CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

By Any Measure, Pennsylvania Does Not Have the Resources to Meet Its Chesapeake Bay Cleanup Commitments

The following document is not an indictment of the Department of Environmental Protection staff, but is a reflection of the current prioritization of resources by the Administration and General Assembly.

Recently, Secretary of Environmental Protection John Hanger told the Senate Appropriations Committee he thought Pennsylvania had the resources in place to help communities and farmers meet the federal Clean Water Act mandate to reduce nutrient and sediment loads going to the Chesapeake Bay, "if nutrient credit trading works."

We believe the Secretary's statement is overly optimistic given the specific commitments Pennsylvania has made to achieve the cleanup milestones, including those to be achieved by the end of 2011 which is just 21 months away.

2011 Commitments Made By Pennsylvania

In the fall of 2009, the U.S. Environmental Protection Agency (EPA) released a report detailing the commitments each Bay government promised to complete by 2011. Even a cursory review of the practices and plans required to be in place by the end of 2011 and the experience Pennsylvania has had implementing these practices from 1985 to 2008 indicate we must double and in some cases quadruple, the resources we now have to achieve the specific goals. For example, from the end of 2009 until the December 2011:

- *Forest Buffers.* DEP has committed to implement over 19,000 acres of new forested buffers between 2009 and the conclusion of 2011. By comparison, between 2001 and 2008, a total of 29,673 acres of buffers were installed. This equates to 10.2 acres per day, 7 days a week. The commitment by DEP more than doubles that rate to 26.1 acres per day, every day, from now through 2011.

- *Nutrient Management Plans*. Between 2001 and 2008, approximately 151,263 acres per year included in newly developed plans. This equates to about 414 acres per day. By the end of 2011, Pennsylvania has committed to add 473,801 acres or 649 acres per day—a 235 acre per day increase.

- *Conservation Plans.* From 2001 to 2008, a total of 1,413,048 acres of plans were developed. This is equal to 144 acres per day. DEP has committed to implement an additional 327,770 acres or 449 acres per day from 2009 through 2011—a three fold increase.

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- *Non-Urban Stream Restoration*. Pennsylvania has committed to restore an additional 215,088 feet (40 miles) of streams through 2011. This equates to approximately 295 feet per day. From 2001 to 2008, the rate of restoration was equivalent to 38 feet per day. Or, in other words, an eight fold increase is required.

- *Tree Planting.* Between 2001 and 2008, Pennsylvania accomplished 5,875 acres of tree plantings, or 2 acres per day. DEP has now committed to plant 15,065 acres of trees or 21 acres per day, or a tenfold increase in the historical rate.

Although not comprehensive, this information easily indicates DEP must drastically increase the resources it has devoted over the last decade to convincing landowners to adopt these practices, planning their installation and installing the practices if Pennsylvania is to meet its commitments through the end of 2011.

Funding and Resource Shortfalls

In 2005 DEP itself determined there was a yearly funding shortfall of over $174 million in Pennsylvania's efforts to meet Chesapeake Bay obligations to meet Pennsylvania's nutrient and sediment reduction goals. Despite increases in the federal Farm Bill, cost-share funding for agricultural best management practices and the technical assistance needed to put these practices on the ground still lags significantly behind DEP's own estimate of the need.

Since 2005 there has been additional funding provided for certain programs, notably through the H2O Program and a $400 million water infrastructure bond issue, but they addressed only a very small portion of the $1.4 billion the Joint Legislative Budget and Finance Committee said in 2008 was needed to fund wastewater system improvements to meet Bay commitments. At the same time over $425 million in support for wastewater treatment plants was eliminated from the state budget since 2003.

Growing Greener Ends

The 2006 Growing Greener II bond issue, again although helpful, actually resulted in capping the funding for Growing Greener Program and a significant decrease in watershed restoration and agricultural best management practices support because the funding was spread out among other competing programs and $50 million was diverted from the Environmental Stewardship Fund to pay for other programs.

The Growing Greener II bond issue funding itself ends this year for projects and the income in the Environmental Stewardship Fund will be largely used to pay debt service on the bond issue for the next 25 years.

Cuts to REAP

The 2008 adoption of the Resource Enhancement and Protection (REAP) farm conservation tax credit program was again helpful providing an innovative and popular tool to help farmers install best management practices, but the modest $10 million

annual cap on credits initially was inadequate given the demand then, and has since been reduced to just $4.5 million for the coming fiscal year.

Cuts to Conservation Districts

Secretary Hanger's testimony before the Senate and House Appropriations Committees this year noted county conservation districts are on the front lines of the effort to implement Pennsylvania's milestones, primarily as they pertain to agriculture. Yet, funding for districts has been consistently reduced over the last seven years.

In FY 2009/10, conservation districts received an 11 percent cut from the previous fiscal year's appropriation. The Governor has proposed another 13 percent decrease in conservation district funding for next fiscal year. If enacted, the Governor's proposal will reduce the funding for conservation districts back to the level received more than ten years ago in FY 1999/00.

DEP has proposed changes to Chapter 102 regulations allowing conservation district to increase fees for erosion and sedimentation fees that should yield additional income for districts. The regulation is expected to be finalized before summer, but real income from the fees will not start flowing to districts until 2011.

Cuts in DEP's Budget

The General Fund budget for DEP has been consistently cut over the last seven years to the point where now the agency has lost 612 of the 3,211 authorized positions it had in 2002-03—19 percent of its staff. 258 positions were just eliminated in FY 2009-2010 alone. This 26 percent cut in DEP's General Fund budget (a 13 percent cut in operating funds) is proposed to be carried over into FY 2010-11 as well.

These cuts fall disproportionally on water-related programs, watershed restoration, and conservation district support staff in the agency, because they are supported by the General Fund. DEP has proposed increases in NPDES water quality permit fees to bring in additional income, but the comment period just closed on the rule and real income will not start flowing to the agency until 2011. The income is expected to be used to support existing staff.

Shortfalls Acknowledged

A 19 January 2010 letter by Secretary Hanger and Department of Agriculture Secretary Russell Redding, to U.S. Senator Ben Cardin of Maryland recognized Pennsylvania's significant shortfall in funding for technical assistance and for taking the compliance actions necessary to meet Pennsylvania's Chesapeake Bay obligations. The letter notes, among other things, that: *"…there is a critical shortage of technical assistance and compliance oversight staff in Pennsylvania."* (p. 2)

The letter advocates for significant increases in funding from the U.S. Department of Agriculture and EPA to overcome such shortfalls with no indication the state will

contribute any additional resources or make up for the resources eliminated from the state budget to address these issues over the last few years.

Specific Agricultural Funding Needs

Today, it is estimated that most farmers seeking assistance in implementing conservation practices on their land are not receiving support. For example:

- Roughly two-thirds of Pennsylvania farmers' requests for state and federal financial assistance cannot be met due to shortages of funds.

- The USDA Natural Resource Conservation Service (NRCS) currently has more than 3,000 applications for financial assistance from our farmers. Many of these requests are in the Bay watershed, totaling and total $80-130 million for this year. Only about $20 million is available.

- Pennsylvania's Plan Development Incentive Program has only enough funding to cost share approximately 100 nutrient management plans on farms per year. After years of no increases in the state's Nutrient Management Fund, recent cuts reduced the fund from $3.28 million to $2.85 million.

Specific Wastewater System Funding Needs

Some additional assistance has been made available to sewage treatment plants but it is nowhere near sufficient to relieve the burden of local ratepayers who will shoulder the costs associated with meeting the new pollution limits. The first phase of limits will be imposed by DEP in the fall of 2010 for 63 of the 184 largest wastewater plants in the watershed and will be systematically imposed on the smaller facilities starting in 2011.

- The 2008 report for the Joint Legislative Budget and Finance Committee by the private consulting firm Metcalf and Eddy estimated that sewage treatment plant upgrade costs will total $1.4 billion for the 184 plants within Pennsylvania's portion of the Bay watershed alone.

- In 2008, $850 million in grants and $400 million in grants and loans was made available for drinking water, sewer system upgrades, flood project projects, and high hazard dam repair across the state, for a total assistance package of $1.25 billion. Estimates indicate the total statewide need for just sewer infrastructure needs are $25 billion or more.

- Although no official accounting is available, the Pennsylvania Municipal Authorities Association (PMAA) has concluded that less than $100 million in assistance has been awarded to sewer plants to defray costs of compliance with Chesapeake Bay cleanup mandates. This represents only 14 percent of the total $1.4 billion cost. In comparison, the Metcalf and Eddy study by the Joint Committee determined that cumulatively Maryland and Virginia have dedicated over $1.6 billion solely to helping their sewage treatment plants meet Bay requirements.

We would be remiss not to mention that the strategy to implement sewage treatment plant nutrient limits, which was developed by DEP and the point source workgroup, is well-conceived and equitable.

Specific Stormwater Management Needs

As for urban stormwater pollution loads, the effort to achieve pollution reductions from this sector has been particularly troublesome, because Pennsylvania has failed to even begin to address what is by far the most expensive and difficult problem in meeting Chesapeake Bay cleanup mandates.

In 2005 DEP estimated the cost of reducing pollution from stormwater was over $5.6 billion, which is about $5 billion more than installing best management practices on farms and $4.2 billion more than the cost of upgrading wastewater plants in the watershed. Specifically:

- According to the EPA, from 1985 to 2008 Pennsylvania achieved only four percent of its nitrogen and two percent of its phosphorus pollution reduction commitments from stormwater control measures. During the same timeframe, agriculture made 45 percent of its nitrogen and 30 percent of its phosphorus cap.

- Unfortunately, DEP has not been willing or able to develop a comprehensive plan to address stormwater loads, particularly for older towns, boroughs, and suburban developments leaving these communities on their own with little financial ability or expertise to plan and implement practices on their own.

- Pennsylvania's administration of the federally required municipal separate stormwater sewer system (MS4) permitting program is widely acknowledged as being ineffective at achieving reductions in stormwater pollution. A model ordinance designed to aid communities in stormwater management has been delayed since the summer of 2006; reissuance of the permits has been delayed for three years.

- Stormwater plans under Pennsylvania's stormwater management act (Act 167) were to be completed almost 30 years ago; many watershed plans have still not been developed or are outdated. DEP found that a large percentage of municipalities have failed to adopt ordinances mandated by the Act. The program to assist counties has been underfunded for decades and, in fiscal year 2009-10, the legislature zeroed out funding assistance to counties altogether.

- In 2003, DEP issued a Comprehensive Stormwater Policy promising to fully integrate the stormwater program so as to fully meet the state's water quality standards. This has yet to come to pass. Technical guidance documents and permitting programs are weak or nonexistent; implementation has been inconsistent.

Simply stated, it is difficult to comprehend how sufficient resources exist to meet our Chesapeake Bay obligations given the systemic and growing funding shortfalls identified above and fragmented patchwork of regulations and polices.

Nutrient Credit Trading – A Tool, Not A Solution

DEP acknowledged from the very beginning in 2006 the Nutrient Credit Trading Program would not result in meeting the Chesapeake Bay cleanup goals.

At a February 1, 2006 DEP Nutrient Trading Workgroup meeting DEP staff said: *"...baseline compliance for agriculture, combined with a trading threshold as currently defined in the Department's trading policy, do not result in all the reductions needed to meet Bay goals."*

In other words, while trading is a great tool for providing innovative and potentially cost-effective reductions designed to ease the burdens on sewage treatment plants and other point sources, even under the most optimistic scenario, the trading program will not be the means by which Pennsylvania agriculture meets its load reduction obligations, let alone achieve the overall pollution limits from all sources.

The program is simply not designed to achieve this. This was a conscious decision by DEP so it could jump start credit generation, but it has left the agricultural community uncertain as to how much effort remains, particularly on a per farm basis, and how much that will cost.

EPA is Driving Decisions

EPA is beginning efforts to define what practices they believe are necessary in Pennsylvania and is exploring steps needed to enforce those requirements directly, potentially bypassing DEP. Because of DEP's unwillingness or inability to define minimum requirements for farmers and developers, Pennsylvania may essentially relinquish to EPA these decisions and penalties for not complying.

Chesapeake Bay TMDL

In compliance with the federal district court settlement decrees entered on 11 June 1999, the EPA in September 2009 officially initiated the process to establish a Total Maximum Daily Load (TMDL) for nutrients and sediment for all impaired segments the Chesapeake Bay. Under the agreement, if impaired portions of the Chesapeake Bay were not returned to non-impaired status by 2010, EPA was obligated to complete a TMDL by 01 May 2011.

A TMDL establishes the maximum allowable amount of pollution a waterbody can accept without causing a violation in water quality standards. For all waterbodies found to be impaired, the Clean Water Act Section 303(d) requires the establishment of at TMDL.

The scope of EPA's Chesapeake Bay TMDL includes all nutrient and sediment sources, including air, from throughout the 64,000 square mile watershed. Each Bay state and Washington D.C. will receive a total maximum amount of nutrients and sediments allowed to be delivered to the Bay on an annual basis (i.e., a cap load).

Specific load allocations for each jurisdiction are scheduled to be released December 2010; final allocations, with source specific caps will be completed by December 2011. The target to achieve the pollution reductions necessary to meet the Bay TMDL is 2025.

As part of the TMDL implementation process, EPA is requiring each jurisdiction to develop a Watershed Implementation Plan (WIP). These plans are to be developed and implemented in 2-year timeframes. Each plan must be approved by EPA. Pennsylvania's interim plan for 2009-11 was released in the fall of 2009. These plans must include specific practices to be placed, the sources and levels of funding available within the 2-year timeframe, and new or altered policies or regulations necessary to achieve full implementation. The WIPs will be obligations, not goals. Failure to meet these obligations could result in several enforcement actions by EPA.

Penalties for Non-Compliance

On 29 December 2009, EPA sent letters to each state within the Chesapeake Bay watershed, and the District of Columbia, regarding the agency's potential use of existing authority to impose penalties on states to assure achievement of Watershed Implementation Plans, as part of the Total Maximum Daily Load Plan scheduled for completion by December 2010. Potential EPA actions outlined in the letter include:

- Require more farms and other businesses to obtain NPDES permits for their activities using the agency's "Residual Designation Authority."

- Actively review all draft major and minor NPDES permits considered by DEP and object/deny permits, such as for new development and Concentrated Animal Farm Operations (CAFO) permits, which are not consistent with required Bay TMDL pollution reductions.

- Require pollution offsets that result in an overall net pollution reduction for any new or increased NPDES discharges, and including for the first time those for new development and CAFOs.

- Establish a watershed by watershed cap on new pollution loads, rather than a Bay watershed-wide cap as currently planned.

- Require sewage treatment plants to make additional nutrient load reductions to the limit of technology, which would be several times more stringent and costly than today's standard.

- Increase and target federal enforcement and compliance oversight for all regulated sources of nutrient and sediment pollution, including air pollution.

- Limit eligibility for federal grants to only those facilities that meet or exceed their nutrient reduction limits.

- Establish and enforce in-stream water quality standards for nutrients for each river and stream in the watershed.

EPA Enforcement Already Underway

In fact, EPA has already initiated efforts to advance enforcement actions in Pennsylvania.

This past fall EPA fined 12 communities for violating the MS4 urban stormwater permit program. Eleven of these communities were within Pennsylvania's Bay watershed. EPA's review continues and may yield additional violations.

In the Watson Run watershed, a tributary to Pequea Creek, in Lancaster County, EPA visited all 24 farms within the small three square mile creekshed. Most of the farms were found to be using cover crops and no-till or low-till farming and most had their soil tested. Yet, only three of the 24 had farm conservation plans as required by state law. And during storms, EPA observed manure-laden water running through barn lots and fields into Watson Run.

Although no immediate enforcement action was undertaken by EPA, farmers are expected to install best-management practices where necessary or face enforcement actions in the future. As with the urban stormwater issue, EPA has expressed that they shall continue to systematically investigate agricultural settings, particularly in areas such as Lancaster County.

The potential and current actions or consequences identified above are available to EPA under its existing authority. If that authority increases or changes EPA may take additional actions.

DEP Lacks Information on Farm Compliance to Determine Credits Available

What is not readily acknowledged is that Pennsylvania simply does not have the information to confidently determine how many farms are currently at legal baseline compliance, let alone above the threshold, and therefore able to generate credits.

In reality, DEP only becomes aware of a farm's specific status when a farm applies for nutrient reduction credits, which has only happened nine times so far. Without knowing how many farms are currently able to generate credits or will be in the near future, DEP cannot accurately determine whether sufficient credits will be in the marketplace when they are needed.

It is vitally important to recognize trading will not provide any resources to help individual farming operations achieve compliance with existing state regulations and with additional requirements under the Chesapeake Bay Total Maximum Daily Load (TMDL), which is, understandably, the core concern of the agricultural community.

DEP Has Not Made Basic Decisions on How Much Credit to Give

Despite years of requests from farm, municipal, county, building and environmental communities, DEP has yet to establish simplified practice-specific protocols (or cookbook) to aid applicants in determining the pollution credits they could generate for

each practice installed. Instead of a simple numeric worksheet or check list for specific practices, DEP continues to review every application as a standalone individual process.

NutrientNet, a online spreadsheet developed by the World Resources Institute for DEP that calculates potential credit generation, does offer some guidance but is limited in its ability to consider site-specific conditions. And, not all farmers may be familiar with such online tools or have the necessary access to the internet. Furthermore, the results of NutrientNet are not final but simply a ballpark estimate from which to enter into discussions with DEP.

The fact that individual farmers who may be interested in participating in the Nutrient Credit Trading program have to either hire a professional consultant to develop their proposal and enter into protracted discussions with DEP has an inhibiting impact on the trading program. As a result, most individual farmers have not participated in the program.

The vast majority of the credit proposals to date are from large and expensive technology-based practices, or simply hauling manure out of the watershed, as opposed to typical conservation practices accessible to the average family farmer.

PENNVEST Involvement in the Nutrient Trading Program

Although the entrance of the Pennsylvania Infrastructure Investment Authority (PENNVEST) into the trading marketplace is welcomed and will hopefully prove successful, there currently are no clear indications that this will be the case. In fact, many of the systemic inhibitors to sewage treatment plant participation in the trading marketplace appear to remain:

- Based on recent research and completed trade agreements, the cost per pound of pollution credits generated by agriculture appears to be routinely more expensive than those from capital upgrades by sewage treatment plants, when amortized over 30 years.

- Whether it is capital upgrades or the purchase of nutrient credits, the cost to sewage treatment facilities is substantial. Pollution credits are not “cheap.” Given that, most authorities will need to raise rates or borrow money to pay for nutrient reductions, many chose to invest in a "brick and mortar" facility that they will ultimately own.

- Many lending institutions have been hesitant to issue loans for something that does not result in a tangible "bricks and mortar" investment.

- Despite contractual obligations which attempt to shield sewage treatment plants from legal responsibility in the event of failure in generating the agreed upon credits with a farmer, many sewer authorities remain hesitant to take on the potential legal liability.

PENNVEST's protocols for their involvement are still in flux. A "mock" trading auction is planned by PENNVEST with the goal of the first auction in the fall. This, however, will be too late for the 63 first phase plants. And, unfortunately, it may also be too late for

the second phase plants, which must meet permits beginning in the fall of 2011. We hope this is not the case.

We Are Far From Meeting 2011 Cleanup Goals

As detailed above, we find it difficult to come to terms with Secretary Hanger's statement that sufficient resources exist to meet our Bay obligations, even if trading is successful. Conversely, we believe Pennsylvania must reverse course and reinvest in our agencies and the programs they administer so we can meet our Chesapeake Bay requirements.

The economic realities facing Pennsylvania today require difficult choices in the budgetary process. In our opinion, conditions dictate that Pennsylvania focus limited financial resources on our obligations over the discretionary. Simply stated, Pennsylvania's effort to restore locally impaired waterways and the Chesapeake Bay is an obligation under the federal Clean Water Act, not an option.

The Chesapeake Bay Foundation and many other groups stand ready to assist DEP and the Commonwealth to come up with the creative and innovative solutions needed to meet Pennsylvania's Chesapeake Bay cleanup mandates.

All that is needed is a willingness to accept this dialogue, before others start making irreversible decisions for us.