



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Office of Water Management

Improving Local Water Quality in Pennsylvania and Restoring the Chesapeake Bay

John Quigley, Secretary, Department of Environmental Protection

Russell Redding, Secretary, Department of Agriculture

**Cindy Adams Dunn, Secretary, Department of Conservation and
Natural Resources**

Dial-in number for Audio: 1-415-655-0003

Access code: 663 709 656

WebEx Technical Support: 1-866-229-3239

Opening Remarks

Russell Redding
Secretary, Department of Agriculture

A Legal Obligation

- Federal Clean Water Act, federal court orders and regulations finalized by the U.S. Environmental Protection Agency (EPA) in 2010 require Pennsylvania to reduce annual loading of nitrogen, phosphorous and sediment entering the Chesapeake Bay watershed and return Bay waters to state water quality standards by 2025
- Pennsylvania's Clean Streams Law

A Legal Obligation

- Article 1, Section 27 of the Pennsylvania Constitution:
 - The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.

Since 1985

- Investment: More than \$4 billion in Pennsylvania through various loan and grant programs toward Chesapeake Bay restoration efforts
- Results: Phosphorous down 25 percent, nitrogen down 6 percent, sediment reduced nearly 15 percent
- Significantly reduced discharges of nutrients from point sources, such as wastewater treatment plants

2010 Total Maximum Daily Load

- As a result of the federal consent decree, in 2010 EPA established a Total Maximum Daily Load (TMDL) for the Bay
- Implementation of this TMDL requires us to develop plans to meet specific target reductions in nitrogen, phosphorus and sediment loads in phases
- Pennsylvania's Phase 2 Watershed Implementation Plan (WIP) has interim targets for these reductions to be achieved in 2017

2010 Total Maximum Daily Load

- Despite our investments and efforts to date, Pennsylvania will not meet 2015 and 2017 reduction targets
- On track for meeting phosphorous reduction goals, but not meeting nitrogen and sediment goals
 - Agriculture
 - Urban stormwater

▶ Consequences of Not Meeting Goals

- U.S. Environmental Protection Agency has taken two actions, and is considering more:
 - Withholding more than \$3 million in funding for DEP Bay-related work
 - Considering progressive actions that increase EPA's role in inspections, permitting and compliance in the Bay watershed in Pennsylvania

Why Pa. is Falling Short on Goals

- Resources have been inadequate to the scale of the challenge
 - August 2013 - PSU Environmental and Natural Resources Institute estimated the resource requirements to fully implement nonpoint source BMPs in Pennsylvania's Watershed Implementation Plan (WIP):
 - \$3.6 billion in capital costs to fully implement all nonpoint source BMPs in the WIP, in incremental levels between 2011 and 2025
 - \$378.3 million per year through 2025, including Operation and Maintenance costs

Why Pa. is Falling Short on Goals

- In FFY 2014, \$146.6 million (combined state and federal funding) was spent on programs to address nitrogen, phosphorus and sediment reduction statewide
 - \$127.6 million (87%) was used for BMP deployment

Why PA is Falling Short on Goals

- Data to measure current Chesapeake Bay pollution reduction efforts for agricultural and urban stormwater pollutant sources is fundamentally inadequate
 - Relies overwhelmingly on installation of Best Management Practices (BMPs) where a portion of the cost was shared by federal or state government
 - Non-cost shared BMPs not counted

Why Pa. is Falling Short on Goals

- The Bay watershed in Pennsylvania is home to more than 33,600 farms
 - EPA recommends that DEP inspect **10 percent of farms annually**
 - In 2014, DEP conducted a total of 592 inspections, which equates to a **1.8 percent** inspection rate

Why Pa. is Falling Short on Goals

- The Bay watershed in Pennsylvania has 206 MS4 communities with an estimated 10,000 discharge sites
 - EPA recommends that DEP inspect **10 percent of the MS4 systems annually**
 - In 2014, DEP conducted 25 field inspections, achieving 10% for the first time
 - Significant compliance with MS4 permitting requirements in the Bay watershed is uncertain until the 10% inspection rate is consistent

Why Pa. is Falling Short on Goals

- Inspection and verification activities related to agricultural and urban stormwater sources have been the missing piece
 - Creating a culture of compliance with existing regulatory requirements
 - Documenting pollutant reductions necessary to meet our targets
- If these basic functions of BMP documentation and verification of compliance are not given their proper attention, Pennsylvania's performance in meeting water quality goals and Bay performance measures will continue to seriously lag

The “Reboot”

- Pennsylvania must change its approach for the Chesapeake Bay
- DEP cannot work alone and be successful
- DEP and the Pennsylvania Departments of Agriculture (PDA) and Conservation and Natural Resources (DCNR) collaborated strongly in this effort to coordinate plans, policies and resources
- Working with our agency partners and a number of external partners and stakeholders, DEP has developed a plan aimed at improving local water quality in Pennsylvania – and by virtue of that, the Chesapeake Bay

Importance of Clean Water Here

- **PENNSYLVANIA-CENTRIC GOAL:**
 - Improve local water quality by reducing nitrogen and sediment loads in Pennsylvania waterways
 - By virtue of achieving local water quality improvements, ultimately restore the water quality of the Chesapeake Bay
- **STRATEGY:**
 - Focus and increase resources and technical assistance, reinvigorate partnerships, organize for success, and create a culture of compliance

Importance of Clean Water Here

- **TOOLS:**
 - Plan is based on increased enforcement, improved data gathering and recordkeeping, increased management focus, and additional financial and technical resources
- **APPROACH:**
 - Reasonable, incremental and balanced

Six Elements to Plan

1. Address pollutant reduction by: a) meeting the EPA goal of inspecting 10 percent of farms and MS4s in the watershed annually, b) ensuring development and use of manure management and agricultural erosion and sediment control plans, and c) enforcement for non-compliance
2. Quantify undocumented Best Management Practices in watersheds impaired by agriculture or stormwater and put more high-impact, low-cost BMPs on the ground
3. Improve reporting, record-keeping and data systems to provide better documentation and obtain maximum credit toward Bay goals

Six Elements to Plan

4. Identify legislative, programmatic or regulatory changes to provide the additional tools and resources necessary to meet federal pollution reduction goals by 2025
5. Establish a DEP Chesapeake Bay Office to coordinate development, implementation and funding of Pennsylvania's Chesapeake Bay efforts
6. Obtain additional resources for water quality improvement

1. Address Pollutant Reduction

Strategy Based On:

- New partnership with Conservation Districts (CDs)
 - CDs work closest with farmers across the state
 - Existing funding will be used to shift from 100 educational visits to minimum of 50 inspections per year
 - Emphasize education **AND** compliance
 - Need for additional DEP staff reduced based on success of partnership

1. Address Pollutant Reduction

- Initial inspection focus:
 - Manure Management Plan
 - Erosion and Sedimentation Plan
- Plus
 - Renewed emphasis on riparian forest buffers, led by DCNR

2. Quantify and Multiply BMPs

- Locate, quantify and verify previously undocumented BMPs via comprehensive, voluntary farm survey
- Unprecedented partnership with:
 - Pennsylvania Farm Bureau
 - PennAg Industries
 - Professional Dairy Managers of Pennsylvania
 - Penn State University
 - Pa. Association for Sustainable Agriculture
 - Pa. Farmers Union
 - Pa. Assn. of Conservation Districts

2. Quantify and Multiply BMPs

- Put new high-impact, low-cost BMP projects on the ground in watersheds that are currently impaired by agriculture or stormwater by shifting an additional 15 percent of available statewide water quality funding (\$1,250,000) to Bay work.

3. Improve Record-Keeping

- Improve data gathering, reporting, record keeping
- Provide better and more accessible documentation of progress made toward Pennsylvania's restoration effort
- Obtain maximum credit for what Pa. farmers are doing
- Consider other data gathering tools, reporting requirements for the agriculture sector based on success of voluntary reporting measures

4. Identify Needed Changes

Identify changes to provide the additional tools and resources necessary to meet federal pollution reduction goals by 2025:

- Legislative
- Programmatic
 - Enhance nutrient credit trading
 - Interstate trading
 - Role of technology
 - Overcome barriers to BMP installation, such as riparian forest buffers
 - Others
- Regulatory

5. Establish a New DEP Bay Office

- Establish a Chesapeake Bay Office within a restructured DEP water programs deputation to coordinate development, implementation and funding of the Commonwealth's Chesapeake Bay efforts
 - Improve management focus
 - Improve accountability

6. Seek New Resources

- Restore existing federal funding
- Pursue additional federal funding
- Obtain additional resources devoted to local water quality and, ultimately, Bay compliance
- Work with public and private partners to identify funding and partnership opportunities for specific practices, such as riparian forest buffers

Value of This Approach

- Retarget existing resources to where they're needed most
- Strengthen ability to seek additional resources
- Restructure existing partnerships and create new ones
- Address chronic data gaps and get Pa. farmers credit they deserve
- Improve DEP management focus on local water quality improvement and the Bay
 - Short- and long-term

Value of This Approach

- Enhance ability to innovate
 - Credit trading
 - Interstate trading
 - Technology
- Improve information technology
- Create a culture of compliance – the missing link

The Power of Partnerships

DCNR

- Forest buffers one of most effective methods of improving local water quality
- Service foresters of DCNR have special expertise to work with partners, landowners and communities to plan and install buffers

Agriculture

- Promote farmers who “do the right thing” and ensure stakeholder engagement
- Provide Technical and administrative support for state agricultural BMP cost-share programs

The Power of Partnerships

Conservation Districts

- Boots on the ground, closest to farmers

Agriculture organizations

- Improve data gathering
- Improve farmer education

PSU College of Ag

- Data management
- Innovation

Riparian Forest Buffers

**Cindy Adams Dunn, Secretary
Department of Conservation and
Natural Resources**

Riparian Forest Buffer Initiative

Goals

- Implement a collaborative, comprehensive, flexible and community-based initiative
- Provide technical assistance for buffer establishment and maintenance
- Build and enhance community partnerships
- Complement the approach by DEP & the Natural Resources Conservation Service (CREP)
- Connects landowners and partners to funding opportunities



Riparian Forest Buffer Initiative

Outcomes

- 95,000 additional riparian forest buffer acres by 2025
- Enhanced conservation benefits
- Improved partnerships



We're All In This Together

- Local water quality in Pennsylvania is a shared responsibility
- Collaboration, partnerships, commitment and resources are key
- “The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come”
- Every farmer, community and citizen must do their part

DEP Mission

“To protect Pennsylvania’s air, land and water from pollution and to provide for the health and safety of its citizens through a cleaner environment. We will work as partners with individuals, organizations, governments, and businesses to prevent pollution and restore our natural resources.”