

**Navigating the Stormwaters:
What's Available Where for Stormwater Management within
the Chesapeake Bay Watershed**

A Companion Piece to the *Finding the Green Guide*

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INTRODUCTION

There is little question that many Pennsylvanians do not understand the importance of proper stormwater management, including the need for efficient sewer infrastructure. In general Pennsylvanians do not understand how ineffective stormwater management practices can affect our economy, environment, and way of life.

The purpose of this report is to educate and inform nonprofits, governmental agencies and elected officials on what funding opportunities currently exist for stormwater management; identify areas of greatest need, and put forth suggestions on improving and reprioritizing current programs to maximize efficiencies on both a state and federal level.

Proper identification and use of funds, along with a more conscientious citizenry, will prove a valuable combination moving into the future. Less flooding, cleaner waters, greater protected species, increased recreational possibilities and more economic opportunities will exist once we can learn to properly balance our need for land use and development with effective environmental protections.

There *is* a way to work the land and build developments all the while protecting our waterways and reversing the damage years of neglect and mismanagement have caused.

This report is the beginning of that greater conservation and may serve as the foundation for future action. By maximizing the dollars available through state and federal programs, emphasizing greater importance on educating the public at large, and streamlining the levels of regulatory requirements, the Chesapeake Bay watershed can repair and grow to the estuary it once was.

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LEGEND

Pennsylvania Department of Community & Economic Development (Commonwealth Financing Authority) – CFA

Pennsylvania Department of Environmental Protection – DEP

Pennsylvania Department of Transportation – PennDOT

Pennsylvania Fish & Boat Commission - PFBC

Pennsylvania Infrastructure Investment Authority – PENNVEST

U.S. Environmental Protection Agency – EPA

U.S. Economic Development Administration - EDA

U.S. Department of Energy – DOE

U.S. Department of Interior – DOI

U.S. Department of Transportation – DOT

U.S. Department of Housing and Urban Development – HUD

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GENERAL APPROACHES TO STORMWATER MANAGEMENT

Low-Impact Development (LID) is a stormwater management approach that seeks to manage runoff using distributed and decentralized micro-scale controls. LID's goal is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source. Instead of conveying and treating stormwater solely in large end-of-pipe facilities located at the bottom of drainage areas, LID addresses stormwater through small-scale landscape practices and design approaches that preserve natural drainage features and patterns.

Green Infrastructure refers to natural systems that capture, cleanse, and reduce stormwater runoff using plants, soils, and microbes. On the regional scale, green infrastructure consists of the interconnected network of open spaces and natural areas (such as forested areas, floodplains, and wetlands) that improve water quality while providing recreational opportunities, wildlife habitat, air quality and urban heat island benefits, and other community benefits. At the site scale, green infrastructure consists of site-specific management practices (such as interconnected natural areas) that are designed to maintain natural hydrologic functions by absorbing and infiltrating precipitation where it falls.

Environmental Site Design (ESD), also referred to as **Better Site Design (BSD)**, is an effort to mimic natural systems along the whole stormwater flow path through combined application of a series of design principles throughout the development site. The objective is to replicate forest or natural hydrology and water quality. ESD practices are considered at the earliest stages of design, implemented during construction, and sustained in the future as a low maintenance natural system. Each ESD practice incrementally reduces the volume of stormwater on its way to the stream, thereby reducing the amount of conventional stormwater infrastructure required. Example practices include preserving natural areas, minimizing and disconnecting impervious cover, minimizing land disturbance, conservation (or cluster) design, using vegetated channels and areas to treat stormwater, and incorporating transit, shared parking, and bicycle facilities to allow lower parking ratios.

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PENNSYLVANIA FUNDING PROGRAMS

As water demands continue to increase across the Commonwealth, access to clean and abundant water is needed now more than ever.

State dollars for stormwater management and sewer infrastructure are typically allocated among a handful of programs and funds, and then disbursed through various grant programs mostly administered by state agencies. The following provides a brief overview of Pennsylvania's main funding programs.

GROWING GREENER ENVIRONMENTAL STEWARDSHIP FUND

Growing Greener was established in 1999 when Governor Tom Ridge and the General Assembly committed nearly \$650 million over five years to fund conservation and environmental protection projects – from the creation of greenways, trails and community parks to wildlife habitat preservation.

In 2002, Governor Mark Schweiker and the General Assembly created a dedicated source of funding for Growing Greener through an increase in the tipping fee – the fee for dumping trash in landfills. The revenue generated by the increase was placed into the Environmental Stewardship Fund for Growing Greener.

In 2005, voters approved Growing Greener II, a \$625 million bond to supplement existing Growing Greener funds. Growing Greener II was approved with 61 percent support statewide. Support was even higher in southeastern Pennsylvania, with 76 percent voter approval.

Over the years, Growing Greener has provided funds to communities and nonprofit organizations to help restore and protect local watersheds, clean up abandoned mines, preserve and acquire farmlands and open spaces, and lessen nonpoint source pollution from entering waterways.

Growing Greener also provides funds for maintaining our award-winning state park system, for heritage conservation, and for the development of multipurpose trails, greenways, and parks in our communities.

Administrators: Department of Agriculture, Department of Conservation and Natural Resources, Department of Environmental Protection, Pennsylvania Infrastructure Investment Authority

Historical Funding: Each year, the Growing Greener Environmental Stewardship Fund struggles for funding – with Growing Greener II bond funds nearly depleted – and a majority of the Growing Greener Environmental Stewardship Fund tipping fees being diverted to pay the debt service on the Growing Greener II bonds.

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MARCELLUS SHALE LEGACY FUND

The Marcellus Shale Legacy Fund was established through the enactment of Act 13 of 2012 to provide distribution of unconventional gas well impact fees to counties, municipalities, and Commonwealth agencies. The fee revenue is used for statewide initiatives in the areas of acid mine drainage abatement, watershed restoration, gas well management and plugging, development and rehabilitation of greenways and recreational trails, sewage treatment projects, and replacement and repair of deteriorated bridges in municipalities with unconventional gas wells.

Receipts deposited into the Marcellus Shale Legacy Fund come from transfers from the Unconventional Gas Well Fund and the Oil and Gas Lease Fund.

In 2013-2014, this fund dispersed more than \$186 million, of which more than \$56 million went toward environmental, conservation, and recreation projects with another \$27.8 million being transferred to the Growing Greener Environmental Stewardship Fund.

Each county, regardless of whether gas extraction takes place within its borders, receives a portion of the Marcellus Shale Legacy Fund for the planning, acquisition, development, rehabilitation and repair of greenways, recreational trails, open space, natural areas, community conservation and beautification projects, community and heritage parks, and water resource management. The county's population determines the county's portion of funds.

Administrator: The Public Utility Commission provides for the transfers from this fund to the Commonwealth Financing Authority, county governments, and state agencies that administer the Growing Greener Environmental Stewardship Fund

Historical Funding: The Marcellus Shale Legacy Fund is one of the more stable state funds. However, due to recent legal uncertainty with Act 13 of 2012, the entire Act may be at risk. As long as the Act remains in place, the funding should remain intact.

OIL & GAS LEASE FUND

Created in 1955, this fund is used to finance conservation, recreation, dams or flood control projects, or to match any federal grants made for these purposes. Revenues are derived from rents and royalties from oil and gas leases of Commonwealth-owned land with the exception of rents and royalties from land owned by either the Pennsylvania Game or Fish & Boat Commissions. Those revenues are paid into the Game and Fish Funds.

Act 50 of 2009 provides \$50 million for an annual appropriation from the fund to the Department of Conservation and Natural Resources. In addition, any monies above the \$50 million must be specifically appropriated by the General Assembly. Act 46 of 2010 authorized a transfer of \$180 million to the General Fund. Act 13 of 2012 authorized

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annual transfers to the Marcellus Shale Legacy Fund to be passed on to the Growing Greener Environmental Stewardship Fund (\$35 million annually) and the Hazardous Site Cleanup Fund.

The concept of the fund was quite simple—revenues from the sale of publicly owned, nonrenewable natural resources would be reinvested into conservation infrastructure that would provide long-term public value. For nearly 60 years, the Oil and Gas Lease Fund revenues have been dedicated to implementing this concept.

Administrator: Department of Conservation and Natural Resources

Historical Funding: In 2009, Governor Rendell began the practice of using Oil and Gas Lease Fund revenues to fund the operations of the Department of Conservation and Natural Resources. This practice has since continued. Instead of using the royalty revenues to fund conservation, recreation dams or flood control projects, as was intended, gas royalties are replacing monies that the Department of Conservation and Natural Resources was receiving from the general fund for operational costs. This continued practice is severely diminishing the purpose and original intent of the fund.

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PENNSYLVANIA FUNDING OPPORTUNITIES FOR STORMWATER MANAGEMENT

CFA Watershed Restoration Protection Program

Projects that involve the construction, improvement, expansion, repair, maintenance, or rehabilitation of new or existing watershed protection Best Management Practices (BMPs).

There is a maximum of \$300,000 for any project. A 15 percent match of the total project cost is required.

Website: www.newpa.com/WRPP

CFA Flood Mitigation Program

Projects authorized by a flood protection authority, the Department of Environmental Protection (DEP), the U.S. Army Corps of Engineers (Corps) or the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) or identified by a local government for flood mitigation are eligible for the program.

Grants shall not exceed \$500,000 for any project. Eligible projects will have a total project cost of \$50,000 or more and a maximum cost of \$1 million. A 15 percent match of the total project cost is required. Match may be cash or noncash and must be directly related to the approved scope of work.

Website: www.newpa.com/FMP

DEP ACT 101 County Planning Grants

County Planning Grants provide reimbursement to counties in Pennsylvania for up to 80 percent of the approved cost for preparation of waste management plans and studies required by the Municipal Waste Planning, Recycling and Waste Reduction Act, also known as Act 101. The maximum grant amount cannot exceed \$75,000. All counties in Pennsylvania currently have in effect a municipal waste management plan developed and approved under Act 101.

Website:

http://www.portal.state.pa.us/portal/server.pt/community/financial_assistance/14065/home/589531

DEP Dirt, Gravel, and Low Volume Road Maintenance Program

The program provides \$28 million annually to reduce sediment pollution and runoff from Pennsylvania's unpaved and low-volume paved public roads. Program administration is through the Pennsylvania State Conservation Commission. Funds are provided at the local level, through Pennsylvania's 66 county conservation districts.

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Public road-owning entities, such as townships, municipalities, and state agencies, are eligible to apply and should apply to the local county conservation district for consideration of funding for individual road projects.

Website: <http://www.dirtandgravel.psu.edu>

DEP Enactment of Ordinances and Implementation of Stormwater Management Plans

Grants are available to reimburse municipalities for costs incurred in the adoption or revision of ordinances or regulations and other administrative, enforcement, and implementation costs incurred in complying with the Pennsylvania Stormwater Management Act, Act 167, and the companion regulation governing stormwater management grants and reimbursements. There is currently no appropriation for this program; however, applications submitted will be held in the event funding is made available.

Website: <https://www.portal.state.pa.us/siteminderagent/forms/login>

DEP Growing Greener Watershed Protection Grants

These grants provide state monies from the Growing Greener Environmental Stewardship Fund to clean up nonpoint sources of pollution throughout Pennsylvania. Examples of projects include acid mine drainage abatement, mine cleanup efforts, abandoned oil and gas well plugging, and local watershed-based conservation projects. The average grant amount is approximately \$150,000 and the match requirement is 15 percent coming from non-DEP funds.

Website:

http://www.depweb.state.pa.us/portal/server.pt/community/growing_greener/13958

DEP Nonpoint Source Implementation Program Grants

These grants provide funding to assist in implementing Pennsylvania's Nonpoint Source Management Program. This includes funding for abandoned mine drainage, agricultural and urban runoff, and natural channel design/streambank stabilization projects.

Counties, municipalities, authorities, school districts, nonprofits, conservation districts, and watershed groups are eligible.

Website:

http://www.portal.state.pa.us/portal/server.pt/community/nonpoint_source_management/10615

PennDOT Transportation Alternatives Program

Moving Ahead for Progress in the 21st Century (MAP-21) introduced fundamental changes to the administration of local programs, including those that previously existed as separate programs in the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU) legislation.

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Transportation Enhancements (TE), Safe Routes to School (SRTS), Scenic Byways (Byways), and the Recreational Trails Program (RTP) are now consolidated into the Transportation Alternatives Program (TAP). With the exception of the RTP, which takes funding “off the top,” the current eligible activities from the SAFETEA-LU programs compete against each other for funding.

Transportation alternatives projects build pedestrian and bicycle facilities, improve access to public transportation, create safe routes to school, preserve historic transportation structures, provide environmental mitigation, and create trail projects that serve a transportation purpose, while promoting safety and mobility.

The list below describes the 10 general project categories eligible for funding through the statewide application process.

1. Bicycle and Pedestrian Facilities
2. Bicycle and Pedestrian Education (grades K-8 only)
3. Conversion of Abandoned Railway Corridors to Trails
4. Construction of Turnouts, Overlooks, and Viewing Areas
5. Outdoor Advertising Management
6. Historic Preservation and Rehab of Historic Transportation Facilities
7. Vegetation Management
8. Archaeological Activities
9. Stormwater Management
10. Wildlife Mortality Mitigation

Each program has its eligibility and match requirements. Visit the website for more information.

Website: <http://www.dot.state.pa.us/Internet/Bureaus/CPDM.nsf/TAPHomepage>

PENNVEST Drinking Water, Wastewater, Stormwater and Nonpoint Source Loans & Grants

Low-interest loans and grants to communities or private firms for designing, engineering, and constructing publicly and privately owned drinking water distribution systems, wastewater collection and treatment systems, stormwater management systems, and nonpoint best management practices.

Website:

http://www.portal.state.pa.us/portal/server.pt/community/available_funding/11211/drinking_waste_and_storm_water_loans/560726

PENNVEST Growing Greener Grants

Under this initiative, PENNVEST has grant funds available for drinking water, wastewater, stormwater, and nonpoint source projects. These are the same types of projects that PENNVEST has always funded. At this time, PENNVEST will be using these grant funds in its normal funding process.

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Any municipality, authority, or private entity that is eligible for Growing Greener grants under the PENNVEST program.

Website:

http://www.portal.state.pa.us/portal/server.pt/community/available_funding/11211/growing_greener_grants/560729

PFBC Valley Creek Watershed Grant Program

The Valley Creek Trustee Council, comprising the Pennsylvania Fish & Boat Commission and the National Park Service, oversees a grant program to provide funding for restoration of the Valley Creek Watershed in Chester County, PA.

The goal of this funding is to improve trout habitat and angler access through implementation of projects related to stormwater management, streambank stabilization, implementation of environmentally sensitive land practices (e.g., easements, land purchase for preservation), and projects that directly improve angler access (e.g., trails).

Note: This is a region-specific grant program.

Website: http://fishandboat.com/promo/grants/valley_creek/00valley_ck.htm

STATE EDUCATION GRANTS

- **DEP Watershed Education Grants**

Through the Water Resources Education Network (WREN) Project, the League of Women Voters of Pennsylvania Citizen Education Fund accepts proposals for watershed education projects sponsored by community-based partnerships that educate, build awareness, and promote water-sustaining public policies and/or behavior change. Projects should be designed to encourage individual or collective action that will protect and improve local water resources.

Counties, municipalities, authorities, school districts, nonprofits, conservation districts, and other entities are eligible.

Website: <http://wren.palwv.org/grants/local.html>

- **DEP Nonpoint Source Pollution Educational Mini-Grants**

The Nonpoint Source Educational Mini-Grants were created for the purpose of informing and educating people about the causes, consequences, and clean-up of nonpoint source water pollution.

Conservation districts are eligible.

Website:

http://www.portal.state.pa.us/portal/server.pt/community/nonpoint_source_management/10615

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- **DEP Environmental Education (EE) Grants Program**

The program supports and strengthens environmental education in Pennsylvania. The EE Grants were established by the Environmental Education Act of 1993 and mandate that 5 percent of all pollution fines and penalties the DEP collects annually be set aside for environmental education.

Public and private schools, colleges and universities, county conservation districts, nonprofit organizations and associations, conservation and education organizations, municipalities, municipal authorities, and businesses are eligible.

Website: <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-97824/0350-BK-DEP4266%20combined.pdf>

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FEDERAL FUNDING OPPORTUNITIES FOR STORMWATER MANAGEMENT

EPA Clean Water Act Nonpoint Source Grant (Section 319 Grants)

Congress amended the Clean Water Act in 1987 to establish EPA's Section 319 Nonpoint Source Management Program because it recognized the need for greater federal leadership to help focus state and local nonpoint source efforts. Under Section 319, states, territories, and Native American tribes receive grant money which supports a wide variety of activities including technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and monitoring to assess the success of projects that have been implemented.

Website: <http://water.epa.gov/polwaste/nps/cwact.cfm>

EPA Clean Water State Revolving Fund (CWSRF)

EPA's Clean Water State Revolving Fund (CWSRF) programs provided more than \$5 billion annually in recent years to fund water quality protection projects for wastewater treatment, nonpoint source pollution control, and watershed and estuary management.

CWSRFs have funded over \$89 billion, providing over 30,012 low-interest loans to date.

CWSRFs offer:

- Low interest rates, flexible terms
- Significant funding for nonpoint source pollution control and estuary protection
- Assistance to a variety of borrowers
- Partnerships with other funding sources

Website: http://water.epa.gov/grants_funding/cwsrf/cwsrf_index.cfm

EPA Community Action for a Renewed Environment (CARE) Grants

The U.S. EPA CARE Cooperative Agreement Request for Proposals (RFP) is a competitive grant program that offers an innovative way for a community to organize and take action to reduce toxic pollution in its local environment. Through CARE, a community creates a partnership that implements solutions to reduce releases of toxic pollutants and minimize people's exposure to them.

Eligible applicants include county and local governments, tribes, non-profit organizations, and universities.

Website: <http://www.epa.gov/care/>

DOE Weatherization and Intergovernmental Program

The Department of Energy's Weatherization and Intergovernmental Program provides grants, technical assistance, and information tools to states, local governments, community action agencies, utilities, Native American tribes, and overseas U.S. territories for their energy programs.

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The program could be used to encourage green infrastructure, such as green roofs, as part of the weatherization process.

Website: <http://www1.eere.energy.gov/wip/index.html>

DOI Rivers, Trails, and Conservation Assistance Program

The mission of the National Park Service's Rivers, Trails, and Conservation Assistance program (RTCA) is to assist community-led natural resource conservation and outdoor recreation initiatives. RTCA's staff provide guidance to communities so that they can conserve waterways, preserve open space, and develop trails and greenways.

Eligible applicants include state or local agencies, tribes, nonprofit organizations or citizen groups.

Website: <http://www.nps.gov/orgs/rtca/apply.htm>

HUD Community Development Block Grant Program

The Community Development Block Grant (CDBG) program is a flexible program that works to ensure affordable housing, provide services to the most vulnerable in our communities, and create jobs through the expansion and retention of businesses. CDBG-financed projects could incorporate green infrastructure into their design and construction. Chicago, for example, has used CDBG to put a new green roof on its historic Cultural Center.

Website:

http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/community_development/programs

HUD Section 108 Loan Guarantee Program

The Section 108 Loan Guarantee Program allows future Community Development Block Grant (CDBG) allocations to be used to guarantee loans for neighborhood revitalization projects, including construction or installation of public facilities and infrastructure. Section 108-guaranteed projects could incorporate green infrastructure into their design and construction.

Website:

http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/community_development/programs/108

HUD Sustainable Communities Regional Planning Grants

The Department of Housing and Urban Development's Sustainable Communities Regional Planning Grant Program supports metropolitan and multijurisdictional planning efforts that integrate housing, land use, economic and workforce development,

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transportation, and infrastructure investments in a manner that empowers jurisdictions to consider the interdependent challenges of: (1) economic competitiveness and revitalization; (2) social equity, inclusion, and access to opportunity; (3) energy use and climate change; and (4) public health and environmental impact.

Website:

http://portal.hud.gov/hudportal/HUD?src=/program_offices/sustainable_housing_communities/sustainable_communities_regional_planning_grants

NOAA Community Based Restoration Program

The NOAA Community-Based Restoration Program began in 1996 to inspire and sustain local efforts to conduct coastal habitat restoration. Since then, the program has funded more than 1,500 projects in the United States, Canada, the Caribbean, and the Pacific Islands. These projects have restored more than 41,000 acres of habitat and opened more than 1,700 stream miles for fish passage, while encouraging communities to actively participate in the conservation of our nation's coastal habitats.

Website: <http://www.habitat.noaa.gov/funding/index.html>

USDA Rural Development Water and Environmental Programs

The Department of Agriculture's Water and Environmental Programs provide loans, grants, and loan guarantees for drinking water, sanitary sewer, solid waste, and storm drainage facilities in rural areas and cities and towns with populations of 10,000 or less.

Website: http://www.rurdev.usda.gov/UWEP_HomePage.html

USDA Rural Development Community Facilities Loans and Grants

The Department of Agriculture's Community Programs provide loans, grants, and loan guarantees for water and environmental projects, as well as community facilities projects. Water and environmental projects include water systems, waste systems, solid waste, and storm drainage facilities. Community facilities projects develop essential community facilities for public use in rural areas and may include hospitals, fire protection, safety, as well as many other community-based initiatives.

Website: http://www.rurdev.usda.gov/HCF_CF.html

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WHAT IS THE PROBLEM AND HOW CAN WE FIX IT?

Unfortunately, in our current economic and fiscal climate, there is not enough money to support the proper management of stormwater. Pennsylvania's laws and programs are convoluted from the federal Clean Water Act to the state's Clean Streams Law regulations to Pennsylvania's Storm Water Management Act (Act 167) and the Pennsylvania Municipalities Planning Code. With four levels of government (federal, state, county, and municipal) the various pieces of the stormwater puzzle are constantly moving.

Many counties in Pennsylvania have tried to make the municipal requirements found within Act 167 match those of the federal National Pollutant Discharge Eliminations System (NPDES) requirements with some success.

Although the proposed 2014-2015 Pennsylvania state budget does not include any eliminations to stormwater management and sewer infrastructure funding, growing competition for state grant dollars from other nonprofits and shifting political priorities will have a strong negative impact on stormwater funding opportunities for the foreseeable future.

Holding the line on funding state conservation districts, nonprofit watershed protection organizations and local municipalities is not working – it is not enough. The construction, operation, and maintenance of a municipal separate storm sewer system (MS4) may involve significant expense, especially when regulatory requirements (stormwater Phase I or Phase II), flooding concerns, water quality issues (including total maximum daily loads, or TMDLs), and population growth are factored in.

Insufficient funding is a serious issue not only for the engineering and design of the stormwater Best Management Practices (BMPs) but also for ensuring that they are designed, installed, and regularly maintained. This is something that many parts of rural Pennsylvania have not embraced. Municipalities are slow to increase fees or taxes to cover the costs associated with proper stormwater management and sewer infrastructure.

The situation does not change when looking at federal funding. With a high level of economic uncertainty, threats of government shutdowns, and funding bills like the Farm Bill constantly being argued and stalled, the outlook for greater federal aid is grim. Federal programs are taking a hit and dollars are becoming increasingly competitive. For significant change to occur, it will have to be on the state level.

Recommendation - A dedicated source of revenue must be identified on the state level to address the growing needs of stormwater management within local communities.

There are no political indications that more funds will be allocated to efforts to restore the Chesapeake Bay watershed. In actuality, the state is years behind where it should be to reach the mandates associated with the Bay. A dedicated source of funding for bay

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restoration is one way to ensure that the state meets its requirements and ensures a better future for the watershed.

One possible revenue stream would be to dedicate a portion of the state's Oil and Gas Lease Fund. A 5 percent allocation to addressing stormwater management and other bay issues would ensure a funding stream that is desperately needed by local communities.

This funding stream would help municipalities address the growing challenges associated with Municipal Separate Storm Sewer Systems (MS4) and Total Maximum Daily Load (TMDL) requirements. If and when a municipality is designated as an MS4, then additional stormwater requirements are required of the municipality to meet those new standards. This is a significant, but necessary, financial burden on municipalities. Funds that target TMDL areas and municipalities with MS4 requirements should be of the highest priority.

Some municipalities within the Bay watershed are tackling stormwater challenges head on. The city of Lancaster, in Lancaster County, has developed a stormwater financing program tied back into the amount of impervious cover a location contains and then issues a credit system for those that are going above and beyond to control stormwater runoff on their properties. The city is identifying ways to move stormwater management to the forefront when dealing with planning.

York County has developed a countywide Watershed Implementation Plan (WIP), based on the most cost-effective BMPs for the dollar. The county is currently identifying and prioritizing those cost-effective projects and local MS4 municipalities will be able to opt-in for a few thousand dollars to install those BMPs and share both water quality benefits and regulatory compliance. Ultimately, they envision a countywide authority/utility be created for stormwater management that is uniform and consistent.

Funding should be prioritized based on providing local governments incentives to manage stormwater in the most cost-effective way possible that ensures community health, economic sustainability, and environmental quality.

Besides the routine cost of operation and maintenance of the stormwater systems in Pennsylvania, there are tracking costs for MS4 requirements, education costs, training costs for staff, administrative costs, and the costs associated with items not always thought of, like new software costs for GIS systems or potential costs of litigation.

Place these costs on top of population growth, need for more infrastructure, existing stormwater facility retrofits, connecting regional stormwater management facilities, and alternative green infrastructure BMPs (e.g., stream restoration, wetlands restoration, riparian buffers, floodplain management, etc.) and costs quickly escalate to the tens of millions of dollars.

A dedicated source of revenue to address these issues would, in complement with the other listed recommendations, prove an essential piece in the puzzle that is protecting the

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Chesapeake Bay watershed.

Recommendation – Agreements, codes, and funding need to be reviewed and updated to mirror new advances in technology and approaches in addressing stormwater management.

Pennsylvania has a Memorandum of Agreement (MOA) with the U.S. Environmental Protection Agency that authorizes Pennsylvania to administer the federal NPDES programs in an all or nothing approach. The MOA is grossly out-of-date and has not been significantly updated since its inception in 1991. This MOA should be reviewed and evaluated for potential areas of improvement since the landscape of the Commonwealth has changed so dramatically over the past 20 years.

In addition to updating the MOA, additional agency funding needs to be provided to the Pennsylvania Department of Environmental Protection to ensure an adequate staff necessary to address the growing needs of municipalities.

Greater accountability of current funds need to take place within DEP. For example, when the Chapter 102 regulations were promulgated in November of 2010, a \$100 per disturbed acre fee was added in order to support DEP's involvement in the program. Recently, questions have arisen as to whether funds generated by this fee greatly outmatch the costs associated running the program. Conservation districts administering the Chapter 102/NPDES programs are doing the majority of the work yet the \$100 per disturbed acre fee is going to DEP.

In addition, DEP has a line item in its budget for the funding of conservation districts. In the 2014-2015 proposed state budget the line item for conservation districts is flat lined. However, this funding is tied to the district's participation in the Chapter 102/NPDES delegation agreement that most conservation districts administer on behalf of DEP. The NPDES portion of the agreement/program involves a review of Post Construction Stormwater Management Plans (PCSM). The funding provided to districts for involvement with stormwater management is insufficient to cover program costs. Districts need to charge fees for services in order to make up the funding shortfall, which has proven to be a problem for years.

Working with the individuals who administer the stormwater management programs on the ground to update the agreements, codes and funding mechanisms would bring greater accountability and efficiency to the watershed.

Recommendation – Hire a Government Affairs Director to monitor and respond to proposed legislation, work with federal and state agencies, manage and consolidate messaging, and educate county and local leaders and the general public on stormwater management plans.

Stormwater management is of paramount importance to water quality, resource management, and habitat improvement. Greater outreach to elected officials and the public is needed to tie stormwater management to community health, economic growth,

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and sustainability.

It is imperative that additional resources be allocated in the form of a Government Affairs Director who can serve as the nucleus of information flowing through the watershed.

All too often good intentions can lead to negative consequences and that, in part, is what is currently taking place. There exists a large number of nonprofit watershed organizations, advocacy groups, coalitions, and foundations all trying to help with bay issues that messaging and priorities are being lost.

Having a singular point of contact for the entire region that federal and state agencies could consult with would prove useful in ensuring realistic expectations and tangible results would flow from the work being done on the ground.

The knowledge gap from the southern area of the watershed to the northern is striking. When asked what funding programs were available for stormwater management and sewer infrastructure, north-central planners listed few to none, while more centrally and southern located planners knew how to tap into many of the state and federal programs listed within this report. This reveals a need for one-on-one training to educate and provide the necessary information so that the entire watershed can benefit from dollars.

A shift in planning mentality must also take place among municipal leaders and the public. A greater emphasis needs to be placed on more cost effective ways to manage stormwater. Planting trees, creating rain gardens and other beautification projects, enacting bay-friendly lawn care practices, harvesting rainwater, and requiring permeable hardscapes will all assist in the management of stormwater and the protection of the Bay.

These small shifts in approach to addressing stormwater challenges today can make a huge difference for the Bay tomorrow.

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CONTACTS

If assistance is needed with a grant or project, here's a list of key contacts:

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