

# SOURCE WATER ASSESSMENT PROJECT:

An Assessment of Potential for Pollution of  
Surface Drinking Water Supply Sources

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Prepared by the Atlanta Regional Commission for

Cherokee County Water & Sewer Authority  
and  
City of Canton Water & Sewer Department

# Why Are We Here?

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- Provide information on the Source Water Assessment for review
- Obtain comments and recommendations on the Assessment

# Water Quality

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- City of Canton and Cherokee County's Treated Drinking Water is good and meets and surpasses all water quality standards
- This project is about assessing the source of the water prior to treatment and potential for future contamination

# Source Water

- Source water can be from streams, rivers, lakes, or aquifers
- In the Atlanta Region Surface water serves approximately 2.7 million people
- ARC Focus on Surface Water



# Source Water Assessment Project Development

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**1996 Amendments to Safe Drinking Water Act**



**EPA Advocates: source water protection plans in place nationally by 2005;**



**Each State Required to Develop and Implement a Source Water Assessment Plan**



**EPD Delegation to Individual Water Systems and Regional Partnerships**



**ARC Facilitates the Metro Atlanta Region SWAP**

# Source Water Assessment Task Force

- ARC
- GA EPD
- LAPA
- Water Suppliers for
  - Atl/Ful County WRC
  - CCMWA
  - Cherokee County WSA
  - City of Atlanta
  - City of Canton
  - City of East Point
  - City of McDonough
  - City of Palmetto
  - City of Roswell
  - Clayton County WSA
  - Douglas Co. WSA
  - DeKalb County
  - Fayette County
  - City of Fayetteville
  - Henry County WSA
  - Rockdale County

# Purpose of the Source Water Assessment Project

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- Develop an inventory of POTENTIAL Sources of Contamination
- Determine the susceptibility of the drinking water to identified Potential Pollution Sources
- Increase public involvement in and awareness of drinking water watershed concerns

# Source Water Assessment Process

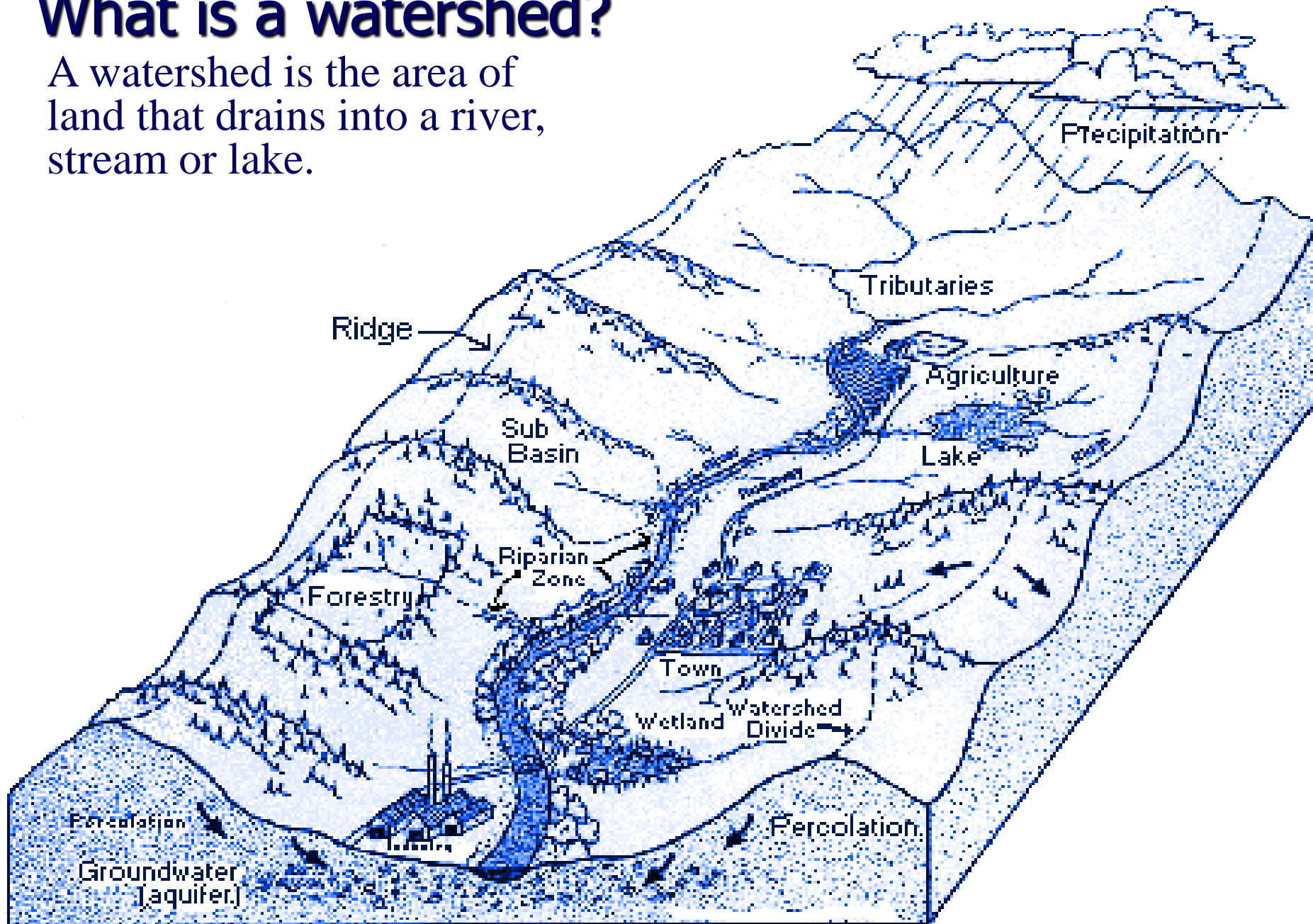
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- Delineate Source Water Assessment Areas for Water Supply Watersheds
- Inventory Potential Pollutant Sources
- Determine Source Water Susceptibility to the Potential Pollutant Sources
- Public Communication

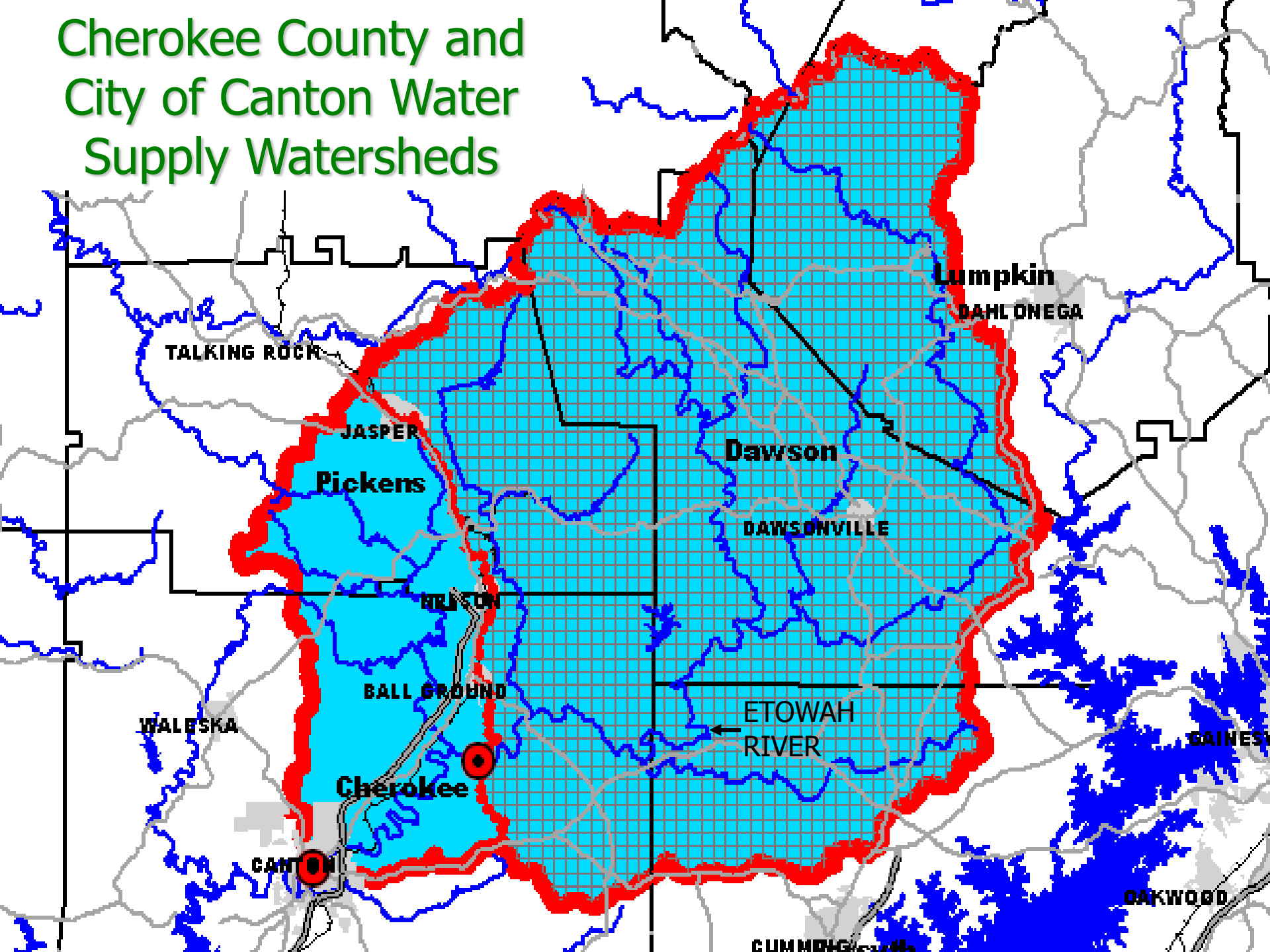


# What is a watershed?

A watershed is the area of land that drains into a river, stream or lake.



# Cherokee County and City of Canton Water Supply Watersheds





# Etowah River

**Cherokee County Water  
& Sewerage Authority  
Etowah River Intake**



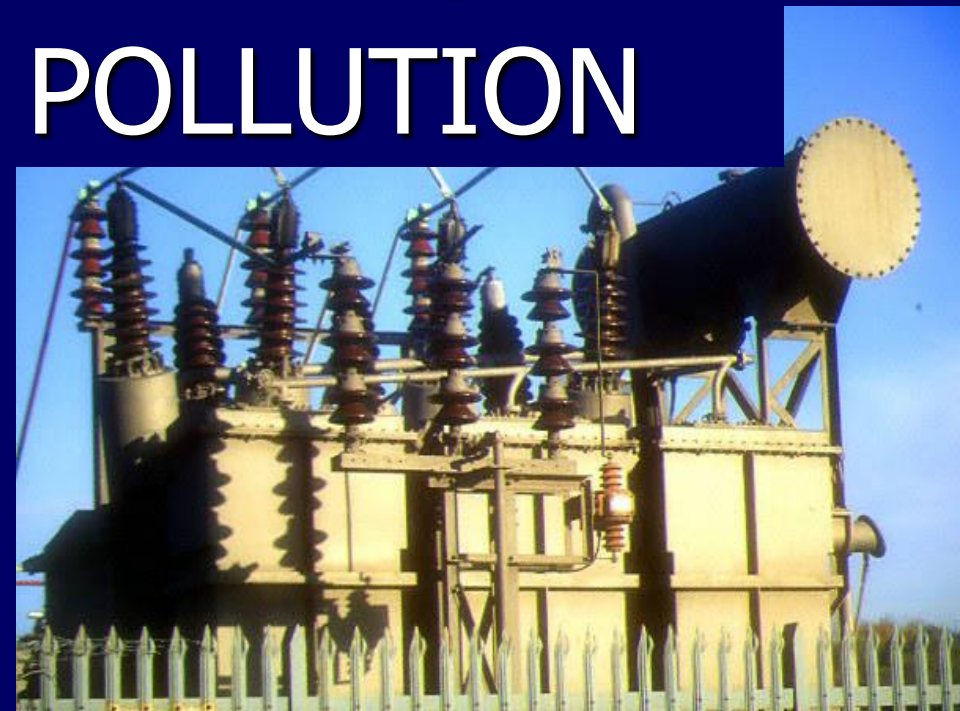


**City of Canton**

**Etowah River Intake**



# POTENTIAL INDIVIDUAL SOURCES OF POLLUTION



# Potential Individual Source Pollutant Categories

- Accident Spill Locations
- Agriculture
- Airports
- Asphalt Plants
- Construction
- Garbage Transfer Stations
- Fueling Facilities
- Hazardous Waste Facilities
- Junk/Scrap/Salvage Yards
- Landfills (open & closed)
- Industries which have Bulk Chemical & Petroleum Storage
- Industries which have Federal Categorical Standards
- Large Industries which Utilize Hazardous Chemicals
- LAS Permit Holders
- Lift Stations
- Marinas
- Military Bases
- Mining
- NPDES Permit Holders
- Oil/Gas Pipelines
- Electric Substations
- Railways, Roads, & Sewer lines adjacent to/crossing streams
- Recycling Centers
- Water & Wastewater Plants

# Inventory of Potential Individual Pollutant Sources

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- Determine the Contaminants of Concern (COCs)
- Link COCs to Potential Pollutant Source Categories
- Map & Document All Potential Pollutant Sources in Each Water Supply Watershed
- Field Verify Mapped Data



# Inventory of Potential Individual Pollutant Sources - Cherokee Intake

- 85 Agriculture/Poultry Farms
- 2 Airports
- 1 Asphalt Plants
- 5 Electric Substations
- 17 Fuel Facilities
- 2 Hazardous Waste Facility
- 3 Junk/Scrap/Salvage Yards
- 4 Landfill
- 4 Large Industries Which Utilize Hazardous Chemicals
- 7 Land Application Sites
- 61 Mines
- 9 NPDES Permit Holders
- 9 Water Treatment Plant
- 1 Wastewater Treatment Facility

# Inventory of Potential Individual Pollutant Sources - Canton Intake

- 126 Agriculture/Poultry Farms
- 5 Airports
- 2 Asphalt Plants
- 11 Electric Substations
- 61 Fuel Facilities
- 24 Hazardous Waste Facility
- 7 Junk/Scrap/Salvage Yards
- 6 Landfill
- 3 Large Industries Which Have Federal Categorical Standards
- 23 Large Industries Which Utilize Hazardous Chemicals
- 7 Land Application Sites
- 81 Mines
- 12 NPDES Permit Holders
- 1 Recycling Centers
- 12 Water Treatment Plant
- 1 Wastewater Treatment Facility

# Susceptibility of Surface Water Intakes to Potential Pollutant Sources

## Potential of Contaminant Release

1. Distance from Water
2. Volume of Release
3. Duration of Release
4. Ease of Transport/Travel

## Potential Contaminant Risk

1. Distance from Intake
2. Toxicity

# Individual Source Component of Susceptibility Ranking

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Watershed	Facilities	Rank
Cherokee County WSA	210	Medium
Canton Water Dept.	382	Medium

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# NON-POINT SOURCES OF POLLUTION

A close-up photograph of a stormwater drain grate on a paved surface. The grate is rectangular and made of dark, textured material, possibly metal or plastic, with a grid pattern. It is set into a concrete or asphalt pavement. The background is slightly blurred, showing more of the pavement and some white lines, possibly from a road or parking lot. The overall scene is outdoors and appears to be a typical urban or residential setting.

Non-Point Source Pollution is caused by everyday activities that take place in residential, commercial, and rural areas and is carried by stormwater runoff to streams and lakes

# Non-Point Source Pollutants

- Sediment
- Bacteria
- Heavy Metals
- Oil and Grease
- Herbicides and Pesticides
- Nutrients
- Temperature Increase

# IMPERVIOUS SURFACE

Impervious surfaces are mainly constructed surfaces - rooftops, sidewalks, roads, and parking lots - covered by impenetrable materials such as asphalt, concrete, brick, and stone. These materials seal surfaces, repel water and prevent precipitation from infiltrating soils.

# Other Non-Point Source Considerations

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- Area of Watershed in Transition
- Size and Proximity of Sewer Lines
- Major Transportation Corridors (limited access highways)
- Railroads



# Non-Point Source Component of Susceptibility Ranking

Watershed	% Impervious	Rank
Cherokee County WSA	2.7%	Low
Canton Water Dept.	3.7%	Low

# OVERALL WATERSHED RANKINGS/PRIORITY

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Watershed	Rank
Cherokee County WSA	Medium
Canton Water Dept.	Medium

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# What Does This Mean??

- Help communities understand **POTENTIAL** threats to their water supplies
- Identify priority needs for protecting drinking water
- Provides a Resource