# Stormwater Overview in the Chesapeake Bay


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# Why is Stormwater Management Important?

- Stormwater runoff poses a significant threat to public health and the environment and remains a leading cause of water quality impairment in the Chesapeake Bay watershed.

- Unmanaged runoff can exacerbate existing, or introduce new, pollution challenges.

  - Picks up pollutants like trash, chemicals, oils, and dirt/sediment that can harm our local waterbodies
  - Causes beach closures and swimming illnesses through bacterial contamination
  - Impacts fisheries and shellfish harvesting through excess:
    - Sedimentation (smothering fish eggs),
    - Nutrients (reducing available dissolved oxygen)
    - Metals (preventing a health risk to people who eat the fish

- Changing weather patterns result in more frequent and intense storms and more extreme flooding events.

- Stormwater pollutants can also increase the cost of treating drinking water supplies.

# Stormwater Foundations in Clean Water Act

- Aims to prevent, reduce, and eliminate pollution in the nation's waters in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters
- The principal objective is to prohibit the discharge of pollutants into waters of the U.S. except in compliance with a discharge permit.
- The National Pollutant Discharge Elimination System (NPDES) Program establishes permit system for point source discharges of pollutants into waters of the U.S.
- A "pollutant" means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.
- Stormwater management is a part of the NPDES permitting program and is designed to reduce or eliminate the discharge of contaminated stormwater into waters of the U.S.

# Where do Region 3 States Fit in?

- A state, territory, or tribe may receive authorization for one or more of the NPDES program components.
- In the Mid-Atlantic Region each State/Commonwealth is authorized to implement the *majority* of the Federal CWA and the NPDES program.
  - EPA retains authorization for the program components for which a state is not authorized.
  - EPA also has oversight authority and works closely with the state on implementation (based on Federal Regulations and Memorandums of understanding)

# What is Stormwater?

- Precipitation that falls from the sky, including rain, hail, and snow.
- Runoff that flows over impervious surfaces, such as paved streets, parking lots, and building rooftops, and discharges **unfiltered and untreated** directly into surface waters

- The Clean Water Act regulates stormwater point source stormwater discharges from three sources/buckets:
  - Industrial activities,
  - Construction activities, and
  - Municipal Separate Storm Sewer Systems (MS4s).

# Industrial Stormwater

- Operators of certain categories of facilities identified in federal regulations @ 40 CFR 122.26(b)(14)(i)-(xi) are required to obtain an NPDES permit if they discharge stormwater from their facility to surface waters.
- Category (x) Construction is permitted separately
- No specific permitting requirements for industrial stormwater permits in regs, use EPA's Multi-Sector General Permit (MSGP) as a guideline.
- EPA's MSGP was issued with an effective date of March 1, 2021 (exp. 2/28/26)

# Common Elements of Industrial Permits

- Preparation of a Stormwater Pollution Prevention Pan (SWPPP)
- Routine Facility Inspections
- Quarterly Visual Assessments
- Corrective Actions
- Monitoring Requirements
- Reporting and Recordkeeping
- Specific Requirements for the Industry (e.g. Standard Industry Classification or SIC code)
- Other special considerations

# EPA's Proposed 2026 MSGP

- EPA MSGP expires February 2026.
- Federal Register Notice with proposed documents.
  - https://www.govinfo.gov/content/pkg/FR-2024-12-13/pdf/2024-29402.pdf
- Public Notice and comment extended to May 19, 2025.
- Proposed Changes
  - Changes to Additional Implementation Measures (AIM)
  - New schedule and sectors (by SIC) for benchmark monitoring
  - PFAS indicator monitoring
  - Resilient design for control measures
  - Impaired waters requirements
  - Specificity water quality limitations

# Stormwater Discharges from Construction Activities

- When stormwater washes over any loose soil on a construction site, along with various materials and products stored outside if not managed properly they can be transported to nearby storm sewer systems or directly into rivers, lakes, or coastal waters.
- Pollutants commonly associated with construction sites include sediment, phosphorus, nitrogen, pesticides, oil and grease, construction chemicals and debris.
- Construction activity includes earth-disturbing activities such as clearing, grading, and excavating land and other construction-related activities that could generate pollutants.

# Who needs a Construction Permit?

- A permit is required for stormwater discharges from any construction activity disturbing:
  - 1 acre or more of land, or
  - Less than 1 acre of land, but that is part of a common plan of development or sale that will ultimately disturb 1 or more acres of land.
- Construction activity includes earth-disturbing activities such as clearing, grading, and excavating land and other construction-related activities that could generate pollutants.
- Permits must address the minimum federal effluent limitation guidelines for construction and development ( “the C&D rule”).

# EPA's 2022 CGP Modification

- Expires February 2027
- Modification necessary for Land of Exclusive Federal Jurisdiction (LEFJ) eligibility + to align with recent judicial decision
- LEFJ = Lands of Exclusive Federal Jurisdiction (where EPA is the NPDES permitting authority)
- 401 Certification Process
- Fact Sheet/Synopsis of Modification
  - https://www.epa.gov/system/files/documents/2025-04/cgp-fact-sheet.pdf
- FR Notice with final modification documents
  - https://www.govinfo.gov/content/pkg/FR-2025-04-15/pdf/2025-06320.pdf

# What is an MS4?

*A **Municipal Separate Storm Sewer System*** (MS4) is:

A conveyance or system of conveyances... owned by a State, city, town, or other public entity that discharges to waters of the U.S. and is:

- Designed or used for collecting or conveying stormwater
- NOT a combined sewer
- NOT part of a Publicly Owned Treatment Works (POTW)

# NPDES Stormwater Regulations

- EPA's Phased approach
  - Phase I – regulates discharges from large and medium MS4s and industrial activity (incl. construction activity ≥ 5 acres) (1990)

  Phase I MS4s – population greater than 100,000 when rule adopted. Specifically defined in regulatory appendix

  - Phase II – regulates discharges from small MS4s and construction activity ≥ 1 acre (1999)

  Phase II MS4s – automatic designation based on location in defined "urban areas" per latest decennial census (New Phase II MS4s every 10 years)

# MS4 Census Rule – What is it?

- Small MS4s were previously automatically designated based upon "location in an urbanized area as determined by the latest decennial census"
  - In the 2020 Census, the Bureau ceased differentiating between "urbanized areas" and "urban clusters" and defined only "urban areas", which resulted in EPA amending its MS4 regulations.
  - Regulations now refer to "urban areas with a population of at least 50,000", which is the Census Bureau's longstanding definition of the term urbanized area.
- Important Note: ONCE IN ALWAYS IN

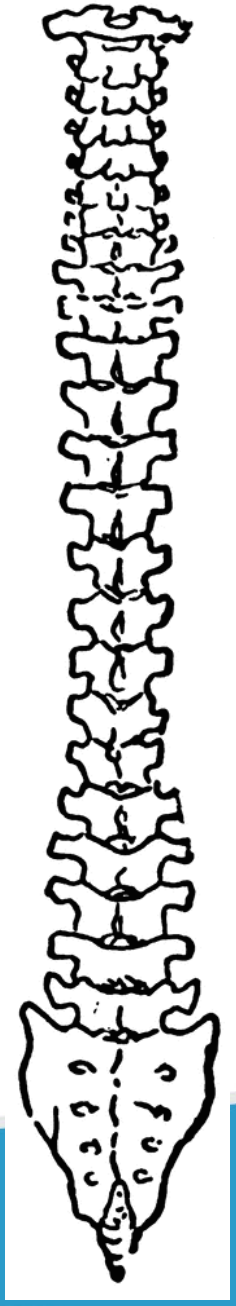
Updated Phase II Fact Sheet Series (https://www.epa.gov/npdes/stormwater-phase-ii-final-rule-fact-sheet-series)

# MCMs: The Backbone of the MS4 Program

- 40 CFR 122.34 outlines NPDES MS4 stormwater permit requirements, including the six Minimum Control Measures (MCMs)

- Develop, implement and enforce a Stormwater Management Program to reduce the discharge of pollutants from your MS4 to the Maximum Extent Practicable (MEP), protect water quality and satisfy appropriate requirements of the CWA

- Narrative effluent limitations in the form of BMPs are generally the most acceptable elements of SWMP



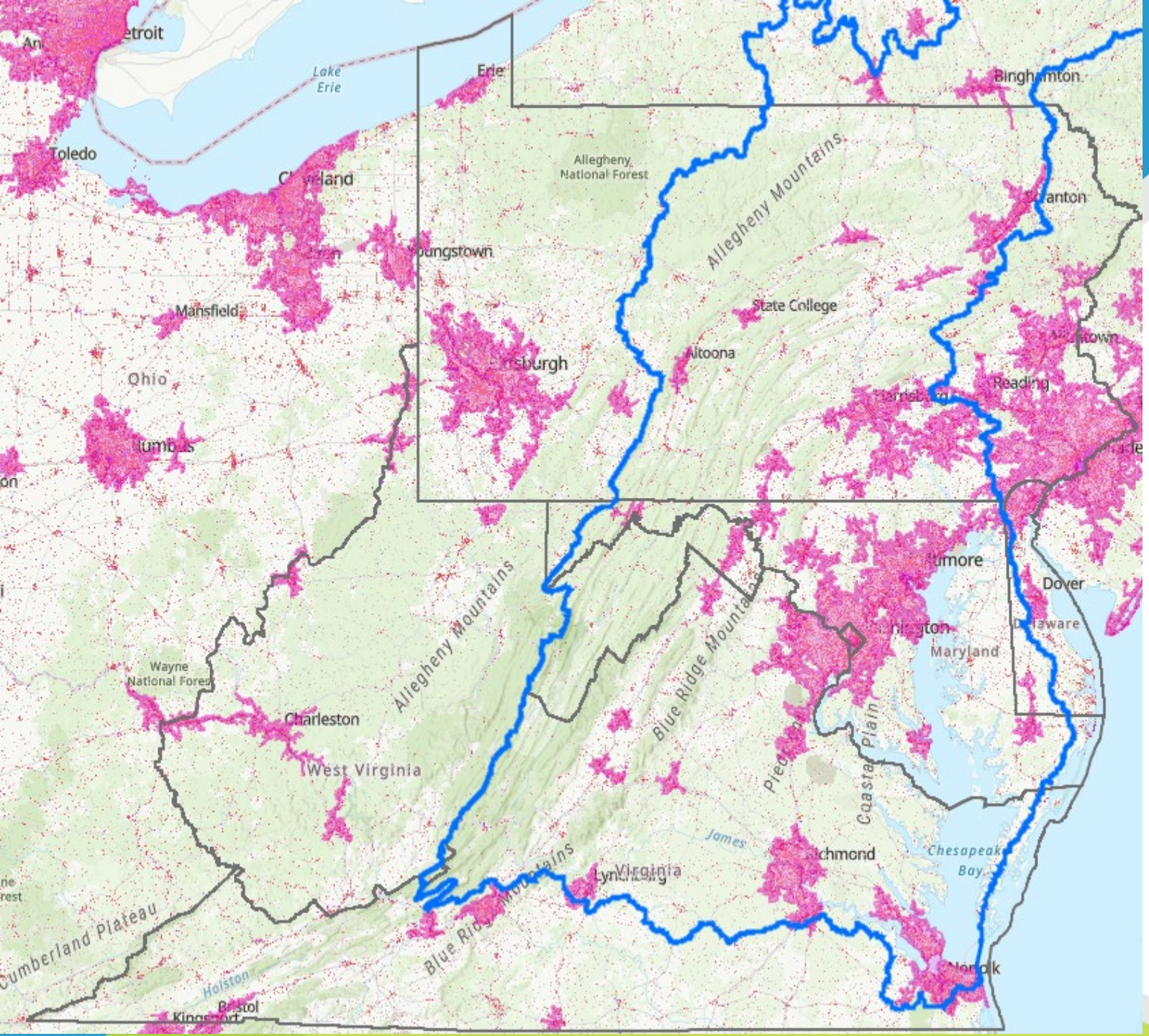

# The Six Minimum Control Measures….

- Public Education & Outreach
- Public Involvement & Participation
- Illicit Discharge Detection & Elimination
- Construction Site Runoff Control
- Post-Construction SW Management for New and Redevelopment
- Pollution Prevention/Good Housekeeping for Municipal Operations

# Non-traditional MS4s & Residual Designation

- Non-traditional MS4s are entities other than municipalities that own or operate conveyance systems.
- EPA sent letters to all states in 2024 with a list of potential entities located in urban areas that may be required to obtain MS4 coverage (meet the criteria for automatic regulation)
  - Limited to non-municipal entities: Colleges/universities, Military installations, Airports, Prisons and Transportation.

- Residual designation authority (RDA) - “any person may petition the Director to require an NPDES permit for a discharge which is composed entirely of stormwater which **contributes to a violation of a water quality standard** or is a **significant contributor of pollutants** to waters of the United States.”




Pink Coloring denotes MS4 regulated areas
*urbanized areas (2000 and 2010 Census);
*urban areas w pop > 50,000 (2020 Census)

Blue outline denotes the Chesapeake Bay Watershed.

# Regional MS4 Permits

| State | Phase I MS4s | Phase II MS4s | Total MS4s |
|---|---|---|---|
| PA | 2 | 1058 | 1060 |
| MD | 11 | 90 | 101 |
| VA | 11 | 100 | 111 |
| DE | 1 | 8 | 9 |
| WV | 0 | 52 | 52 |
| DC | 1 | 0 | 1 |

# Status of R3 Stormwater Permits

- 4 of 26 Phase I MS4 permits are expired/admin extended
- VA and DE have current Phase II GPs – all other states are expired/admin extended
  - Reissued permits will need to incorporate the 2020 Census results

- Construction and Industrial GPs
  - All states maintain current permits
  - DE is in the process of changing from permit by rule to stand alone industrial GP
  - EPA is in the process of preparing to reissue its MSGP (2026) and CGP (2027)

# Waters of the United States (WOTUS) Review

- EPA published Federal Register notice for request for stakeholder feedback.
- Listening sessions to be held on implementation of the definition of WOTUS considering SCOTUS 2023 decision
- FR Notice Link
  - https://www.govinfo.gov/content/pkg/FR-2025-03-24/pdf/2025-04649.pdf

# Key Developments in the Chesapeake Bay Watershed

**EPA Settlement Activities (September 8, 2023)** - On July 10, 2023, EPA entered into a Settlement Agreement resolving litigation challenging EPA's oversight of Pennsylvania's implementation of the Chesapeake Bay Total Maximum Daily Load (Bay TMDL) and the Chesapeake Bay Program (CBP) partnership's 2025 water quality goals. As part of the final agreement, EPA has committed to take several actions and to post information online regarding many of those actions. The first of those actions is to provide a list of administratively extended National Pollutant Discharge Elimination System (NPDES) permits in Pennsylvania including general permits (GPs) and individual permits, as appropriate. EPA also issued a public statement of the Agency's planned maintenance or increase in compliance-assurance activities in Pennsylvania.

# CB Settlement Agreement MS4 Permit Guide

- In November 2023, EPA published a revision to its July 2010 document Urban Stormwater Approach for the Mid-Atlantic Region and Chesapeake Bay Watershed.
- Document outlines EPA expectations for MS4 permits.
- Includes both required (regulatory) and voluntary elements

https://www.epa.gov/system/files/documents/2023-11/final_ms4_permitting_guide_nov-1_0.pdf

# Common Questions/Comments

- Stormwater utility fee vs tax
- Once in always in – 2020 Census
- State's Permitting Authority vs. EPA oversight
- There are no tools available for small MS4's
- Funding opportunities for MS4s

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# Thank you