

Integrated Public Education and Outreach & Public Involvement and Participation Programs

West Cocalico Township, Lancaster County

September 2014

The Township's National Pollutant Discharge Elimination System (NPDES)-regulated Municipal Separate Storm Sewer System (MS4) collects runoff, conveys the water through a system of pipes and swales, and then discharges it to surface waters such as the Cocalico Creek, the Little Cocalico Creek, Trout Run and Harnish Run. As part of our Authorization to Discharge waters from the MS4 to surface waters, there are specific requirements that include public education and involvement in water quality improvement issues.

Specifically, the MS4 General Permit outlines the required Stormwater Management Program as having a series of six Minimum Control Measures, or MCMs. Each of these contains multiple Best Management Practices (BMPs) and Measurable Goals that must be met. West Cocalico Township has chosen to integrate several BMPs of MCM #1 and #2 into a singular Plan since they both address working with citizens to attain cleaner water. The requirements for MCMs #1 and #2 included in the Federal Regulations and the BMPs, defined by the Pennsylvania Department of Environmental Protection (PA DEP) are as follows:

MCM #1: Public Education and Outreach on Stormwater Impacts

Implement a public education program to distribute education materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff. (40 CFR Part 122.34(b)(1)(i))

BMP #1: Develop, implement and maintain a written Public Education and Outreach Program.

BMP #2: Develop and maintain lists of target audience groups that are present within the areas served by your regulated small MS4s. In most communities the target audiences shall include residents, businesses (including commercial, industrial and retailers), developers, schools, and municipal employees.

BMP #3: You must annually publish at least one issue of a newsletter, a pamphlet, a flyer, or a web site that includes general stormwater educational information, a general description of your Stormwater Management Program, and/or information about your stormwater management activities. The list of publications and the content should include a list of references (or links) to refer the reader to additional information (e.g., PA DEP and US EPA stormwater websites, and any other sources that will be helpful to readers). You must implement at least one of the following alternatives:

- a. Publish and distribute in printed form a newsletter, a pamphlet or a flyer containing information consistent with this BMP.

- b. Publish educational and informational items including links to DEP's and EPA's stormwater websites on your municipal website.

BMP #4: Distribute stormwater educational materials and/or information to the target audiences using a variety of distribution methods, including but not limited to: displays, posters, signs, pamphlets, booklets, brochures, radio, local cable TV, newspaper articles, other advertisements (e.g., at bus and train stops/stations), bill stuffers, posters, presentations, conferences, meetings, fact sheets, giveaways, storm drain stenciling.

MCM #2: Public Involvement / Participation

Comply with applicable state and local public notice requirements when implementing a public involvement/participation program. (40 CFR Part 122.34(b)(2)(i))

BMP #1: Develop, implement and maintain a written Public Involvement and Participation Program (PIPP) which describes various types of possible participation activities and describes methods of encouraging the public's involvement and of soliciting the public's input.

BMP #2: Prior to adoption of any ordinance required by this General Permit, provide adequate public notice and opportunities for public review, input, and feedback.

BMP #3: Regularly solicit public involvement and participation from the target audience groups. This should include an effort to solicit public reporting of suspected illicit discharges. Assist the public in their efforts to help implement your SWMP. Conduct public meetings to discuss the on-going implementation of your SWMP.

This Plan considers portions of the "Public Education and Outreach on Stormwater Impacts" and "Public Involvement / Participation" MCMs together because there are obvious connections to the principles contained within them. The Township's philosophy is to use outreach and educational opportunities to bring increased awareness of water quality and quantity issues to a larger audience through time. This, in turn, should inspire behavioral change as well as direct participation in various cleanup events and similar activities. West Cocalico Township is fortunate to have an active watershed group within its boundaries that conduct considerable outreach and physical projects for the common good: Cocalico Creek Watershed Association

This Plan has a five-year horizon. There is a natural nexus between this mid-range perspective and our MS4's coverage under the Commonwealth's General Permit (PAG-13) from March 2015 through March 2020. Annual reporting is required of the Township to the PA DEP, and we have established a system to track progress of the entire Stormwater Management Program including the efforts detailed within this Plan targeting MCMs #1 and #2.

DRIVING FORCES

Water is a resource that some take for granted, whether it is the drinking water that comes out of the tap, a stream that is home to aquatic life that fishermen flock to, or the giver of life to crops and

livestock. Unlike other areas of the United States, our community has an adequate supply of surface and groundwater that we use for many purposes. What impacts this vital resource the most here is its quality. Water can be degraded by soil erosion, nitrates, phosphates, household chemicals, and other things in excess.

As the population in West Cocalico Township grows, the complexion of land uses shifts from large agricultural tracts to a greater number of smaller properties and more property owners. With a mix of homes, businesses, industry, and agriculture there are multiple sources of pollution – but also more opportunities to make *positive* impacts. The more people in our community that are aware of the issues affecting water quality, the better chance there is that improvement will come about through collective action.

Watershed awareness is a fundamental building block of this type of grassroots movement. As shown in the map to the right, about 100% of West Cocalico Township’s area is comprised of the Cocalico Creek watershed.

There are several strong reasons for encouraging a better understanding of what makes up a watershed and in which one a person lives or works. For starters, Lancaster County has 16 watershed groups that span municipal boundaries to bring about results that people can join and volunteer in. This concept creates a personal connection between individual actions and water resources when someone understands which local waterway could be affected by particular decisions or actions. Finally, individual watersheds may be impaired by different pollutants or in varying degrees and subject to individualized Total Maximum Daily Loads (TMDLs).

With the above factors driving West Cocalico Township to improve our connection with the public for water quality and quantity purposes, the following goals are established:

- ☐ Contribute to meeting attainment levels for our surface waters.
- ☐ Create a better understanding of the links between land use, runoff management, water quality, and flood control.
- ☐ Promote awareness of the storm sewer system as an essential component of the municipal infrastructure, and how household or business pollutants must be eliminated from the system.
- ☐ Encourage public participation in community activities such as waterway cleanup or restoration.
- ☐ Work with the agricultural community to reduce sediment and nutrient runoff to waterways.
- ☐ Make a stronger, fact-based connection between pollution reduction and decreased costs of treating the public drinking water supply.
- ☐ Participate in and support local watershed groups’ organizational meetings and awareness events.
- ☐ Satisfy the requirements of the MS4 General Permit.

The remainder of this Plan is intended to serve as a strategic guide for the Township to play a more effective role in educating and involving the citizenry as stewards of our water resources. It details different segments and sub-groups of the population to better craft tailored messages and approaches that appeal to them. “Branding” the program can offer a more cohesive umbrella that residents and businesses will eventually recognize and hopefully embrace. The Plan also lays out an introductory menu of initiatives that we will pursue throughout the five-year period from 2015 to 2020, one that is certainly open to additions and modifications as time goes on.

POPULATION SEGMENTS/KEY STAKEHOLDER GROUPS

While a one-size-fits-all approach may make sense in certain situations, such as publishing articles in the township newsletter, outreach is more effective if the overarching message is customized to a specific part of the population. Residents of a neighborhood may gain more from information about the storm drains running under their streets than would a farmer served by a road without such infrastructure. Similarly, a cost breakdown of water treatment costs due to excessive nutrients in the groundwater may be suitable for the adult population but not necessarily for elementary school children. Identification of key stakeholder groups is a vital step in adapting the main goals to hit home with the proper message. Below are descriptions of such groups that take into account both the general makeup of the population and the attributes of our community. Furthermore, the segments are not mutually exclusive, in that someone may fall into more than one area because of varied interests or lifestyles.

☐ *Residents and Neighborhoods* – This broad category includes households and neighborhoods within the Urban Growth Area as well as the rural subdivisions scattered throughout the Township. Many of the lots in these areas are smaller than one acre, have lawns, and are likely to be served by stormwater infrastructure like subsurface pipes, curbed streets, and/or inlets.

☐ *Agricultural Community* – About 50% of West Cocalico Township’s land area is used for agriculture, most notably crop production and the raising of livestock. Because of the large area devoted to this industry, there are considerable challenges and opportunities related to this community’s role in water quality improvement.

☐ *Business and Industry* – Despite this being a generic category, the business community can be a powerful ally in the water quality conversation. Pooled financial resources conveyed through activity sponsorships, a broad audience reach, and the unique land use characteristics of business and industry enterprises also make this group an important target.

☐ *Cocalico School District* – The School District, which serves East Cocalico Township, Denver Borough and Adamstown Borough as well as West Cocalico Township, is a direct conduit to the children of our community and their families. Water quality education and hands-on experiences are part of the curriculum, and the Township has an opportunity to coordinate with this along with the Cocalico Creek Watershed, who is active in the District’s municipalities.

☐ *Municipal Staff* – West Cocalico Township owns and maintains several sites throughout the municipality. At each of these locations, there are opportunities to utilize proper operational practices to reduce impacts on runoff and waterways. The *Good Housekeeping Operation & Maintenance Program* will be used to lead these best management practices.

CRAFTING THE MESSAGE

West Cocalico Township's water quality message must appeal to the collective citizenry in a cost-effective manner and inspire action throughout the community. Fortunately, this topic has received a considerable amount of attention in the past few years within the greater Chesapeake Bay watershed, and as a result, a wealth of educational material and techniques has been created for the public benefit. Taking the overall message for the Township as a whole, the foundation for this public campaign is summarized by these principles:

- ☒ Water resources are extremely valuable, and will become more so for future generations that will have a larger population depending on them.
- ☒ Improvement to water quality is made on both large and small scales by individual residents, farmers, and business operators.
- ☒ Watershed awareness leads to a stronger connection between people and water resources.
- ☒ Stopping current sources of pollution and sedimentation to waterways and surface water supplies is the first step in improving water quality.
- ☒ When armed with good information, many individuals will choose to make decisions that benefit the common good.
- ☒ Community-based organizations, such as watershed groups, are powerful vehicles that unite residents and community leaders to protect and enhance water resources.
- ☒ Cost-efficient and/or naturally-based solutions often involve simple techniques that many people can implement.

Over the last couple of years, we have utilized the Township newsletter and website to broadcast watershed and water quality information to residents and businesses. In addition to other local and regional awareness-building efforts, our outreach to date has introduced our involvement in this widespread issue to the citizenry. But further outreach efforts will require a cohesive and customized approach to be effective. Customized messages must relate to each of our population segments. These messages can be created by asking questions like:

- ☒ What are the most common threats to water quality?
- ☒ What common vision can the entire community relate to?
- ☒ What costs are associated with impaired or polluted waters, and who bears them?
- ☒ Who is affected by the loss of wildlife habitats?
- ☒ How can the amount of sediment and other pollutants in our surface waters be conveyed in identifiable figures, like truckloads or bags of fertilizer?
- ☒ Can certain desired behaviors be portrayed as "doing the right thing" and justified as economically sensible?
- ☒ How can municipal staff demonstrate proper "good housekeeping" procedures at Township-owned facilities?

Different audiences can have different motivations for wanting to positively affect our collective water resources. Throughout the life of West Cocalico Township's public outreach campaign, the list below will

likely evolve and expand. However, the task of pairing motivations and functions with the identified population segments lays the ground work for customizing the overarching message.

Residents/ Neighborhoods:

- Lawn fertilization is an easy target for behavioral change. Frequency of application, amount, and proper technique can reduce pollution from residential areas.
- Awareness of how the storm sewer system works, where it drains to, and why dumping any substance into it has a negative impact on waterways is needed; creating this awareness can reduce pollution.
- HOAs and subdivisions that have developed into close-knit neighborhoods may be easier to reach for waterway cleanup projects (often sponsored by watershed associations) and other events that encourage positive behavior and/or productive activity.
- Disconnecting runoff generated by an individual lot from the storm sewer system in a safe manner can benefit the entire community.
- Importance of managing stormwater associated with increases in impervious area.

Agricultural Community

- Sediment is the largest contributor to stream impairments locally, and a major component of pollution to the Chesapeake Bay. Agricultural operators play an increasingly vital role in improving water quality.
- Agricultural Erosion & Sedimentation and/or Conservation Plans are building blocks to improved water quality – each farm in West Cocalico Township should have and implement one.
- Cost-sharing programs for streamside conservation projects are impactful, such as the Conservation Reserve Enhancement Program (CREP).

Business and Industry

- Establishments that cater to a clientele that visits a physical store or office can support municipal and/or watershed group efforts by displaying posters, distributing handouts, sponsoring events, etc.
- Keeping a “clean shop” is of particular importance with non-residential land uses that use cleaners, chemicals, or other types of process liquids that flow into waterways or the storm sewer system.
- Since non-residential uses can have more impervious coverage (area and percentage of total lot), runoff can be pre-treated with green infrastructure techniques like rain gardens and infiltration before reaching waterways or the storm sewer system.

Cocalico School District

- Continued success in improving water quality relies heavily on future generations, such as our school-age children.
- Sources, amounts, and effects of common pollutants should be discussed with our youth in terms that are comprehensible by various age groups.

West Cocalico Township Municipal Staff

- Municipal staff must exhibit "good housekeeping" principles at its facilities, including the Township buildings and community parks, to maintain water quality and provide a positive example to the citizenry.

DISTRIBUTING THE MESSAGE

Print and Electronic Media

West Cocalico Township must be resourceful in broadcasting the water quality campaign since staff time and budget constraints are not conducive to a costly program employing a full-time staff member. This places a premium on partnerships with other organizations, use of electronic contact methods, and reaching out to established neighborhood groups for education and participatory activities. A prime example of piggybacking this message with a mainstream medium is through our Township newsletter. For the last several years, we have incorporated brief pieces up to whole-page features on topics ranging from illicit discharges, the MS4 program, and watershed association profiles. ***We will continue to use the newsletter as a Township-wide conduit for standing segments on water resources.***

However, the newsletter is just one piece in the larger scheme of distributing the message to our constituents. Our website (www.westcocalicotownship.com) is currently a no-cost resource used to convey a considerable amount of information, current event postings, and links to other valuable websites. The “Storm Water Management Page” is home to good information and learning material for visitors to the site.

Partnerships and Events

Lancaster County as a whole has 16 different watershed associations – a testament to the fact that there is considerable community awareness of the watershed concept, local water quality challenges, and our impact on the Chesapeake Bay. Such groups have been responsible for numerous waterway restoration projects, distribution of information at various community events, and obtaining grant funding for water quality efforts. ***West Cocalico Township will continue to strengthen its partnerships with the Cocalico Creek Watershed Association supporting and promoting events and educational outreach conducted by these organizations.***

In addition to the media outlets discussed above, we can use our Facebook page to notify our followers on watershed group activities and other updates as part of the objective to encourage more residents and local businesses to participate.

The following are additional near-term projects that can help jump-start more activity and interest in improving water quality in our community:

Inlet Marking – Marking storm drain inlets within various neighborhoods and developments with the help of local residents can create more awareness with people of all ages, especially children. This is particularly impactful because it creates a visual reminder to everyone that passes by the drains stamped with a catchy phrase like “Only Rain Down the Storm Drain” or “Don’t Pollute – Flows to Waterways”. This can also be effective in encouraging more eyes to keep watch of what is flowing into our drains and waterways, a critical objective of our Illicit Discharge Detection & Elimination program. Additional assistance from residents could help identify such pollutants early and initiate a prompt cleanup response from the Township or other emergency responders.

Conservation Planning for Agriculture – West Cocalico Township should partner with the Lancaster Farmland Trust to ensure that every farm in our municipality has a Conservation Plan or Agricultural Erosion & Sedimentation Plan. Although these are required as part of the Clean Streams Law, not all

farms have one. We can take a more active role in ensuring this is achieved, helping to cut down on one of the largest contributors to our waterways' impairment: sediment.

Public Involvement in the Planning and Implementation Processes

There are other opportunities for the public to be involved in water quality improvement efforts, namely during program planning and implementation stages. As noted in the introductory section of this document, permit requirements of our MS4 call for a comprehensive local Stormwater Management Program (SWMP). Although many elements of the SWMP have been in place for several years now, there are others that have just recently come under consideration. ***A prime example is the Chesapeake Bay Pollution Reduction Plan (to be started in 2017) – an undertaking with a transparent public involvement process that will solicit meaningful feedback and ideas to properly position our municipality for pollution reduction through impactful, cost-effective solutions.***

The Township will also make public the periodic progress reports of our SWMP on our website and in print at the Township Office. We have initiated a reporting system beginning with progress made in 2015, and intend to document accomplishments no less frequently than once per year. Not only does this assist in compiling the required Annual Report to the PA DEP, it can serve as an update to our citizens. The breadth of the SWMP offers a range of topics to discuss, including public involvement, illicit discharge detection, and stormwater facility inspections. We will maintain regular communication with the Cocalico Creek Watershed Alliance and the Lancaster County Conservation District representative in attendance. This allows us to be legitimate participants in their events, activities, and communications; all of which are important tools to help us reach our residents and businesses.

West Cocalico Township leadership recognizes the significance of the need to improve water quality, in addition to the financial impacts and regulatory obligations that comes with it. Without each resident, business owner, farmer, and school-age child being part of this effort we will likely have to resort to more costly, structural fixes to clean our waterways and treat the drinking water. Because we have about 7,300 people living in this municipality, we are fortunate to have about 7,300 opportunities to incrementally improve our water resources for current and future generations.