NPDES STORMWATER PERMITTING REQUIREMENTS
WHAT 12-SW MEANS FOR INDUSTRIAL FACILITIES IN MARYLAND

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Presentation Overview

• NPDES Permit Background
• Requirements of MDE’s General Permit 12-SW
• Challenges for Industrial Properties
Industrial General NPDES Permit Background

• EPA issued Clean Water Act Amendments that established stormwater NPDES requirements for industries and municipalities in 1990

• Maryland, a delegated authority by EPA, has been issuing *General Permit 02-SW* since 1992

• Permit re-issued every 5 years

• Last Permit expired on November 30, 2007

• The General Permit 02-SW replaced by 12-SW on January 1, 2014
Industrial NPDES Permits other than 12-SW

• General Permit 12-SW is not applicable for all industries requiring a permit:
  – Where industry-specific General Permits are available
    • Mineral quarries, borrow pits, concrete and asphalt plants
    • Surface coal mines
    • Marinas
    • Animal feeding lots
  – Where Individual Permits required
    • For certain industries subject to effluent guidelines
    • When MDE requires an individual permit
Which industries are covered under 12-SW?

- Based on their Standard Industrial Classification (SIC), facilities that
  - Fall under the Primary Industrial Activity Sectors (Appendix A of 12-SW Permit)
  - Discharge stormwater runoff related to industrial activity as defined in 40 CFR 122.26 (b) (14) (i)-(ix) and (xi)
12-SW Permit Reissuance Process

• After the permit issuance, the facility is required to submit to MDE
  – Completed Notice of Intent (NOI)
  – Stormwater Pollution Prevention Plan (SWPPP)
  – A fee

• Exemption from 12-SW coverage
  – If there is no potential for stormwater runoff to be exposed to pollutants
How different are the requirements from 02-SW?

<table>
<thead>
<tr>
<th>Requirements</th>
<th>02-SW</th>
<th>12-SW</th>
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<tbody>
<tr>
<td>Development of SWPPP</td>
<td>✓</td>
<td>✓</td>
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<td>Employee Training</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Identification of Pollution Prevention Team</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Implementation of best management practices (BMPs)</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>(minimize exposure/preventive maintenance/good house keeping/spill prevention and response/erosion and sediment control)</td>
<td>✓</td>
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<tr>
<td>Chesapeake Bay Restoration Requirements</td>
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<td>✓</td>
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<tr>
<td>Visual Monitoring</td>
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<td>✓</td>
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<td>Additional monitoring requirements for industries discharging into impaired water bodies</td>
<td>×</td>
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<td>Industry-Specific Benchmark Monitoring</td>
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<td>Annual Report</td>
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Chesapeake Bay Restoration Requirements

Requirement: Facilities must implement restoration measures to treat 20% of the untreated impervious area that exists on January 1, 2006

Applicability:

- Greater than 5 acres
- Located within the Chesapeake Bay Watershed within Phase I and II Municipal Separate Storm Sewer System (MS4) Jurisdictions
- Not owned/leased from a permitted MS4 NPDES Stormwater Permitting Requirements Page 8
Chesapeake Bay Restoration Requirements - Timelines

• Restoration measures must be implemented within
  – 5 years of the effective permit date for facilities previously covered under 02-SW
  – 4 years from the date of filing of NOI for all other permittees
Potential Restoration Options – Traditional BMPs

- Sand Filters
- Hydrodynamic Separators
- Wet Ponds
- Bioretentions
- Infiltration Trenches
- Vegetated Swales
Potential Restoration Options – Green Infrastructure Practices

- Alternative Pavements
- Vegetated Box Filters
- Rain Garden
Potential Restoration Options – Alternative Urban BMPs

• Alternative Urban BMPs accepted by MDE
  – Street sweeping
  – Reforestation
  – Conversion of impervious cover to pervious/forest
  – Catch basin cleaning/storm drain vacuuming
  – Step pool conveyance system
  – Outfall stabilization
  – Stream restoration
Chesapeake Bay Restoration Requirements- Potential Challenges

- **Challenge**
  - Lack of available open space

- **Solution**
  - Implementation of alternative urban BMPs such as street sweeping, catch basin cleaning, tree box filters, pervious pavements
Chesapeake Bay Restoration Requirements- Potential Challenges

• Challenge
  – Availability of funding

• Solution
  – Grants (e.g., CBT, MD DNR, )
  – Partnerships with local municipalities or other permit holders
  – Integrate with other improvement projects for site
  – Consider alternative solutions (tree planting, impervious area reduction)
Chesapeake Bay Restoration Requirements- Potential Challenges

- **Challenge**
  - Regular maintenance and inspection of implemented BMPs to retain the credits and record keeping

- **Solution**
  - Employee volunteer programs
  - Education and outreach for employees
  - Consider maintenance requirement when selecting BMP
  - Include BMP maintenance components in SWPPP and SWPPP training
Monitoring

- Visual monitoring
  - Quarterly for all permitted outfalls

- Bench mark monitoring
  - For specific industry sectors only
  - Analyze samples for all benchmark parameters for 4 quarters
  - Ensure average of 4 monitoring values do not exceed benchmark by implementing suitable controls

- Additional monitoring
  - As specified by MDE for facilities discharging to impaired

**Bench Mark Monitoring Industry Sectors**

- Chemical and allied products manufacturing and refining
- Landfills and land application sites
- Automobile Salvage Yards
- Scrap recycling and waste recycling facilities
- Food and kindred products
- Fabricated metal products
Annual Report

• Summarizing comprehensive annual site compliance evaluation
  – Events of exposure of potential pollutants to stormwater runoff
  – Leaks/spills
  – Offsite tracking of industrial or waste materials
  – Events of pollutants entering drainage system
  – Inspection and evaluation of outfalls
  – Inspection, maintenance and evaluation of performance of BMPs
  – Trainings
  – Visual and analytical monitoring

• Personnel performing evaluation and date of evaluation
Conclusion

• 12-SW requirements include significant requirements related to the Chesapeake Bay TMDL

• Burden on industries with tight operating costs

• Need for additional labor effort and financial commitment to meet all the inspections, monitoring and record keeping requirements
Thank You