

Caln Township Stormwater (MS4) 2021-2022 Program Update April 14, 2022



Prepared April 2022 by



Presentation Outline

- ▶ Caln Township's Stormwater Permit and Program
- ▶ Minimum Control Measures (MCMs)
 - ▶ Public Education / Involvement
 - ▶ Illicit Discharge Detection and Elimination
 - ▶ Stormwater Facility Management
 - ▶ Municipal Pollution Prevention
 - ▶ Municipal Stormwater Ordinance Update
 - ▶ Township Pollution Reduction Plan
- ▶ Questions/Comments and Contact Information



Caln's Stormwater (MS4) Program

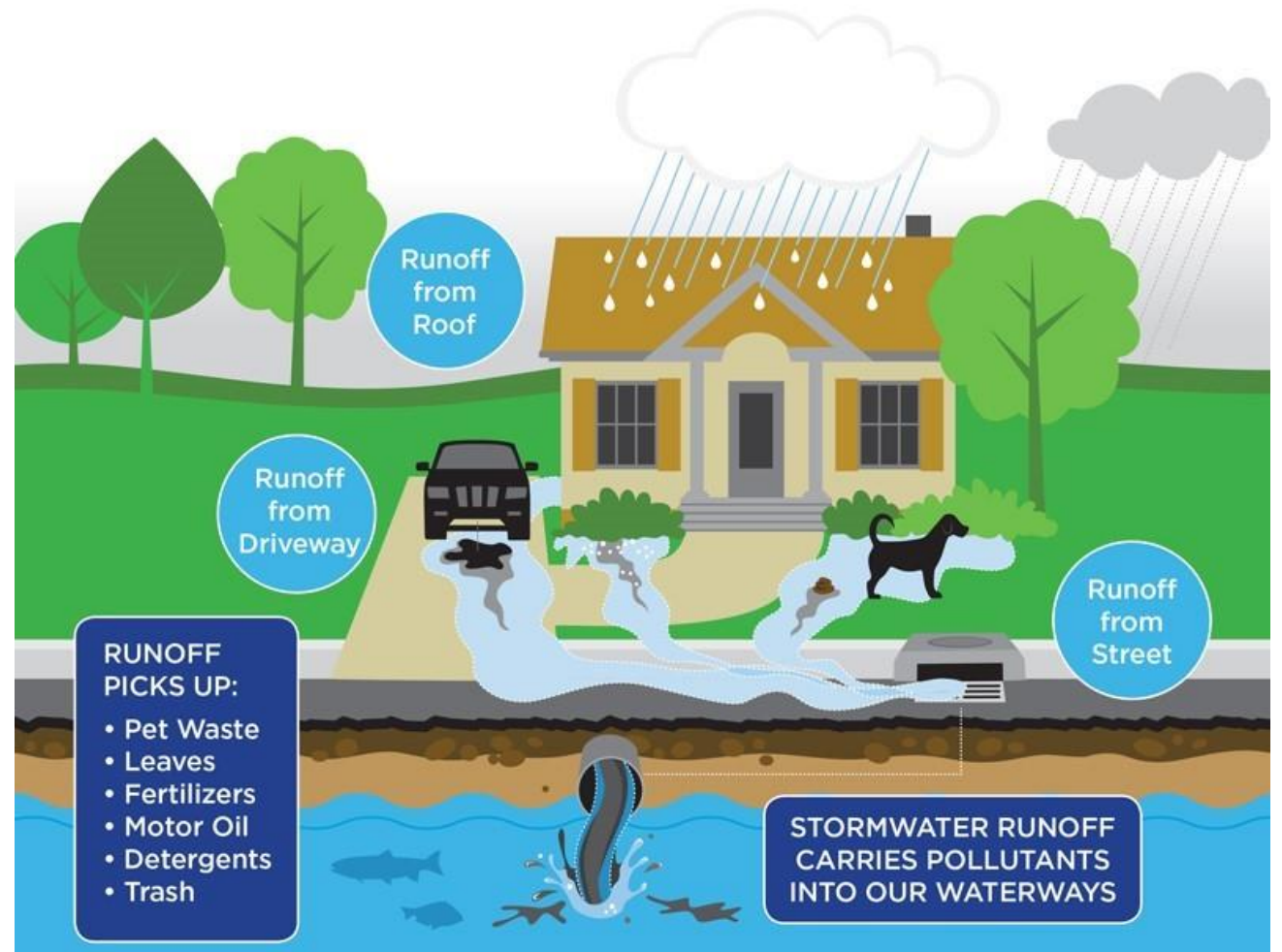
- ▶ The EPA's National Pollutant Discharge Elimination System (NPDES) individual permit covers small municipal separate storm sewer systems (MS4s) in certain portions of the State of Pennsylvania
 - ▶ [For More Info - https://www.epa.gov/npdes/npdes-permit-basics](https://www.epa.gov/npdes/npdes-permit-basics)
- ▶ Caln Township is categorized as an MS4 designated by the Pennsylvania Department of Environmental Protection (PA DEP) under the Clean Water Act (CWA) and associated regulations.
- ▶ Caln Township is a PAG-13 General Permit holder
- ▶ MS4 owners and operators covered under this individual permit must manage, implement, and enforce management programs for controlling all stormwater discharges
- ▶ [Link to PA DEP's NPDES General Permit Requirements](#)

What is Stormwater?

- ▶ Stormwater is rainwater or melted snow that runs off streets, lawns and other sites. When stormwater is absorbed into soil, it is filtered and ultimately replenishes aquifers or flows into streams and rivers.
- ▶ In developed areas, impervious surfaces such as pavement and roofs prevent precipitation from naturally soaking into the ground. Instead, water runs rapidly into storm drains, sewer systems and drainage ditches and can cause
 - ▶ Downstream flooding
 - ▶ Stream bank erosion
 - ▶ Increased turbidity (muddiness created by stirred up sediment) from erosion
 - ▶ Habitat destruction
 - ▶ Combined storm and sanitary sewer system overflows
 - ▶ Infrastructure damage
 - ▶ Contaminated streams, rivers and coastal water

Typical Stormwater Pollutants

- ▶ Petroleum
 - ▶ Oil, Grease, Leaking Vehicles
- ▶ Cooking greases/oils (homes, restaurants)
- ▶ Sediment (soil)
- ▶ Trash/garbage
- ▶ Engine coolants/antifreeze (glycols)
- ▶ Heavy metals from vehicle break parts and tires
- ▶ Fertilizers and pesticides (residential, industrial, agriculture uses)
- ▶ Fecal Bacteria
 - ▶ Pet Waste, Human Waste from sewer breaks
- ▶ Detergents from outdoor car washing, mop wash water dumped outdoors, etc.
- ▶ Liquids from uncovered dumpsters
 - ▶ printing inks, food, etc.



Stormwater Exceptions

- ▶ Except where specifically prohibited under the “Discharges Not Authorized by this General Permit” section, the Township’s General Permit authorizes the discharge of stormwater to surface waters from regulated small MS4s. In addition, the following non-stormwater discharges are authorized by this General Permit as long as such discharges do not cause or contribute to pollution as defined in Pennsylvania’s Clean Streams Law:
 - ▶ 1. Discharges or flows from firefighting activities.
 - ▶ 2. Discharges from potable water sources including water line flushing and fire hydrant flushing, if such discharges do not contain detectable concentrations of Total Residual Chlorine (TRC).
 - ▶ 3. Non-contaminated irrigation water, water from lawn maintenance, landscape drainage and flows from riparian habitats and wetlands.
 - ▶ 4. Diverted stream flows and springs.
 - ▶ 5. Non-contaminated pumped ground water and water from foundation and footing drains and crawl space pumps.
 - ▶ 6. Non-contaminated HVAC condensation and water from geothermal systems.
 - ▶ 7. Residential (i.e., not commercial) vehicle wash water where cleaning agents are not utilized.
 - ▶ 8. Non-contaminated hydrostatic test water discharges, if such discharges do not contain detectable concentrations of TRC.

Minimum Control Measures (MCMs) And Annual Requirements

Public Education and Outreach

- ▶ The Township posts stormwater related materials on the municipal website.
 - ▶ Link to stormwater webpage ([Link](#))
- ▶ The Township has created pamphlets specific to the municipal stormwater program and posted them on the stormwater webpage. Printed copies are also available through the Township office.
- ▶ Illicit discharge/water quality complaints or general stormwater questions can be reported through email to info@calntownship.org, or by calling (610) 384-0600 during business hours.

Why should we care about stormwater?

Keeping our streams clean is very important. Everything that lives in and around our streams, like fish and other wildlife, needs clean water to live healthy lives.



Many of our rivers, streams, and lakes have trash or other man-made pollutants that hurt the health of the waterway and the creatures that need it to live.

Anything that is left outside can make its way into our streams. This means that, while leaving a small piece of trash might look like it is not a big deal, trash and other harmful debris left outside add up to equal sick fish and animals.



What can I do to help?

Taking care of waterways is everyone's job!

Clean up after your dog!

Make sure you pick up dog waste.



Pick up your trash!

Rain has to travel to get to our streams. As it travels, it can pick up whatever is in its path. If trash is left lying around, the rain will pick it up and carry it into our streams. To keep our water clean, please pick up after yourself!

-Don't put anything down storm drains.

-Stay out of stormwater ponds, culverts, etc. Only authorized personnel may enter.



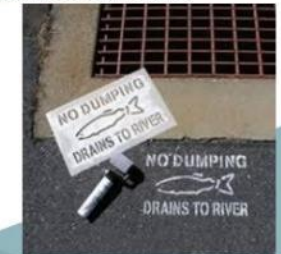
Keep our streams healthy!

The rain that falls onto your house often finds its way into creeks and streams. It's very important that the water stays as clean as possible before it flows into larger waterways.

You can help keep our water clean by making your home and neighborhood as friendly to water as possible!

Storm drains and other pipes were built to carry water away from homes and deliver it to the streams and creeks. You probably have seen these drains around; they look like metal boxes with bars on the side of the road, just like the picture below!

Because rain travels and collects whatever is in its path, it is very important that the inlets stay clean. Trash and debris, as well as organic material such as gravel, leaves, and sticks should not go into our storm drains!



Public Involvement and Participation

- ▶ The Township must involve the public in events that promote active participation and further the education of Caln's Stormwater program.
 - ▶ Public Surveys
 - ▶ Storm Drain Stenciling
 - ▶ Rain Barrel Workshops
 - ▶ Social Media Driven Events
 - ▶ Stream Cleanups
 - ▶ Tree Plantings
 - ▶ Earth Day Events
- ▶ One upcoming event in Chester County is the Brandywine Creek Clean Up
 - ▶ Brandywine-Red Clay Alliance
 - ▶ Saturday April 23 at 8:00 AM - 12:00 PM
 - ▶ All crews must have transportation to drive to assigned sections.
 - ▶ Clean up locations include: Beaver Valley, Pocopson, Downingtown and Coatesville Area
 - ▶ Register on the Brandywine/Red Clay Alliance Website - <http://www.brandywineredclay.org/event/brandywine-clean-up-3/>

Illicit Discharge Detection and Elimination

- ▶ An illicit discharge is defined as “any discharge to a stormwater system that is not composed entirely of stormwater”.
 - ▶ Does not include exceptions stated in earlier slides
- ▶ As a Municipal Stormwater Permit holder, the Township is required to maintain a reporting mechanism for the public to report illicit discharges to the Township administration.
- ▶ Illicit discharge/water quality complaints can be reported through email to info@calntownship.org, or by calling (610) 384-0600 during business hours.
- ▶ § 135-501 of the Township’s Stormwater Management Ordinance allows Township personnel to obtain access to private property for stormwater related activities. § 135-801 prohibits illicit discharges into the Township’s stormwater system.

Post-Construction Stormwater Management

- ▶ The Township has an ordinance that requires the implementation and maintenance of post-construction stormwater management for new development and redevelopment projects, including sanctions for non-compliance.
 - ▶ <https://ecode360.com/9316511>
- ▶ The Township is required to conduct regular maintenance activities associated with publicly owned Stormwater Facilities, also known as “BMPs”. This may include the following:
 - ▶ Mowing
 - ▶ Plant Composition and Health
 - ▶ Trash and Debris Accumulation
 - ▶ Sedimentation and Erosion
 - ▶ Dewatering
 - ▶ Overall Functionality based on Design and Intent



Stormwater Management Facility - N Baily Rd

Privately-Owned Stormwater BMPs

- ▶ Privately-owned BMPs must be maintained by the responsible property owner.
- ▶ The Township conducts annual BMP inspections. The Township will contact property owners in the event that a BMP does not pass the Township's annual inspection. The inspections are based off PA DEP's Stormwater Design Manual's design and maintenance criteria.
- ▶ If you have questions regarding the maintenance of a BMP on your property, please contact the Township office.



Stormwater Management Facility - Pippen Dr

Municipal Pollution Prevention

- ▶ The Township must demonstrate that it is controlling all stormwater runoff from municipal properties.
- ▶ DEP conducts municipal audits for MS4 permit holders once a permit cycle.
- ▶ In the fall of 2021, The Township and ARRO conducted an internal facility audit at the public works garage and storage facility (behind the Township building).
- ▶ ARRO provided the Township with a list of action items to address in preparation for a future site audit.



Township Stormwater Ordinance Update

- ▶ The Township is required to ensure that its current stormwater ordinance is compliant with PA DEP's 2022 model ordinance requirements. ARRO will provide a draft stormwater ordinance to the Township for review. This will include any unique items in its current stormwater ordinance.
- ▶ Chester County published its final stormwater ordinance for municipalities to adopt in Feb 2022.
- ▶ A workshop for county municipalities is planned for April 2022 to address the final ordinance version.
- ▶ The ordinance must be adopted by Sept 2022.

Township Pollution Reduction Plan

- ▶ As part of its 2018-2023 MS4 permit requirements, Caln Township is required to provide structural water quality improvement projects by the end of the permit cycle.
- ▶ The project must reduce nutrients and siltation from the West Branch Brandywine Creek Watershed.
- ▶ To fulfill its obligation, the Township is retrofitting an existing swale on the north side of Caln Park West and creating a bioswale.
- ▶ The bioswale project involves the construction of approximately 1070 LF of bioswale and associated rip-rap and grading.
- ▶ The project was designed by ARRO in 2021/2022 and was put out for bid on 3/14/2022. The project will be paid for through a grant. The project must be completed by June 30th.
- ▶ The Township will likely need to address the next PRP requirement during the 2023-2028 MS4 reporting cycle.

Township Pollution Reduction Plan



Swale looking north along the east side of CPW

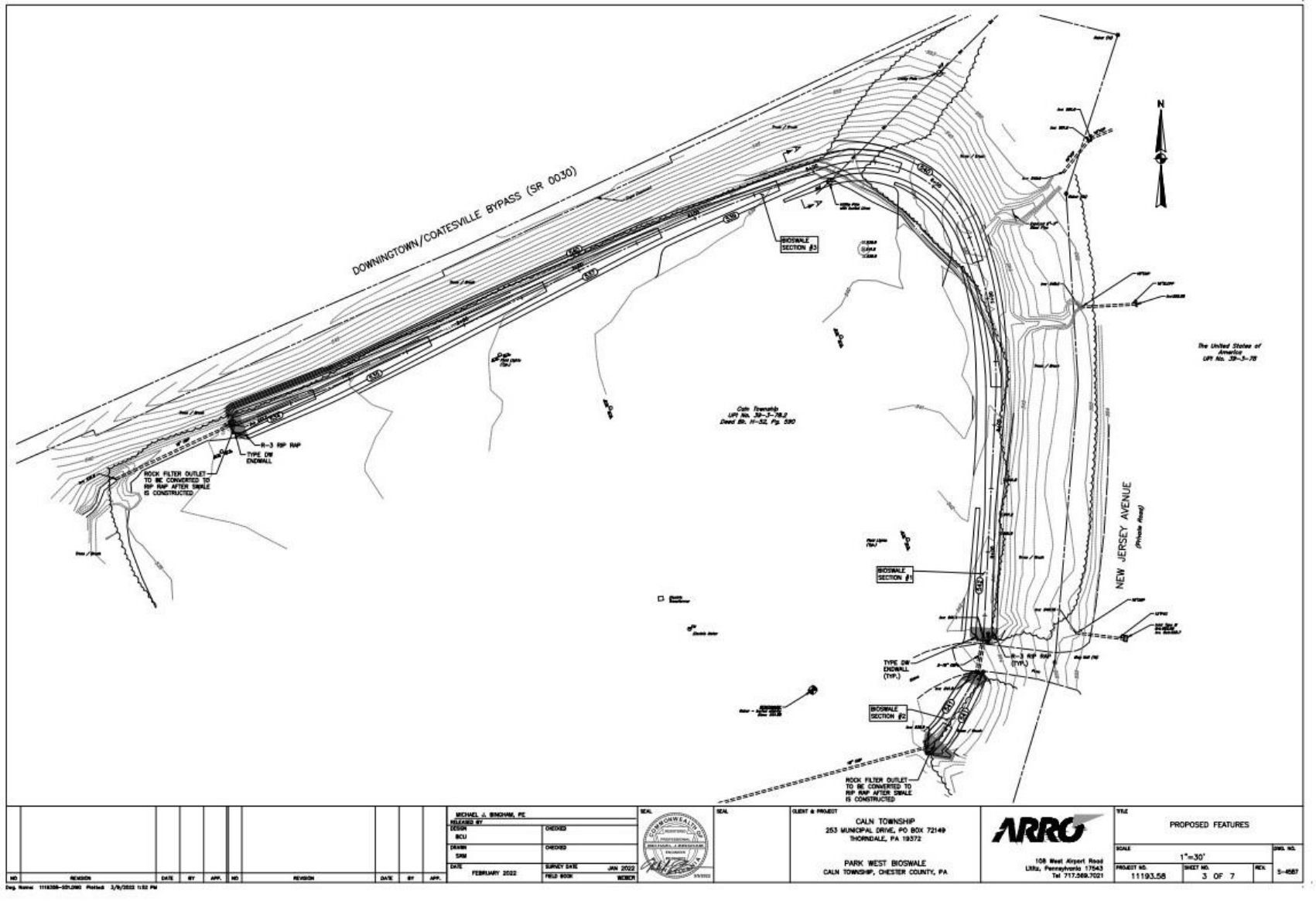


Swale looking west along the north side of CPW



Swale discharging into a tributary to West Branch Brandywine Creek

Plan Design - Caln Park West Bioswale



THIS CONCLUDES THE TOWNSHIP'S STORMWATER PROGRAM UPDATE

- ▶ If you have any questions related to the Township's stormwater program, please call the Township office (610-384-0600), or e-mail info@calntownship.org

