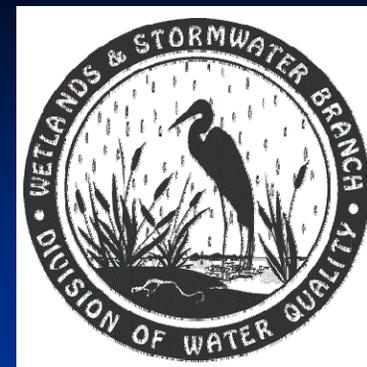


US EPA ARCHIVE DOCUMENT

# North Carolina Division of Water Quality



## Wetlands and Stormwater Branch

**Environmental Compliance Assistance Workshop**  
NC Hospitals and Healthcare Facilities  
September 14, 2007

# What is a Watershed?



# Sources of Pollution

**Agriculture**



**Stormwater**



**Point Sources**



**Construction**



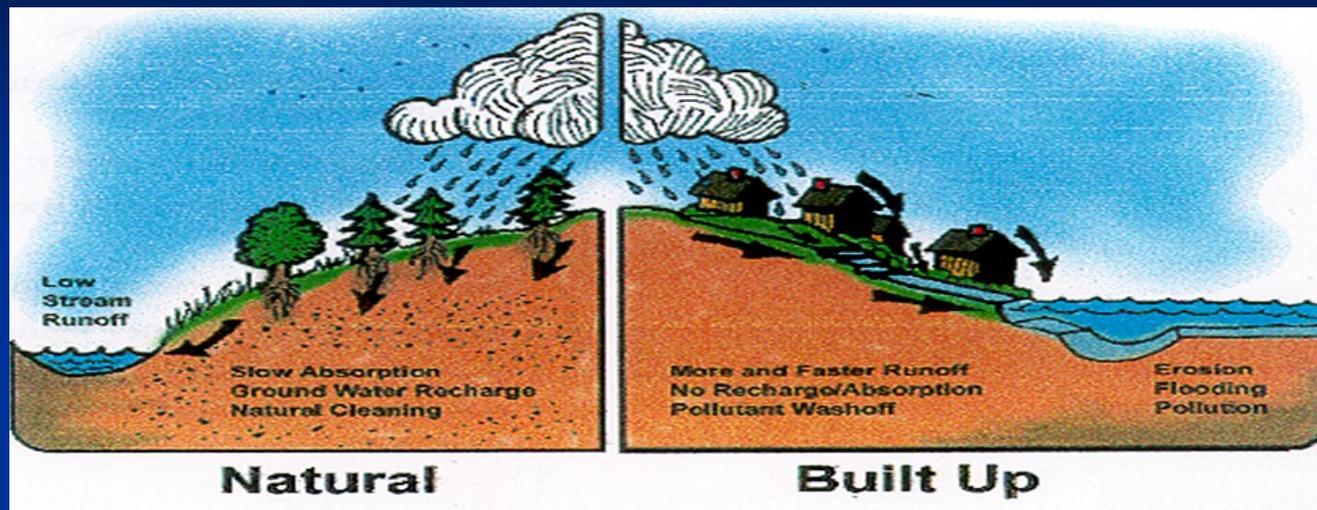
**Marinas**



**Atmospheric Depos**



# Why Be Concerned About Stormwater



- Increased Imperviousness
- Increased Runoff
- Increased Pollutants
- Impacts to Streambanks
- Erosion/Sedimentation



# Why be Concerned about Stormwater?



- Declining water quality

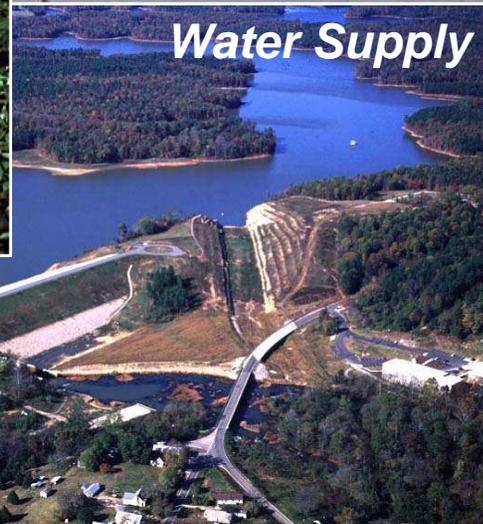
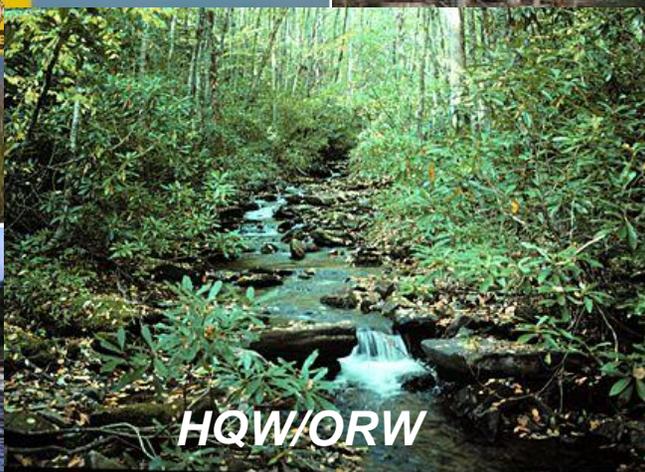


- Increasing demand for clean water



- *Urbanization:*
  - Population doubling every 50 years
  - 88% increase in urban area from 1982-1997 (USDA-NRCS)

# Stormwater Overview – State SW



# Stormwater Overview - NPDES



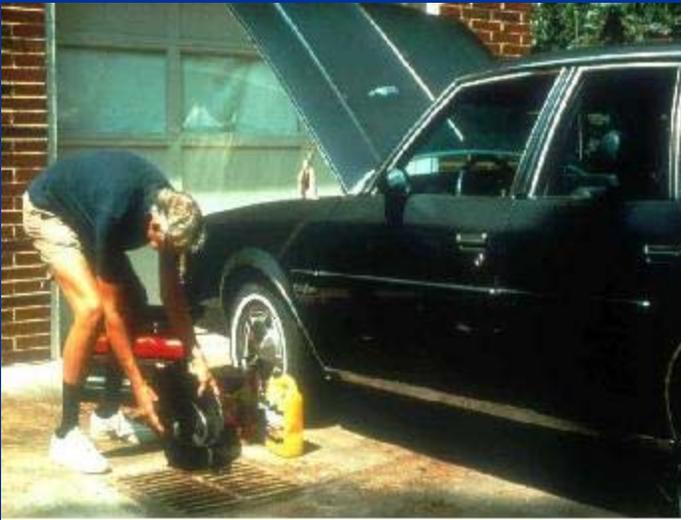
Federal Stormwater  
Industrial Programs

1990



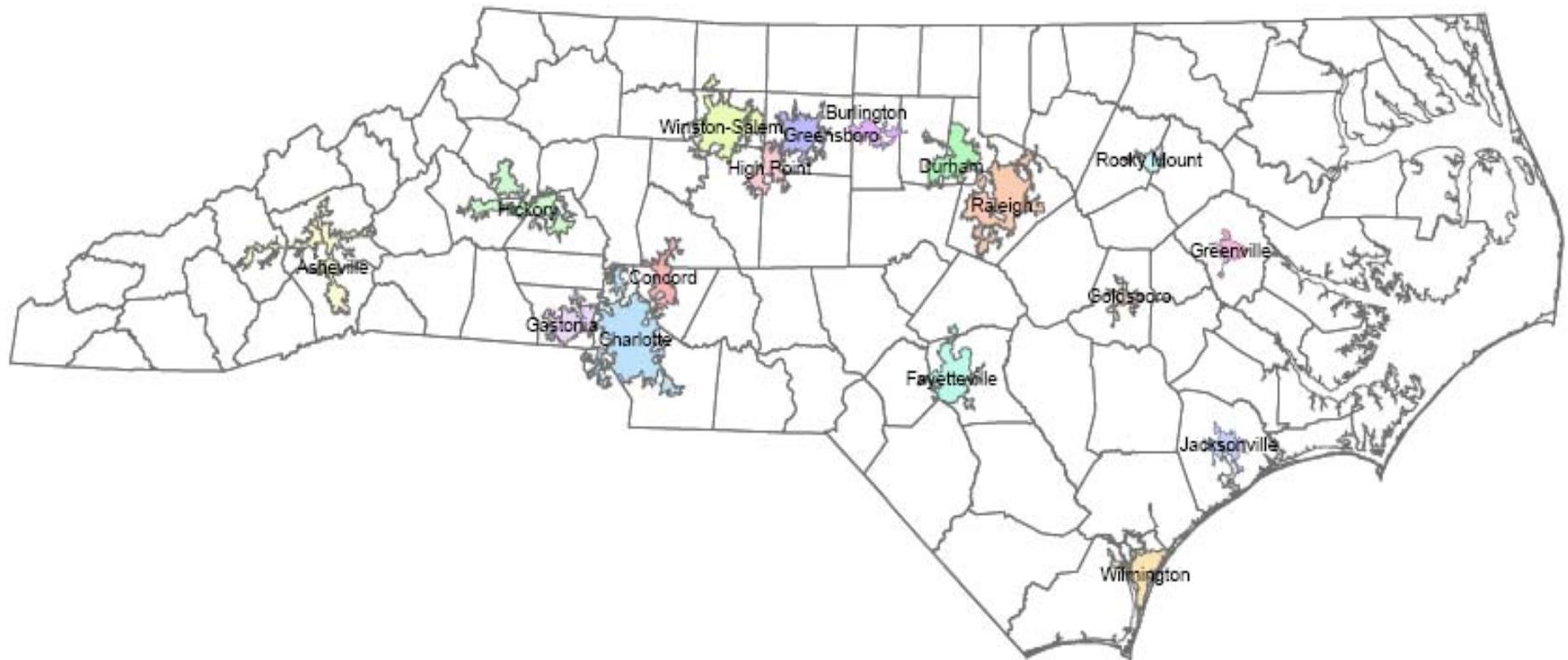
# Stormwater Overview – Municipal

Federal Stormwater  
Municipal  
1990, 1999



## Urbanized Areas from Year 2000 Federal Census

*Municipal Separate Storm Sewer Systems (MS4s) in these areas were automatically designated by the U.S. EPA's Phase II Regulations*



# Minimum Control Elements

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



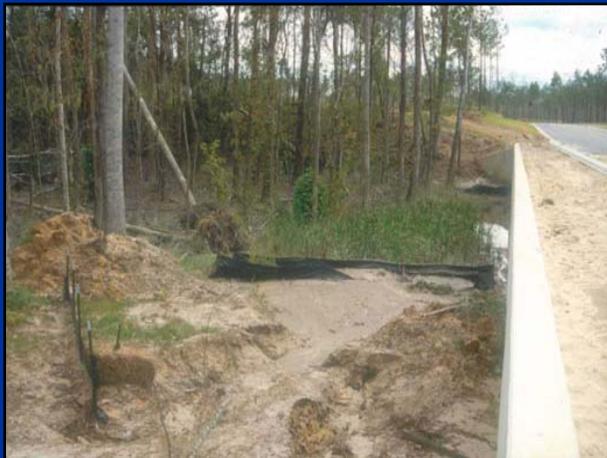
# Illicit Discharge Program

- Program to Detect and Remove
- Mapping of Storm Sewer System
- Reporting Mechanism and Education



# Construction Site Runoff Control

- Maintain Sediment Onsite
- Condition Met By State/Local Program



## Post Construction Runoff Control

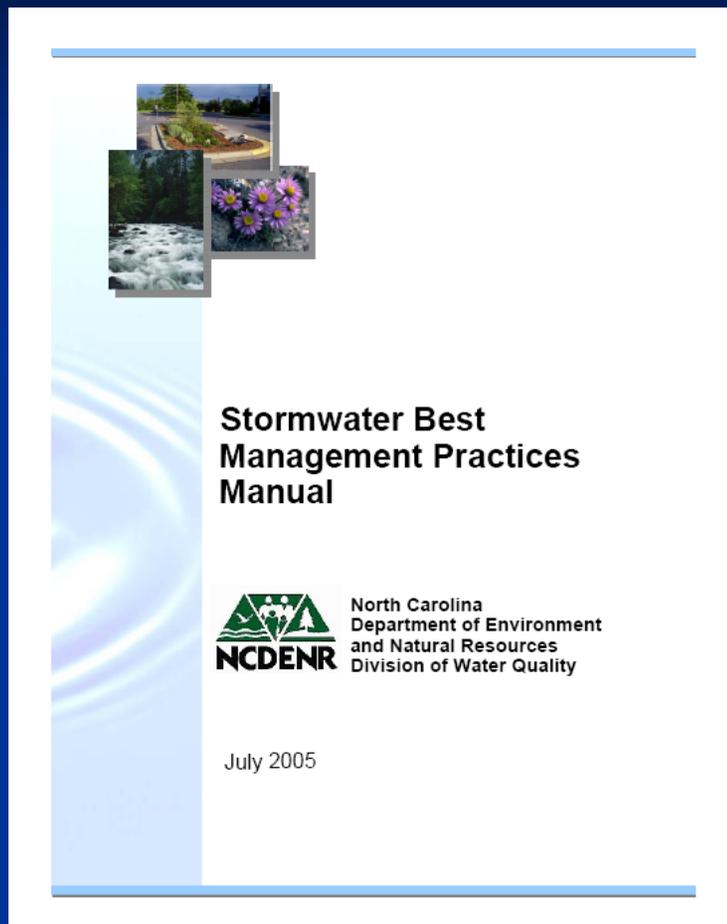
- New development and redevelopment
- 1-year / 24-hour storm control
- 85% average annual TSS removal
- Operation & maintenance of BMPs
- Specific requirements for Class SA, Tr, NSW



# Pollution Prevention/ Good Housekeeping

- Look at Source Reduction Measures
- Concentration on Municipal Activities
- Maintenance Areas, etc.
- Local Ordinances





# Stormwater Resources

*Phase II Stormwater Model Ordinance (DRAFT 7-1-2005) by Kane and Whisnant  
This draft is near-final and is intended for presentation to the EMC Water Quality Committee.*

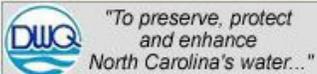
## Phase II Stormwater Model Ordinance for North Carolina

By Betsy Kane and Richard Whisnant  
UNC School of Government



# N.C. Division of Water Quality

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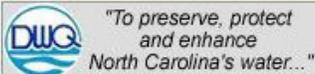


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City : <input type="text"/>		
State : NC		
Zip Code : <input type="text"/>		
<input type="button" value="Find Address"/>		

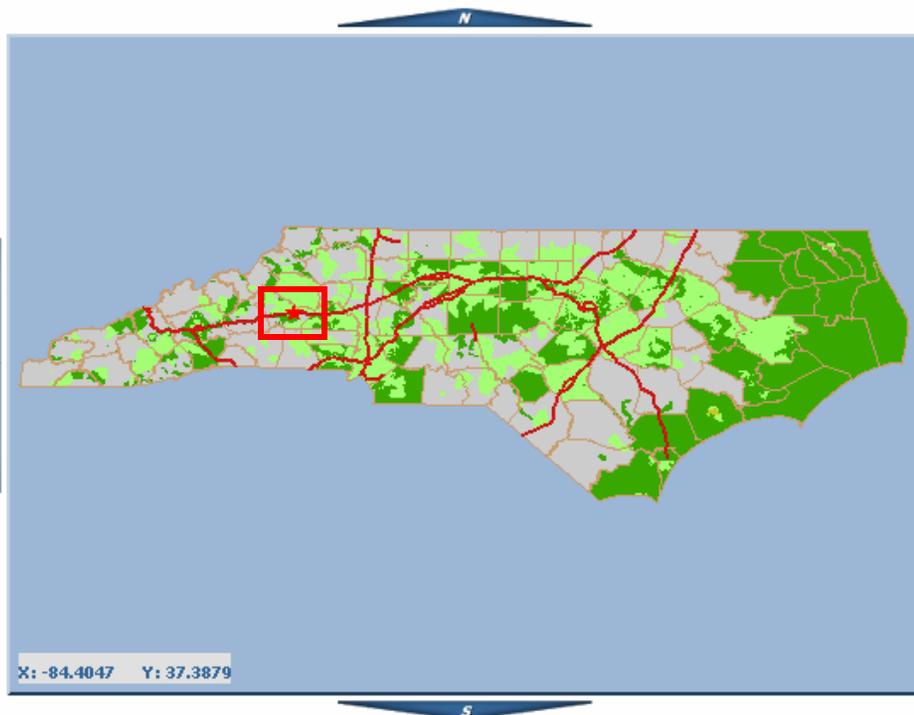


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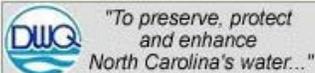


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State : NC		
Zip Code : <input type="text"/>		
<input type="button" value="Find Address"/>		



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Address	Lat/Long	Results
Permitting :	Local	
Type:	Water Supply Watershed	
Basis:	WS-IV Protected Area	
Notes:	Satisfies Phase II Requirements	
Contact:	<a href="#">View local contacts list</a>	
County:	BURKE	
DENR Region:	Asheville	



http://207.192....

- General Hydrography (Arcs)
- General Hydrography (Polys)
- Municipal Boundaries
- Stormwater Jurisdiction
  - City in Phase II tipped county
  - Coastal County
  - Countywide
  - Exempt Phase II City
  - Exempt Phase II City ETJ
  - Freshwater HQW
  - HQWORW SB SC & Freshwater
  - High Quality or Outstanding
  - Phase II MSI
  - NSW City
  - NSW County
  - None, Inc. area
  - None, Uninc. area
  - Phase II City
  - Phase II City & State Stormwater
  - Phase II City ETJ
  - Phase II City & HQW
  - Phase II City & NSW City
  - Phase II Tipped County
  - Randleman Lake Watershed
  - Urbanized Area
  - Water Supply Watershed
  - SA-Shellfish Waters

Done

# Information Sources

Division of Water Quality  
Stormwater Permitting Unit

<http://h2o.enr.state.nc.us/su/stormwater.html>

State Stormwater Education

<http://www.ncstormwater.org>