



MS4 Annual Report Highlights July 1, 2022, to June 30, 2023

PowerPoint Presentation

Palmer Township
Northampton County
Pennsylvania
PAI: 132206

MS4 Annual Report Information

- The MS4 (Municipal Separate Storm Sewer Systems) reporting year is July 1, 2022, to June 30, 2023
- Report is due September 30, 2023
- WATERSHED NAMES: Lehigh River HUC # 02040106, Bushkill Creek (Delaware River) HUC # 02040105, and Schoeneck Creek HUC # 020401050303.
- CONTACT PERSON: Palmer Township MS4 Coordinator, Phone No. (610) 253-7191
- WEBSITE: www.palmertwp.com/stormwater.html
- The Annual Report is divided into 6 Minimum Control Measures (MCM's) listed on the next slide. The Highlights of the 2022-2023 Report are summarized in this PowerPoint Presentation.

MCM (Minimum Control Measures)

- MCM #1 - Public Education and Outreach on Stormwater Impacts
- MCM #2 - Public Involvement/Participation
- MCM #3 - Illicit Discharge Detection and Elimination
- MCM #4 - Construction Site Storm Water Runoff Control (Northampton County Conservation District Responsibility)
- MCM #5 - Post-Construction Storm Water Management in New Development and Redevelopment.
- MCM #6 - Pollution Prevention/Good Housekeeping for Municipal Operations

Palmer Township

Stormwater Program (MS4)

Why MS4 is important and how you can help



MCM 1

MS4 BMPs- Native Plants



Long before humans roamed the earth and started altering the environment, plants thrived in open space. Over time plants adapted to their surroundings, finding the best way to live with the other organisms in the area. Some examples of plant adaptation are cacti in the desert that have waxy coatings on their leaves to retain water (Plant Adaptations, 2022). When plants have evolved to be best suited to their environment, these are called native plants. Another definition would be a plant that existed in an area before colonization of Europeans (Landscaping with Native Plants, 2022). The opposite of a native plant would be an invasive plant, which is a plant from another environment that is introduced to an area where there are no natural predators. Native plants are important not only to Pennsylvania, but to all areas of the world because the plants are best suited to live there, but also because the animals rely on those native plants for their food source. Native plants attract pollinators like bees, moths, hummingbirds, and beetles to continue the plant population into the next year (Landscaping with Native Plants, 2022). The Department of Conservation and Natural Resources (DNCR) tracks and promotes plantings that will aid native pollinators (Landscaping with Native Plants, 2022).

When you plant native you should keep in mind to conserve existing native vegetation and plant communities; why dig up the native plants that are already there? Choose nursery propagated native plants to ensure that the species is native and not just labeled as a native plant (Landscaping with Native Plants, 2022). Keeping native plants in their habitat is the goal, so please do not remove any native plants from the wild to be transplanted in your own yard. Limit fertilizer and chemical usage to increase plant health and never plant an invasive species. The most important tip is to know your site! Is there wet or dry soil? Is it a sunny or shady spot most of the day? The site conditions truly determine what type or species of plant you should be choosing. Pennsylvania has a wide variety of native plants suited to every type of condition, you are guaranteed to find a native plant that will suit your garden or landscaping site! Do your part for the environment and choose native plants this spring! For more information, visit DCNR's website (<https://www.dcnr.pa.gov/Pages/default.aspx>) for plant updates and native species for your own garden!



References

Landscaping with Native Plants. (2022, October 11). Retrieved from Pennsylvania Department of Conservation and Natural Resources: <https://www.dcnr.pa.gov/Conservation/WildPlants/LandscapingwithNativePlants/Pages/default.aspx>.

Plant Adaptations. (2022, November 17). Retrieved from National Park Service: <https://www.nps.gov/teachers/classrooms/plant-adaptations.htm>

PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS

MCM #1 Information

- Articles on storm water were provided in the Palmer Township Newsletter editions dated August 2022, November 2022, February 2023, and May 2023.
- Storm water pamphlets are available for residents and visitors at the Palmer Township Municipal Building near the receptionist's desk.
- Storm water information is available on Palmer Township's website: www.palmertwp.com/stormwater.html
- A display board detailing MS4 program history was at Palmer Community Weekend August 17, 18, 19, and 20th, 2023. The display board also gave residents' ideas of how to be stormwater smart and reduce pollution at home.
- An Express-Times newspaper notice (done in conjunction with Lower Nazareth Township, West Easton Borough and Wilson Borough) was published in the February 17, 2023, newspaper.
- Posters describing ways to reduce storm water runoff pollution were posted at the Charles Chrin Community Center and Palmer Library.

MS4 BMPs- Native Plants



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MS4 Article in the Palmer Newsletter
(February 2023)



TOWNSHIP DIRECTORY

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- Michael Betti - Vice Chair
- Kathleen Mitchell
- Ann Marie Pandella
- Joseph Armato

Palmer Township
Palmer Municipal Building

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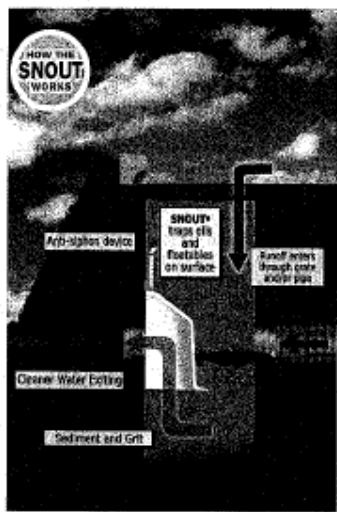
Editor: Denise Moran
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MS4 BMP - Water Quality Inlet

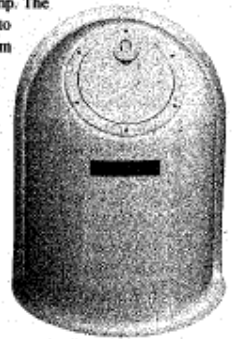


There are many ways that townships and municipalities all over the country have adapted their practices to reduce stormwater pollution. The concepts are the same: reduce waste and keep pollutants out of the water ways, but how this is accomplished is unique to every region. In past articles other best management practices (BMPs) were described such as the ecological filter at Mill Race Park and the wash bays at the Public Works building. Palmer has another BMP that may be on your street! These BMPs are water quality inlets, called SNOUTS, that can be added to storm drain inlets with sumps to reduce the amount and number of pollutants discharged from the stormwater system.

A SNOUT is a vented fiberglass water quality hood that is installed over the outflow pipe in a storm drain with a deep sump or drain. The hood creates space to trap any floating debris on the surface and allows solids to sink to the bottom of the sump. The drain or sump needs to be deep, at a minimum

36 inches, to allow separation of floating debris, sediment, and oil. The outflow pipe of the SNOUT is designed to keep solids and trash inside the drain and prevent them from washing further into the storm drain system. The clarified water is then forced out of the SNOUT by incoming storm flow resulting in a cleaner stormwater discharge with none or reduced amounts of sediment, oils, and trash.

While these SNOUTs help keep trash and sediment out of the water ways, it is still important to reduce your stormwater pollution at home. To find out more about what you can do to help Palmer Township keep its stormwater clean, visit www.palmerpa.com/stormwater.html. To learn more about SNOUTs and how they work, visit www.bmpinc.com.



MS4 Article in the
 Palmer
 Newsletter
 (November 2022)

HOLIDAY MUNICIPAL BUILDING CLOSINGS:

- Veteran's Day**
Thursday, November 11th
- Thanksgiving Day**
Thursday, November 26th
- Day after Thanksgiving Day**
Friday, November 25th
- Christmas Eve**
Friday, December 23rd
(Christmas Eve observed)
- Christmas Day - Monday, December 26th**
(Christmas observed)
- New Year's Day - Monday, January 2nd**
(New Year's Day observed)

Attention History Buffs:

The Palmer Historical Society invites your membership and attendance at their informative and educational meetings, featuring local and area subjects of interest.

Meetings are held in the Palmer Library 10:00AM to Noon February - May and September - November. Membership is \$5.00 per year and includes invitation to all events.

Interested? Please contact Ed Dean at 610-253-2281



TOWNSHIP DIRECTORY

BOARD OF SUPERVISORS:

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Joseph Armato – Vice-Chair
Jeffrey A. Young
K. Michael Mitchell
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HOLIDAY MUNICIPAL BUILDING CLOSINGS:

Memorial Day – Monday May 29, 2023

4th of July – July 4th, 2023

MS4 NEWS

MS4 Homeowner Best Management Practices- Rain Gardens

Many homeowners use gardens for different purposes and get great benefits. Some may think that gardening is relaxing and helps relieve their stress from the day. Some people think that it adds beauty or even practicality depending on what you are growing. But did you know that there is another kind of functioning garden that can reduce stormwater runoff from your house roof, driveway, patio, and other paved areas? Rain gardens work by being lower in the ground than a regular garden and act as a hole for rain to recharge groundwater. Without rain gardens, this rapidly moving water can carry pollutants like fertilizer, eroded soil, pesticides, anti-freeze, grass clippings and pet waste directly to our streams like the Bushkill Creek. However, once a homeowner adds a rain garden, up to 30% more water can be absorbed by the ground than equivalent yard space!

If you are looking for a summer project this year or want to add more plant life to your yard, a rain garden would be a great option to consider! Here are a few things to think about before starting to plant your rain garden:

1. Size of your roof¹
 - a. While this may seem inconsequential, the size of your roof determines how much water will run off your property during a rainstorm. Determining the size of your roof and how much water runs off the roof will help determine the size and depth of your rain garden.
2. Type of soil¹
 - a. The type of soil you have in your yard plays a major role in planning your rain garden. Different soils have different rates that they absorb water. Clay absorbs water more slowly than sand, so if you have clay, it would be best to add compost or dead leaves to loosen the soil¹.
3. How deep the rain garden will be¹
 - a. Keep in mind how deep you want to make your rain garden for drainage and what type of plants would be best suited to the rain garden.

Other aspects to consider are the placement of your rain garden. You want to avoid putting the rain garden directly over any septic systems so that if you have any problems down the road, you will not need to dig up your rain garden to fix it. You also want to choose a spot in your yard that is not always wet because the rain garden should drain within 24 hours. If water does not drain within 24 hours, the standing water can be a breeding ground for mosquitoes¹, and no homeowner wants mosquitoes in their yard. It is also suggested that plants with a variety of colors, shapes, and bloom times should be chosen for your rain garden to encourage pollinators, as well as semi-evergreen plants that will control erosion in the wintertime. For more information on how to establish your own rain garden, visit the source below. To find out what you can do for Palmer, visit palmerwp.com/stormwater.html.

Sources

1. An introduction to rain gardens. Penn State Extension. (2022, June 6). Retrieved June 22, 2022, from <https://extension.psu.edu/an-introduction-to-rain-gardens>
2. Picture sourced from: <https://www.econst.com/app/uploads/2016/11/rain-garden.jpg>



MS4 Article in the Palmer Newsletter (May 2022)

Palmer Township Website on Stormwater



Departments

News

Contact



General Info

Alerts

Calendar



[Go Back](#)

Stormwater

A clean stormwater system is critical to our environment.

PLEASE NOTIFY THE PALMER TOWNSHIP PUBLIC SERVICES DEPARTMENT IMMEDIATELY IF AN APPARENT ILLICIT DISCHARGE IS FOUND AT A STORM SEWER OUTLET OR WITHIN A SWALE.

PUBLIC SERVICES CAN BE CONTACTED AT 610-253-7191 WEEKDAYS FROM 8:30 AM TO 4:30 PM.

AFTER HOURS, A MESSAGE CAN BE LEFT AT THE NORTHAMPTON COUNTY NON-EMERGENCY PHONE NUMBER 610-759-2200.

Resolve.

to protect

Updates coming soon!

From the well or the tap, the watershed we live in is the source of your or someone else's drinking water.

It's precious...

- Water makes up three quarters of our planet.
- Only 1% of all the water on earth is accessible and clean enough for our consumption.
- All people, plants and animals must share this same 1% water supply.

Make every drop count...

- A watershed is all the land that drains into a common water body, such as a stream, creek, lake or river.



Palmer Days Display 2023



Palmer Township MS4 Program



What is MS4?

MS4 stands for Municipal Separate Storm Sewer System. The permit program was started in 1990 for large cities with populations over 100,000.

In 2018 in PA, there were approximately 950 municipalities with an MS4 permit.



Why was the MS4 program started?

The MS4 program is meant to reduce the pollution that enters our streams and rivers. Many townships, boroughs and cities have separate storm sewer systems that carry water from the road directly to the stream without a filter. Any dirt, debris, oil, anti-freeze, pet waste, or cleaning products that were on the road are being washed into our waterways, like the Bushkill Creek. In 2016, DEP labeled roughly 19,000 miles of streams in PA as impaired for aquatic life and recreation.

Be Stormwater Smart

There are many different ways to be stormwater smart at home and help reduce possible pollutants being washed from your property.

1. Know the impaired streams near you
Waterways in Palmer Township are the Lehigh River, Schoeneck Creek and Bushkill Creek.



2. Plant a rain garden
Rain gardens utilize native plants and grasses to infiltrate water on your property.

3. Join forces!

Consider volunteering with local conservancy groups or the Penn State Extension to learn more about what you can do to prevent stormwater pollution at home.

4. Think about lawn care

Use pesticides and fertilizer sparingly. Don't leave grass clippings or leaves in the street, or put them into the storm drains. Consider using organic or environmentally friendly lawn care products.



5. Set up a rain barrel at your residence

Rain barrels capture water from your downspout for later use in the garden or to rinse your car.



For more information on Palmer Township's MS4 program, visit palmertwp.com/stormwater.html, or use the QR Code above!



MCM 2



PUBLIC INVOLVEMENT / PARTICIPATION (PIP)

MCM #2 Information

- The Palmer Township Environmental Steering Committee (ESC) held an Earth Day event on April 22nd, 2023. Residents came to attach emblems to storm inlets, learn about native plants, and recycling in Palmer.
- Efforts were underway by Palmer ESC to involve students, scouts and residents with a volunteer program to attach emblems to storm sewer inlets. These efforts are following a township-wide inlet survey.
- Bushkill Stream Conservancy (BSC) completed a stream restoration project on the Bushkill Creek near Mill Race Park. BSC president and members did a walk and talk on Earth Day explaining the restoration project and ongoing plant maintenance.
- Information about storm water runoff is available at the receptionist's desk at the Palmer Township Municipal Building.
- Website information and links are provided on the Palmer Township webpage. (www.palmertwp.com/stormwater.html)

Palmer Township Earth Day 2023



Event Information

Saturday
April 22, 2023
Mill Race Park
Newlins Mill Road

Join the Palmer ESC and Bushkill Stream Conservancy (BSC) in a variety of fun, educational events! Learn about the Bushkill Creek, stormwater, and native plants during our outdoor day of fun!

Event Schedule

9am-10:30am
Enviro-scape- BSC
Stormdrain labeling
10:30am-11am
Native Plants- D&L
11am-12pm
Walk and Talk- BSC
12pm-12:30pm
Lunch Break
12:30pm-1pm
Water Testing Demo- BSC
1pm-1:30
Recycling Education- JPM Total Recycle

9:00-10:30am Storm Drain Labeling

Committee members and volunteers received supply bags to complete storm drain labeling in the Villages of Mill Race. This labeling was done as part of Palmer Township's MS4 program, to educate residents about stormwater and pollutants that can find their way to our streams. Storm drains need to be cleaned and labeled to ensure the public does not dispose of anything in the storm drain. For more information on Palmer Township's MS4 program, please visit <https://www.palmerwp.com/stormwater.html>.



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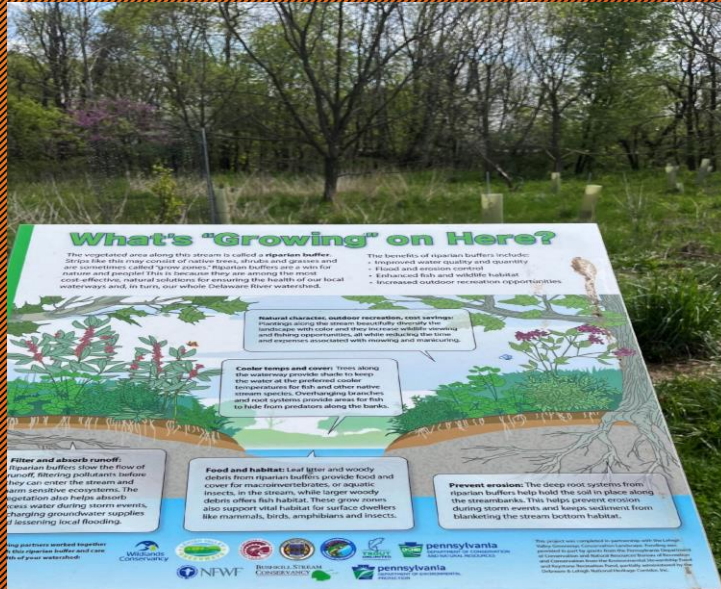
Bushkill Stream Conservancy (BSC)



- Bushkill Stream Conservancy's mission is to advance the conservation and enhancement of the Bushkill Creek watershed.
- BSC does this by sponsoring education programs, public outreach, environmental research and restoration of streams.
- They also partner with Jacobsburg Environmental Education Center to educate the public and protect biodiversity of the Bushkill Creek.
- BSC's current project is focused on 1.9 miles of the Bushkill Creek between Tatamy and Palmer. Goals are to increase public access and awareness as well as mitigate effects of development in the area.



BSC Stream Restoration



Inlet Emblem Program

- Township employees conducted a township wide survey last permit year to determine how many inlets need to be relabeled. Palmer ESC is still working with volunteers to reattach emblems in phases across the township.
- Metal fish plates were installed in pre-cast inlet tops by the Palmer Township Public Works Department on previous storm sewer projects.
- Future Palmer Township Storm Sewer Projects are required to install metal fish plates on all new inlets as shown in the Palmer Township Standard Specifications and Construction Details.



Picture of Duracast Emblem for Inlet



Picture of Metal Emblem for Inlet ("Fish Plate")



Palmer Township Inlet Emblems



MCM 3

ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDD&E)



MCM #3 Information

- Storm sewer outfalls/swales were inspected for illicit discharges within Palmer Township during the reporting year. No illicit discharges were found. There are 82 known storm sewer outfalls/swales within Palmer Township.
- Typically, approximately 25% of storm sewer outfalls/swales are inspected each year, about 20-30 outfalls.
- Inspections are performed, recorded on an inspection sheet, photographed and catalogued by the MS4 Coordinator. Pictures of a few typical outfalls are included in this PowerPoint.
- A spreadsheet is attached to this presentation and lists when the outfalls/swales were inspected and known remaining outfalls/swales.
- A note was added to the Township's webpage describing what an illicit discharge is and what to do when one is found.
- The locations of the storm sewer outfalls and swales are provided on a Palmer Township topographic map. The map is available for review upon request at the Palmer Township Municipal Building.

- Pictures of storm sewer outfalls from inspections for illicit discharges





MS4 OUTFALL FIELD SCREENING REPORT



BACKGROUND INFORMATION

Permittee Name: Palmer Township	NPDES Permit No.: PAI-132206
Date of Inspection: <input type="text"/>	Outfall ID No.: B-1
Land Uses in Outfall Drainage Area (Select All): <input type="checkbox"/> Industrial <input type="checkbox"/> Urban Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Open Space <input type="checkbox"/> Other: <input type="text"/>	Latitude: 40° <input type="text"/> <input type="text"/>
	Longitude: 75° <input type="text"/> <input type="text"/>
	Dry Weather Inspection? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	Date of Previous Precipitation: <input type="text"/>
	Amount of Previous Precipitation: <input type="text"/> in
Inspector Name(s): <input type="text"/>	Were Photographs Taken? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	Are Photographs Attached? <input type="checkbox"/> Yes <input type="checkbox"/> No

OUTFALL DESCRIPTION

TYPE	MATERIAL	SHAPE	DIMENSIONS	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input checked="" type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other <input type="checkbox"/> Other	Diameter: 16 in	<input type="checkbox"/> In Water <input type="checkbox"/> With Sediment
<input type="checkbox"/> Open Channel	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Rip-Rap <input type="checkbox"/> Other	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other	Depth: <input type="text"/> in Top Width: <input type="text"/> in Bottom Width: <input type="text"/>	

Dry Weather Flow Present at Outfall During Inspection? Yes No (If No, skip to Certification Section)

Description of Flow Rate: Trickle Moderate Significant N/A

DRY WEATHER FLOW EVALUATION

Does the dry weather flow contain color? Yes No If Yes, provide a description below.

Outfall/
Swale
Inspection
Form
Example

Notice added to Palmer Township's storm water website.



- **Protect Palmer Township and Downstream Environment From Illicit Discharges To Storm Sewer System**
- Illicit discharges include dry weather flows from storm water outfalls and swales along stream banks or a significant volume of an unusual looking or odorous discharge from a storm water outfall during wet weather.
- If an illicit discharge is found, do not investigate further; this material may be harmful to your health and safety. Immediately notify the Palmer Township Public Services Department at 610-253-7191 from 8:30 a.m. to 4:30 p.m. weekdays; and, after hours, a message can be left at the Northampton County non-emergency phone number 610-330-2200.
- Some examples of illicit discharges are automotive fluids (antifreeze, used motor oil, brake fluid, fuel, etc.), concrete slurry, paint products and solvents.



MCM 4

CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

MCM #4 Information

- The Northampton County Conservation District (NCCD) performs reviews and approvals of Erosion & Sediment Control Plans and NPDES Plans within Palmer Township.
- Pre-construction meetings and field inspections are performed by the NCCD.
- Notice of Violations (NOV) and other compliance letters are also sent by the NCCD.
- NOVs are sent to the Developer/Contractor/Permit Holder and a copy is sent to Palmer Township for tracking and inclusion in the Annual Report.
- The pamphlet “Don’t Let Storm Water Run Off With Your Time and Money!” is given to Developers, Contractors and Builders by the Palmer Township Planning and Permitting Offices.
- Other construction stormwater information can be found using the links on the Township’s webpage.

Notice of Violations List

Maintained by Palmer Township

ATTACHMENT K

NORTHAMPTON COUNTY CONSERVATION DISTRICT EROSION AND SEDIMENT CONTROL PLAN NOTICE OF VIOLATIONS PALMER TOWNSHIP, PA 2022-2023

NUMBER	PROJECT NAME/ RESPONSIBLE PARTY	NCCD # NPDES#	DATE SENT OUT	RECEIVING STREAM	COMMENTS
1	Palmer Elementary School David Piperato, Superintendent Skepton Construction Inc. (Co-permittee)	24-17-1-86 PAD480042	10/18/2022	Bushkill Creek	Site still under construction
2	John G. Sales and Service John A. Gonsalves	Facility ID:48-20917	12/1/2022	Bushkill Creek	Faulty spill prevention equipment
3	Northwood Ave Transformer Spill Met Ed c/o Jeffrey Reed	Facility # 864740 Remediation # 55944	3/1/2023	Schoeneck Creek	Lewis Environmental on site; oil booms placed in basin
4	Omega Homes Inc-257 and 261 Lewis Circle Alex Hornstein	K9 7 3A-10 0324 K9 7 3A-11 0324	3/8/2023	Schoeneck Creek	Requirements for Clean Fill
5	Coherent Corporation Jason Tennant	Approval-48-00122A	3/27/2023	N/A	Air Quality Program Approval

Don't Let Storm Water Run Off With Your Time and Money!

What the Construction Industry Should Know About Storm Water In Our Community

The construction industry plays an important role in improving our community's quality of life by not only providing new development, but also protecting our streams and rivers through smart business practices that prevent pollution from leaving construction sites.

Storm water runoff leaving construction sites can carry pollutants such as dirt, construction debris, oil, and paint off-site and into storm drains. In our community, storm drains carry storm water runoff directly to local creeks, streams, and rivers with no treatment. Developers, contractors, and homebuilders can help to prevent storm water pollution by taking the following steps:

1. Comply with storm water permit requirements.
2. Practice erosion control and pollution prevention practices to keep construction sites "clean."
3. Conduct advanced planning and training to ensure proper implementation on-site.

The remainder of this fact sheet addresses these three steps.

Storm Water Permit Requirements for Construction Activity

Planning and permitting requirements exist for construction activities. These requirements are intended to minimize storm water pollutants leaving construction sites.

- Pennsylvania's Erosion and Sediment Pollution Control Program (25 Pa. Code, Chapter 102) requires Erosion and Sediment Control Plans for all earth disturbing activities.
- The National Pollutant Discharge Elimination System (NPDES) Permit Program (25 Pa. Code, Chapter 92) requires that construction activities disturbing greater than one acre submit a Notice of Intent for coverage under a general NPDES permit.

Knowing your requirements before starting a project and following them during construction can save you time and money, and demonstrate that you are a partner in improving our community's quality of life. For more information about these programs, contact your local county conservation district office or the Department of Environmental Protection.

Erosion Control Practices:

- Perimeter controls (e.g. silt fence)
- Sediment traps
- Immediate revegetation
- Phased, minimized grading
- Construction entrance
- Protection of streams and drainage ways
- Inlet protection



An Ounce of Prevention

Rain that falls onto construction sites is likely to carry away soil particles and other toxic chemicals present on construction sites (oil, grease, hazardous wastes, fuel). Storm water, if not properly managed, carries these pollutants to streams, rivers, and lakes. Erosion and sediment control practices can serve as a first line of defense,

What is Storm Water?

Storm water is water from precipitation that flows across the ground and pavement when it rains or when snow and ice melt. The water seeps into the ground or drains into what are commonly called storm sewers. These are the drains you see at street corners or at low points on the sides of streets. Collectively, the draining water is called **storm water runoff**.



Pollution Prevention Practices:

- Designated fueling and vehicle maintenance area away from streams.
- Remove trash and litter.
- Clean up leaks immediately.
- Never wash down dirty pavement.
- Place dumpsters under cover.
- Dispose of all wastes properly.

minimizing clean up and maintenance costs, and the impacts to water resources caused by soil erosion during active construction. Erosion controls can reduce the volume of soil going into a sediment control device, such as a sediment trap, therefore, "clean out" frequencies are lower and maintenance costs are less. When possible, divert water around the construction site using berms or drainage ditches.

In addition, use pollution prevention and "good housekeeping measures" to reduce the pollution leaving construction sites as well. This can be as simple as minimizing the pollution source's contact with rainwater by covering it, maintaining a "clean site" by reducing trash and waste, and keeping vehicles well maintained.

The Best Laid Plans

Plans such as erosion and sediment control plans and storm water pollution prevention plans are important tools for outlining the erosion control and pollution prevention practices that you will use to manage storm water runoff prior to breaking ground. Developing good plans allows for proper budgeting and planning for the life of the project. Proper installation and maintenance of erosion and storm water controls is essential to a plan that works. Training for on-site staff helps to ensure the proper installation and maintenance of erosion controls and pollution prevention practices. Inspect controls and management techniques regularly to ensure they are working, especially after storm events. If polluted storm water is leaving the site, you may need to repair or add additional storm water controls.



The Bigger Storm Water Picture

Your community is preventing storm water pollution through a comprehensive storm water management program. This program addresses storm water pollution from construction, but it also deals with new development, illegal dumping to the storm sewer system, and municipal operations. It will also continue to educate the community and get everyone involved in making sure the only thing that storm water contributes to our streams is . . . water! Contact your community or the Pennsylvania Department of Environmental Protection for more information about storm water management.

Available in the Municipal Lobby for permit applicants, residents, and developers.

Pennsylvania Association of Conservation District's:
<http://www.pacd.org/default.html>

Pennsylvania Handbook of Best Management Practices for Developing Areas:
http://www.pacd.org/products/bmp/bmp_handbook.html

Storm Water Manager's Resource Center:
<http://www.stormwatercenter.net>

Pennsylvania Department of Environmental Protection:
<http://www.dep.state.pa.us>



Northampton County Conservation District (NCCD)



More Questions?

- If you have more questions regarding how erosion control is enforced, or questions about stormwater management during the construction phase, please reach out to NCCD for more information.

Contact

- 14 Gracedale Ave, Nazareth, PA 18064-9211
- Open Monday thru Friday 8am-4pm
- (610) 829-6279
- northamptoncd@northamptoncd.org
- www.northamptoncounty.org/CTYAD/MN/CONSVK/Pages/default.aspx



MCM 5

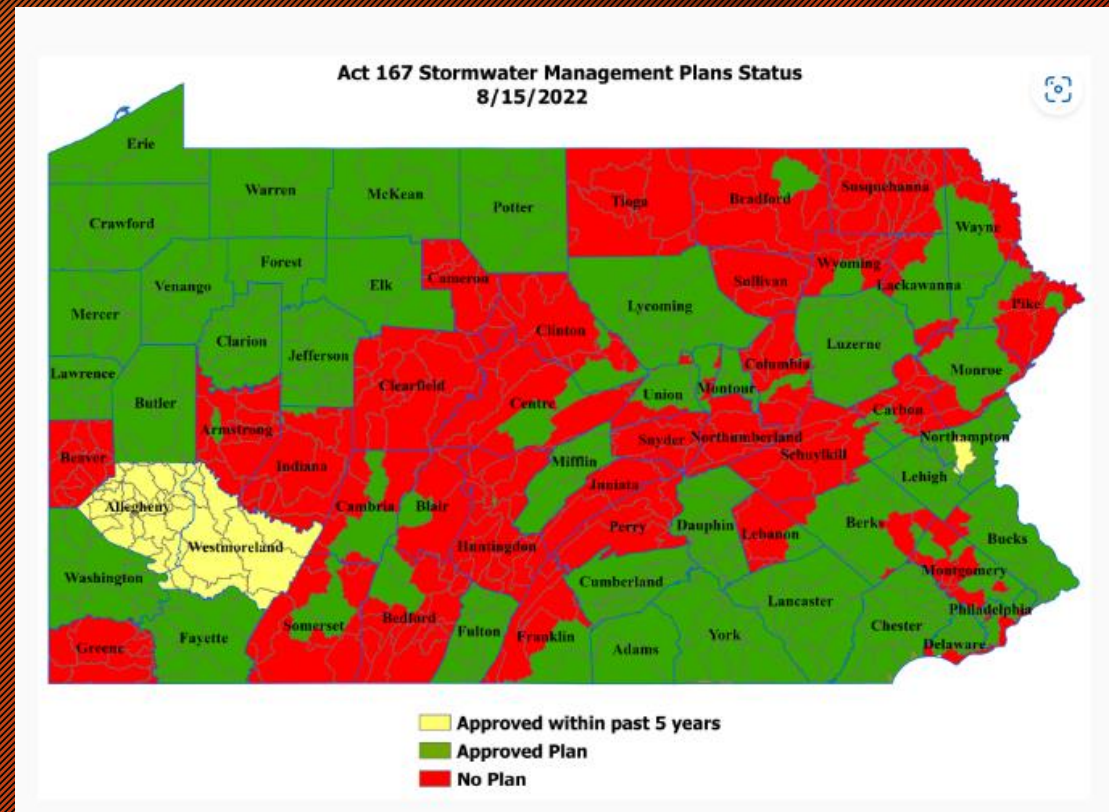
POST CONSTRUCTION STORM WATER MANAGEMENT
IN NEW DEVELOPMENT AND REDEVELOPMENT

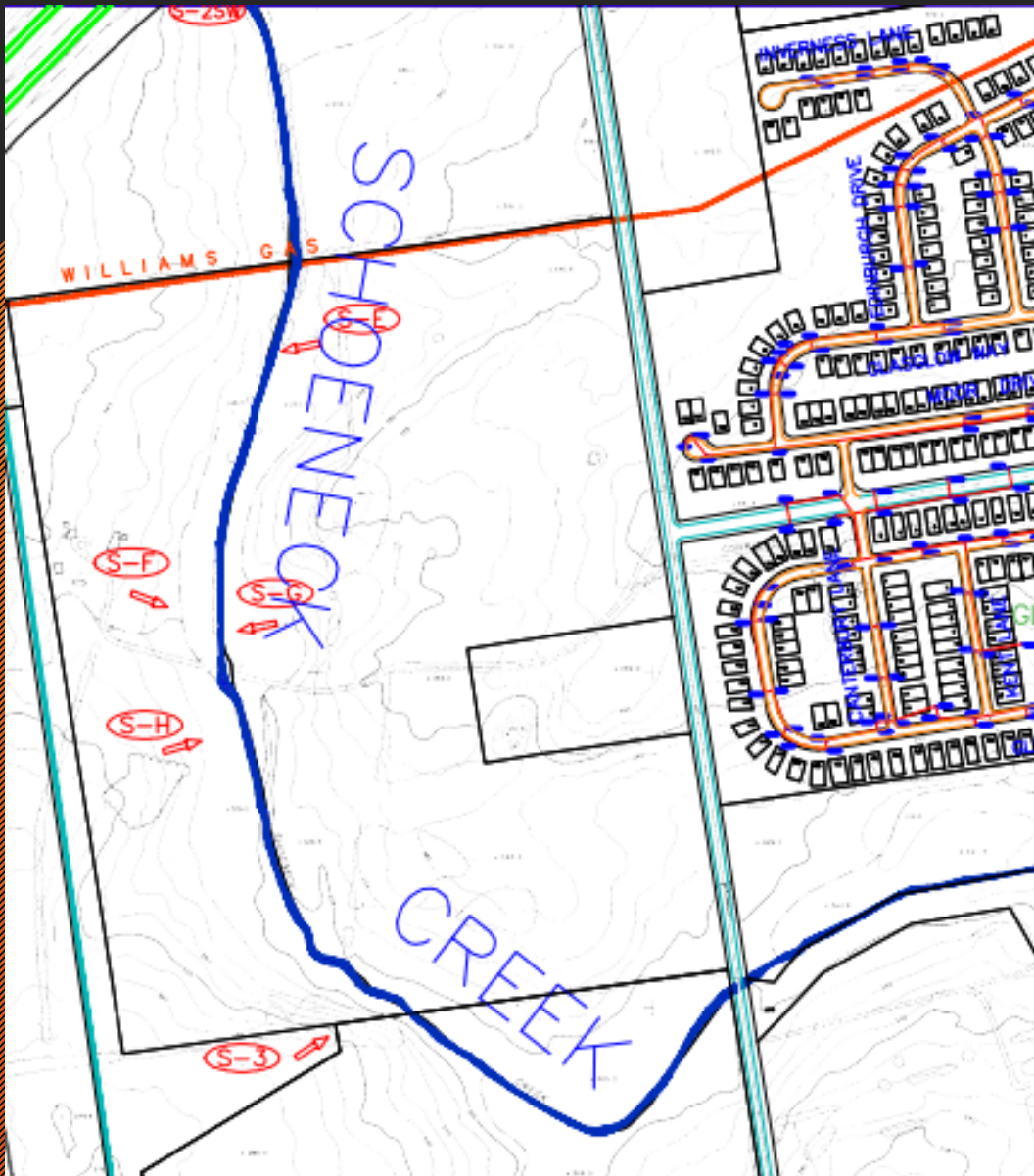
MCM #5 Information

- Prior to the construction of any subdivision or land development improvements the design requirements for post-development storm water controls are reviewed and approved by the Lehigh Valley Planning Commission and the Township Engineer pursuant to Township Ordinances 158 and 165, and the DEP approved Act 167 Plan.
- Final inspection of the constructed storm water conveyance and detention facilities is done by the Township Engineer to ensure compliance with the approved storm water management reports and plans.
- A Township topographic map with inlet numbers and locations is available at the Palmer Township Public Services Department.
- The Palmer Township Public Works Department provides maintenance and repairs to the existing Township owned storm water collection and conveyance facilities within Township street rights-of-way.
- The Palmer Township Parks Department provides maintenance and repairs to the existing storm water detention facilities located on properties owned by the Township.

What is Act 167?

- County level plan
- How to improve watershed
- Large scale
- County Submission
- Not approved=more review

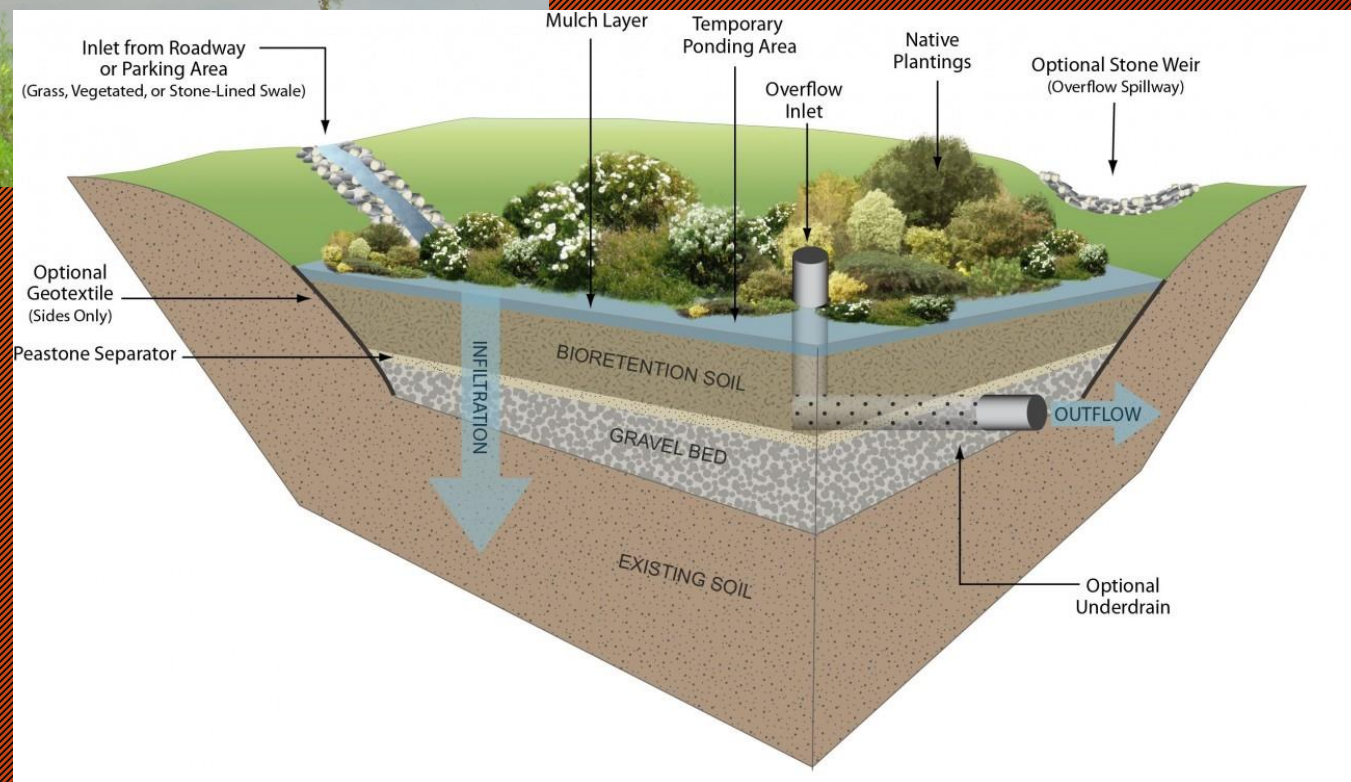




Palmer
Township
Topographic
Map with Inlet
Numbers And
Outfall
Locations



Examples of post-construction storm water management



MCM 6



POLLUTION PREVENTION/GOOD HOUSEKEEPING MEASURES

MCM #6 Information

- The detention basin inspection and maintenance program was continued.
- Inlets, outfalls/swales, and detention basin locations have been assigned identification labels. Labels are based on the river/creek where they are located and are numbered for closed pipes while swales are lettered (Ex: B-1, S-2WSW, L-D)
- Inlets in newly accepted subdivisions are being located and added to Township GIS map.
- Inlet cleaning and street sweeping programs were continued.
- The Township Public Works Department and Parks Department employees were provided with MS4 training in June 2023.
- The Township will train new or transferred employees and update new procedures as necessary to all Public Works and Parks employees.
- The Township is working on a required Pollutant Reduction Plan (PRP) to address specific concerns, like siltation, for each waterway.

Example of Township Owned BMP Inspection Form

INSPECTION INSTRUCTIONS:

- Each BMP requires a separate inspection form.
- A photo of each BMP is required with the inspection form.
- Before and after photos for BMPs requiring maintenance.
- Complete the checklist that corresponds with the specific BMP.

CHECKLIST:

Condition	Maintenance Required When:	Requires Maintenance Yes, No or N/A	Maintenance Performed Yes or <u>No</u>
Monitoring	Inspection of discharge water for obvious signs of poor water quality		
Sediment Accumulation	Sediment depth in bottom of vault exceeds 6-inches		
Trash and debris accumulation	Trash and debris accumulation in vault, or pipe inlet/outlet, <u>floatables and non-floatables</u>		
Oil accumulation	Oil accumulations that exceed 1-inch, at the surface of the water		
Damaged pipes	Inlet or outlet piping damaged or broken and in need of repair		
Access cover damaged/not working	Cover cannot be opened, corrosion / deformation of cover		



Examples of Wash Bay Facilities

Truck wash bay facilities at the Public Works and Utilities garage. They use oil/water separator tanks at the Public Works Building, the Parks Building and both fire stations.



Procedure Township Operation and Maintenance

- Recently updated manual for Township Public Works Operations

**OPERATIONS AND MAINTENANCE MANUAL
FOR
PALMER TOWNSHIP,
NORTHAMPTON COUNTY, PENNSYLVANIA**

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Further Information

- Please contact the Palmer Township Public Services Department for additional information on the MS4 program. Phone Number: (610)-253-7191
- Additional information can be obtained from the links on the important websites slide. These websites can also be accessed through the Township web page on the stormwater page.

Just Remember You Can Help Protect
Our Streams!



Important Web Sites

www.palmertwp.com/stormwater.html

<https://www.dep.pa.gov/Business/Water/CleanWater/StormwaterMgmt/Pages/Be-Stormwater-Smart-.aspx>

www.bushkill.org

<https://www.lvpc.org/water-resources.html>

www.epa.gov/npdes/stormwater

www.northamptoncounty.org/CTYADMN/CONSVIC/Pages/default.aspx

CREDITS

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THE END