

History of the Regulated MS4 Program

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What's an MS4?

Municipal Separate Storm Sewer System

“...a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, and storm drains): owned or operated by a state, city, town, county, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian Tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States.”

- Designed or used for collecting or conveying stormwater



What's an MS4?

Municipal **S**eparate **S**torm **S**ewer **S**ystem
IS NOT

- A Combined Sewer System
- Part of a Publicly Owned Treatment Works

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In the Beginning...

- Rivers and Harbors Act (1899)
- Federal Water Pollution Control Act (1948)
- Water Quality Act (1965)
- Refuse Act (1970)

All early attempts to protect water quality.

The logo for the 2024 Partnering Conference is a white square with a gear border. It contains the text "2024 PARTNERING CONFERENCE" in yellow and green, "acec-ky" in blue, and "kytc * fhwa" in blue at the bottom. The logo is positioned in the top right corner of the slide, overlapping a decorative graphic of overlapping teal, yellow, and grey diamond shapes.

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June 22, 1969



<https://www.smithsonianmag.com/history/cuyahoga-river-caught-fire-least-dozen-times-no-one-cared-until-1969-180972444/>

Cuyahoga River Fire

June 22, 1969



<https://www.smithsonianmag.com/history/cuyahoga-river-caught-fire-least-dozen-times-no-one-cared-until-1969-180972444/>

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Environmental Protection Agency

Established: January 1970



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Clean Water Act

Signed Into Law: October 18, 1972

- Established the National Pollutant Discharge Elimination System (NPDES)
- Discharging “**pollutants**” through a “**point source**” into a “**Water of the United States**” is prohibited by the Clean Water Act unless covered by an NPDES permit.



Clean Water Act

Signed Into Law: October 18, 1972

- Discharging “**pollutants**” through a “**point source**” into a “**Water of the United States**” is prohibited by the Clean Water Act unless covered by an NPDES permit.
 - **Pollutant**: anything but water and other authorized discharges.
 - **Point Source**: discernable, confined, and discrete conveyance...from which pollutants are or may be discharged.
 - **Waters of the US**: changes often
 - Navigable waters, tributaries, certain lakes, ponds, & impoundments, wetlands adjacent to jurisdictional waters.



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NPDES Permits

- NPDES Permits Contain:
 - Limits on what can be discharged
 - Requirements for Monitoring and Reporting
 - Other requirements to ensure protection of water quality and human health



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NPDES Permits

- NPDES Permits Contain:
 - Limits on what can be discharged
 - Requirements for Monitoring and Reporting
 - Other requirements to ensure protection of water quality and human health
- Permit Term is 5 Years
 - Expired Permit requirements remain in effect until permit is reissued.

NPDES Permits

- NPDES Permits Cover Discharges From:
 - Animal Feeding Operations
 - Aquaculture
 - Industrial Wastewater
 - Municipal Wastewater
 - Stormwater: Industrial, **Municipal**, Construction, Transportation, Oil & Gas, Mining



<https://www.kfia.org/Page/46/kentucky-stormwater-resources-stormwater-kits-ky-stormwater-useful-links>

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NPDES Permits

- MS4 Permit Approach
 - Most NPDES permits rely on “end-of-pipe” effluent limits for various pollutants at each point source.



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NPDES Permits

- MS4 Permit Approach
 - Most NPDES permits rely on “end-of-pipe” effluent limits for various pollutants at each point source.
 - As MS4s have many point sources (outfalls) that vary greatly in discharge rate, frequency, and composition, MS4 permits focus on BMP requirements (structural and non-structural) to mitigate pollutant discharge in stormwater runoff.

NPDES Permits

- MS4 Permit Approach
 - Most NPDES permits rely on “end-of-pipe” effluent limits for various pollutants at each point source.
 - As MS4s have many point sources (outfalls) that vary greatly in discharge rate, frequency, and composition, MS4 permits focus on BMP requirements (structural and non-structural) to mitigate pollutant discharge in stormwater runoff.
 - Flexibility is built into MS4 permit requirements to allow for a local approach to compliance.

KPDES Program Implemented

1983

- Kentucky granted permitting authority by EPA
 - Kentucky Pollutant Discharge Elimination System
 - Permits issued by the state
 - EPA oversight remains
 - KY permits must ensure compliance with all applicable CWA requirements.
- Water of the US → Waters of the Commonwealth
 - Includes groundwater



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MS4 Phase I Program Implemented

1990

- Medium & Large MS4s 100k+ population
 - MSD: Louisville Metro
 - LFUCG: Lexington Metro
- Issued Individual Permits
 - Specific to the permittee's MS4 Area



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MS4 Phase I Program

Permit Requirements

- Public Education
- Public Involvement
- Illicit Discharge Detection and Elimination
- Construction Stormwater
- Post-Construction SW Management
- Good Housekeeping Municipal Operations
- Industrial Oversight
- Watershed Monitoring
- Reporting



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MS4 Phase II Program Implemented

1999

- Small MS4s 10k+ population or in Urban Area pop. 50k+
- KYTC
 - Individual Permit
 - Within other MS4 Areas



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MS4 Phase II Program Implemented

1999

- Small MS4s 10k+ population or in Urban Area pop. 50k+
 - KYTC
 - Individual Permit
 - Within other MS4 Areas
 - Everyone Else
 - General Permit
 - 104 Permittees, 73 Permit Numbers



MS4 Phase II Program

Permit Requirements

- Public Education
- Public Involvement
- Illicit Discharge Detection and Elimination
- Construction Stormwater
- Post-Construction SW Management
- Good Housekeeping Municipal Operations
- Monitoring
- Reporting



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MS4 Phase II General Permit Remand Rule

November 17, 2016

- Provides two options for permits



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MS4 Phase II General Permit Remand Rule

November 17, 2016

- Provides two options for permits
 - Traditional General Permit Approach
 - All compliance requirements in permit



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MS4 Phase II General Permit Remand Rule

November 17, 2016

- Provides two options for permits
 - Traditional General Permit Approach
 - All compliance requirements in permit
 - Procedural Approach
 - Permit contains general requirements, permittees propose Management Plan. If approved, the contents become requirements, as well.



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November 17, 2016

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- State Choice Approach
 - Either of above or combination of the two



MS4 Phase II General Permit Remand Rule

November 17, 2016

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 - Traditional General Permit Approach **← Ky's Approach**
 - All compliance requirements in permit
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MS4 Phase II General Permit Remand Rule

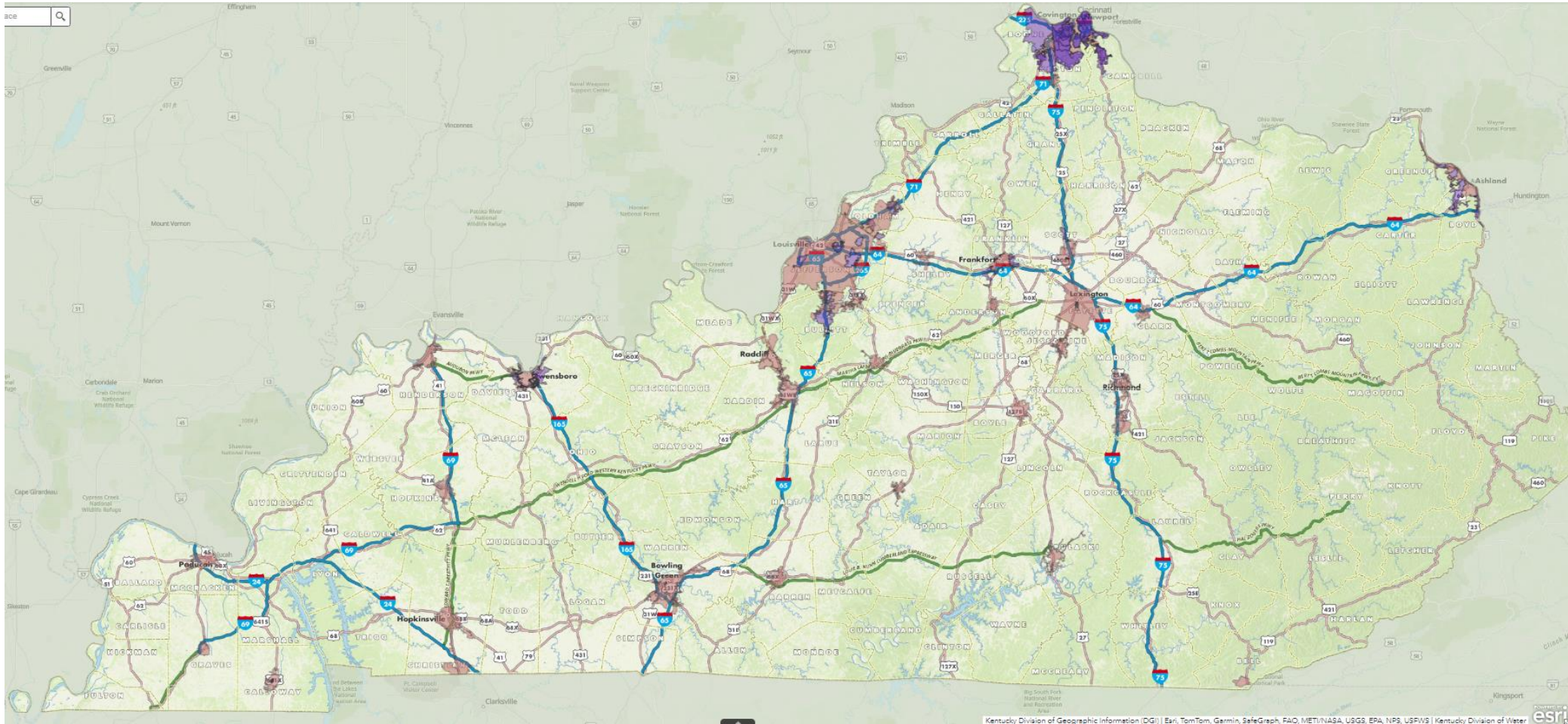
November 17, 2016

Permit Requirements must be “clear, specific, and
measurable



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Current KY Regulated MS4s



Questions?

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MS4 Program 9:00am

