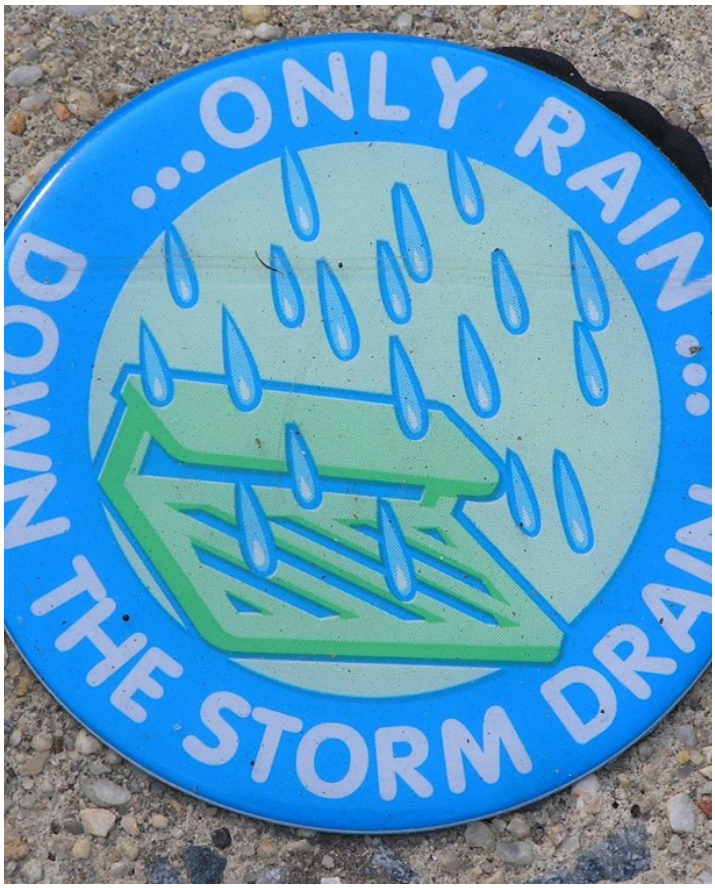
MUNICIPAL STORMWATER

INTRODUCTION

Municipal Stormwater Management is the collaborative process of regulating stormwater runoff to reduce pollution and minimize flooding in local waterways. With the guidance of State and Federal legislation, municipalities develop, design and implement stormwater frameworks to sustain healthy water quality and maintain steady water volume. These regulatory practices benefit humans and wildlife on a local, regional and national level by adressing numerous focus areas such as agriculture, land development, drinking water, recreation, habitat health and transportation.

Municipalities have many tools to help guide them in their Municipal Stormwater Management process including regulatory ordinances, PA Act 167, MS4, PA Chapter 102, and Total Maximum Daily Loads (TMDLs).



A badge place on a stormdrain to educate the public on stormwater

Reforestation at Dansko site

MUNICIPAL REGULATORY ORDINANCE

Local municipalities use ordinances as a legal tool to regulate activities within their jurisdiction, including the management of stormwater. Municipal Regulatory Ordinances that support stormwater quality and quantity include:

- Stormwater Management Ordinances
- Zoning Ordinances
- Subdivision and Land Development Ordinances (SALDO)

These ordinance provisions can vary slightly for each municipality, but they all aim to protect, conserve, and manage local stormwater. Additionally, model ordinances and codes are publicly available and can be found at the municipal, county, and state level.

ACT 167

Act 167 refers to the Pennsylvania Stormwater Management Act of 1978. The legislation requires each county to adopt a watershed stormwater management plan (Act 167 Plan) for each of their DEP designated watersheds.

An Act 167 Plan outlines county watershed planning initiatives and mandates local municipalities to implement development ordinances that help control runoff, prevent flooding, and protect water quality. A Plan can include, but is not limited to, concepts relating to stormwater management systems, obstructions, flood control projects, land development plans, transportation facilities, and public utility services. A county's Act 167 Plan must be reviewed and revised every five years.

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MS4

The Municipal Separate Storm Sewer System (MS4) is the term for all public-owned conveyance systems, such as pipes, storm drains, basins or ditches, which are designed to collect or transport storm water. The MS4 is separate from public sanitary sewer infrastructure.

To regulate stormwater runoff, reduce pollution, and maintain water quality within the MS4 system, the U.S. Environmental Protection Agency (EPA) and Pennsylvania Department of Environmental protection (DEP) require each Municipality to have an MS4, or National Pollutant Discharge Elimination System (NPDES), permit. The MS4 permit requires municipalities to implement a Storm Water Protection Program with six Minimum Control Measures (MCM) including:

1. Public Education
2. Public Participation/Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Post-Construction Runoff Control
6. Pollution Prevention/Good Housekeeping

Municipalities and individual property owners who implement and maintain approved stormwater best management practices (BMPs) are eligible for MS4 credits, which reduce their overall stormwater management cost.

CHAPTER 102

Chapter 102 is a DEP regulation regarding erosion and sediment (E&S) control and post-construction stormwater management (PCSM) for projects proposing earth disturbance activties over a certain size. An NPDES permit is required, and BMPs are planned and implemented, to minimize erosion and sedimentation into local waterways during active construction. Stormwater BMPs must also be engineered, installed, and maintained to handle site stormwater runoff after construction is completed.

Stormwater Management System

TMDLs

Total Maximum Daily Load, or TMDL, is a calculation of the maximum amount of a pollutant a waterbody can receive in a day while still being able to meet water quality standards. The TMDL equation accounts for pollutant sources as well as seasonal variations in water quality. When collected for multiple pollutants, TMDLs are used to develop action plans for waterbody restoration and maintenance.

The Clean Water Act mandates each state, in collaboration with local community members, to develop TMDLs for all waterbodies identified on their Section 303(d) impaired water list. If the TMDL document is approved by the EPA, pollutant load allocations are implemented through NPDES permits and an implementation plan can be prepared for further remediation actions.

For more information on stormwater management, visit the Brandywine Conservancy website for additional toolkits.

BRANDYWINE CONSERVANCY

1 Hoffman's Mill Road
P.O. Box 141
Chadds Ford, PA 19317

610.388.2700
conservancy@brandywine.org
www.brandywine.org/conservancy