Jefferson County
&
The Chesapeake Bay Initiative

Prepared By
Jefferson County Engineering Department
November 1, 2011

Introduction

The Chesapeake Bay Initiative is an effort to reduce pollution to both local streams and the Chesapeake Bay, improve water quality, and restore aquatic habitat. The Chesapeake Bay watershed includes an eight county area in West Virginia which will be required to do its part to reduce pollution to the Chesapeake Bay.

Chesapeake Bay Facts

The Chesapeake Bay is approximately 200 miles long and runs north-south from the mouth of the Susquehanna River to the Atlantic Ocean. The Chesapeake Bay watershed is 64,000 square miles and has 11,600 miles of tidal shoreline. The bays width ranges from 3.4 miles to 35 miles. The watershed encompasses parts of six states: Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia, as well as Washington D.C. There are about 150 major rivers and streams in the bay watershed.

The Chesapeake Bay supports more than 3,600 species of plants, fish and animals. The Chesapeake Bay is a commercial and recreational resource for more than 16 million people who live in its watershed. The bay produces about 500 million pounds of seafood per year.

Fourteen percent (14%) of West Virginia drains into the Potomac River and on to the Chesapeake Bay.

Water Quality Issues

Everything we do on land – including the use of automobiles, fertilizers, pesticides, toilets, water and electricity – affects our streams, rivers and the Bay.

Stormwater carries a host of contaminants from the land into the water: sediment, phosphorus, nitrogen, toxic metals, herbicides and pesticides, organic material, oil compounds, and bacteria. Roadways, for example, release oil and grease,

tailpipe emissions, and other toxics from motor vehicles. Lawns contribute fertilizer and animal waste. Construction sites release quantities of mud and sediment.

In the Bay's tributaries, eroded material and dirt from the land become suspended in the water, blanketing aquatic habitat. Sediment keeps sunlight from reaching underwater grasses. As these plants die, the animals that rely on them are imperiled.

In addition to sediment, the leading threat to the health of the Chesapeake Bay is excess nitrogen and phosphorus pollution that destroys habitats and causes fish kills. The top sources of these pollutants include agriculture, sewage treatment plants, stormwater runoff from urban and suburban land development, and pollution from automobiles, factories and power plants. Stormwater pollution is responsible for about 19 percent of the nitrogen and phosphorus pollution in the Bay

Too much nitrogen and phosphorus cause algae blooms that block sunlight to the underwater grasses. When the blooms decompose, they consume oxygen and create “dead zones,” where dissolved oxygen levels are too low to sustain marine life. Underwater grasses filter polluted runoff, provide food for waterfowl, and provide essential habitat for blue crabs, juvenile rockfish (striped bass), and other aquatic species. Underwater grasses also take up nitrogen and phosphorus pollutants that, in overabundance, lead to algae blooms that can degrade water quality. By providing capture of the first one inch of rainfall runoff, stormwater quality controls can reduce nitrogen and phosphorus by 90% from new land development, thus allowing these grasses to recover. Scientists believe that increasing bay grass coverage will result in dramatic improvements throughout the entire Bay ecosystem.

The U.S. Environmental Protection Agency (EPA) has developed a Bay-wide “pollution diet” that outlines the maximum amount of nitrogen, phosphorus and sediment pollution each state in the watershed can contribute to the Bay in order to improve the water quality.

History/Timeline – Bay Cleanup Efforts

- 1983: The EPA signed an agreement with the state of Maryland, the Commonwealths of Pennsylvania, and Virginia, and the District of Columbia recognizing the need to act to clean up the Bay.
- 1987: The governments signed another agreement that required a 40 percent reduction in nutrient pollution to the Bay by year 2000.
- 1992: The 1987 agreement was reaffirmed.
- 2000: When it became apparent that the 2000 deadline would not be met, the United States and other governments signed a third agreement. The Chesapeake 2000 agreement. The Chesapeake 2000 agreement set a goal of

improving water quality in the Bay sufficiently to get it off the Clean Water Act's "dirty waters list" by 2010. Among the steps, the agreement requires a 40 percent reduction in nitrogen and phosphorus pollution.

- In the year 2002, Bob Wise, then governor of West Virginia, signed a Memorandum of Understanding (see Appendix A) agreeing to join with the states of Delaware, Maryland, New York, Pennsylvania, Virginia and the District of Columbia, to improve water quality in the Chesapeake Bay. All parties agreed to work cooperatively to achieve the nutrient and sediment reduction targets that "we agree are necessary to achieve the goals of a clean Chesapeake Bay by 2010, thereby allowing the Chesapeake Bay and its tidal tributaries to be removed from the list of impaired waters."

- 2006: EPA admits that the terms of the 2000 agreement will not be met by the 2010 deadline, but instead, not until at least 2020 or later.

- 2009: Efforts by Federal, State, and local governments to improve water quality in the Chesapeake Bay were subsequently unsuccessful. As a result, President Barack Obama issued an Executive Order on May 12, 2009 directing the Environmental Protection Agency (EPA), working with other federal agencies, to "define the next generation of tools and actions to restore water quality in the Chesapeake Bay and describe the changes to be made to regulations, programs, and policies to implement these actions;" and to "define environmental goals for the Chesapeake Bay and describe milestones for making progress toward attainment of these goals." In the executive order, the Administrator of the EPA shall "examine how to make full use of its authority under the Clean Water Act to protect and restore the Chesapeake Bay and its tributary waters." This includes strengthening existing permit programs and extending coverage where appropriate.

- May 12, 2010: A new federal strategy for protecting and restoring the Chesapeake Bay watershed, drafted under President Obama's Executive Order, is released.

- July 1, 2010: EPA announces draft allocations for nitrogen and phosphorus as part of the rigorous pollution diet for meeting water quality standards in the Chesapeake Bay watershed.

- December 2010: The states publish their Phase 1 Watershed Implementation Plans (WIP's) and the EPA develops a Total Maximum Daily Load (TMDL) for the Bay watershed. The TMDL will create point and nonpoint nitrogen and phosphorus load caps for jurisdictions throughout the Bay watershed.

- November, 2011: The state's Phase 2 – WIP's are due to the EPA, explaining in more detail how pollutants at the local level will be reduced.

- 2017: Phase III WIP's are expected to address any needed modifications to ensure, by 2025, that actions are in place which will achieve full restoration of the Chesapeake Bay and its tidal tributaries to meet applicable water quality standards.

Total Maximum Daily Load (TMDL)

The 1972 Clean Water Act authorizes EPA to require states to report water bodies that do not meet certain water quality standards to EPA and to establish a Total Maximum Daily Load (or TMDL, also referred to as a 'pollution diet' or 'pollution limit') for those bodies of water**.** The intent of any TMDL is to restore a polluted body of water.

Most of the Chesapeake Bay and the tidal portions of its tributary rivers are on the U.S. Environmental Protection Agency's (EPA) impaired waters list.

The TMDL, which was completed by EPA December 29, 2010, is described as the largest TMDL in the country. It outlines how much nitrogen, phosphorus, and sediment pollution each state may contribute to the Bay and calls for a 25 percent reduction in nitrogen pollution, a 24 percent reduction in phosphorus, and an 18 percent reduction in sediment throughout the region, from 2009 levels, by 2025. It also sets milestones for progress and lays out the consequences for failure.

As part of the TMDL, EPA requires the states by the end of 2010 to specify, in great detail, how they will achieve pollution reductions in their jurisdiction through enforceable measures. These plans are called Phase 1 - Watershed Implementation Plans, or WIPs.

Phase 2 - WIPs, which better explain how pollutants will be reduced at the local level, are due from each state by November, 2011 and must be finished by March, 2012.

Watershed Implementation Plans

The West Virginia Department of Environmental Protection (WVDEP) is the state agency charged with developing a program in West Virginia to meet the federal water quality requirements for the Chesapeake Bay. To date, this effort has involved public participation in developing a Phase I - Watershed Implementation Plan (WIP-I) and a Phase II – Watershed Implementation Plan (WIP-II).

The watershed implementation plan (WIP) is a formal action plan towards achieving and maintaining water quality standards. The WIP is the roadmap for how, by whom, and when implementation of pollution reduction techniques will occur.

The WVDEP's efforts are focused on the following sectors:

- **Agriculture** (i.e., livestock stream crossings, fertilizer, animal litter, etc.); and
- **Point Source** (industrial discharges & waste water treatment plants); and
- **Urban/Mixed Open** (industrial & developed lands storm water runoff, septic systems, lawn fertilizer, etc.); and
- **Forestry** (forest harvesting operations, wildfires, etc.)

According the WVVDEP's web site, the reduction of nitrogen, phosphorus and sediment pollutants is the focus of the WVDEP's efforts. The plan for meeting pollutant reduction requirements can be found in West Virginia's Potomac Tributary Strategy. Many of the actions outlined there are expensive and/or are not part of any regulations. To overcome these hurdles, Project teams have begun working in targeted watersheds. These groups build partnerships, gather funding, and identify priority projects that are most important to their local communities." For this purpose, the following watershed project teams have been formed:

- Opequon
- Sleepy Creek
- Mill Creek South Branch
- Rockymarsh
- WV Stormwater Network
- Elks Run Study Committee
- Blue Ridge Watershed Coalition
- Blue Heron Environmental Network
- Warm Springs Watershed Association
- Friends of Cacapon

The WVDEP web site indicates that partnerships have been formed for the purpose of addressing how to meet the pollutant reduction requirements set forth in the Chesapeake Bay Water Quality Initiative Memorandum of Understanding signed by former governor Bob Wise. The partners include the following organizations:

WV Conservation Agency

WV Department of Environmental Protection

WV Department of Agriculture

Cacapon Institute

Freshwater Institute

Natural Resources Conservation Service

WV Division of Forestry

Chesapeake Bay Program

USDA Farm Service Agency

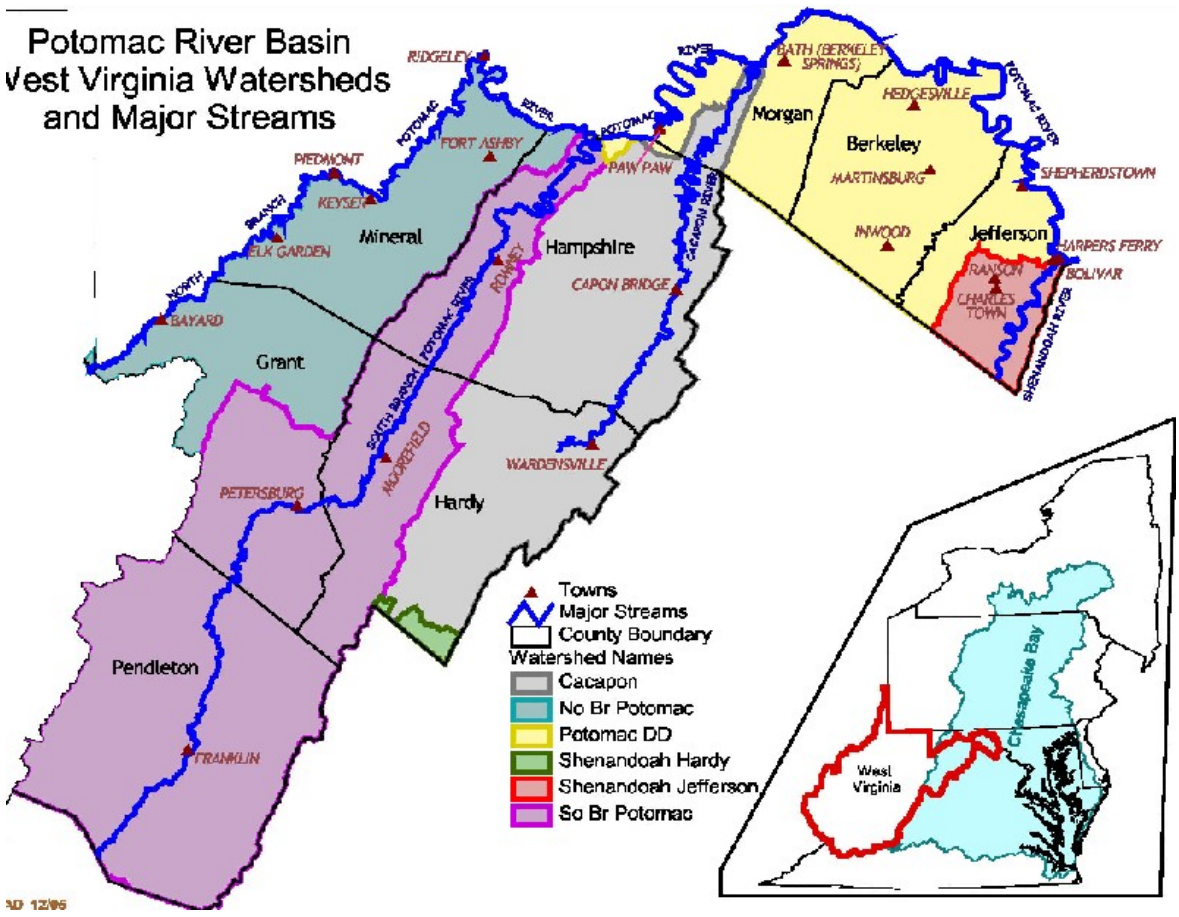
WVU Extension Service

US Fish & Wildlife

WV Water Resources Institute

West Virginia's Potomac Basin watershed includes the following eight counties: Jefferson, Berkeley, Morgan, Hampshire, Mineral, Hardy, Grant and Pendleton. The following is the watershed map from the WVDEP web site:

West Virginia Potomac Basin Watersheds



(Figure No. 1)

See the West Virginia Department of Environmental Protection's web site (http://www.dep.wv.gov/WWE/watershed/wqmonitoring/Pages/ChesapeakeBay.aspx) for more information on their Chesapeake Bay pollution prevention initiative.

Region 9 & The Model Stormwater Management Ordinance

When it rains, water accumulates on man-made surfaces such as roads, roofs and parking lots. These hard (impervious) surfaces prevent the rain from soaking in. As more houses, roads, and shopping centers are built, more water runs off the impervious surfaces and enters our streams and other waterways, either directly or through urban storm drain systems. This water is called stormwater or urban runoff, and it eventually finds its way into the Chesapeake Bay.

Stormwater carries a host of contaminants from the land into the water: sediment, phosphorus, nitrogen, toxic metals, herbicides and pesticides, organic material, oil compounds, and bacteria. Roadways, for example, release oil and grease, tailpipe emissions, and other toxics from motor vehicles. Lawns contribute fertilizer and animal waste. Construction sites release quantities of mud.

In the Bay's tributaries, eroded material and dirt from the land become suspended in the water, blanketing aquatic habitat. This sediment keeps sunlight from reaching underwater grasses. As these plants die, the animals that rely on them are imperiled.

Stormwater pollution is responsible for about 19 percent of the nitrogen and phosphorus pollution in the Bay, if the contribution of nitrogen from air pollution is included. It is one of the major reasons that the Bay remains on the EPA's "dirty waters" list.

This past year, the Region 9 Planning & Development Council administered a grant provided by the West Virginia Department of Environmental Protection, for the purpose of hiring a consultant to facilitate the writing of a model storm water management ordinance for those areas not covered under an MS4 permit. The purpose of the ordinance is to provide a template/model for managing and regulating storm water runoff from urban/suburban land development, with the intent of reducing sediment, nitrogen and phosphorus pollution to the Chesapeake Bay.

Delta Development Group, Inc. of Mechanicsburg, PA, and the WVDEP, along with a stakeholder's committee made up of people from Morgan, Berkeley and Jefferson Counties participated in writing the ordinance. The stakeholders committee consisted of people from the economic development sector, the environmental sector, planners, engineers and administrators from county and local government, and representatives from engineering consultants and the home building industry. The model storm water ordinance was completed in February, 2011. It is available on the Region 9 Planning and Development Council web site, which is the following link:

http://www.region9wv.com/

…and the model ordinance can be found at the following link:

http://www.region9wv.com/LinkClick.aspx?fileticket=ZfFjsMl0Yuo%3d&tabid=66

The model storm water management ordinance requires that storm water quality control measures be provided to reduce stormwater runoff pollution into the Chesapeake Bay from land development. This is done by capturing the runoff from the first 1-inch of rainfall and keeping it on-site and filtering out the pollutants by using Low Impact Development type techniques, such as: bio-retention basins, grass swales, rain gardens, infiltration basins, green roofs, disconnection of building downspouts from storm sewers, pervious pavers, stream buffers, etc. Providing quality control will be in addition to the already established requirements for quantity control in the Jefferson County Subdivision Ordinance; which is intended to reduce the volume and/or peak rate of runoff so as to reduce flooding and protect our floodplains. Quantity control is usually provided via traditional methods such as detention/retention ponds and infiltration basins.

The quality control measures will capture and treat the runoff from the first 1-inch of rainfall; then, for all rainfall in excess of the first 1-inch of rainfall, the quantity control measures will capture and detain the additional runoff (2, 10 & 100 year storm events) and release it at a slower rate, so as to not increase the post-development peak runoff rate over the pre-development peak runoff rate. In order to achieve both quality control and quantity control, elements of the model stormwater management ordinance will need to be merged with the stormwater management requirements in the Jefferson County Subdivision Ordinance. Probably the best way to do this is to pull the stormwater management requirements out of the subdivision ordinance and create a separate stormwater management ordinance.

The Clean Water Act, MS4 Communities, & Jefferson County

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1977.

The first sentence of the federal Clean Water Act says: *"The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."* The CWA is the cornerstone of surface water quality protection in the United States. (The Act does not deal directly with ground water nor with water quantity issues.) The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting

wastewater standards for industry and also sets water quality standards for all contaminants in surface waters.

The CWA requires the municipalities to obtain and hold permits for their stormwater discharges (called "Municipal Separate Storm Sewer System Permits," or MS4s). An MS4 community is defined as:

> *The regulatory definition of an MS4 (40 CFR 122.26(b)(8)) is "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):*
>
> *(i) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created to or pursuant to state law)...including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States.*
>
> *(ii) Designed or used for collecting or conveying stormwater;*
>
> *(iii) Which is not a combined sewer; and*
>
> *(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2."*
>
> *Municipalities and other entities that are regulated under the WV small MS4 general permit are required to develop and implement stormwater management programs. These stormwater management programs include six measures that help to protect and restore water quality from polluted runoff.*

Communities under the jurisdiction of an MS4 permit are required to develop, implement, and enforce a stormwater management program designed to reduce the discharge of pollutants. The program must include the following six minimum control measures:

1. Public Education & Outreach

2. Public Participation & Involvement

3. Illicit Discharge Detection & Elimination

4. Construction Site Stormwater Runoff Control

5. Post-Construction Stormwater Runoff Control

6. Pollution Prevention/Good Housekeeping

Under these measures, MS4 communities are required to enact ordinances that meet the provisions of the MS4 permit. The quality control requirements in an MS4 stormwater management ordinance will provide pollution protection that meets or exceeds the requirements for reducing pollutants to the Chesapeake Bay. So by default, an MS4 community will automatically comply with the WVDEP's efforts to reduce stormwater runoff pollutants to the Chesapeake Bay, just by complying with the MS4 requirements. The MS4 permit requirements are not identical to the model stormwater management ordinance requirements. The model stormwater management ordinance is just a part of the requirements for an MS4 community.

The WVDEP anticipates that within the next year, Charles Town, Ranson, and Shepherdstown will be designated MS4 communities by the WVDEP. Jefferson County does not meet the definition that allows the WVDEP to designate it as an MS4 community. Since Jefferson County and other non-MS4 areas in the watershed do not have to comply with the MS4 permit requirements, the WVDEP is looking for voluntary participation in order to help the state in meeting its Watershed Implementation Plan – Phase I & II commitments.

During the WIP II workshops, the WVDEP indicated that the EPA is considering additional rule making, if necessary, to bring non-MS4 communities under their jurisdiction if voluntary compliance efforts are unsuccessful.

In a letter (see Appendix B) to the Jefferson County Commission received on September 23, 2011 from Alana Hartman, Potomac Basin Coordinator, WVDEP, the WVDEP is requesting that "the Jefferson County Commission consider enhancing its stormwater regulations..." and stated that "adding a section on managing water *quality* to the requirements already in place to manage water *quantity* would help West Virginia to achieve our goal for developed lands, outlined in the Phase I Watershed Implementation Plan (WIP)." This would be done by adopting the 1-inch rainfall runoff capture requirement in the model stormwater management ordinance.

Other Efforts to Date

The following are key efforts that have occurred to date in Region 9 to support efforts to reduce pollutants to the Chesapeake Bay under the Chesapeake Bay Initiative:

Watershed Implementation Plan – Phase II:

The Jefferson County Planning Director and the Chief County Engineer participated in the recent WVDEP's Watershed Implementation Plan – Phase II workshops and the final WIP II Summit meeting held on September 23, 2011.

The consensus among the participants of the "Industrial and Developed Lands" workgroup was that the municipalities and counties wanted to eliminate a duplication of efforts in dealing with the Chesapeake Bay Initiative. Especially the future ongoing efforts of tabulating and reporting to the EPA the types of best management practices implemented for each land development project, which will be required to demonstrate regulatory compliance to the EPA.

The group expressed a desire that a centralized geographic information system database (GIS) be implemented for this purpose and that it be managed by one person, under the direction of Region 9, thus eliminating the duplication of effort. As a result, Matthew Pennington was hired by Region 9 as the Chesapeake Bay Program Coordinator for this purpose.

State Funding for Wastewater Treatment Plant Upgrades:

State Senator Herb Snyder, D-Jefferson, shepherded through the state Legislature, Senate Bill SB245, which sets aside $6 million of surplus state lottery funds each year for 30 years to fund about $85 million in bonds that will help pay for sewer plant upgrades, improvements and new construction.

Acting Gov. Earl Ray Tomblin signed the bill into law on April 6, 2011.

The upgrades will help West Virginia meet new pollution-reduction goals that are part of the federal "pollution diet" for the Chesapeake Bay and its rivers. West Virginia has 13 wastewater facilities that need to be upgraded to meet nutrient limits.

The funding will cover about 40 percent of the expected cost for the wastewater treatment plant upgrades. Even though the balance will have to be picked up by customers, the funding will prevent customers from bearing all the costs and it is expected that rates will be more manageable.

Summary

Fourteen percent (14%) of West Virginia drains into the Potomac River and on to the Chesapeake Bay. Jefferson County, along with seven other counties in West Virginia, is located within the Chesapeake Bay watershed. Stormwater runoff from land development in Jefferson County contributes to the pollution of local steams and the Chesapeake Bay.

In 2002 the State of West Virginia signed a Memorandum of Understanding (see Appendix A) agreeing to join with the states of Delaware, Maryland, New York, Pennsylvania, Virginia and the District of Columbia, to improve water quality in the Chesapeake Bay.

On May 12, 2010, President Obama issued an Executive Order strengthening and outlining a new federal strategy for protecting and restoring the Chesapeake Bay watershed. The Federal Environmental Protection Agency (EPA) is charged with carrying out that order.

The West Virginia Department of Environmental Protection (WVDEP) is the state agency charged with developing a program in West Virginia to meet the federal water quality requirements for the Chesapeake Bay. In 2010, the WVDEP and the Region 9 Planning and Development Council organized a stakeholder's committee, made up of people from Morgan, Berkeley and Jefferson Counties, who participated in the writing of a model stormwater management ordinance. The stakeholders committee consisted of people from the economic development sector, the environmental sector, planners, engineers and administrators from county and local government, and representatives from engineering consultants and the home building industry. The purpose of the requirements in the model stormwater ordinance is to reduce pollution from stormwater runoff to the Chesapeake Bay.

Reducing pollution to local streams and the Chesapeake Bay will require the adoption of the 1-inch rainfall stormwater runoff capture (quality control) requirement in the model stormwater management ordinance.

The West Virginia Department of Environmental Protection (WVDEP) formally requested in a letter (see Appendix B) received on September 23, 2011, that Jefferson County adopt the 1-inch rainfall stormwater capture requirement as part of their current stormwater management regulations. The WVDEP indicated that grant funds are available for Jefferson County to hire a consultant to help staff write a new stormwater management ordinance for Jefferson County.

List of Informational Resources

The following are sources from which information was taken for this overview of the Chesapeake Bay Initiative:

- Clean Water Act - Summary

  http://cfpub.epa.gov/npdes/cwa.cfm?program_id=45

- Clean Water Act

  http://epw.senate.gov/water.pdf

- Governor Bob Wise - Memorandum of Understanding – Chesapeake Bay

  http://www.chesapeakebay.net/content/publications/cbp_12085.pdf

- President Obama – Executive Order on Chesapeake Bay Protection

  http://executiveorder.chesapeakebay.net/post/About-the-Executive-Order.aspx

- The TMDL web page at the Environmental Protection Agency:

  http://www.epa.gov/chesapeakebaytmdl/

- The West Virginia Chesapeake Bay Program web page:

  http://www.wvca.us/bay/

- The Chesapeake Bay Foundation web page:

  http://www.cbf.org/page.aspx?pid=2518

- The Chesapeake Bay Program (A Watershed Partnership)

  http://www.chesapeakebay.net/

- Region 9 – Eastern Panhandle Planning & Development Council

  http://www.region9wv.com/

Appendix A

Memorandum of Understanding

AMONG

the State of Delaware, the District of Columbia, the State of Maryland, the State of New York, the Commonwealth of Pennsylvania, the Commonwealth of Virginia, the State of West Virginia, and the United States Environmental Protection Agency

REGARDING

Cooperative Efforts for the Protection of the Chesapeake Bay and Its Rivers

WHEREAS, the Chesapeake Bay is a National Treasure for which we are responsible, due to our stewardship of the 64,000 square miles of land in its watershed, and the 111,000 miles of creeks, streams and rivers which run through our jurisdictions and ultimately into its waters; and,

WHEREAS, over the years the Chesapeake Bay's remarkable ecosystem has been impaired by the excess of nutrients and sediments flowing into it through its tributaries; and,

WHEREAS, the Chesapeake Bay Program, an internationally-recognized intergovernmental effort has made measurable strides toward the restoration of the Bay and its living resources; and

WHEREAS, that effort has been notable for its reliance on cooperative and consensus-based approaches for its greatest successes; and

WHEREAS, despite efforts to date, the tidal rivers and the Bay remain on the Clean Water Act list of impaired waters thereby requiring establishment of a total maximum daily load by May 2011 unless those waters meet applicable water quality standards by 2010; and

WHEREAS, we have developed a process, based on advanced science and data acquisition, which integrates the cooperative and statutory water quality programs applicable to the Chesapeake Bay and its tidal tributaries, and enhances through watershed-wide partnership the ability to restore the Bay's living resources and meet the necessary water quality standards;

NOW, THEREFORE, we, the undersigned executives representing the District, state and Federal entities with responsibility for the quality of the waters flowing into the Chesapeake Bay agree that we will:

- Work cooperatively to achieve the nutrient and sediment reduction targets that we agree are necessary to achieve the goals of a clean Chesapeake Bay by 2010, thereby allowing the Chesapeake and its tidal tributaries to be removed from the list of impaired waters.
- Provide for an inclusive, open and comprehensive public participation process.
- Collaborate on the development and use of innovative measures such as effluent trading, cooperative implementation mechanisms, and expanded interstate agreements to achieve the necessary reductions.

→

By this Agreement, we will work toward our goals in a spirit open to others, welcome new ideas, pursue fairness and equity, seek the most cost effective solutions, encourage collaborative approaches, and always be committed to the common goal of a healthy and productive Chesapeake Bay and its rivers. We agree to report annually to the citizens on the progress toward achieving the goals of this agreement.

FOR THE STATE OF DELAWARE

Thomas R. Carper

Signed September 2000

FOR THE DISTRICT OF COLUMBIA

Anthony A. Williams

Signed October 2000

FOR THE STATE OF MARYLAND

Parris N. Glendening

Signed October 2000

FOR THE STATE OF NEW YORK

George E. Pataki

Signed November 2000

FOR THE COMMONWEALTH OF PENNSYLVANIA

Tom Ridge

Signed October 2000

FOR THE COMMONWEALTH OF VIRGINIA

James S. Gilmore III

Signed November 2000

FOR THE STATE OF WEST VIRGINIA

Bob Wise

Signed June 2002

FOR THE UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

Carol M. Browner

Signed October 2000

Appendix B

west virginia department of environmental protection

Division of Water and Waste Management
HC 63 Box 2545
Romney, WV 26757
(304) 822-7266

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
dep.wv.gov

Patsy Noland
President, Jefferson County Commission
P.O. Box 250
Charles Town, WV 25414

Dear Ms. Noland,

As a result of recent work to plan the implementation of the Chesapeake Bay Total Maximum Daily Load (TMDL) in West Virginia, I respectfully request that the Jefferson County Commission consider enhancing its stormwater regulations, either within the subdivision ordinance or in a new stormwater management ordinance. Adding a section on managing water *quality* to the requirements already in place to manage water *quantity* would help West Virginia to achieve our goal for developed lands, outlined in the Phase I Watershed Implementation Plan (WIP).

In the WIP, which became part of the Bay TMDL in December 2010, we proposed to hold constant these lands' contributions of nutrients and sediment to the Chesapeake Bay, even in light of expected new development, between 2010 and 2025. Essential to this strategy is the fact that entities covered under West Virginia's Municipal Separate Storm Sewer System (MS4) permit require new development and re-development to manage the first one-inch (or better) of rainfall on site. Charles Town, Ranson, and Shepherdstown are anticipated to be covered by the MS4 permit in the near future, and their resulting stormwater regulations could influence growth patterns by driving new development into the surrounding non-MS4 areas of Jefferson County. It was suggested by local stakeholders during monthly meetings this summer that this type of sprawl could be discouraged if the County Commission voluntarily adopts a similar "1-inch capture" requirement.

We believe that requiring stormwater to be managed on-site has additional benefits to communities. Many of the practices developers and engineers use to achieve this goal involve plants, swales, and other "green infrastructure" elements that bring nature into living and working spaces and reduce the need for large pipes and expanses of pavement. West Virginia has a spreadsheet calculator to help engineers determine the size and number of practices necessary to manage the first inch of rainfall on a given proposed development. Other resources and trainings can also be made available to ease Jefferson County's transition into this new paradigm.

Finally, we have funding available from the US EPA's Chesapeake Bay Regulatory and Accountability Program, requiring 25% local match, to take actions to increase accountability and ensure that West Virginia's WIP goals will be met. We are committed to making some of those funds available to local governments like Jefferson County Commission, to enable you to hire a consultant or use staff time to examine and revise local ordinances according to the WIP recommendations, if you decide to pursue such efforts.

I am enclosing a template for the type of proposal needed to access those funds. Please note that the workplan and budget would have to be approved by EPA. The timeline would ideally be this fall through June 30, 2012, but an extension is negotiable. We look forward to hearing from you if you need any assistance or clarification following this correspondence.

Sincerely,

Alana Hartman, Potomac Basin Coordinator

Cc: Scott Mandirola, Director, DWWM