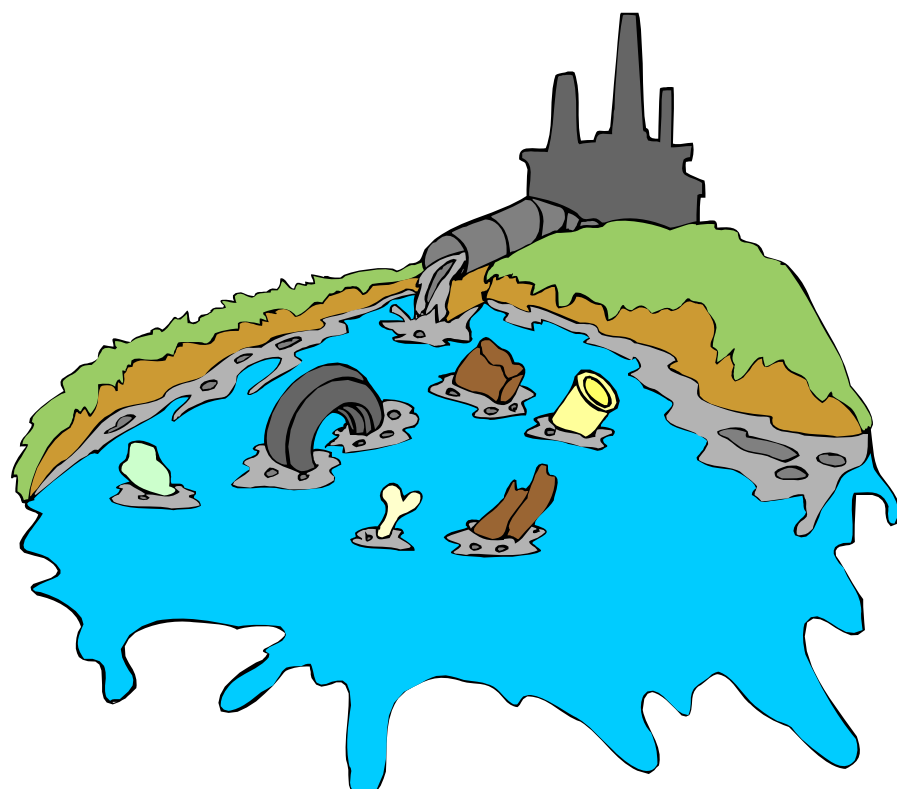




NDPES Permit For Discharges From Municipal Separate Storm Sewer Systems (MS4)

Tennessee Department of Environment and Conservation (TDEC)

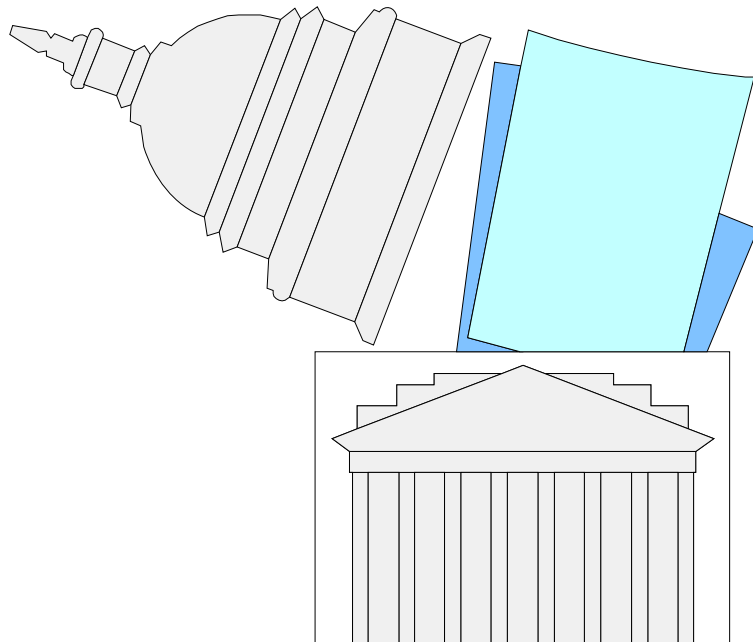
Division of Water Pollution Control



Thirty years ago, **two-third** of the nation's waters were **unsafe** for uses such as fishing and swimming.



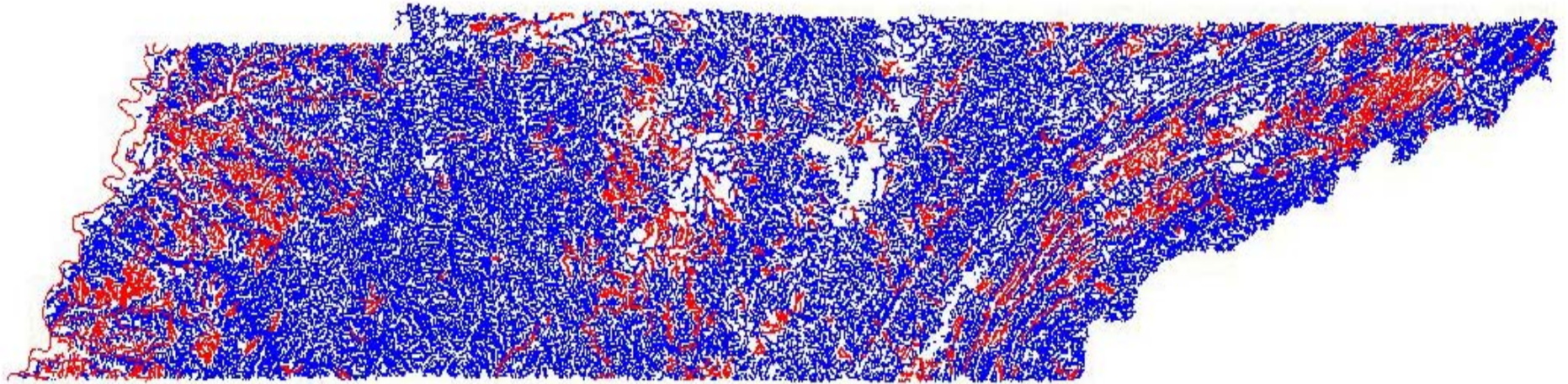
National Pollutant Discharge Elimination System (NPDES) Program



To improve water quality, the **NPDES** program was established to prohibit the discharge of pollutants into a "water of the United States" unless covered under a permit.



NPDES Permits initially focused on pollutant sources including discharges from industrial and sewage treatment plants.



Water quality improved dramatically through the implementation the NPDES program. But even with this success, water bodies were still impaired. The leading source of this impairment was found to be **storm water pollution**.



Storm water pollution is caused by rainfall or snowmelt moving over the ground picking up pollutants and depositing them into rivers, lakes, wetlands and ground water.

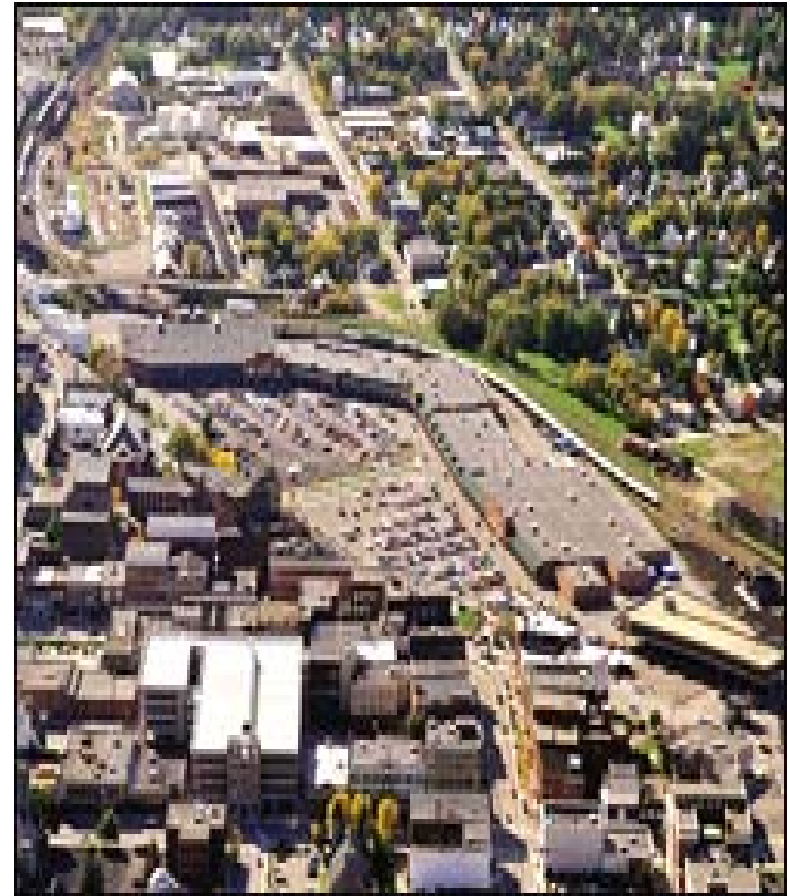


The impact by an individual storm water source may be small but the **cumulative** effect can significantly degrade water quality. These pollutants can kill aquatic life and limit the use of our waters for recreational or other purposes.



Storm water pollutants from **urban** areas:

- Oil and Grease
- Heavy Metals
- Industrial chemicals
- Bacteria
- Salt/sand
- Pesticides
- Herbicides
- Nutrients
- Floatables





Storm water pollutants from **suburban** areas:

- Household chemicals
- Yard waste
- Trash
- Salt/sand
- Excess nutrients
- Pesticides
- Cleaning agents
- Grease



Storm water pollutants from **developing** areas:

- Soil/sediment
- Trash
- Toxins
- Bacteria
- Oil & grease

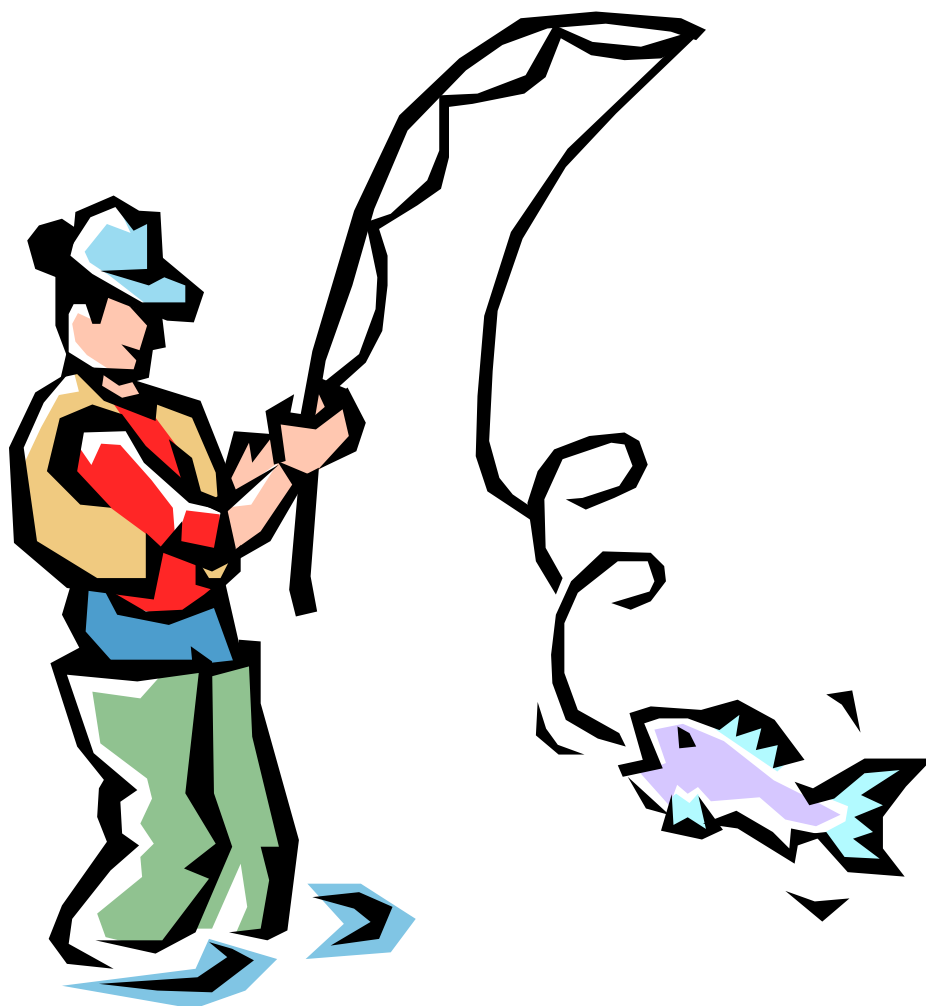




Storm water pollution from **agricultural** areas:

- Excess nutrients
- Pesticides
- Soil/sediment
- Bacteria





To specifically address storm water pollution, EPA promulgated **Phase I** of the NPDES Storm Water Program in 1990.



Phase I MS4s

Under Phase I, “medium” and “large” **municipal separate storm sewer systems (MS4s)** were required to obtain NPDES permit coverage for storm water discharges. The NPDES permit required the MS4 to control the quality of storm water discharges from any ditch, culvert, or conveyance in that routes to waters of the state.



Phase I MS4s included:

- Memphis
- Chattanooga
- Nashville
- Knoxville



Storm Water Phase II Rule

The next step in EPA's effort to preserve, protect, and improve the Nation's water resources from polluted storm water runoff was **Phase II**, which was published December 8, 1999. Phase II extends coverage of the NPDES storm water program to "small" MS4s.



Phase II MS4s included:

Alcoa
Anderson County
Athens
Bartlett
Belle Meade
Berry Hill
Blount County
Brentwood
Bristol
Brownsville
Carter County

Church Hill
Clarksville
Cleveland
Collegedale
Collierville
Columbia
Cookeville
Dickson
Dyersburg
East Ridge
Elizabethton

Farragut
Forest Hills
Franklin
Gallatin
Germantown
Goodlettsville
Hamilton County
Hawkins County
Hendersonville
Jackson
Johnson City



Jonesborough
Kingsport
Knox County
Lakesite
Lakewood
Lebanon
Lewisburg
Lookout Mountain
Loudon County
Madison County
Martin
Maryville
Maury County

McMinnville
Millington
Montgomery County
Morristown
Mount Carmel
Mount Juliet
Murfreesboro
Oak Hill
Oak Ridge
Red Bank
Ridgeside
Robertson County
Rockford
Rutherford County

Sevier County
Sevierville
Shelby County
Signal Mountain
Smyrna
Soddy-Daisy
Sullivan County
Sumner County
Tipton County
Tullahoma
Union City
Washington County
Williamson County
Wilson County



Six MS4 minimum control measures...

The development and implementation of Phase II MS4s are slightly different from Phase I MS4s.

They are comprised of six elements, termed “**minimum control measures**,” that are expected to result in the significant reduction of storm water pollutants.



Six minimum control measures include:

6

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



Public Education and Outreach

Develop and implement a program to educate the community about the impacts of storm water discharges on local waterbodies and the steps that can be taken to reduce storm water pollution.



Public Education and Outreach



- Informational web site
- Educational displays
- Brochures or fact sheets
- Service announcements
- Watershed signage
- Posters
- Bumper stickers

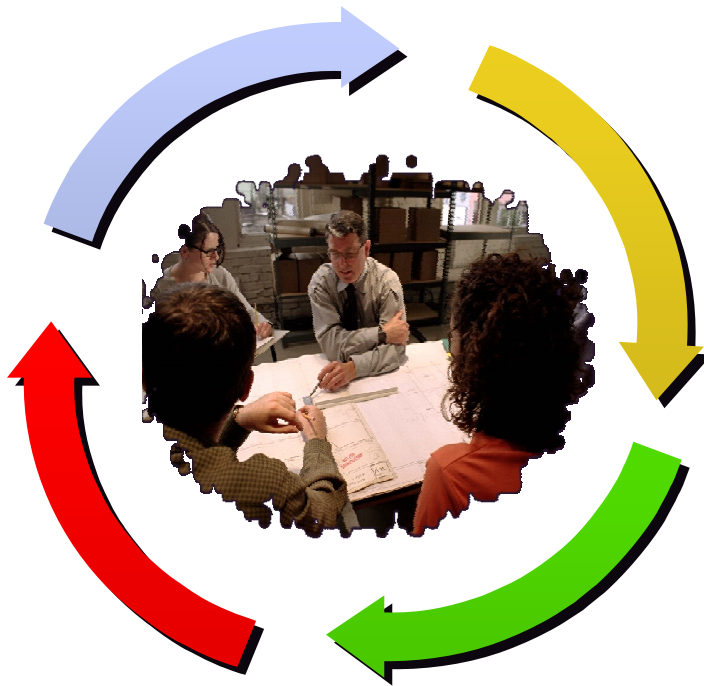


Public Participation/Involvement

Actively include the public in developing, implementing and reviewing the MS4 storm water management program, for broader public support and shorter program implementation schedules



Public Participation / Involvement



- Public meetings and panels
- Citizen watch groups
- “Adopt a stream” programs
- Volunteer monitoring
- Storm drain stenciling
- Volunteer educators
- Community clean-ups

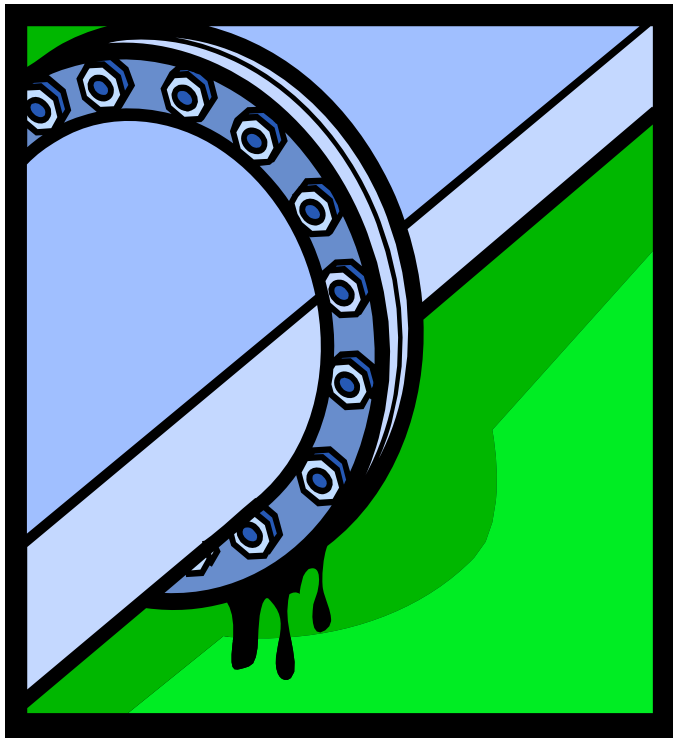


Illicit Discharge Detection / Elimination

Develop, implement and enforce a program to detect and eliminate any illicit discharges that enters the MS4 through either direct or indirect connections



Illicit Discharge Detection and Elimination



- Sanitary wastewater
- Effluent from septic tanks
- Car wash wastewaters
- Improper oil disposal
- Radiator flushing disposal
- Grey wastewaters
- Spills from roadway accidents



Construction Site Runoff Control

Develop, implement, and enforce a program to reduce pollutants in storm water runoff from construction activities that result in a land disturbance of one acre or greater



Construction Site Runoff Control



- Ordinance requiring erosion prevention and sediment controls on land disturbance activities
- Submittal and approval process for erosion prevention and sediment control plans
- Perform inspections to ensure compliance



Post-Construction Runoff Control

Develop, implement and enforce a program to reduce pollutants in post-construction runoff to the MS4 from new development and redevelopment projects



Post-Construction Runoff Control



- Ordinance requiring a combination of structural and/or nonstructural post-construction runoff best management practices
- Submittal and approval process for post-construction runoff
- Ensure long-term operation and maintenance of controls



Pollution Prevention / Good Housekeeping

Develop and implement an operation and maintenance program to prevent storm water pollutant runoff from MS4 operations and system



Pollution Prevention / Good Housekeeping



- Prevention of pollutant runoff from MS4 operations such as roads and parking lots, maintenance/storage yards and waste transfer stations
- Maintenance for structural and non-structural controls to reduce pollutants discharged from the MS4
- Proper disposal of waste removed from the MS4



MS4 Compliance Evaluation Inspections (CEI)

The Division of Water Pollution Control implements the EPA Phase I and Phase II regulations in Tennessee. Environmental field office personnel conduct MS4 CEI's and pursue enforcement as necessary



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Phone: (901) 368-7939
FAX: (901) 368-7979
Jim Chaney, Director
Bill Relker, Administrator



The Division reviews the following **prior** to a CEI :

- Current MS4 permit and Notice of Intent
- MS4 annual reports
- MS4 Website and Hotline
- Any other relative documents pertaining to storm water quality within the MS4 program area



The Division reviews the following **during** a CEI:

- Construction, post-construction and illicit discharge ordinances and programs
- Plan review processes, standard conditions, technical standards and guidance
- Construction site inspections and examples of enforcement actions
- MS4 system inventory, pollution prevention and good housekeeping records
- Public education, outreach and participation materials and documentation



The Division inspects the following **during** a CEI :



- MS4 outfalls and storm water quality controls
- Commercial and/or residential construction activities
- MS4 operations such as maintenance facilities, storage yards and waste transfer stations



Thank you....
any questions



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Division of Water Pollution Control
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