

Region 6 General Permit for Small MS4s



Cottonwood forest on the Rio Grande, near Bernalillo, New Mexico. Photo by camerafiend.

**U.S. EPA – Region 6
SMS4 Public Meeting November 29, 2006**

What Will We Cover?

- ✓ Why are we concerned about storm water?
- ✓ Who must apply for the permit?
- ✓ When do you apply?
- ✓ How do you apply?
- ✓ What does the permit require?
- ✓ Available Resources
- ✓ Q&A

Terms to Know

- **NPDES** - National Pollutant Discharge Elimination System
- **MS4** – Municipal Separate Storm Sewer System
- **UA** – Urbanized Area
- **SWMP** – Storm Water Management Program
- **BMP** – Best Management Practice
- **NOI** – Notice of Intent
- **NOT** – Notice of Termination
- **ESA** – Endangered Species Act
- **NHPA** – National Historic Preservation Act
- **SHPO/THPO** – State or Tribal Historic Preservation Officer

Potential Impacts from Storm Water

- Destruction/Degradation of aquatic habitat
- Accelerated loss of storage in lakes/reservoirs
- Diminished water recreation experiences
- Reduced aesthetic and preservation values
- Increased hydroelectric facility impairment
- Accelerated stream bank erosion
- Increased flood damages
- Reduced infiltration/groundwater recharge

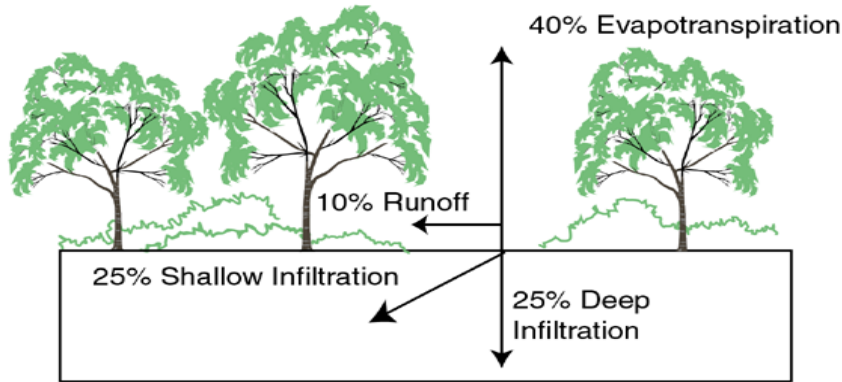
Expected Benefits of SW Program

- Enhanced commercial, recreational and subsistence fishing
- Enhanced opportunities for swimming, boating and noncontact recreation
- Drinking water benefits
- Reduced illness from consuming contaminated seafood and swimming in contaminated water
- Enhanced aesthetic value
- Navigational benefits
- Reduced flood damage

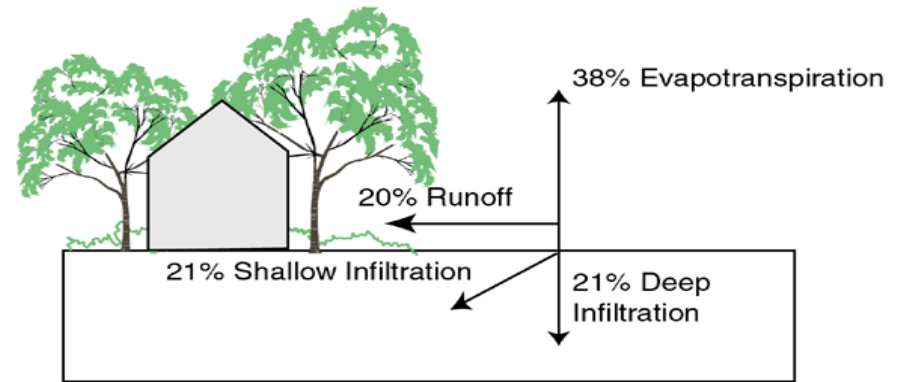
Why is Storm Water a Challenge?

- Developed and disturbed land affects
 - Quality
 - Quantity
- Storm water typically is not treated and can pollute rivers, lakes, and coastal waters
 - Contaminates on the land washed off by storm water
 - Illicit discharges of untreated wastewater
 - Illegal dumping into storm drains

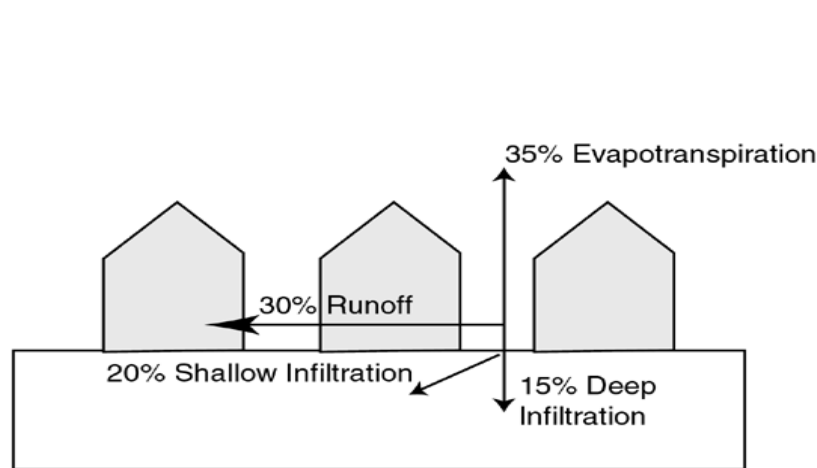
Imperviousness vs. Storm Water Runoff



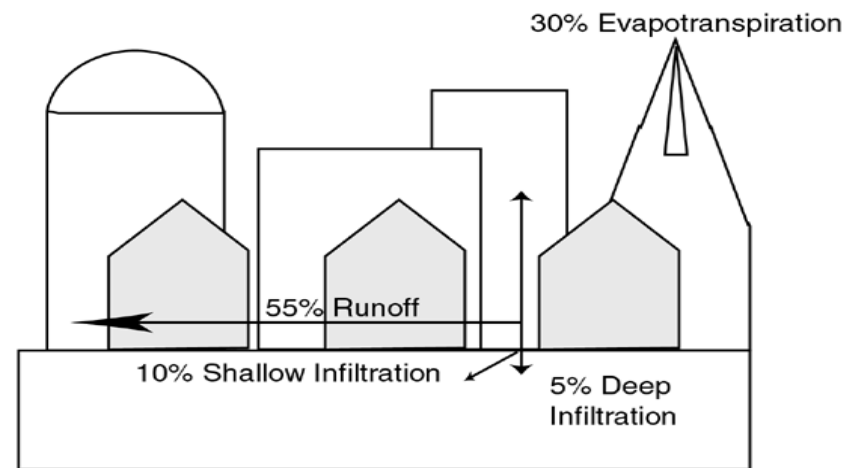
Natural Ground Cover



10% - 20% Impervious Surface



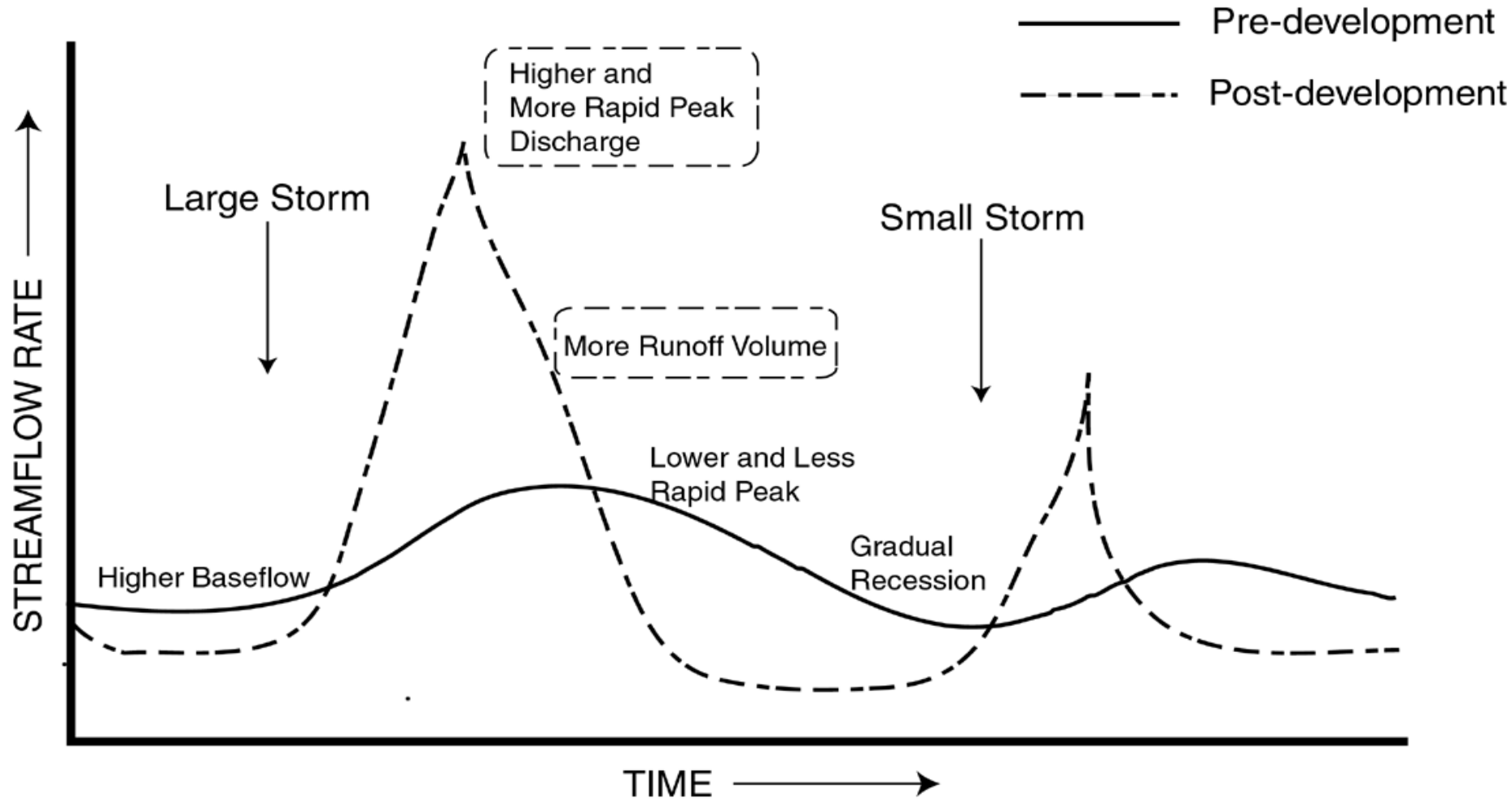
35% - 50% Impervious Surface



75% - 100% Impervious Surface

Changes in runoff flow resulting from increased impervious area (NC Dept. of Nat. Res. and Community Dev., in Livingston and McCarron, 1992.)

Changes in Hydrology After Development



Changes in stream hydrology as a result of urbanization (Schueler, 1992).

Impervious Cover Influences Stream Shape and Size

Large amounts of stormwater runoff due to impervious cover can:

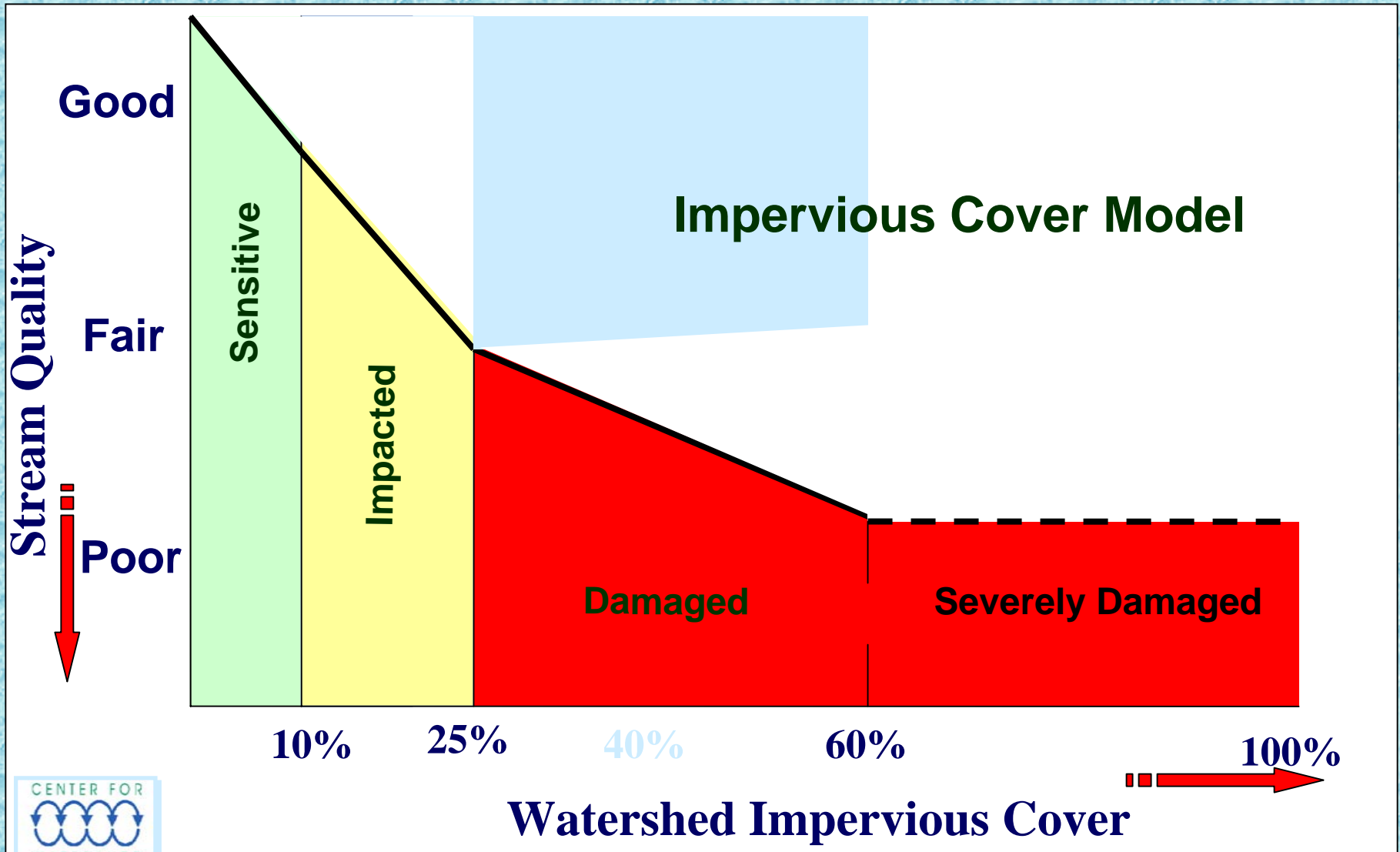


Erode stream banks, making the banks steeper and the channel wider

Deposit soil on the stream bottom, making the stream more shallow

Cause straightening of the channel

Relationship Between Impervious Cover and Stream Quality



Is there a water quality problem?

- According to 2000 305b report, of the 32% of the nation's waters that were assessed, 40% were impaired:
 - **Rivers & Streams**: 39% impaired, **11% of impairment due to urban runoff/storm sewers**
 - **Lakes & Ponds**: 45% impaired, **18% of impairment due to urban runoff/storm sewers**
 - **Estuarine**: 51% impaired, **32% of impairment due to urban runoff/storm sewers**
 - **Shoreline miles** **>50% of are impaired due to urban runoff/storm sewers**

What Do States Identify as the Leading Causes and Sources Affecting Impaired Waters?

- **Leading Causes:** Siltation, nutrients, bacteria, metals (primarily mercury), and oxygen depleting substances
- **Leading Sources:** Pollution from urban and agricultural land that is transported by precipitation and runoff

Storm Water Pollutants

- Sediment
- Nutrients
- Bacteria
- Oxygen Demand
- Oil and Grease
- Trace Metals
- Toxic Chemicals
- Chlorides
- Thermal Impacts

SW Permitting Framework

- Emphasis on pollution prevention
 - MS4 storm water management program (SWMP)
 - Industrial and construction storm water pollution prevention plans (SWPPP or SWP3)
- Opportunity to develop priorities based on case-specific factors and select most cost effective controls

Which MS4s Need Permits?

Large, Medium...and Now Small MS4s

What is an MS4?

A ***municipal separate storm sewer system*** (MS4) is a conveyance or system of conveyances owned by the United States, a State, city, town, Tribe, special district, or other public entity that discharges to waters of the U.S. and is:

- designed or used for collecting or conveying storm water
- not a combined sewer
- not part of a Publicly Owned Treatment Works (POTW)
- not a very discrete area such as a building

What is an “Urbanized Area?”

A central place (or places) and the adjacent densely settled surrounding area that together have a minimum population of 50,000 and an average density of 1,000/sq.mi. in core area plus band with 500/sq. mi.

(Bureau of the Census geographers liken it to flying over an urban area and drawing a line around the built-up, developed area as seen from the air)

Storm Water Phase II Program

Regulated Small MS4 Definition

Automatic Nationwide Designation:

All Small MS4s Located Within
"Urbanized Areas" (UAs)

Urbanized Areas In Permit Area

New Mexico

- Albuquerque
- El Paso
- Farmington
- Las Cruces
- Santa Fe

Oklahoma

- Fort Smith
- Lawton
- Norman
- Oklahoma City
- Tulsa

Determining Location in a UA

- Operators of small MS4s need to determine if they are located within the boundaries of a Bureau of the Census-defined “urbanized area” based on the latest decennial Census
- Information regarding UA boundaries on EPA’s web site - see link at <http://www.epa.gov/region6/6wq/npdes/sw/ms4>

**How Do You Apply for
the Small MS4 GP?**

Step 1: Read the General Permit

- Available from EPA at:
www.epa.gov/region6/sws or
Terry Branch at 214-665-6667
branch.terry@epa.gov
Diane Smith at 214-665-2145
smith.diane@epa.gov
- You are responsible for knowing what's required in the permit before submitting the NOI.
- Keep a copy of the permit with your paperwork.

Step 2: Make sure you are eligible to apply for the permit.

- Is your MS4 in an area covered by one of the 3 general permits?
- Is your MS4 discharging to an impaired water? Is there an applicable TMDL?
- EPA: www.epa.gov/owow/tmdl/
- NM: Rich Powell NMED 505-827-2798
www.nmenv.state.nm.us/swqib/Monitoring+Assessment/index.html
- OK: Steve Webb ODEQ 405-702-8195

Step 2: Make sure you are eligible to apply for the permit (cont).

- Will your discharges/discharge-related activities impact an endangered species or critical habitat?
 - ESA review procedures described in Appendix A
- Will your discharges/discharge-related activities adversely affect historic properties?
 - NHPA review procedures described in Appendix B

Step 2: Make sure you are eligible to apply for the permit (cont).

- Will you provide notice and public access to NOI documents?
- Will you provide public access to SWMP and Annual Reports documents?

Step 3: Develop a Storm Water Management Program

- Include:
 - ✓ Six minimum measures
 - ✓ Measurable goals
 - ✓ Schedules with credible interim progress towards full programs within 5 years
 - ✓ Measures as needed to comply with eligibility conditions related to WQ, TMDLs, ESA, NHPA

Step 3: Develop a Storm Water Management Program (cont'd)

- ✓ Check Part 8 for additional State or Tribal requirements
- ✓ System Map showing outfalls, waterbodies, and BMPs

Step 3: Local Notice/Public Participation on NOI

- ✓ 60 days prior to submittal, local public notice of NOI & make available NOI & attachments (~February 1, 2007)
- ✓ Make any changes you believe appropriate as result of local public participation process
- ✓ You may provide responses to any unresolved local comments on NOI or on any comments during EPA's public participation process for EPA to include in decision-making process

Step 4: Complete and submit Notice of Intent (NOI).

- ✓ The NOI is not an 'application' – it is more like a registration.
- ✓ By signing and submitting the NOI, you are agreeing to comply with all requirements in the general permit.

How to Complete the NOI

- No form – Appendix C has suggested format
- Basic information: Name, Location, Receiving Waters, Contact
- Are SWMP responsibilities shared with someone?

How to Complete the NOI (cont'd)

- Description of SWMP
 - BMPs for 6 Minimum Measures
 - Measurable Goals
 - Schedules for program development & implementation
- Summary of issues from local public participation
- Describe how endangered species, historic preservation eligibility were met
- If applicable, describe how TMDL eligibility was met

When do you need to send in the NOI?

- MS4s in Urbanized Areas: **April 1, 2007**
- MS4s designates later: **180 days from designation** (Director can give more time)

What will EPA do with the NOI?

- Make available via internet for public review for 30 days
- Review for consistency with permit reqs.
- React to any comments/public hearing requests from public, USFWS, SHPO, etc.
- Issue coverage letter (no automatic coverage)

How can public participate?

- Local review prior to NOI submittal
- Review NOIs submitted to EPA (see Appendix E of permit for instructions on how to submit comments or request for meeting/hearing)
- Take advantage of MS4 public participation & public involvement programs on SWMP and Annual Reports over term of permit

**What Does the Small
MS4 GP Require?**

Limitations on Coverage

- Most non-storm water NOT eligible
- Industrial and construction storm water need to be covered under other permits
- Discharges compromising Water Quality
- Discharges inconsistent with TMDL
- Endangered species eligibility
- Historic preservation eligibility

Permit Requirement Basics

Required to develop, implement and enforce a storm water management program to:

- Reduce the discharge of pollutants to the maximum extent practicable (MEP)
- Protect water quality/comply with TMDLs
- Satisfy the appropriate water quality requirements of the Clean Water Act

Storm Water Management Program – Heart of the Permit

The storm water management program must include:

- Six minimum control measures
- Controls to meet MEP, WQ, TMDLs, Eligibility, etc.
- Evaluation/assessment efforts
- Record keeping

Water Quality

- SWMP must be designed to reduce pollutants to the Maximum Extent Practicable (MEP) and protect water quality
- After coverage, EPA can notify permittee that discharges cause/contribute to WQ problems that must be addressed or risk losing permit coverage. Monitoring may be required.

TMDLs

- **Existing TMDLs:** If there is allocation for parameter likely to be in MS4 discharge, must meet TMDL requirements/implementation plan within any applicable timelines
- **New TMDLs:** EPA may require revisions to SWMP to comply with applicable TMDL requirements/allocations

Minimum Control Measures

1. Public Education and Outreach
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management in New Development and Redevelopment
6. Pollution Prevention/Good Housekeeping for Municipal Operations

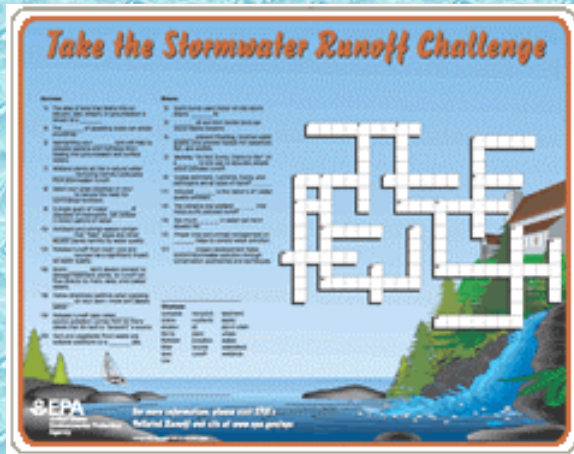
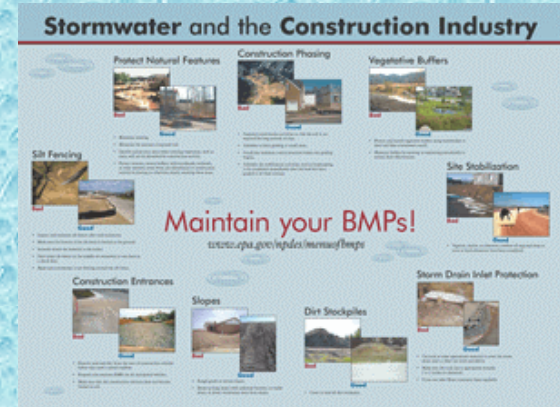
Minimum Control Measures

cont'd

- For each each minimum control measure:
 - Best management practices
 - Measurable goals
 - Timing and frequency of the actions
 - Responsible persons
- EPA measurable goal and BMPs as guidance on web: visit MS4 page at www.epa.gov/region6/sws

Six Minimum Measures

Public Education and Outreach



Minimum Control Measures

Public Education and Outreach

MUST:

- Distribute educational materials to the community, or
- Conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff

Minimum Control Measures

Public Education and Outreach

Recommend:

- May use materials provided by others
- Inform public on how to get involved in storm water program activities
- Tailor program to target specific groups of entities, particularly those likely to have significant storm water impacts
- Address the viewpoints and concerns of minority and disadvantaged communities

Public Involvement/Participation



Minimum Control Measures

Public Involvement/Participation

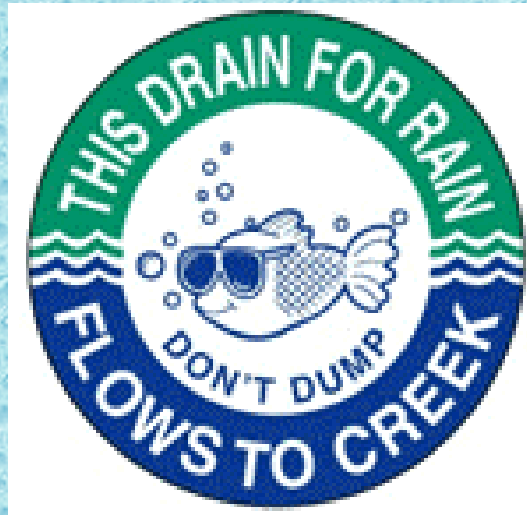
MUST:

- Comply with State, Tribal and local public notice requirements
- Must comply with the permit's NOI/SWMP/Annual Report public notice/access requirements

Recommend:

- Provide opportunities for the public to participate, such as:
 - Local storm water management panel
 - Volunteer monitoring

Illicit Discharge Detection and Elimination



Minimum Control Measures

Illicit Discharge Detection and Elimination

What are some sources of illicit discharges?

- Sanitary or process wastewater
- Effluent from septic tanks
- Improper auto and household toxics disposal
- Illegal dumping

Do all illicit discharges need to be addressed?

Minimum Control Measures

Illicit Discharge Detection and Elimination

MUST:

- Develop a sewer system map of all outfalls and the names of all receiving waters
- Prohibit non-storm water discharges, through an ordinance or other means and implement enforcement procedures
- Implement a plan to detect and address non-storm water discharges
- Inform public employees/general public of hazards associated with illegal discharges

Minimum Control Measures

Illicit Discharge Detection and Elimination

Recommend:

- A plan with procedures for:
 - Locating priority problem areas
 - Tracing the source of an illicit discharge
 - Removing the source
 - Program evaluation & assessment
- Promotion of public reporting of discharges
- Distribution of outreach materials
- Storm drain stenciling

Construction Site Storm Water Runoff Control



Minimum Control Measures

Construction Site Storm Water Runoff Control

MUST:

- Develop a program to reduce pollutants from construction activities that disturb ≥ 1 acre
- Use an ordinance, or other regulatory means, with penalties, that requires appropriate E&S controls and controls on waste at the site
- Have procedures for:
 - site plan review
 - site inspection & enforcement
 - public input

Minimum Control Measures

Construction Site Storm Water Runoff Control

Recommend:

- Procedures for site plan review should include review of individual pre-construction site plans
- Procedures for site inspections and enforcement could include steps to identify priority sites based on the nature of the site, topography, soil characteristics, and receiving water quality.
- Provide appropriate educational and training measures for construction site operators

Post-construction Storm Water Management



Minimum Control Measures

Post-construction Storm Water Management in New Development and Redevelopment

MUST:

- Develop a program, using an ordinance or other regulatory means, to address runoff from new development and redevelopment projects that disturb ≥ 1 acre
- Implement strategies with a combination of structural and/or non-structural BMPs
- Ensure adequate long-term operation & maintenance (O&M) of BMPs

Minimum Control Measures

Post-construction Storm Water Management in New Development and Redevelopment

Recommend:

- The BMPs chosen should:
 - be appropriate for the local community
 - minimize water quality impacts
 - attempt to maintain pre-development runoff conditions
- Participate in watershed planning efforts
- Assess existing ordinances, policies, and programs that address storm water runoff quality
- Provide opportunities for public participation

Pollution Prevention/Good Housekeeping for Municipal Operations



Minimum Control Measures

Pollution Prevention/Good Housekeeping for Municipal Operations

MUST:

- Develop an O&M program to prevent or reduce pollutant runoff from operations
- Include employee training to prevent and reduce storm water pollution from activities such as the maintenance of park and open space, buildings, and storm water systems.

Minimum Control Measures

Pollution Prevention/Good Housekeeping for Municipal Operations

Recommend:

- Maintenance activities and schedules, and long-term inspection procedures
- Controls on the discharge of pollutants from streets, salt/sand storage areas, waste transfer stations, etc.
- Procedures for disposing of waste from the MS4
- Ways to ensure new flood management projects assess impacts on water quality

Monitoring & Assessment



Purposes

- Evaluate
 - Compliance with permit/SWMP
 - Appropriateness of BMPs
 - Progress towards meeting Measurable Goals
- Assess
 - Effectiveness of SWMP in meeting MEP and WQ objectives
 - Consistency with TMDLs

Monitoring/Assessment Plan

- Must include proposed plan with 1st annual report (copy State/Tribe)
- Discharge to Impaired/TMDL Waters
 - Must gather information on levels of pollutant(s) of concern (or surrogate)
 - Must collect analytical data on your MS4 discharges if subject to TMDL wasteload allocation
 - Prior to TMDL, must collect or obtain analytical data on pollutant of concern (can be group effort or make use of existing representative data)
 - Must be consistent with any TMDL-required monitoring requirements, even if would replace analytical sampling otherwise required by permit

Annual Reports

(Format in Appendix D)

- Covers January 1 – December 31
- First one due April 1, 2008, then every April 1st
- Local public notice/availability at least 30 days prior to submittal
- Covers:
 - status of compliance
 - assessment of BMPs
 - progress on measurable goals
 - progress on meeting MEP
 - results of monitoring/assessment
 - summary of plans for following year
 - any proposed changes to SWMP, BMPs, measurable goals
 - describe any changes needed to comply with applicable TMDLs
 - notice if going to rely on partner to satisfy a permit requirement
 - summary of any issues raised in public review of Annual Report

Endangered Species

Appendix A

- Must meet an eligibility criteria PRIOR to submitting NOI:
 - A – No endangered or threatened species or critical habitat in proximity
 - B – Formal or informal ESA Section 7 consultation concluded
 - C – ESA Section 10 incidental take permit
 - D – Effects already addressed by another operator's certification under A, B, or C
- If cannot initially qualify, contact EPA. ESA consultation on route towards individual permit can then be used to qualify for the General Permit

Historic Properties

Appendix B

- Must meet an eligibility criteria PRIOR to submitting NOI:
 - 1 – None in path of MS4 discharges or BMP construction areas
 - 2 – Properties identified, but will not be affected
 - 3 – Potential adverse effects, but have written agreement with SHPO/THPO to avoid or mitigate
- If cannot initially qualify, contact EPA.
- Remember, you must still comply with any State/Tribal laws or regulations concerning historic properties

How Do I Get a Copy of the Final General Permit?

- General Permit documents are available from EPA at: www.epa.gov/region6/sws or

Diane Smith smith.diane@epa.gov 214-665-2145

- Docket is at EPA Region 6 in Dallas, TX and available for review during normal working hours (contact Diane)

Storm Water Program

Internet & Other Resources

- EPA has plenty of guidance/web links to information on BMPs, Measurable Goals, example program elements/ordinances, case studies, etc.
- Other MS4s will be good resources
- Region 6 Annual MS4 Operator's Conference (2007 will be in Rogers, AR June 18-22)
- Region 6: www.epa.gov/region6/sws
- EPA HQ: www.epa.gov/npdes/stormwater