TESTIMONY OF J. CHARLES FOX
SENIOR ADVISOR TO ADMINISTRATOR LISA P. JACKSON
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
SUBCOMMITTEE ON CONSERVATION, CREDIT, ENERGY, AND RESEARCH
COMMITTEE ON AGRICULTURE
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Chairman Holden, Congressman Goodlatte, and Members of the Subcommittee, I am J. Charles Fox, Senior Advisor to Administrator Lisa P. Jackson, at the U.S. Environmental Protection Agency (EPA). Thank you for the invitation to speak today on the Chesapeake Bay Executive Order and the Federal Agency Strategy for implementing it. We appreciate greatly the interest of this Subcommittee in cleaning up the Chesapeake and in the valuable role that the agriculture community can play in doing so.

President Obama's Executive Order on the Chesapeake Bay defines a new era of shared federal leadership, one that is characterized by new levels of accountability, performance, partnership and innovation. In this regard, we intend to build on the progress made by the agricultural community and other sectors in the Chesapeake Bay watershed in implementing the important objectives of the Executive Order. The twenty-six year history of the modern Chesapeake Bay cleanup program suggests that we will need a new commitment and new tools to be successful in achieving our ambitious goals for the Bay and the watershed.

The Importance of the Watershed and the Bay

The Chesapeake Bay watershed encompasses 64,000 square miles, parts of six States and the District of Columbia. Nearly 17 million people live in the watershed. The land mass of the Bay watershed is sixteen times the size of the Bay, a ratio higher than any other estuary in the world. This means that our actions on the land have a profound impact on our local streams, rivers and, ultimately the Bay.

The Chesapeake Bay is the largest estuary in North America and is ecologically, economically and culturally critical to the region and the country. It is home to more than 3,600 species of fish, plants and animals. For more than 300 years, the Bay and its tributaries have sustained the region's economy and defined its traditions and culture. The economic value of the Bay is estimated at more than $1 trillion[1] and two of the five largest Atlantic ports (Baltimore and Norfolk) are located in the Bay.

The approximately 84,000 farms in the Chesapeake Bay watershed form a vital part of the watershed's economy and way of life. EPA believes that maintaining the viability of agriculture is essential to sustaining ecosystems in the Bay. Environmentally sound farming is a preferred land use in the Region and EPA is committed to working together with USDA to help farmers produce abundant and affordable foods while managing nutrients and soils in a

[1] *Saving a National Treasure: Financing the Cleanup of the Chesapeake Bay*, A Report to the Chesapeake Bay Executive Council, Chesapeake Bay Blue Ribbon Finance Panel, October 27, 2004

manner that helps to restore the Bay's water quality and the values and benefits that derive from clean water and a healthy, vibrant ecosystem.

The Health of the Bay

The main sources of nutrient and sediment pollution to the Chesapeake Bay and its tributaries are agriculture, urban and suburban discharges and runoff, wastewater, and atmospheric deposition (see Figure 1). While both nitrogen and phosphorus loadings have declined since 1985, significant additional loading reductions are needed to meet water quality standards (see Figures 2 and 3). Based on EPA's current estimates, to meet water quality standards by 2025 in the Bay, as specified in the President's Executive Order, nitrogen must be reduced by 84 million pounds per year from current loadings and phosphorus by 1.3 million pounds per year from current loadings.

It is clear that to achieve the loading reduction targets EPA, in collaboration with the Bay states and stakeholders, estimate are needed to achieve state water quality standards in the Bay and its tributaries, significant nutrient and sediment loading reductions are needed from each of these main pollution sources. Put differently, water quality standards cannot be met without a significant reduction of nutrients and sediments from each of these sectors.

Figure 1. Relative Responsibility for Pollution Loads to the Bay

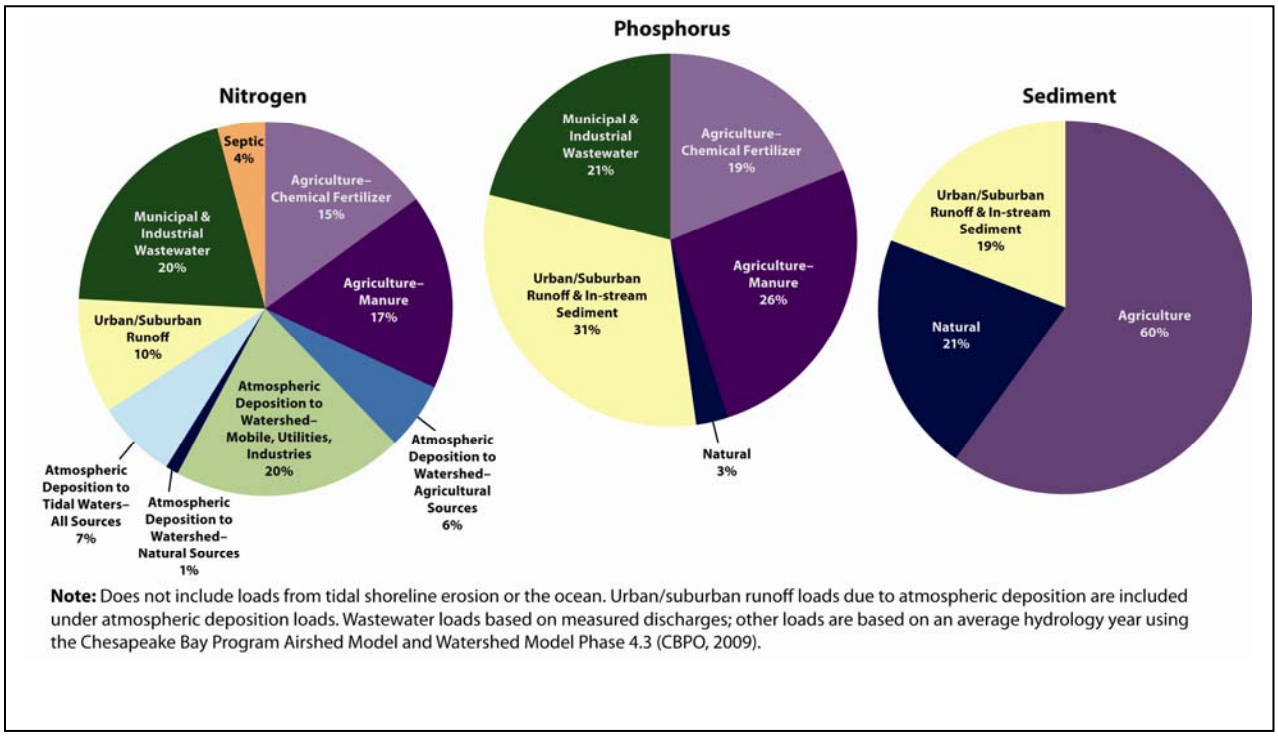
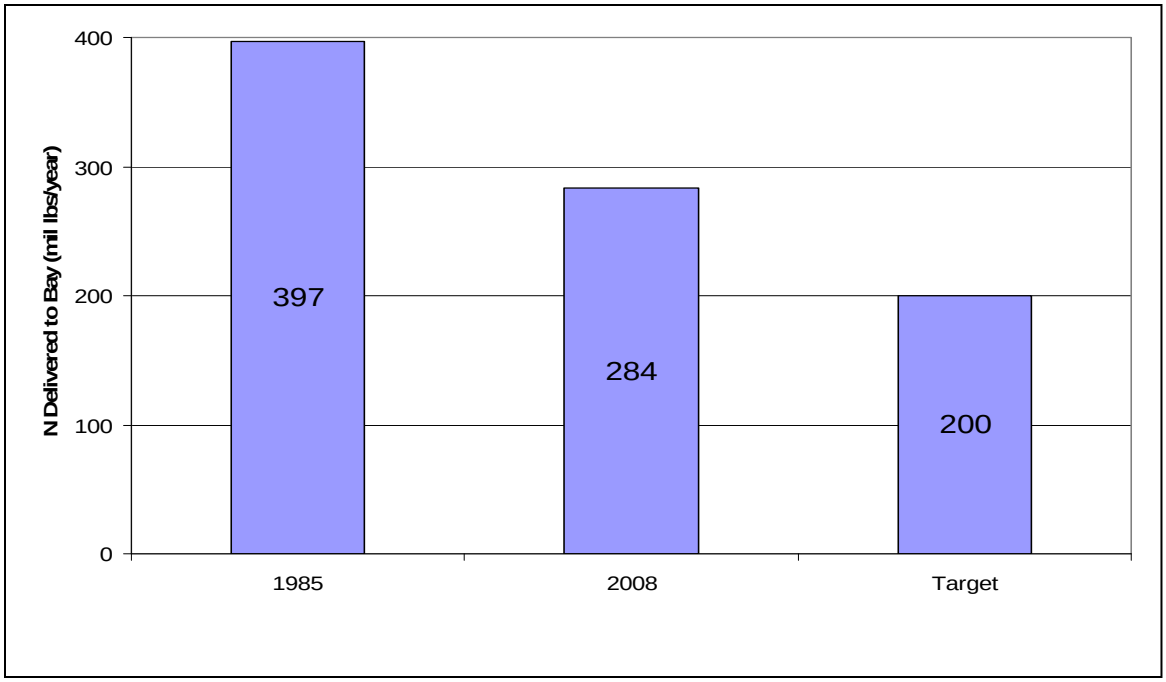
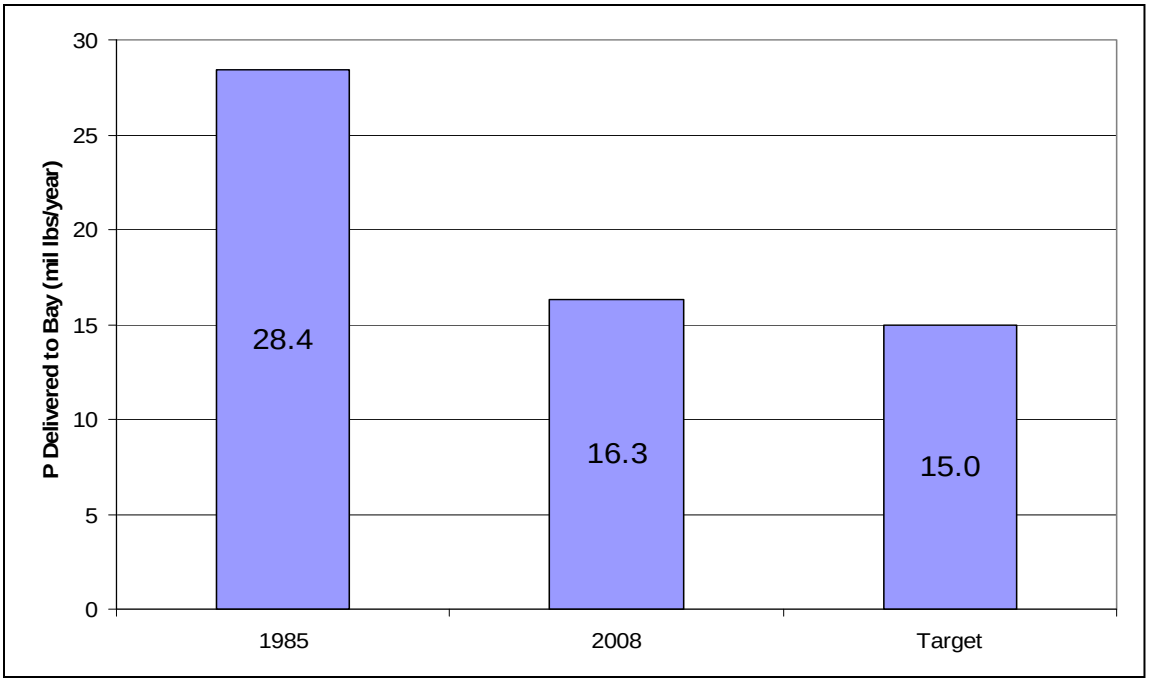


Figure 2. Total Nitrogen Delivered to the Chesapeake Bay from the Watershed



Source: Chesapeake Bay Program Watershed Model Phase 5.2 (2009)

Figure 3. Total Phosphorus Delivered to the Chesapeake Bay from the Watershed



Source: Chesapeake Bay Program Watershed Model Phase 5.2 (2009)

Much of the reductions in agricultural pollution since 1985 been achieved through implementation of nutrient management and conservation practices, and changes in land use. In addition to this historical progress, there are many current examples in the Bay watershed of the agricultural community's leadership in conservation. They include:

- **Manure injection technology on no-till systems**
  The Commonwealth of PA and other Bay states have made tremendous progress in sediment reductions by switching to no-till systems. EPA, through our Innovative Nutrient and Sediment Reduction Program, is funding a project to test manure injection technologies on farms throughout the watershed to not only get the sediment reductions from no-till systems, but to increase the nutrient crop uptake and lower the manure nutrient runoff from these systems. This technology will be tested soon on farms in Pennsylvania, Maryland and New York.

- **Advanced nutrient management**
  NRCS through the Conservation Innovation Grants program is funding a project that will showcase how enhanced nutrient management can be good for the farmers' bottom line and for the Bay. Demonstrating how farmers can lower nitrogen application rates on some fields by guaranteeing participating producers no loss in net income, is a great way to test out new approaches without negative impacts on the farmers' bottom line. This approach will be demonstrated soon in Pennsylvania.

- **Cover crops and ethanol production**
  EPA, through our Innovative Nutrient and Sediment Reduction Program is funding a project in Maryland that will target 7,000 acres per year in the Chester River watershed to plant commodity cover crops. The project will quantify nutrient uptake by winter small grain commodity cover crops and promote cover crop ethanol production. This work is good for the Bay and offers an additional revenue stream for the farmer.

- **Accelerated Agricultural Conservation**
  In the Commonwealth of Virginia, under Congressman Goodlatte's leadership the Virginia Waste Solutions Forum was formed to address the most pressing challenges of livestock waste in the Shenandoah Valley. EPA is pleased to be aligning our resources with the USDA Farm Bill funding to harness the collaborative efforts of the Virginia Waste Solutions Forum to accelerate nutrient reduction efforts in areas of high-density animal production in the Shenandoah Valley.

Still, agriculture remains the single largest source of nutrient and sediment pollution to the Bay, with about half of that load directly related to excess livestock waste. Agriculture covers about 25 percent of the Chesapeake Bay watershed, representing the largest intensively managed land use. USDA's 2007 Census of Agriculture estimates there are84,000 farms in the Bay watershed covering about 12.8 million acres. Excess livestock waste and improperly applied fertilizers still flow into creeks, streams and rivers, carrying excess nitrogen and phosphorus into the Bay. Aggravating this problem are certain cropland tillage practices that increase sediment and nutrient discharges to the Bay and its tributaries by contributing to erosion.

Pollution from urban and suburban stormwater is also significant and like agricultural sources, must be significantly reduced if the Bay's water quality standards are to be met. Since 1950, the number of residents in the Bay watershed has doubled. Experts predict that population will continue to rise, topping 19 million in the watershed by 2030. Low density, disconnected development -- commonly referred to as sprawl -- has been the predominant form of development in the Bay watershed for the past several decades and its impacts are very significant. New development that is spread-out, far from existing communities, schools, wastewater treatment facilities, shopping, and jobs brings increased impervious surfaces that do not allow water to filter into the ground. Instead, rainfall runs off, picking up pollution and quickly carrying it into waterways, increasing the volume and speed of storm water carried in nearby streams and rivers, eroding stream banks, and increasing rates of nutrient and sediment discharges downstream and into the Bay.

Clearly the manner in which we manage the impacts from such growth must be improved and new and successful practices like low impact development, and storm water retention and infiltration are necessary if this growth is to be accommodated on the landscape and the Bay's water quality standards achieved. Devising and delivering low impact development practices on the ground is every bit as important to reducing the impacts of urban and suburban development as conservation practices like livestock waste management, conservation tillage and buffers are to reducing impacts from agriculture.

Executive Order 13508

On May 12, 2009, President Obama presented all citizens who cherish the Chesapeake with an historic opportunity when he signed an Executive Order on Chesapeake Bay Protection and Restoration, directing a new era of shared federal leadership to restore the Bay. The Executive Order acknowledged that the efforts of the past 25 years to reduce pollution and clean up the Bay and its tributaries have yielded some progress. However, it concluded that the poor health of the Chesapeake remains one of our nation's most significant environmental challenges. Indeed, Administrator Jackson has emphasized repeatedly that communities in the Chesapeake Bay watershed expect and deserve rivers and streams that are healthy and thriving.

The Executive Order created a Federal Leadership Committee, chaired by EPA, to strengthen the role of the federal government in the Bay restoration and align the capabilities of EPA, and the Departments of the Interior, Commerce, Agriculture, Defense, Homeland Security, and Transportation. The Order directed federal agencies to prepare seven draft reports to support a joint federal strategy. These topical reports, on issues ranging from water quality to public access, were released in draft on September 10, 2009 and in revised form on November 24, 2009. At the same time these reports were being prepared, EPA conducted extensive outreach in public meetings and invitational sessions with agriculture leaders in the Bay watershed. We held public meetings with agricultural stakeholders in Frederick, Maryland and Harrisburg, met with key Chesapeake Bay leadership of the National Association of Conservation Districts, twice met with producers in meetings facilitated by NRCS and the

American Farmland Trust, and held numerous meetings with state agricultural agencies and producer groups. And we will continue to seek public review and comment on the Executive Order Strategy.

The Executive Order directed the Federal Leadership Committee to prepare and release a Draft Strategy for Protecting and Restoring the Chesapeake Bay. That Draft Strategy was released on November 9, 2009. It contains a comprehensive suite of federal initiatives that collectively support three objectives:

1. Restoring clean water,
2. Conserving treasured places and restoring habitats, fish and wildlife, and
3. Adapting for Climate Change.

To achieve these objectives, there are three mechanisms that pervade our approach:

1. Empowering local efforts by governments, citizens, and conservation districts;
2. Promoting science-based decision making, and
3. Establishing a new era of shared federal leadership.

The Draft Strategy is available online at: http://executiveorder.chesapeakebay.net. The formal public comment period opened November 9, 2009 and extends through January 8, 2010. The strategy will evolve significantly through public comments, state consultations and agency revisions before the final version is published in May 2010.

Actions to Restore Water Quality

The Executive Order challenged EPA to identify potential changes to programs, policies and regulations that would be sufficient to achieve water quality standards. The Strategy states the goal of implementing, by 2025, all pollution control measures needed to restore water quality and attain water quality standards. As explained in the draft Strategy, EPA is proposing three key steps to accomplish these pollution reductions:

1. Create **a new accountability program** to guide federal and state water quality efforts;
2. Initiate **new federal rulemakings** as needed and other actions under the Clean Water Act (CWA) and other authorities; and,
3. An **enhanced partnership between USDA and EPA** to implement a "Healthy Waters – Thriving Agriculture" Initiative.

New Accountability Program

The proposed new accountability framework builds on the requirements of Sections 117(g) and 303(d) of the Clean Water Act to establish new expectations to guide state and federal efforts for reducing nutrient and sediment pollution.

On November 4, 2009, EPA sent a letter to the six watershed states and the District of Columbia providing the Agency's expectations for the development of Watershed Implementation Plans (WIPs). These plans are a key element of this new era of ecosystem restoration, greater transparency and accountability, and improved performance.

Watershed Implementation Plans will express the specific intentions and commitments of the States, and through the States, the local partners, for achieving the Bay TMDL nitrogen, phosphorus and sediment load reductions necessary to meet Bay water quality standards. EPA expects Phase One plans to be submitted by November 2010 and include a description of the authorities, actions and control measures that will be implemented to achieve point and nonpoint source target loads and TMDL allocations. Phase Two plans, due November 1, 2011, will further divide loads at a finer scale and among smaller geographic areas.

EPA expects the States and the District to have controls in place for 60% of the necessary load reductions by 2017 as an interim milestone to meeting the 2025 goal. These plans will be further measured through a series of two-year milestones detailing near term actions to evaluate progress.

EPA's new accountability program, modeled on the Clean Air Act, also includes actions we may take in the event that jurisdictions do not commit to establish and implement effective restoration programs or do not achieve interim milestones. EPA plans to articulate these so-called "consequences" in greater detail in a letter to the states later this month, and they include:

- Revising the draft or final pollutant reduction allocations in the Bay TMDL that EPA will establish in December 2010 to assign more stringent pollutant reduction responsibilities to pollution sources where achievement of pollution reductions is more reliable;

- Objecting to state CWA National Pollutant Discharge Elimination System (NPDES) permits that fail to incorporate limitations consistent with the pollutant allocations in the TMDL;
- Acting to limit or prohibit new or expanded discharges of nutrients and sediments unless appropriate offsets are made;
- Withholding, conditioning, or reallocating federal grant funds; and,
- Taking other actions as appropriate.

New Federal Rulemakings and Actions

The draft Strategy calls for new clean water rulemakings to reduce pollution from concentrated animal feeding operations (CAFOs), stormwater, and new or expanding discharges of nutrients and sediment. With these rulemakings, EPA would significantly strengthen or clarify federal requirements that would further limit nutrient and sediment discharges to the Bay. EPA is also in the process of developing and implementing a number of regulations and programs that will continue to reduce nitrogen from a variety of stationary and mobile sources of air deposition. EPA expects the full slate of planned air program activities will result in at least an estimated additional seven million pounds of reduction in nitrogen loading to the Bay between 2010 and 2020.

It is important to note that with respect to the CAFO, stormwater and new or expanding discharge rules, EPA has expressed its willingness and desire to encourage state-level regulatory action in lieu of federal action whenever possible and appropriate. Nonetheless, EPA believes

initiating federal rulemaking in the areas outlined here provides important federal leadership in support of state regulatory action. As described in the Water Quality Report under Section 202(a) of the Executive Order, EPA plans to initiate rulemakings under the CWA to reduce nitrogen, phosphorus and sediment pollution to the Bay watershed from concentrated animal feeding operations (CAFOs), stormwater[2] and new or expanded dischargers. In the interim, EPA will continue to collaborate closely with the Bay states in establishing appropriate new programs that are consistent with the load reductions necessary to achieve water quality standards.

EPA will also implement a compliance and enforcement strategy that focuses on four key sectors: concentrated animal feeding operations, stormwater discharges, municipal and industrial wastewater treatment facilities and stationary air sources of nitrogen deposition. In addition, EPA will identify appropriate opportunities for compliance and enforcement activities related to the CWA section 404 program regulating dredge and fill operations, federal facilities, and Superfund sites, including remedial action and removal sites and Resource Conservation and Recovery Act (RCRA) corrective action facilities.

Enhanced Partnership between USDA and EPA

Let me emphasize again that EPA believes maintaining the viability of agriculture is essential to sustaining ecosystems in the Bay. Environmentally sound farming is a preferred land use in the region, and the Agency is committed to strong partnerships and collaboration

[2] More information: http://www.epa.gov/npdes/stormwater/rulemaking

with states and local governments, urban, suburban and rural communities, the private sector, and USDA to achieve the water quality and environmental objectives for the Bay. We want to work with USDA to align our resources to complement USDA efforts. Recognizing that well-managed forest and farm lands are the preferred land uses for water quality in the Bay, EPA and USDA have committed to developing and implementing a "Healthy Waters-Thriving Agriculture Initiative." Meeting the challenges in the Bay will require federal agencies to commit and coordinate resources on a scale that matches the scope of the environmental and agricultural issues in the region. EPA has a unique opportunity to undertake with USDA several new and ambitious efforts that build and expand on the strong working relationships that have been reinforced in developing the Chesapeake Bay Watershed Initiative. Our hope and commitment is to work with USDA to achieve significant improvements for the Bay itself and the farming communities in its watershed in several key areas, including:

- Strategically expanding intensive use of key conservation practices in the high priority agricultural watersheds by aligning EPA resources with those of USDA and other public and private partners to engage farmers in nutrient and sediment reduction efforts;
- Collaborating in development of next generation conservation planning tools with other federal, state, agricultural, and research partners;
- Aligning federal, state, and private resources and partnerships to establish high profile projects to tackle some of the most challenging agricultural issues facing the Bay; and

- Aligning EPA programs and resources with USDA efforts to achieve water quality improvements by developing critically needed tools and technologies to help farmers meet their conservation and farm operation objectives.

By aligning the resources and continued work of federal, state and local partners, EPA and USDA's collaboration can accelerate the wider adoption of conservation practices and support innovative efforts to address some of the most pressing challenges to meeting water quality and agricultural goals in the Bay. For example, EPA will target its resources as a catalyst for strong partnerships on local initiatives to address challenging agricultural issues such as keeping livestock out of streams and engaging small dairy operations in conservation.

EPA is also interested in working to expand market-based conservation opportunities. We believe markets for ecosystem services are an essential part of the solution to Bay impairment. EPA's 2003 National Water Quality Trading Policy and 2007 Water Quality Trading Toolkit for Permit Writers recognize and promote trading markets. We anticipate the 2010 Bay TMDL and state implementation plans will provide a basis for trading whereby landowners who reduce their nutrient discharges can generate nutrient credits in the process, and sell a portion of those credits on the open market. EPA is also supportive of wetland mitigation banking which creates a revenue stream for participating landowners and we are interested in promoting other types of markets such as carbon sequestration and endangered species habitat protection, which could also benefit landowners.

Closing

As I noted earlier, a fundamental challenge for the Bay's water quality is reducing pollutant discharges and run-off from both urban and suburban development and agricultural lands. Pollutant discharges and run-off to the Chesapeake from urban and suburban development are increasing, while nutrient and sediment loadings from agriculture have not declined enough to restore the Bay. Presently, we have a range of tools that we are implementing to tackle these problems and we have also laid the groundwork to achieve similar necessary pollution reductions from municipal wastewater and air sources of nutrients. We stand ready to work with the Subcommittee and other Members of Congress to explore these issues in the months ahead.

Across the Chesapeake Bay watershed, there have been important actions over the past 25 years - by farmers to implement nutrient management practices, such as installing buffer strips and fences; by homeowners to reduce energy consumption and storm water pollution; by localities to upgrade wastewater treatment plants and to reduce stormwater pollution; by developers to implement sediment and erosion control plans and implement smart growth practices; by states to expand land conservation and strengthen their water quality protection programs. These good efforts have helped to hold the line against further degradation of the magnificent Chesapeake Bay, they have not, however, been sufficient to restore the Bay to its once healthy condition.

The Chesapeake Bay Program's March 2009 annual Health and Restoration Assessment of the Chesapeake Bay and Watershed, known as the "Bay Barometer," documents what so many residents of the Bay watershed already know: the Chesapeake Bay ecosystem remains severely degraded, despite the concerted efforts of many people for more than 25 years. The data are sobering. Virtually all of the 13 measures which comprise Bay health show conditions that fall short of restoration goals.

Although we face daunting challenges, in all my conversations with government officials and citizens around the Bay, I have heard a strong sense of optimism for the future. Scientists have learned much about the Bay and that knowledge is being used by managers to help plan and evaluate new policies and practices. Our region's elected officials are engaged as never before. At EPA and partner federal agencies, we have clear direction from the President to provide the leadership necessary to protect and restore the Bay. We have a wonderful opportunity to build on the work of farmers in the Chesapeake Bay watershed to make a clean and healthy Chesapeake Bay a reality.

I greatly appreciate your support in simultaneously addressing the agricultural sustainability and water quality restoration imperatives in the Chesapeake Bay watershed. Thank you again Chairman Holden, Congressman Goodlatte, and Members of the Subcommittee, for the opportunity to appear before you today.