of new and innovative solutions for nutrient and sediment reductions, such as new technologies or novel ways of funding Bay conservation practices. By keeping a focus on clean water, the Commission is delving into issues ranging from sustainable energy production, increased land conservation and enhanced wastewater treatment to policy initiatives that will strengthen the Bay Program's federal-state partnership. The following actions and highlights summarize the Commission's work featured in the past year.

Actions & Highlights

BIOFUELS

After three years of leadership regarding sustainable next-generation biofuels, the Commission published *Chesapeake Biofuel Policies: Balancing Energy, Economy and Environment* in partnership with the Commonwealth of Pennsylvania and with the guidance of an expert Biofuels Advisory Panel. Released in January 2010, the report builds on earlier work of the Commission and its partners and further demonstrates the potential for significant nutrient reductions to the Chesapeake from increased plantings of next-generation biofuel feedstocks. Winter crops such as barley or rye or perennial grasses such as switchgrass can complement existing cropping patterns and serve as buffers or nutrient sinks. Sustainable harvest of forest thinnings can promote forest management practices to improve the uptake of excess nutrients.

Next-generation biofuels also offer a net economic benefit to our region and could serve as a market-based driver for sound conservation practices. Over 18,000 jobs could be created within the Chesapeake region at a conservative watershed production goal of 500 million gallons per year of next-generation biofuels. Related improved land use for feedstock production could more than double the watershed's annual rate of progress toward water quality goals from all sources. If 766,000 acres of winter rye is planted in rotation, then we might expect to see a 4 million pound reduction of nitrogen being delivered to the Bay.

BLUE PLAINS

The largest point source of nitrogen pollution in the Chesapeake Bay watershed sits on the banks of the Potomac River in our nation's capitol. Blue Plains Advanced Wastewater Treatment Plant is the largest facility of its kind in the world, treating wastewater from over two million customers in the District of Columbia, southern Maryland and northern Virginia. In the past decade these three jurisdictions have invested over $700 million to upgrade the facility, with the Federal government contributing grants of about $180 million. However, significantly greater investment is needed to reduce the amount of nitrogen pollution discharged from the plant to meet their permit limit of 4.2 mg/l and to further Bay restoration goals.

Because of its sheer size and its location in the headwaters of the Bay, improving nitrogen reduction controls at Blue Plains will be massively beneficial for Bay restoration efforts: enhanced nutrient removal (ENR) technology will prevent up to 4 million pounds of nitrogen from reaching the waters of the Bay every year. By combining the ENR upgrades with the ongoing burdensome and costly work to address the District's antiquated

Combined Sewer Overflows, millions of dollars will be saved. However, increased federal funding is critical to accomplish this monumental task with projected costs for ENR alone now totaling $970 million. The Commission remains steadfast in its efforts to securing additional federal funds to see this project through.

LAND CONSERVATION

With the renewed watershed-wide recognition to increase land conservation, the Chesapeake Bay Commission recently pledged to focus its work in the coming months to pull together federal and state strategies needed for furthering conservation. In 2001, the Commission and the Trust for Public Land produced a report entitled *Keeping Our Commitment: Preserving Land in the Chesapeake Watershed*. This landmark report helped the Bay states and federal partners define their *Chesapeake 2000* land conservation goals and outlined policy and financing strategies that could be used to achieve those goals.

Those goals have been met and new goals have been launched within the watershed, setting ambitious land conservation and public access targets. As with the conservation goals in the 2000 agreement, achieving these new goals will require new policies and innovative financing strategies, entrepreneurial action and flexibility. Given the current economic environment, creative and thoughtful approaches to achieve these objectives are more important than ever.

Building on the body of knowledge from the *Keeping Our Commitment* report, the Commission is partnering with the Chesapeake Conservancy to produce a report that:

1. Updates information on existing programs and funding sources used by the states and others to conserve land, sustain working lands and expand public access;
2. Highlights land conservation success stories in the region and suggests ways to expand these models;
3. Identifies new or expanded policies and financing strategies (including an expanded federal role), and new private sector initiatives to accomplish the new goals; and
4. Highlights the connection between land conservation and water quality protection.

ENHANCING THE FEDERAL-STATE PARTNERSHIP

With increased federal involvement in the Chesapeake restoration effort, from a Bay-wide TMDL to the Presidents Executive Order, and potential Congressional reauthorization of the Bay Program, the Commission has remained vigilant in seeking opportunities to maximize this new chapter in the Bay Program partnership. Commission members and staff have testified at several Congressional hearings. A number of Commission members have held formal hearings and informal workgroups in their respective jurisdictions. Throughout the process, both members and staff have emphasized the necessity to balance accountability and flexibility within the Bay Program. The Commission has recently released a document outlining ten principles for a successful federal-state partnership to implement the TMDL, whether through legislation, policy or funding.

Maryland
Briefing for CBP Executive Council – June 3, 2010

Overview

Maryland is committed to accelerating the Bay restoration effort and BayStat has given us a very clear sense of what actions are necessary to meet our objectives and what they will cost. As a result of Governor Martin O'Malley's ambitious 2-year milestones to accelerate Bay cleanup Maryland farmers planted 239,000 acres of cover crops in 2009, while poultry farmers transported 52,000 tons of poultry litter out of the watershed, exceeding our milestone goal by 168 percent. Maryland's Bay Restoration Fund provided for the upgrade of over 700 septic systems inside the critical area for a 9,132 pound reduction in nitrogen. By fully funding Program Open Space since 2007, Maryland has preserved more than 28,000 acres of vital natural landscape. Thanks to bold action taken by the O'Malley-Brown Administration, the Bay's blue crab population is at its highest level since 1997, and a new plan to rebuild our native oyster is being implemented. Maryland is on schedule to meet its first 2-year milestone while policies, programs and actions are being evaluated for subsequent milestones.

Under the strong leadership of Governor O'Malley, the State of Maryland has created a number of exciting and innovative programs that are accelerating our Bay restoration efforts, described below.

Actions & Highlights

Accountability

- **Established BayStat,** a tool to coordinate and track public, private and non-profit efforts to restore the Chesapeake Bay and its tributaries. Established **GreenPrint** to track and target land preservation. Developed **AgPrint**, a tool to identify areas best suited for agricultural land preservation. These interactive, web-based tools are allowing Maryland to be more effective and efficient with our limited resources while promoting public accountability and advocacy.
- **Instituted 2-year milestones** in each State in the region as chair of the Chesapeake Bay Executive Council to accelerate implementation and increase accountability. Set a 2020 date for Maryland to meet its nutrient reduction goals. Maryland is 55% through the 2-year milestone process with 44% (1,650,000 lbs of nitrogen reduced) of the total goal achieved, and is on track to meet 2011 goals (with reductions built in to account for potential shortfalls).
- **Created Maryland's Conservation Tracker,** a comprehensive inventory of agricultural conservation practices funded by Federal and State cost-share since 2000. A protocol is under development for inventorying non-government funded conservation practices for TMDL tracking.

Funding

- **Implementation of Bay Restoration Fund,** a dedicated fund, financed by wastewater treatment plant users, to upgrade Maryland's WWTPs with enhanced nutrient removal (ENR) technology. Upgrading the 67 major plants will allow for nutrient reductions of 7.5 million pounds of nitrogen per year and 0.22 million pounds of phosphorus. A similar fee paid by septic system users has been utilized to successfully upgrade hundreds of onsite systems and to implement cover crops to reduce nitrogen loading to the Bay.
- **Created the Chesapeake and Atlantic Coastal Bays Trust Fund** to finance practices that reduce nutrients and sediment in the Bay and its tributaries. In FY '11, Governor O'Malley committed $20 million to accelerate Bay restoration by focusing financial resources on the most effective nonpoint source pollution control projects. Over the past two years the fund has been used to: implement Urban/Suburban non-point source projects and agricultural BMPs resulting in an estimated reduction of 366,746 lbs of Nitrogen, 35,199 lbs of Phosphorus, and 4,538 lbs of Sediment and created 14 Soil Conservation District positions to provide technical assistance for agricultural best management practice installation. The Trust Fund has been used to implement 238,839 acres of cover crops and support 8 Maryland Counties and Baltimore City in their efforts to clean-up local rivers and streams.
- **Provided Full Funding for Land Conservation through Program Open Space,** Maryland's premier land conservation program, for the third year in a row. Improving opportunity and access to our great outdoors is a priority in Maryland. Through the dedicated funding of Program Open Space and related

programs including donated easements, Maryland has preserved nearly 832,000 acres of land since 1969, including stream valleys, greenways and our best remaining rural working landscapes.

- **The Innovative Technology Fund**, a partnership between the State of Maryland and the University of Maryland is continuing to accelerate Bay restoration through the development of new technologies. This program has developed projects from the stormwater, agricultural and natural resource sectors; such as the development of new ventilated flooring for poultry houses that has the potential to greatly reduce the production of ammonia.

Advancing Nutrient Reduction

- **Maryland's stormwater program** leads the region and positions the State to be able to more easily meet additional federal requirements that EPA has pledged to develop between now and 2012. As of May, Maryland now requires use of "environmental site design" to the maximum extent practicable. This means that where feasible, management techniques that keep water on-site and allow water to infiltrate into the ground. In addition, because over 95% of stormwater runoff in Maryland comes from already developed land, there is significant regulatory focus on stormwater discharge permits issued to Maryland's 10 largest counties and the State Highway Administration—that require control of stormwater pollution from existing developed land.
- **New Concentrated Animal Feeding Operation (CAFO) Permits** issued to controlling poultry litter at well over 500 (well over half) of Maryland's poultry operations for the first time. Maryland is also the first state in the region to implement a regulatory program approved by EPA to meet new federal requirements. Maryland went beyond federal requirements to protect surface waters and implemented a state permit to protect State groundwater as well.
- **Maryland is implementing the 2006 Healthy Air Act** which requires reductions in emissions of the air pollutants SOx, NOx, mercury and CO2 from the State's coal-fired power plants. This resulted in significant reductions of atmospheric deposition of nitrogen to the Bay and its tributaries beginning in 2009. Nitrogen oxide emissions from coal-fired power plants is a major contributor. When fully implemented in 2013, Maryland will reduce nitrogen related emissions from State power plants by 75% from 2002 levels. Nearly one-third of the nutrient pollution in the Bay is attributable to air deposition.

Fisheries

- **Enacted Blue Crab Management Actions** in partnership with the Commonwealth of Virginia and the Potomac River Fisheries Commission resulting in the highest population of blue crabs, 658 million, in the Bay since 1997 and a 60% increase over last year. The population estimate is the result of the 2009-2010 Bay-wide winter dredge survey conducted annually by the Maryland Department of Natural Resources (DNR) and the Virginia Institute of Marine Science (VIMS).
- **Unveiled Maryland's Oyster Restoration and Aquaculture Development Plan** to support a healthy population, and maintain a scientifically-managed public fishery while building investment and opportunity in aquaculture. The Plan will open 600,000 new acres to aquaculture and increase oyster sanctuary areas from 9% to 25% of existing quality habitat – essential to the future of the Bay's oyster population and sustainable harvest.

Stewardship

- **Created the Watershed Assistance Collaborative** to provide funding for technical assistance, provide outreach and training opportunities, and supply on-the-ground personnel for local nonpoint source activities and projects. By leveraging resources of existing programs, the Watershed Assistance Collaborative exists to provide coordinated capacity building opportunities to local implementers.
- **Advancing Citizen Stewardship & Environmental Learning** through programs like Marylanders Plant Trees and Marylanders Grow Oysters and the new *StreamHealth* web tool. Maryland inmates are also contributing to these efforts and learning green job skills. Through the Maryland Partnership for Children in Nature we are working to ensure that all young people have the opportunity to connect with and learn about their natural world and grow to become responsible stewards. The landmark Civic Justice Corps, a summer conservation jobs program that employs at-risk youth in State Parks, is slated to double participation for the second year in a row.

Virginia
Briefing for CBP Executive Council – June 3, 2010

Overview

Virginia's commitment to a restored Chesapeake Bay continues as Governor Bob McDonnell and his administration take the lead in the commonwealth's actions. With the change in administrations, the outgoing Kaine administration announced it had exceeded its goal of preserving 400,000 acres in the state while incoming Gov. McDonnell announced his commitment to preserving another 400,000 acres. Process on this goal can be monitored at www.dcr.virginia.gov/land_conservation/index.shtml

The past year has brought successes beyond land conservation. By the end of the year nearly $627 million had been committed to wastewater treatment upgrades, crab populations had increased to a 13 year high and new nutrient management regulations were in place. The 2010 Virginia General Assembly passed and Gov. McDonnell approved a dedicated funding source for Chesapeake Bay cleanup efforts. An additional $10 charge per land transaction to the state's recordation tax will go to the Virginia Water Quality Improvement Fund (WQIF) for installation of agricultural conservation best management practices. For this coming biennium that translates to $9 million per year. Details on these successes and others are listed below.

Actions & Highlights

Continued Progress with New Nutrient Removal Facilities - Twelve new WQIF grant agreements signed this year to bring total number of projects to 53, committing a total of almost $627 million in state cost-share. Three plants brought their nutrient reduction systems on-line this year, bringing the total number of Bay dischargers operating with nutrient removal to 29. Based on the annual compliance plan (Feb. 2010) for dischargers covered by the Virginia Chesapeake Bay Watershed Nutrient Discharge General Permit, projections show the total delivered nutrient loads will meet, or even be lower than, the waste load allocations in all basins for calendar year 2011.

Crab Population Boom - Crab numbers this past winter increased 60 percent from the previous year, marking the second straight year of growth. The increase is due to a landmark stock rebuilding program, including closure of the winter dredge fishery by the Virginia Marine Resources Commission and partner agencies. A winter survey conducted by Virginia and Maryland scientists estimates the population has increased to 658 million crabs, the highest number in 13 years.

New Land Conservation Goal - Virginia met its self-imposed statewide land conservation goal of 400,000 over the past four years, preserving 424,103 as of winter 2010. Specific land conservation accomplishments include the creation of two new state parks, six new state forests and 13 natural area preserves, and parts of 13 Civil War battlefields were protected. Governor McDonnell has established a new goal to preserve an additional 400,000 acres over the next four years.

Nutrient Credit Exchange Program Established - Virginia has implemented an innovative Nutrient Credit Exchange Program previously adopted by the General Assembly to establish market-based incentives that streamline the nutrient reduction process.

Erosion and Sediment Control Local Program Reviews – Virginia has completed a five year statewide review of all locally-administered erosion and sediment control programs. Where local programs were found inconsistent with state law, corrective action agreements were completed and shortcomings corrected. As of March 2010, 155 or 94.5 percent of the programs have been found consistent with state law. Well run locally-administered programs reduce the loss of sediments and other pollutants from active construction sites.

Advances in addressing NPS from agricultural sources – Use of targeted incentive funds through Virginia Agricultural Ag BMP Cost-Share Program (VACS) continues to result in roughly 85 percent of available funds being used for implementation of the suite of 5 "priority practices" across the state. While VACS funding for the coming year (begins July 1, 2010) will not be at levels appropriated for the two prior years, for the first time ever (thanks to an action taken by the 2010 Virginia General Assembly) there is now a revenue source dedicated to VACS funding. The funding source originates from an increase in the fee for recording land transactions at the local level. Further enhancements in the collection of data for agricultural conservation include the ongoing improvements in a web-based BMP tracking program.

New Turf and Landscape Category of Nutrient Management Certification – Virginia has initiated a new category of Nutrient Management Planner Certification to better meet the needs of professionals developing nutrient management plans for urban/suburban developed lands, such as golf courses, office parks, public lands that receive nutrients, and areas treated by lawn service companies. The agriculture certification category has been offered since 1996 and has 329 certified planners. So far, 65 persons have become certified in the new Turf and Landscape category. Individuals must meet educational and experience requirements and pass a two-part examination to become certified.

Poultry Litter End User Regulation – New requirements on Virginia end-users of poultry litter became effective on January 1, 2010. The new regulations require enhanced tracking and accounting of poultry litter that is transferred from the farm where the litter is generated. End users are required to store and land apply poultry litter in accordance with the requirements outlined in the amended regulation which address the proper rate and timing of applications as well as setbacks to environmentally sensitive features for land application and storage of poultry litter.

Washington, DC
Briefing for CBP Executive Council – June 3, 2010

Overview

- DC continues using an aggressive Anacostia Restoration Plan to better frame and manage the local efforts to restore this historic river to swimmable, fishable conditions.
- DC is actively cleaning up tributaries of the Anacostia River, including Watts Branch, Pope Branch, Hickey Run, Nash Run and more – by implementing the Anacostia Watershed Trash Reduction Plan to clean up the river's trash by 2013. We are accomplishing this in part through a newly issued Trash TMDL together with EPA and our Maryland partners (82% of the Anacostia lies within Maryland).
- DDOE provides free comprehensive *RiverSmart Homes* audits and up to $1,200 in direct financial support to install rain barrels, rain gardens and other Bayscaping systems to treat stormwater runoff at residents' homes.
- DC is improving its stormwater management in part by creating green infrastructure throughout the City, enabling us to more directly influence the water quality change we want to have. For the Anacostia, the Potomac, and other urban areas of the Chesapeake Bay watershed, *the solution to water quality is found on the land* -- and depends upon how we manage there. To this end, DC is rapidly expanding its green rooftop coverage percentage (DC is second only to Chicago in its green roof square footage total among cities nationwide): one ARRA stimulus-funded program was created to expand the District's municipal buildings' green roof square footage totals. Over $3,000,000 will be committed to the funding of new and retrofit green roofs on District public schools and libraries by the end of 2011.
- We look forward to working with our neighboring jurisdictions and federal partners to accelerate water quality restoration. We recognize that we cannot accomplish our goals of accelerating our efforts without the help of our upstream neighbors in Maryland, *and* our federal partners, whose properties comprise a full 30% of the City's footprint. Because of this, DC is fully supportive of the new Federal Strategy issued this Spring by EPA and its many partners, and we look to them to 'lead by example' as outlined in the Strategy.

Actions & Highlights - Specifically to Accelerate Bay-Anacostia Restoration

1. Implementing our Municipal Separate Storm Sewer System Permit (MS4 Permit for stormwater)
The District continues working closely with EPA Region III to develop a MS4 permit and Stormwater Management Program that has many positive attributes that will help improve local waterbodies (the Anacostia & Potomac Rivers) that ultimately drain into the Chesapeake Bay. The Draft Permit requires the District to implement specific measures such as installation of a certain number of trees and green roofs, enhancing street sweeping in the city, and requiring broad application of low impact development (LID) practices. The District is implementing these initiatives to contribute in a measurable way to immediately reduce pollution into District waterways (and, will also apply towards the forthcoming Chesapeake Bay TMDLs for nutrients and sediments). EPA Region III has referred to the District's MS4 permit as a model for the Chesapeake watershed.

2. Working with our Federal Partners on the Managing Their Stormwater runoff in the District
The District is currently working with various federal agencies in the city to explore ways to implement stormwater requirements established by Section 438 of the federal *Energy Independence and Security Act of 2008* (EISA). Currently, all new federal development and re-development projects over 5,000 square feet in size within city limits are subject to the District's erosion and stormwater management regulations. This process requires proposed development to have a stormwater management plan to reduce runoff and the pollutants carried into District waterways. Under EISA, federal agency facilities are now required to retain stormwater runoff equivalent to the 95th percentile rain event, which is 1.7 inches of rain. DDOE is working with federal agencies, including EPA and Department of Defense, to find ways to enforce the requirements of EISA in all new stormwater management plans developed for federal properties located within District City limits. Since the federal government owns property comprising fully one-third of the city's footprint, the District anticipates that

this ongoing cooperative effort will significantly enhance water quality in local waterways, as well as that of the Chesapeake Bay.

3. Incentive Programs: RiverSmart Homes Incentive Program

To address stormwater runoff in residential areas of the City, the District Department of Environment (DDOE) continues to operate the highly successful *RiverSmart Homes Program* which provides incentives for homeowners to install best management practices (BMPs) on their properties. The District currently offers up to $1,200 per homeowner to install one, or several, of the following landscape enhancements to help reduce stormwater runoff at the lot level: Shade Trees, Rain Barrels, Pervious Pavers, Rain Gardens, Bayscaping.

3.1. Green Roof Incentive Program

Since the early 2000's, the District has been working to install green roofs on new and existing buildings throughout the City. Green Roofs sequester stormwater and pollutants, such as nutrients, before they enter local waterways. In cooperation with DC Greenworks, DDOE implements a subsidy program providing $5 per square foot for installation of green roofs (up to 4,000 square feet in size) on new and existing properties. In cooperation with the Anacostia Watershed Society, DDOE implements a subsidy program providing $7 per square foot for new buildings with green roofs over 4,000 square feet in size.

4. New Regulatory Initiatives x 2

In the past two years, the District has implemented two new pieces of legislation that will help to improve conditions in local watersheds.

- With the passage of the city's *Comprehensive Stormwater Management Enhancement Amendment Act of 2008*, the District banned the use of coal tar pavement products on public and private property. Coal tar contains polycyclic aromatic hydrocarbons (PAHs) which are highly toxic chemicals that have been found to have harmful impacts on humans and animals, and are suspected to cause cancer. By banning all use of coal tar throughout the City, the District took aggressive steps to reduce the introduction of PAHs through stormwater runoff into the District's waterways and Chesapeake Bay.

- In 2009, the city ratified the *Anacostia River Cleanup and Protection Act*, also known as the "Bag Bill." This legislation placed a five cent fee on all plastic and paper bags used in local District businesses (e.g. grocery stores, pharmacies) in the hopes that there would be a reduction in the number of bags introduced as litter to District waterways. The District hopes this will help the city, and its regional partners, in meeting the goals outlined in the Trash Free Potomac by 2013 strategy, by reducing the enormous load of trash that ends up in our precious Anacostia River.

Delaware
Briefing for CBP Executive Council – June 3, 2010

Overview
In order to achieve Watershed Implementation Plan and 2-Year Milestone requirements on an aggressive schedule, the Delaware's Department of Natural Resources and Environmental Control (DNREC) has convened the Chesapeake Bay Interagency Workgroup. This Workgroup is made up of representatives from each DNREC Division, Department of Agriculture, Department of Transportation, Office of State Planning Coordination, County Conservation Districts, US Department of Agriculture agencies, US Geological Survey, and other stakeholders. Eight subcommittees have been formed to address: Agriculture; Urban Stormwater; Wastewater; Land Use and Comprehensive Plans; Restoration; Public Lands; Funding; and Information Technology. Subcommittees are tasked with: recommending and reviewing Total Maximum Daily Load sub-allocating methodologies to the various point and nonpoint sources within the basins; assessing current data tracking and reporting systems; determining maximum implementation goals and methods to estimate program and funding gaps; and assisting with writing and providing information for the Watershed Implementation Plan. Delaware has been busy implementing our 2009-2011 Milestone goals and a few activities are highlighted below.

Actions & Highlights
Delaware's 1999 Nutrient Management Law mandates that all farmers, golf courses, and other nutrient handlers develop and implement phosphorus (P)-limited nutrient management plans, maintain nutrient handling records, attend certification training, obtain and maintain nutrient certification, and submit annual reports. Since 2007, all farms requiring a nutrient management plan now have one and implementation levels will be maintained into the future.

The Delaware Department of Agriculture's Relocation Program moves poultry litter/manure from farms with insufficient land or high soil phosphorus levels to farms with nutrient needs or to alternative use facilities. This has resulted in relocating almost all of the excess litter in Delaware; most comes from Chesapeake Bay watersheds. Over 50% of the excess litter was sent to alternative use projects like the Perdue AgriRecycle fertilizer plant, which processed a total of 39,508 tons of Delaware's litter and 31,316 tons of Maryland's litter in 2009.

Delaware's Nutrient Management Commission continues to implement agreements with Delaware poultry companies (Allen's, Mountaire, and Perdue), resulting in the incorporation of the phytase enzyme in all feed, which helps poultry digest P and reduces the amount in litter. Phytase and other litter/manure amendments and handling practices have reduced the P content in litter by 30-40%. Poultry company agreements have also led to increased nutrient management education, certification, and stewardship, and additional funding for the Relocation Program.

The Delaware Department of Agriculture and DNREC have been working with EPA over the last year to prepare for modifying the State's current Concentration Animal Feeding Operation regulations in response to changes in the federal regulations. Delaware's revised regulations will be presented to the agriculture community and general public during the summer of 2010.

The Invista facility, which produces nylon in Seaford, has recently downsized their operations. Additionally, a monitoring study to better quantify their nutrient loadings in their discharge indicated that a reduction in permitted loads was warranted. The permit will be renewed this summer and the nitrogen loads will be cut in half – decreasing the amount of nitrogen allowed to be discharged into the Nanticoke River from 430,700 pounds per year to 215,350 pounds per year.

Delaware is working to improve the tracking and reporting of many best management practices in order receive more model credit. This year, cover crop data differentiated between early and standard plantings and the crop

species planted in most regions. Stormwater data was updated for the first time since 2004. Additionally, a new database to track stormwater BMPs, known as MUDtracker, is nearing completion and data will be extracted and electronically submitted to the Bay Program through the National Environmental Information Exchange Network, which is becoming a reporting requirement in 2010. Finally, a pilot program in the Choptank River and Gravely Branch watersheds will attempt to fill data gaps on voluntary agricultural BMP implementation.

Delaware recently re-assessed the funds available to do work in the Chesapeake Bay Watershed during this first 2-Year Milestone period and more funds will be available than originally anticipated. The original Milestones published reported that $16.948M could be available to do work in the Chesapeake and new estimates indicate that $25.307 million may now be available. While some sources of funds have been cut, other sources are expected to be greater than originally anticipated. This increase in funds is due to several factors.

- First, due to State fiscal shortfalls, State general funds for conservation practices were expected to be significantly decreased during the FY 2010 budget period. However, Governor Markell and the Delaware General Assembly were able to increase the amount of State general funds used for conservation practices.

- Secondly, funds from the Chesapeake Bay Watershed Initiative through the Natural Resources Conservation Service and Farm Bill were not initially included in the milestones because actual funding amounts were unknown at the time of publication. This source of funds will provide almost $6 million for conservation cost-share practices in Delaware's portion of the Chesapeake Bay Watershed during this milestone period.

- Finally, Delaware was also eligible for a one-time regulatory and accountability grant from EPA and these funds will help improve regulatory programs, WIP development, and track progress toward 2-Year Milestones.

DNREC's Division of Fish and Wildlife has been working to enhance American shad populations in the Nanticoke River. Most of the American shad that run up the Nanticoke River in the spring are returning to spawning sites in Delaware tributaries and headwaters. During the first five years of the project, American shad larvae were obtained from the Maryland Department of Natural Resources and stocked in the upper Nanticoke and tributaries. Division staff constructed a hatchery on the Nanticoke River, and by 2005 the project began rearing and stocking American shad larvae from collections of spawning adults from the upper River and tributaries. In 2009, an estimated 713,000 three-day-old larvae were stocked. Because the larvae in the hatchery are marked with tetracycline, they can be distinguished from wild juveniles by examining their otoliths (ear bones) under ultraviolet light. Since 2005, it has been determined that more than 30% of juveniles were of hatchery origin. In 2009, 22% of a sample of returning adult American shad that had been captured downriver in Maryland originated from the Division's hatchery.

DNREC and its local and private partners will launch the Nanticoke River Water Trail this summer. The 26-mile long trail will be accessed from at least six public sites. A map and guide will be available providing paddlers with information to safely plan their water-based recreational experiences and interpretation highlighting the area's rich history and noteworthy natural and cultural heritage.

Finally, under Secretary Collin O'Mara's leadership, DNREC will be reorganized in 2010 to improve communication and coordination between the previously five separate divisions. The new DNREC structure will have a Natural Resources focus and an Environmental Protection focus. Delaware's involvement in the Chesapeake Bay Program has reinforced the need to integrate good science, monitoring and assessment findings, environmental improvement recommendations, and implementation activities. This reorganization will advance our goals in the Chesapeake.

Pennsylvania
Briefing for CBP Executive Council – June 3, 2010

Overview

Pennsylvania's Chesapeake Watershed Implementation Plan (WIP)) will build upon three core elements that have already shown success: Milestone Implementation and Tracking; New Technology and Nutrient Trading; and Compliance. In 2009, Pennsylvania surpassed its goal to restore 3,300 miles of forest buffers by 2010. The state has planted a total of 3,901 miles of forest buffers along waterways since 2002. Among its new technology initiatives, Pennsylvania is promoting enhanced regional methane digesters to digest manure, produce electricity and substantially reduce nutrients. To facilitate the nutrient trading market, efforts are underway to create a Bank and Exchange in PennVEST that would buy and sell nutrient credits. On the private market, eight contracts for nutrient trades have been signed. Nonpoint Source Compliance is being addressed through Pennsylvania's Chesapeake Bay Agricultural Water Quality Initiate. It will use a targeted watershed approach to achieve agricultural compliance. Pennsylvania's Point Source Compliance Plan will continue to be implemented. Permits for the 63 Phase 1 wastewater treatment plants (85% of the load) have been issued.

Actions & Highlights

1. **Milestone Implementation and Tracking**. Pennsylvania will accelerate existing programs and improve BMP tracking.
   - The Department of Environmental Protection (DEP) has initiated revisions to Chapter 102 Erosion & Sedimentation Control regulations to address "animal heavy use areas," near stream activities, and mandatory 150 foot riparian forest buffers for impaired Exceptional Value and High Quality streams. Proposed revisions to the Manure Management Manual address a "workable" manure plan format, phosphorus, buffers, Animal Concentration Areas, winter spreading of manure consistent with approach taken in Pennsylvania's nutrient management program. DEP continues to work with county conservation districts and NRCS through Chesapeake Bay Implementation Grant to provide funds for 50 conservation district staff positions and 60-70 agriculture BMP projects annually.
   - PennVEST (PA State Revolving Loan Fund) has strategically used ARRA funding to improve water quality across the state. Investments in the Chesapeake watershed include:
     - $34.3 million for seven projects to eliminate 1216 malfunctioning on-lot systems.
     - $179 million for 17 projects to eliminate or reduce combined sewer overflows
     - 62 "green" infrastructure projects that will achieve a reduction of 1.3 million pounds of nitrogen, 4 million pounds of phosphorus and 1,055 tons of sediment per year.
     - $105 million for 17 projects to reduce nutrients and sediment to the Chesapeake Bay, including the $14 million Chesapeake Bay Foundation (CBF) Project.
     - The CBF Project will involve five county conservation districts and two private agriculture consultants to implement more than 200 agricultural BMPs and several anaerobic digesters on 66 farms. Farmers are required to have or restore forested buffers on all streams, have an updated conservation plan, and address sources of water pollution. The annual pollution reduction benefits are estimated to be: 1.3 million pounds of nitrogen; 444,957 pounds of phosphorus; 1055 tons of sediment; 17,547 metric tons of carbon reduced via carbon sequestration.

     From 2003 to 2009, PennVEST has provided $2.8 billion in funding for projects in the Chesapeake watershed. An additional $600 million is anticipated in 2010 and 2011. This will include a Nonpoint Source Program to support "Million Pound Projects" to accelerate BMP implementation.
   - Pennsylvania surpassed its goal to restore 3,300 miles of forest buffers by the year 2010. The state has planted a total of 3,901 miles of forest buffers along waterways since 2002. Pennsylvania is home to the largest Conservation Resource Enhancement Program (CREP) in the nation. DEP's CREP program delivers more than $50 million in state and federal assistance for BMPs and, unlike other federal Farm Bill programs, targets key edge-of-stream BMPs to maximize water quality.

- Tracking of Voluntary Agricultural BMPs: BMPs installed without government support are generally not reported to the EPA Watershed Model. DEP is funding 2 pilot projects in Lancaster and Bradford county conservation districts to address this issue. These pilots will include Agricultural Core Four BMPs, Aerial Surveys of Buffers, Farm Visits, Streambank Stabilization and Dirt and Gravel Roads. Starting in 2011, the results of the pilots will be used to direct similar activities in conservation districts throughout the Chesapeake Bay watershed.

2. **New Technology and Nutrient Trading**

Nutrient trading has served as a platform to promote new technologies to address excess manure. DEP is working with a number of companies to install varying technologies.

- The Cove Area Regional Enhanced Methane Digester will service 2 counties. Its patented water treatment process removes nutrients and discharges nearly potable water.
- EnergyWorks' Energy and Nutrient Recovery Facility will process egg layer manure, capture and convert nitrogen and recycle ash by-products that contain phosphorous and other minerals.
- ElectroCell passes electricity through conductive manure liquids. The process makes nutrients more available for plant uptake, reduces nutrient content, and substantially reduces odor.

Current activity in PA's Nutrient Trading Program includes the following:

- DEP is codifying its Nutrient Trading Policy in Chapter 96 regulations.
- PennVEST awarded a contract to Chicago Climate Exchange in January 2009 to establish a framework for a "Bank and Exchange." It will purchase nutrient reduction credits to establish a portfolio of available credits, and sell credits for a set price and time period. The first auction will be held this spring.
- To date, PA's Nutrient Trading Program has approved 55 proposals for the generation of credits: 1.7 million TN credits; 202,000 TP credits. Eight contracts have been completed in nonpoint to point source trades.

3. Compliance

- Pennsylvania's Point Source Compliance Plan will continue to be implemented. Permits for the 63 Phase 1 wastewater treatment plants (85% of the load) have been issued. Permits for the 47 Phase 2 plants (10% of the load) will be issued by the end of 2010 or early 2011. The 73 Phase 3 plants (5% of the load) received 92.8a letters to initiate the permitting process in March 2010.
- The development of a Chesapeake Bay Agriculture Water Quality Initiative will be the focus of the agriculture workgroup for Pennsylvania's WIP. DEP's draft framework and EPA comments were provided to the workgroup for consideration as they develop their work products.

Other Activities:

- The Pennsylvania Fish and Boat Commission and partners have completed in excess of 75 fishway and dam removal projects in the Susquehanna and Potomac watersheds reopening hundreds of stream miles to fish.
- Pennsylvania is the first state to meet the Chesapeake 2000 Agreement goal to permanently preserve from development 20% of the land area in its Bay watershed. Over three million acres are preserved. Since 2003, the Department of Conservation and Natural Resources has spent $106.7 million in state funds for land acquisition in the Bay watershed.
- The Department of Agriculture has also invested to preserve lands through its Agriculture Conservation Easement Program. More than 425,000 acres represent some 3,900 preserved farms that are required to follow a conservation plan. Since 2003, $147 million has been spent in Pennsylvania's Bay watershed.

New York
Briefing for CBP Executive Council – June 3, 2010

Overview

In 1983, a Chesapeake Bay Program formalized to help improve scientific understanding and to confront various negative impacts to living resources observed in the Bay, including water quality impairments. In 2000, the Chesapeake Bay Program sought New York's formal participation in its water quality restoration efforts. At the time, New York signed a Memorandum of Understanding agreeing with the seven watershed jurisdictions and the EPA to work cooperatively to achieve nutrient and sediment reductions and, among other things, to pursue fairness and equity.

New York's unique story among the Chesapeake Bay watershed states is this: Due mainly to its rural and forested landscape, the conservation stewardship ethic of its landowners and residents, the strength and delivery of New York's core Clean Water Act programs, and population decline over the last 25 years, nutrient concentrations in the Susquehanna River leaving New York are low and declining. For instance, New York contributes about 25% of the Susquehanna River flow and, according to recent CBP figures, delivers only about 10% of its nitrogen load. This shows New York is a very dilute source, making large scale reductions especially challenging. Locally, only a few isolated cases of water quality/best usage impairments exist in the Susquehanna and Chemung River Basins in New York.

The omission of New York in recent federal and private investigative reports critical of Bay restoration progress and accountability appears reflective of New York's small footprint on the Bay, short tenure in the program, and remoteness from its economic and cultural influence. One might also reasonably expect the Chesapeake Bay Program, including EPA's pending Chesapeake Bay TMDL, to continue to reflect such equitable principles.

All things considered, New York is steadfast in its commitment to continually develop and improve an action-oriented and comprehensive Susquehanna-Chemung River Basin program in New York and to aggressively pursue its implementation. With a primary focus on protecting water quality and the natural landscapes that support it, improving aquatic habitat and reducing flood damages, principally through non-traditional "naturalized" flood control measures, New York expects such actions also to contribute to nutrient and sediment reduction for the benefit of Chesapeake Bay.

Building from extensive stakeholder input, New York developed a realistic Tributary Strategy in 2006 that describes practical cost-effective control measures to reduce nutrient and sediment loads, given sufficient time, funding and people for implementation. New York expects to, in essence, refine this Strategy into two-year increments, seek necessary funding assistance, and evaluate and integrate program innovations as better information and new science dictate.

New York
Briefing for CBP Executive Council – June 3, 2010

Actions & Highlights

Wastewater

- In accordance with the New York Tributary Strategy for Chesapeake Bay Restoration, permit modifications are being issued to 27 of the 28 Bay-significant discharges in New York. This adds nutrient action levels and a compliance schedule that requires nutrient removal optimization. Twenty-one of these permit modifications have been issued since 2008. The 28th Bay-significant discharge permit for the Binghamton-Johnson City WWTP is not being so modified because it recently completed a comprehensive rebuild that added nutrient removal treatment. This is New York' largest discharger in the basin, representing about 25% of New York's total wastewater nutrient load.

Concentrated Animal Feeding Operation permit enhancements

- In 2009, New York State issued the State Environmental Conservation Law permit for CAFO-sized farms that do not discharge or propose to discharge. This new ECL permit, in concert with the existing Clean Water Act permit, ensures that both medium and large sized animal agricultural operations are implementing appropriate management practices and nutrient management practices with a high level of regulatory oversight. Both of the New York CAFO permits require a Comprehensive Nutrient Management Plan that is written and annually updated by a New York State Certified Planner, with many practices being implemented and/or evaluated by a professional engineer. All management practices must meet the technical standards set by USDA-NRCS Conservation Practice Standards. NY CAFOs are making great strides meeting the technical requirements of these permits. The next step is compliance assessments through inspections.

Ecosystem-based watershed planning

- With 604(b) water quality planning component of the American Recovery and Reinvestment Act, on January 1, 2010, the Southern Tier Central Regional Planning and Development Board received an award to develop and implement a regional action plan for the Susquehanna and Chemung River Basins that integrates human needs, economic issues, environmental concerns and natural hazards (particularly floods).

Upper Susquehanna Coalition wetland program

- The USC wetland program includes restoration, construction, conservation, protection and research with its scientific partners. Wetland projects are successfully implemented by the combined efforts of specialized USC staff and program partners in a *vertically and horizontally integrated* system. This system combines wetland site identification, evaluation, delineation, survey, design, and monitoring with construction and heavy equipment expertise and allows the USC wetland program to complete any wetland project. Since 2005, the USC and its partners have restored over 1,600 acres of wetlands and created another 375 acres.

West Virginia
Briefing for CBP Executive Council – June 3, 2010

Overview

West Virginia agency staff, non-profits, residents, local governments and farmers have been working hard over the past year to implement our tributary strategy, our two-year milestones and to develop our state allocations and watershed implementation plan. Numerous state and federal resources have been brought to the table to facilitate these activities.

Actions & Highlights

■ At right, volunteers receive instructions on planting 590 trees and shrubs along Opequon Creek in Jefferson County on April 21, 2010.

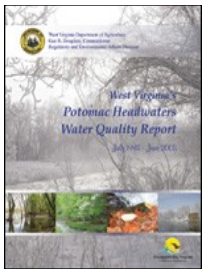
West Virginia Chesapeake Bay Web site
www.wvca.us/bay

► dedicated to the state's work in the Potomac to support restoration of the Chesapeake Bay.
► highlights West Virginia's Potomac/Bay Partners, TMDL progress, relevant documents, resources available, project examples, data sources and information.

Eastern Panhandle Conservation District's Agriculture Enhancement Program

► the state's first agriculture financial and technical assistance program.
► designed to enhance agriculture production while protecting water quality.
► features cost share on several practices that protect water quality including cover crops, stream fencing, water systems, stream crossings and riparian buffers.
► 84 farmers have enrolled in the program in Berkeley, Jefferson and Morgan counties, which have some of the highest rates for nitrogen delivery from West Virginia to the Chesapeake Bay.

Potomac Headwaters Water Quality Report
http://www.wvca.us/bay/data.cfm



► produced by the West Virginia Department of Agriculture.
► summarizes 10 years of monitoring data collected from 114 sites in 10 watersheds.
► presents the findings of the program for parameters such as temperature, dissolved oxygen, pH, conductivity, total phosphorus, ammonia-nitrogen, nitrate-nitrogen and fecal coliform.

West Virginia Two-Year Milestones

► developing West Virginia's Water Quality Nutrient Trading Program.
► identifying funding options for nutrient upgrades to wastewater treatment plants.
► funding sources are in place for implementation of the planned practices for the two-year period.