

# **Stormwater Rulemaking Listening Sessions**

**US Environmental Protection Agency  
Office of Water**



# Guide to Our Webcasts

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- *To Complete the Survey* – Turn off your pop-up blocker

## How to Give Public Comments During the Webcast

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**On24 phone assistance:**

1-800-833-2812 (US domestic)

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**Webcast Event Number:**

**187267**

# Webcast Schedule

- 12:00 – 12:45 EPA Presentation
- 12:45 – 4:00 Public statements
- We will take a 5 minute break at approximately 2:00

# US Environmental Protection Agency Office of Water

Engineering and Analysis Division  
Office of Science and Technology

Mary T. Smith, Division Director

Janet Goodwin, Branch Chief

Jan Matuszko, Engineer

Water Permits Division  
Office of Wastewater Management

Linda Boornazian, Division Director

Connie Bosma, Branch Chief

Jonathan Angier, Physical Scientist

Holly Galavotti, Env. Protection Sp.

# Purpose of the Listening Sessions

- EPA has initiated a rulemaking to improve its stormwater program. Today's session will provide the public with an early opportunity to learn about and comment on EPA's preliminary stormwater rulemaking considerations.
- The listening sessions are not intended to cover two related actions that are focused on provisions to protect waterbodies from stormwater discharge from active construction sites. These other actions are:
  - Final Construction & Development Effluent Guideline issued on December 1, 2009
  - Proposed Extension of the Construction General Permit published on October 19, 2009

# Briefing Outline

- **Background on Federal Stormwater Program**
- **Stormwater Challenges**
- **The National Research Council (NRC) Report**
- **Stormwater Rulemaking Schedule**
- **Preliminary Considerations for Rulemaking**

# Federal Stormwater Regulations

## Phase I

Finalized in 1990

Regulates medium and large MS4s (defined as areas that serve 100,000 or more people)

- 10 categories of industrial operations
- Active construction sites of 5 acres or more

Requires:

MS4s to develop and implement a stormwater management plan (SWMP) to

- find and eliminated illicit discharges
- control discharges from its system by addressing runoff from active construction sites, new development and redevelopment, industrial program

Construction and Industrial stormwater dischargers to develop and implement Stormwater Pollution Prevention Plan (SWPPP)

## Phase II

Finalized in 1999

Regulates small MS4s located in an “urbanized area” (UA) as defined by the Bureau of Census

Additional MS4s outside of UAs designated by the NPDES permitting authority

- Active construction activities disturbing between one and five acres

MS4 SWMP must include 6 minimum control measures:

- Public Education & Outreach
- Public Participation/Involvement
- Illicit Discharge Detection & Elimination
- Construction Site Runoff Control
- Post-Construction Runoff Control
- Pollution Prevention/Good Housekeeping

# Stormwater Challenges

Much progress has been made; however, significant challenges remain to protect water bodies from impact of stormwater discharges



Urban stormwater is the primary source of water quality impairment:

- 13% of all rivers and streams
- 18% of all lakes
- 32% of all estuaries

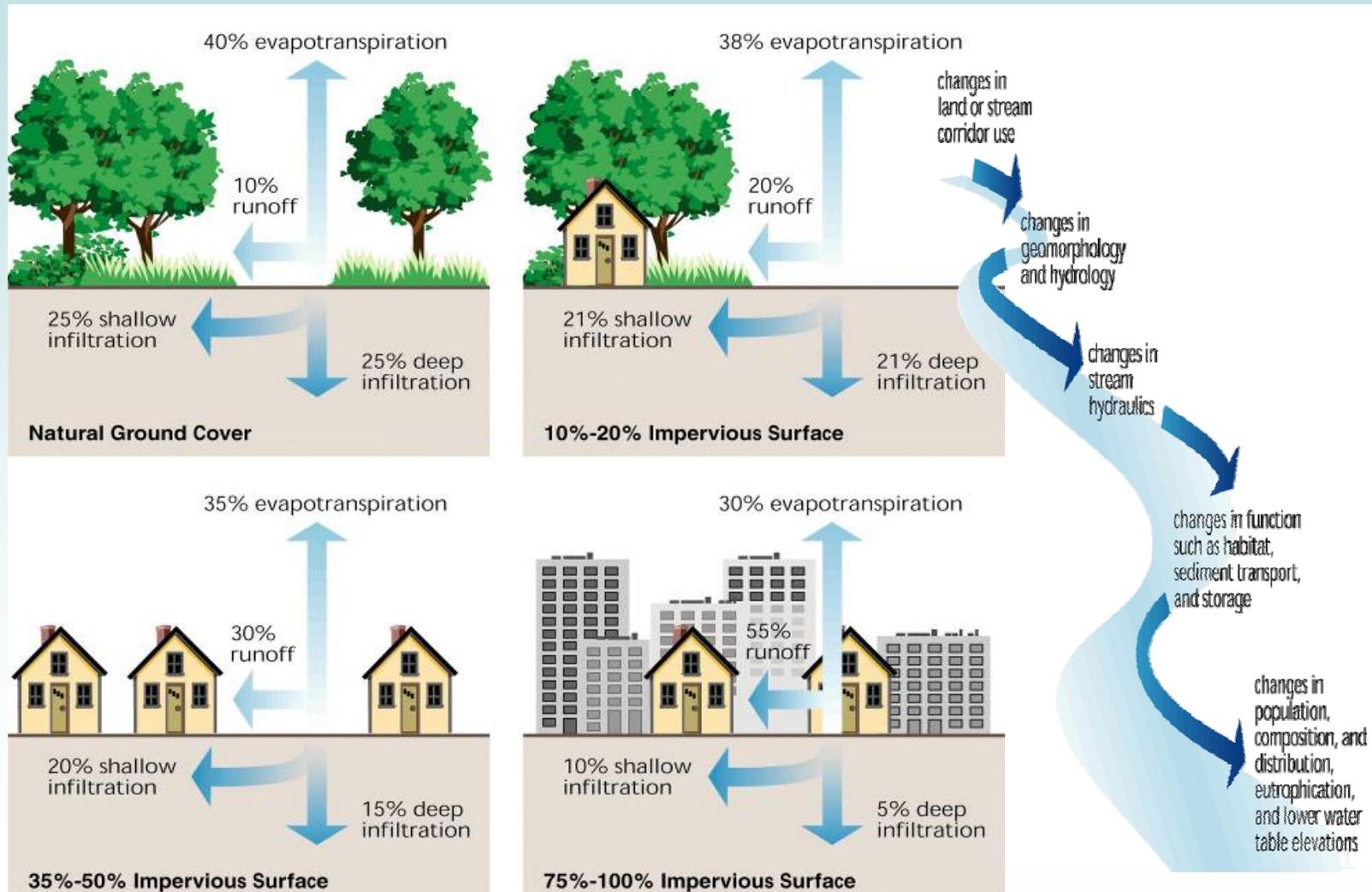
# National Research Council (NRC) Report

- In 2006 EPA commissioned the National Research Council (NRC) to study EPA's stormwater program
- In October 2008 NRC released *Urban Stormwater Management in the United States*, available at:  
[www.epa.gov/npdes/stormwater](http://www.epa.gov/npdes/stormwater)
- **Key Findings**
  - Current approach is unlikely to produce an accurate picture of the problem and unlikely to adequately control stormwater's contribution to waterbody impairment
  - Requirements leave a great deal of discretion to dischargers to set their own standards and ensure compliance, which results in inconsistency across the nation
  - Poor accountability and uncertain effectiveness

# **KEY NRC Report Recommendations**

- **“A straightforward way to regulate stormwater contributions to waterbody impairment would be to use flow or a surrogate, like impervious cover, as a measure of stormwater loading ....”**
- **“Efforts to reduce stormwater flow will automatically achieve reductions in pollutant loading. Moreover, flow is itself responsible for additional erosion and sedimentation that adversely impacts surface water quality.”**
- **“Stormwater control measures that harvest, infiltrate, and evapotranspire stormwater are critical to reducing the volume and pollutant loading of small storms.”**

# Impacts of urbanization on stormwater runoff



# Green Infrastructure Practices



# Green Roofs



**Tulsa Loft Project, OK**



**William J. Clinton Presidential Library and Museum  
Little Rock, AR**

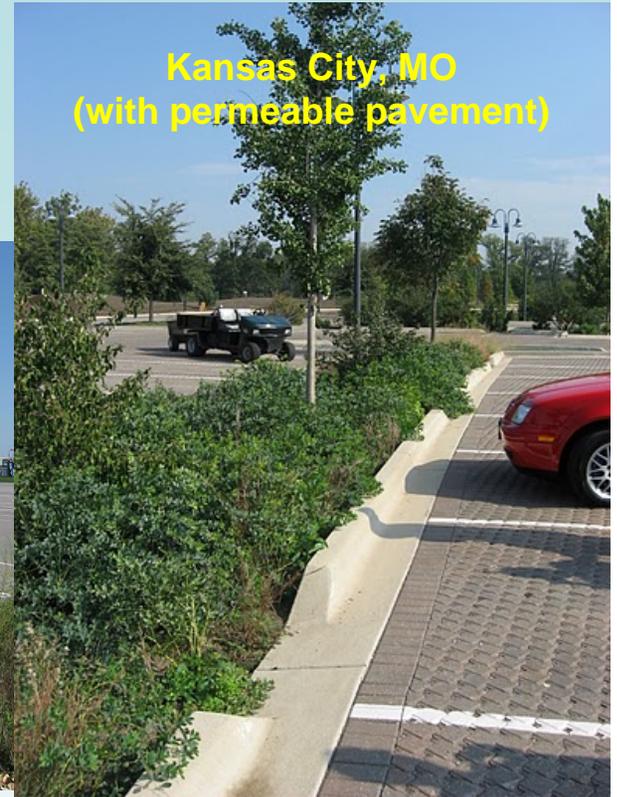


**Baylor Research Institute  
Texas Medical Center**



**US Department of Transportation Headquarters  
Washington DC**

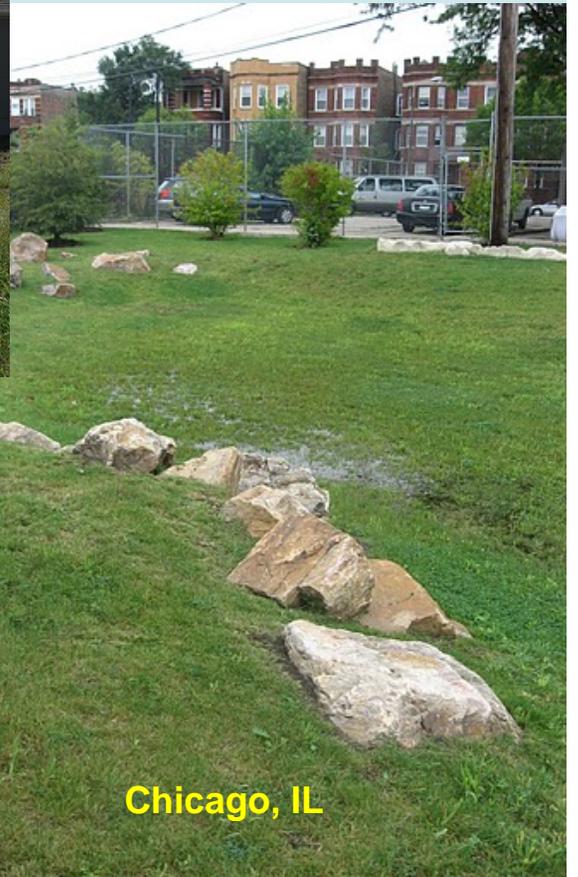
# Parking Lot Island Infiltration Areas



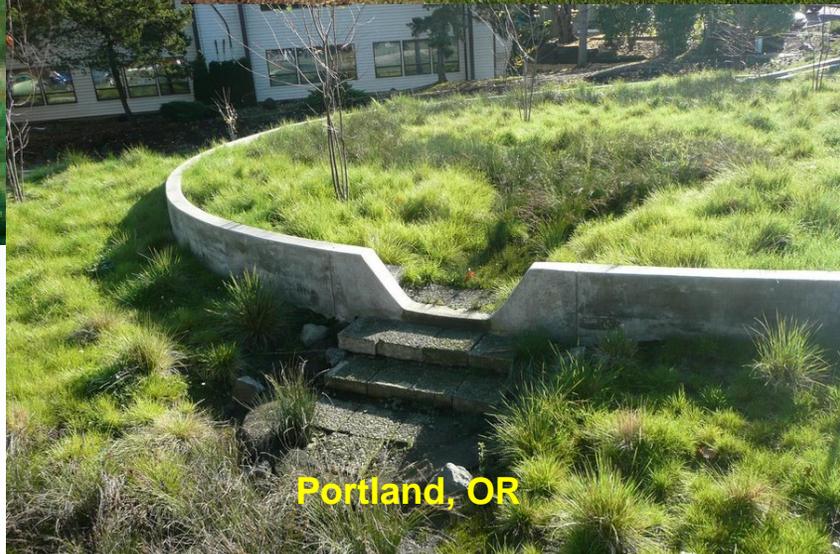
# Open Swales



Lenexa, KS



Chicago, IL



Portland, OR

# Rain Gardens

Fortin St. Project  
New Orleans, LA

Stafford County, VA



Alachua County, FL

Chicago, IL



# Planters



# Permeable Pavements



Olympia, WA



Wilsonville, OR



Emeryville, CA



Chicago, IL

# Rainwater Harvesting & Use



**Rainwater Cisterns – Santa Fe Railyard Plaza**



**Cistern (covered by vegetation)  
Chicago**



# **EPA Initiated Stormwater Rulemaking**

- **Primary impetus – protect waterbodies from stormwater impact of urbanization**
- **Oct. 30, 2009 - Federal Register (FR) notice announcing EPA's intent to distribute questionnaires (Information Collection Request (ICR)) seeking data to inform the rulemaking from the following groups:**
  - **Owners, operators, developers, and contractors of developed sites**
  - **Owners or operators of MS4s**
  - **States and territories**
- **Jan. – Mar. 2010 – Listening Sessions input on preliminary rulemaking considerations (FR Notice published Dec. 28, 2009)**
- **Spring 2010 – EPA expects to publish a final FR ICR notice with 30-day comment period and distribute questionnaires in the summer**
- **Late 2011 – EPA expects to propose a rule to be published in the FR for public comment**
- **Late 2012 – EPA expects to take final action**

# **Stakeholder Input on Rulemaking**

- **Input on Stormwater Practices**
- **Five Preliminary Considerations for Rulemaking**

# Input on Stormwater Practices



- Design, performance, operation and maintenance, capital and lifetime cost for stormwater retention practices used to control discharges from new development, redevelopment and retrofit.
- Cost comparisons of different stormwater management approaches for specific sites.
- Monitoring information that may have been collected to show the impacts of stormwater control measures on water quality and/or flow rates in the receiving waterbody.

# Five Preliminary Considerations for Rulemaking

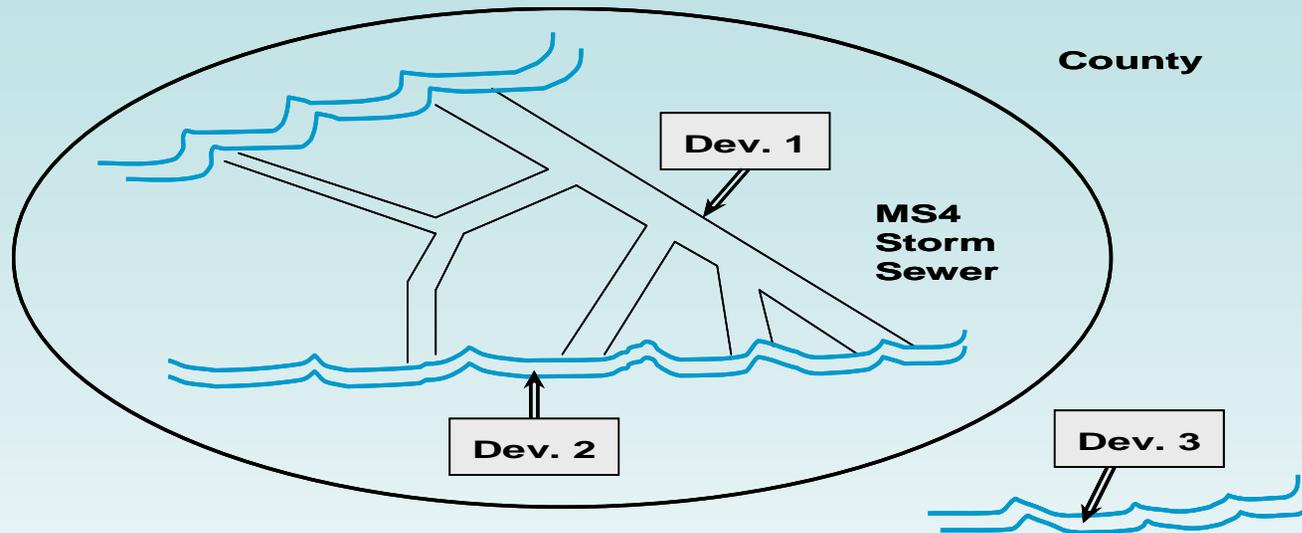
1. Expand the universe of regulated discharges beyond urbanized area
2. Establish substantive post-construction requirements for new and redevelopment
3. Develop a single set of consistent requirements for all MS4s, in place of existing “Phase I” and “Phase II” rules
4. Address stormwater discharges from existing development through retrofitting
5. Consider additional requirements to further reduce stormwater impacts in the Chesapeake Bay

# 1. Expand the universe of regulated discharges beyond urbanized area



- Regulated small MS4s limited to Urbanized Area (UA) boundary as defined by the U.S. Census,
- Federal regulations cover only 2% of total U.S. land area, while much development is occurring outside covered areas
- Some states have designated additional separate storm sewer systems as regulated MS4s.

# 1. Expand the universe of regulated discharges beyond urbanized area



- What is the best way to expand the universe of regulated discharges beyond Urbanized Area?
- Is there an appropriate jurisdictional boundary for permit coverage, such as municipality or county?
- What criteria could be used to identify areas (e.g., % of impervious cover)?
- Should States decide the areas to include?
- In addition to expanding area should EPA consider regulating stormwater discharges from particular types or sizes of development that are not covered by an MS4 permit?

## 2. Establish substantive post-construction requirements for new and redevelopment

- Develop a standard that promotes sustainable practices that mimic natural processes to infiltrate and recharge, evapotranspire, and/or harvest and reuse precipitation.
- Should there be a national requirement for on-site stormwater controls such that post development hydrology must mimic pre-development hydrology on a site-specific basis?
- Options for meeting the requirement could be: on-site retention of specific sized storm, limits on amount of effective impervious area, use of site-specific calculators to determine predevelopment hydrology, and/or use of regional standards to reflect local circumstances.
- Should the standards be different for new development vs. redevelopment?

### 3. Develop a single set of consistent requirements for all regulated MS4s

- Many Phase I & II MS4s address issues that are similar, but the regulatory requirements are different.
- Should EPA apply the requirements to all MS4s?
- Should EPA apply 6 minimum measures to Phase Is?
- Phase I MS4s are required to implement a program to control discharges from industrial facilities. Should this requirement be extended to all MS4s?
- What additional requirements should be considered?

## 4. Addressing stormwater discharges from existing development.

- Stormwater discharge from developed areas is a significant contributor to water quality impairments.
- Some MS4 permits require retrofit practices that infiltrate or otherwise retain stormwater.
- Some cities are implementing retrofit practices to control CSOs.
- Should EPA consider retrofit requirements?
  - Development of a retrofit plan?
  - Should we start with large MS4s?
  - Should we require Implementation of the plan?
  - Limit to water quality impaired waters?

## 5. Consider additional requirements to further reduce stormwater impacts in the Chesapeake Bay

- What additional requirements should EPA consider to protect the Chesapeake Bay?
  - Buffer requirements
  - Additional requirements on active construction
  - Further extending area of coverage
- Should we consider applying these provisions to other sensitive areas?

# Additional Information

- EPA website on rulemaking

[www.epa.gov/npdes/stormwater/rulemaking](http://www.epa.gov/npdes/stormwater/rulemaking)

- EPA stormwater website

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Submit written comments to

[www.regulations.gov](http://www.regulations.gov), Docket ID No. EPA-HQ-OW-2009-0817 by February 26, 2010

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**5 Minute Break**

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# The Webcast has Ended

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