



COOPERATIVE EXTENSION

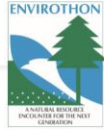
College of Agriculture, Forestry and Life Sciences

Cassie Castleberry

Water Resources Agent

Sumter





Donate Today



2026 Current Issue (Part A) pdf (posted 9/23/25)

About the Current Issue Study Guides:

There will be **TWO (2)** sections of study resources for the Current Issues station:

- **Part A:** Consists of Key Topics, Learning Objectives, and Study Resources directly relating to the 2026 Current Issue. It contains general content knowledge as well as resources from a regional, North American, or global perspective. Click on the image to the left to download Part A.
- **Part B:** Resources may be more specific to the state of Mississippi, but have broader application. **Part B will be posted in May 2025.**

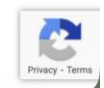
BOTH sections will be used for the 2026 NCF-Envirothon Annual Competition's Current Issue Test and Oral Presentation Scenario.

Competition Rules

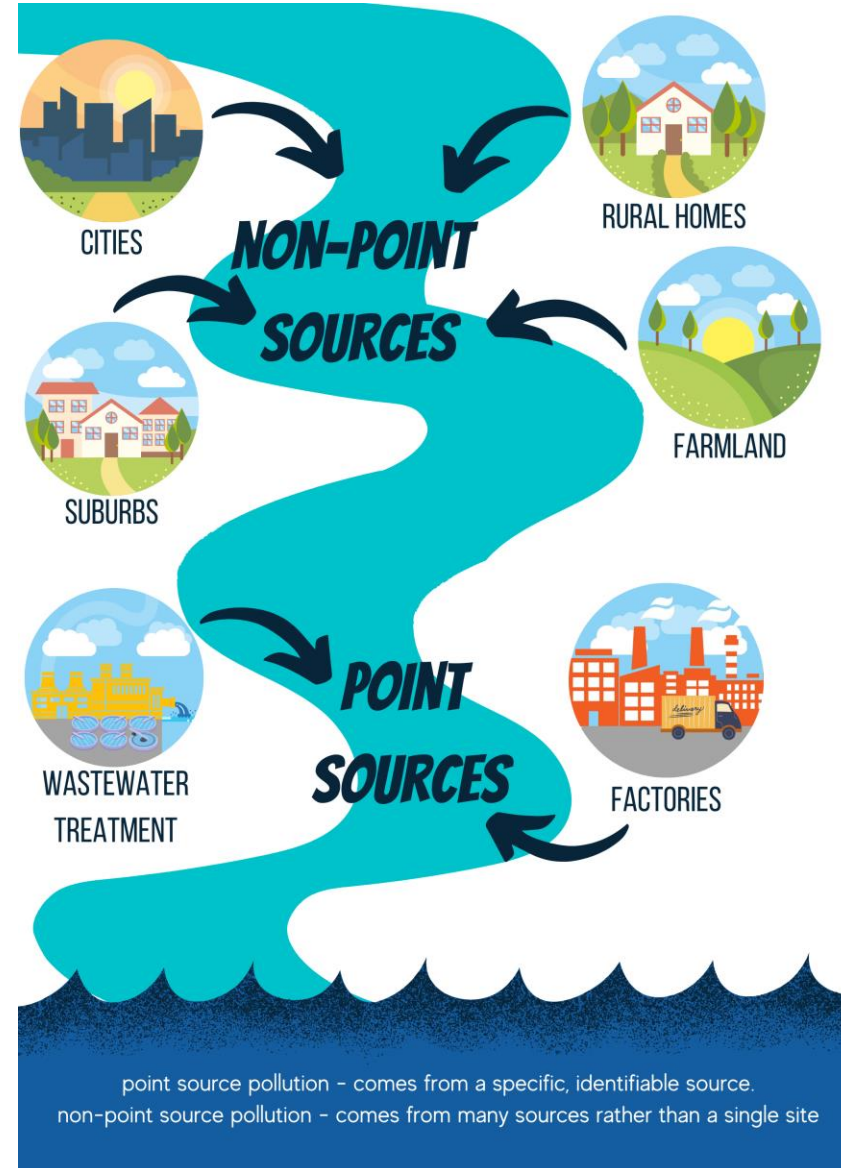
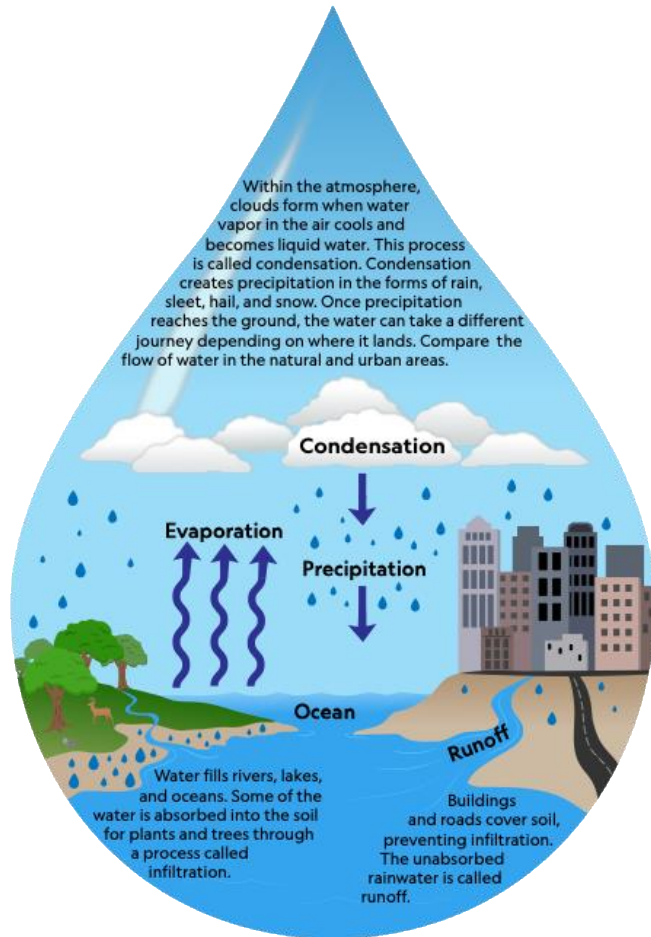
2025 Competition Rules and Regulations

https://envirothon.org/wp-content/uploads/2025/09/2026-Current-Issues-Part-A.pdf

Official competition rules, regulations, guidelines, and procedures that team members and



I THE WATER CYCLE



Stormwater: Where It Flows, Everything Goes

When it rains, snows, or sleet, water hits hard surfaces and takes anything on that surface with it, through drains, pipes, and ditches to local rivers, lakes, and streams.

Cigarette butts in the gutter become a real problem when they reach wildlife.

Pet waste washes into pipes and pollutes parks and recreation areas downstream.

Oil and grease leaked from cars washes down drains and into waterways.

Trash left on sidewalks gets swept into sewers and contaminates stormwater.

Lawn fertilizer and pesticides can wash across pavement and down drains, taking toxics with them.

Car washing chemicals can harm fish and animals.

Where Stormwater Flows, Everything Goes



Stormwater Innovations Improve Our Community

Solutions that manage stormwater are a natural way to reduce pollution, bring value to our community, and make it a better place to live.



Where Stormwater Flows, Everything Goes



Smart Steps to Stormwater Management

Make your community better! You can take steps to decrease the pollution that flows into local waterways every time it rains, snows, or sleets by following these tips.

Direct water from downspouts and sprinklers to green areas only.



Where Stormwater Flows, Everything Goes



Pick up after pets.

Where Stormwater Flows, Everything Goes





Runoff is collected from paved and other surfaces and directed into the garden



Native plants do not require fertilizer and help filter pollutants from the runoff

Native plants provide food and habitat for birds, butterflies, and other pollinators!



A depression in the earth is filled with a mixture of sand, topsoil, compost, and sometimes gravel, that filters runoff

A typical rain garden is between six and nine inches deep

Rain gardens can turn this...

...into this!



BIOSWALE

With community input and volunteer assistance, The Watershed Project is creating bioswales along the Richmond Greenway. The bioswale captures the stormwater and slows it down, keeping the water from flooding homes, the Greenway path, and nearby streets, where it creates potholes. The bioswale helps clean the water before it enters the San Francisco Bay as well. The native plants in the bioswale also create habitats for birds and butterflies.

1) Water flows in: dirty water from neighborhood roads and rooftops enters the bioswale

2) Water slows down and is cleaned: Plants, rocks, and dirt slow water down in the bioswale, giving time for pollutants to settle out. As water infiltrates the soil, plants and microbes break down some of the pollutants

4) Water flows out: Excess stormwater exists the bioswale and flows into the Bay, cleaner than when it entered

3) Water sinks into the ground: Water enters the perforated pipe, where it is slowly absorbed into the ground. This helps recharge groundwater, and reduce the amount of water that flows into the Bay



To volunteer, or with questions regarding the bioswale, please contact The Watershed Project at: volunteer@thewatershedproject.org or 510-665-3430





What can you do?

- Get involved
- Ask questions
- Do little things that make a big impact

Nonpoint Sources
Typically
Discharge
Indirectly
to
Waterways:

- Agriculture
- Hydromodification
- Urban Runoff
- Roads, Highways
and Bridges
- Abandoned Mine
Drainage
- Atmospheric
Deposition
- Marinas and
Boating
- Timber Harvest
- Septic System



Point Sources
Typically
Discharge
Directly
to
Waterways:

- Factory
- Wastewater
Treatment Plant
- Stormwater
Discharge

Hydrologic
Cycle:

- Overland Flow
- Infiltration
- Groundwater Flow
- Transpiration
- Evaporation
- Rainfall
- Aquifer

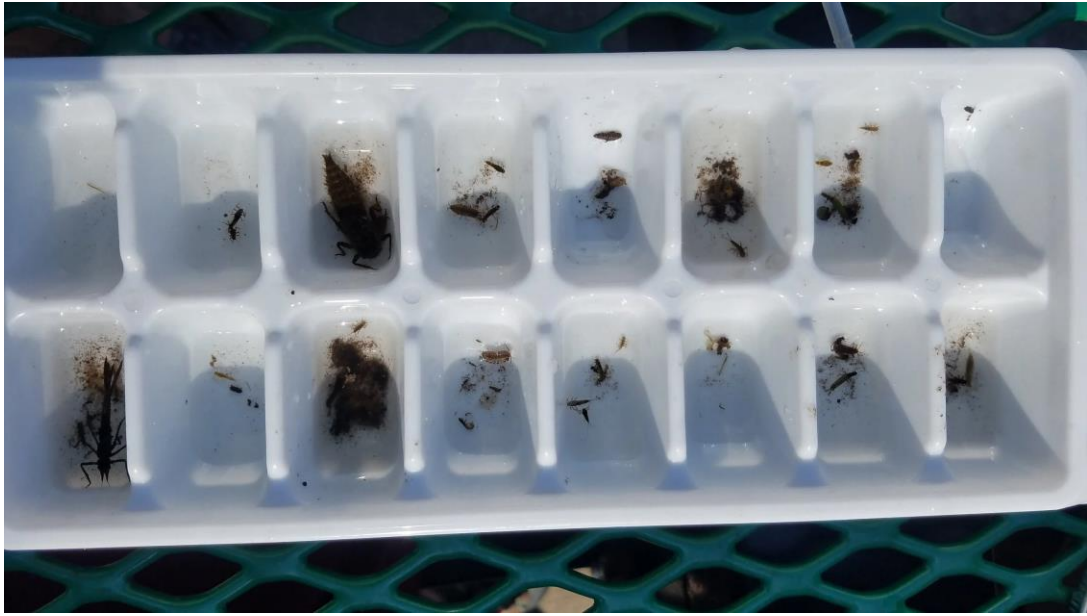


Taken from the EPA:

“An Interactive Guide to Nonpoint Source Monitoring”

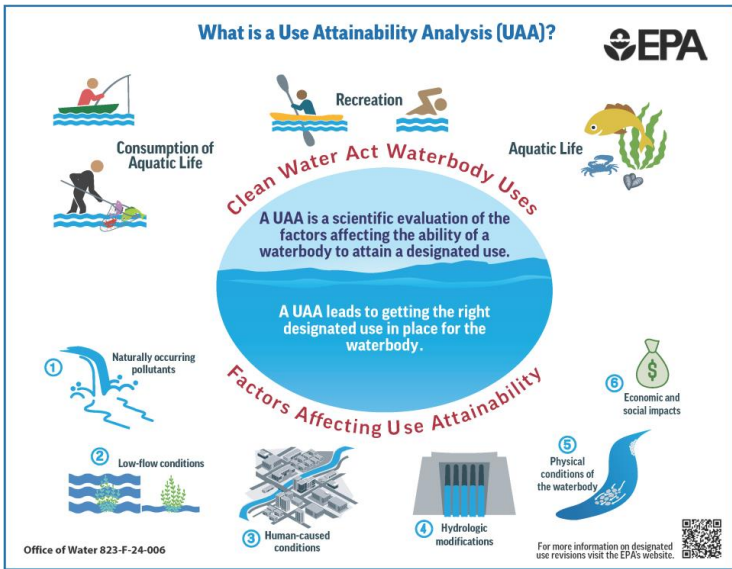
Why Do We Need Nonpoint Source Monitoring?

- Identify water quality problems, designated use impairments and causes, and pollutant sources.
- Develop total maximum daily loads (TMDLs), including load and waste load allocations.
- Analyze trends.
- Assess the effectiveness of best management practices (BMPs) or watershed projects.
- Assess permit compliance.
- Validate or calibrate models.
- Conduct research.



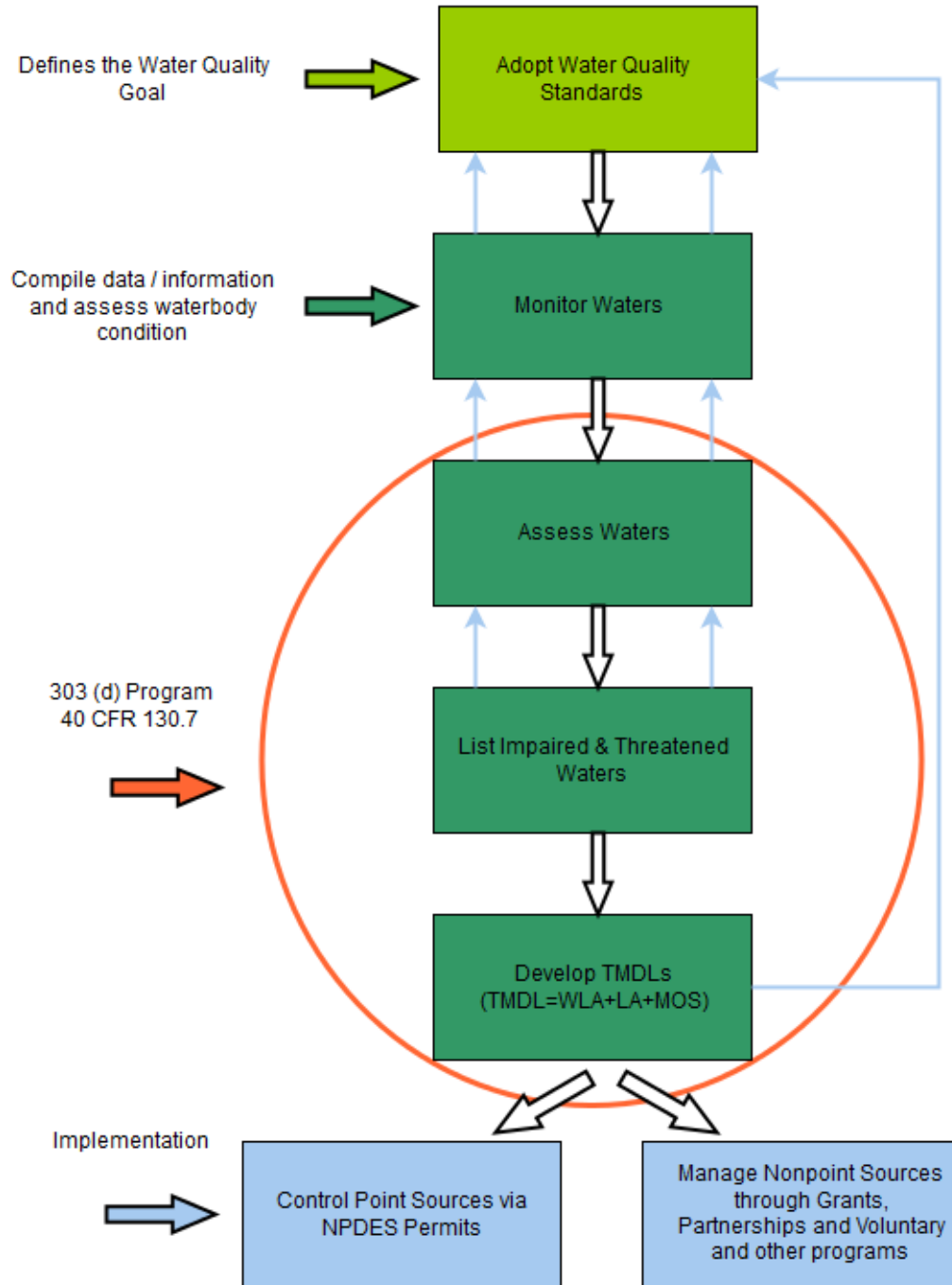
ADOPT
a
STREAM





FUN FACT:

The Federal Water Pollution Control Act of 1948 was the first major U.S. law to address water pollution. Growing public awareness and concern for controlling water pollution led to sweeping amendments in 1972. As amended in 1972, the law became commonly known as the Clean Water Act (CWA).



- 303(d) Impaired Waters & TMDL (Total Maximum Daily Loads)
- 319 Grant (1987 amendments to CWA)

Stormwater management is a smart investment.



Where Stormwater Flows, Everything Goes




Landscaping improves parking lots.




Where Stormwater Flows, Everything Goes



Help reduce flooding with permeable paving.



Where Stormwater Flows, Everything Goes



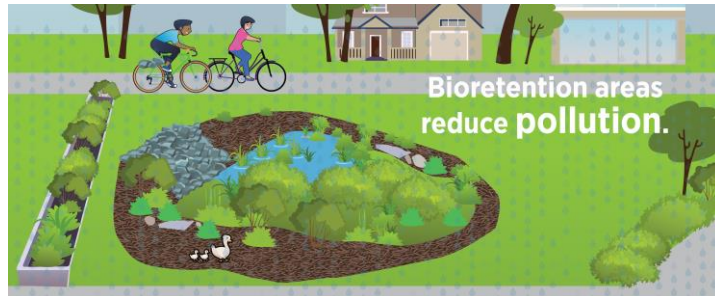
Pocket parks add green space.




Where Stormwater Flows, Everything Goes



Bioretention areas reduce pollution.



Where Stormwater Flows, Everything Goes



Rain gardens absorb stormwater.



Where Stormwater Flows, Everything Goes



MS4?

- Municipal Separate Storm Sewer System
- [According to the United States Environmental Protection Agency \(EPA\)](#), an MS4 is a conveyance, or system of conveyances, that is:
- “owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.,”
- designed or used to collect or convey stormwater (e.g., storm drains, pipes, ditches),
- not a combined sewer, and
- not part of a sewage treatment plant, or publicly owned treatment works (POTW).”



- South Carolina has 1 large MS4- SCDOT
- 3 medium MS4s - City of Columbia, Greenville County, and Richland County
- SC has over 70 regulated small MS4s



A Service of Clemson Extension



Why are MS4s important?



Each MS4 develops a stormwater management program (SWMP) that helps them decide how to reduce the discharge of pollutants from its sewer system. According to the EPA, SWMPs address the following:



Construction site runoff control



Illicit Discharge Detection and Elimination



Pollution prevention



Post-construction runoff control



Public education and outreach



Program effectiveness



Total maximum daily loads

Logical Fallacies

But why though?

Josh Castleberry, Dean PFS Central
Carolina Technical College



**CENTRAL
CAROLINA
TECHNICAL COLLEGE**

The List

1. <i>Ad hominem</i> Attack	2. Appeal to Tradition	3. Appeal to (the Wrong) Authority
4. Appeal to Emotion	5. Appeal to Ignorance	6. <i>Argumentum ad Populum</i>
7. Argument from Personal Incredulity	8. Association Fallacy	9. Cherry Picking
10. Fallacy Fallacy	11. False Cause	12. Hasty Generalization
13. Red Herring	14. Single Cause	15. Slippery Slope
16. Straw Man	17. Hasty Generalization	18. Loaded Questions

- Points for proper ID
- More points for the WHY

Practice

Dadgum environmental groups

- "Environmental groups want to ban all farming to stop water pollution. That's unrealistic, so we shouldn't listen to them."
- misrepresents the actual position by exaggerating it into something extreme. It attacks a distorted version of the argument (banning all farming) instead of the real one (likely advocating for better runoff controls).

1. *Ad hominem* Attack
2. Appeal to Tradition
3. Appeal to Ignorance
4. *Argumentum ad Populum*
5. Argument from Personal Incredulity
6. Association Fallacy
7. Fallacy Fallacy
8. False Cause
9. Single Cause
10. Straw man

Drama on the Senate Floor

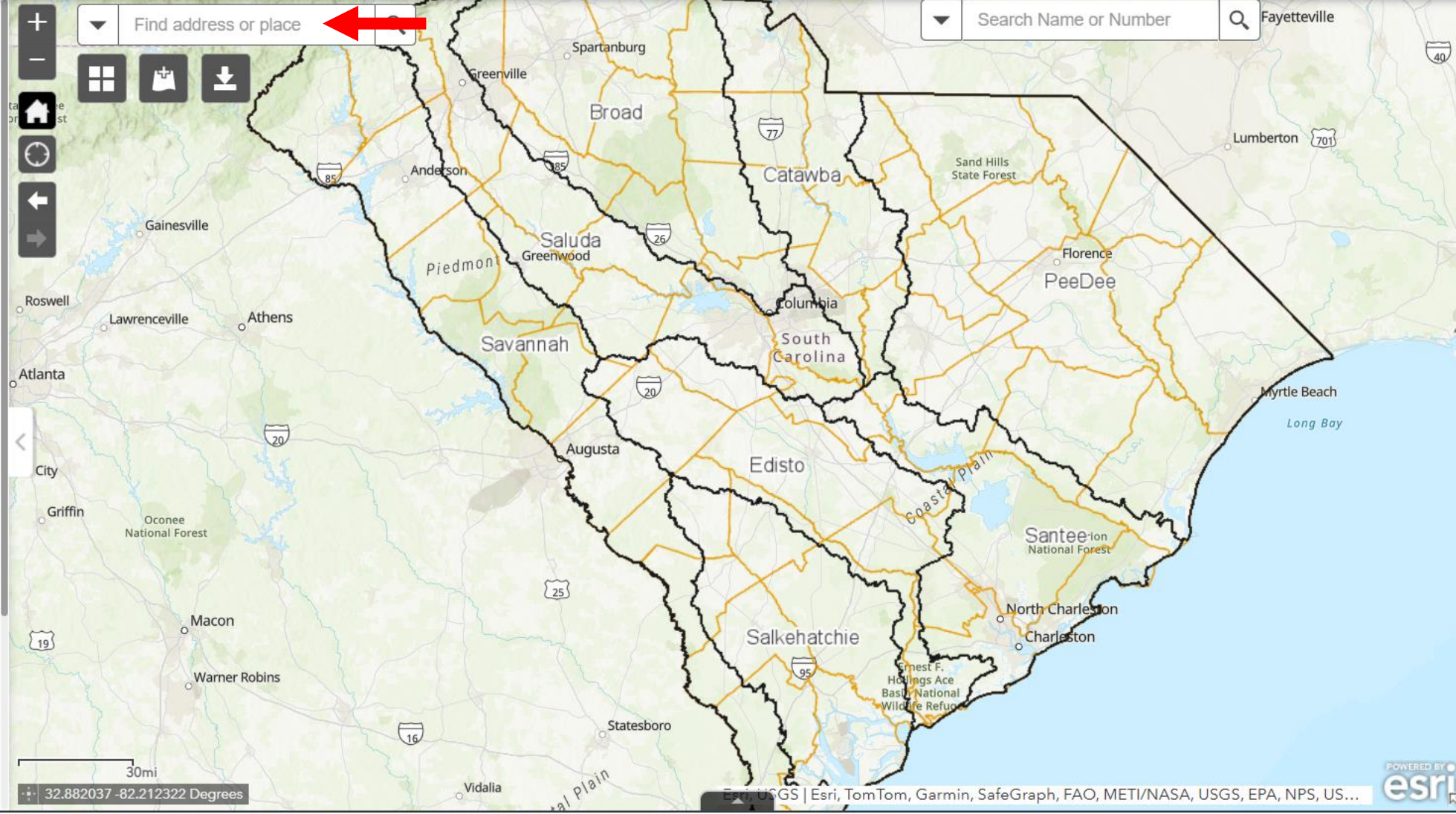
- “Senator Bright’s argument to fund the MS4 included an *Ad hominem* attack against Senator West, so we shouldn’t fund the MS4.”
- Assumes that a logical fallacy in a statement totally negates the value of the statement

1. *Ad hominem* Attack
2. Appeal to Tradition
3. Appeal to Ignorance
4. *Argumentum ad Populum*
5. Argument from Personal Incredulity
6. Association Fallacy
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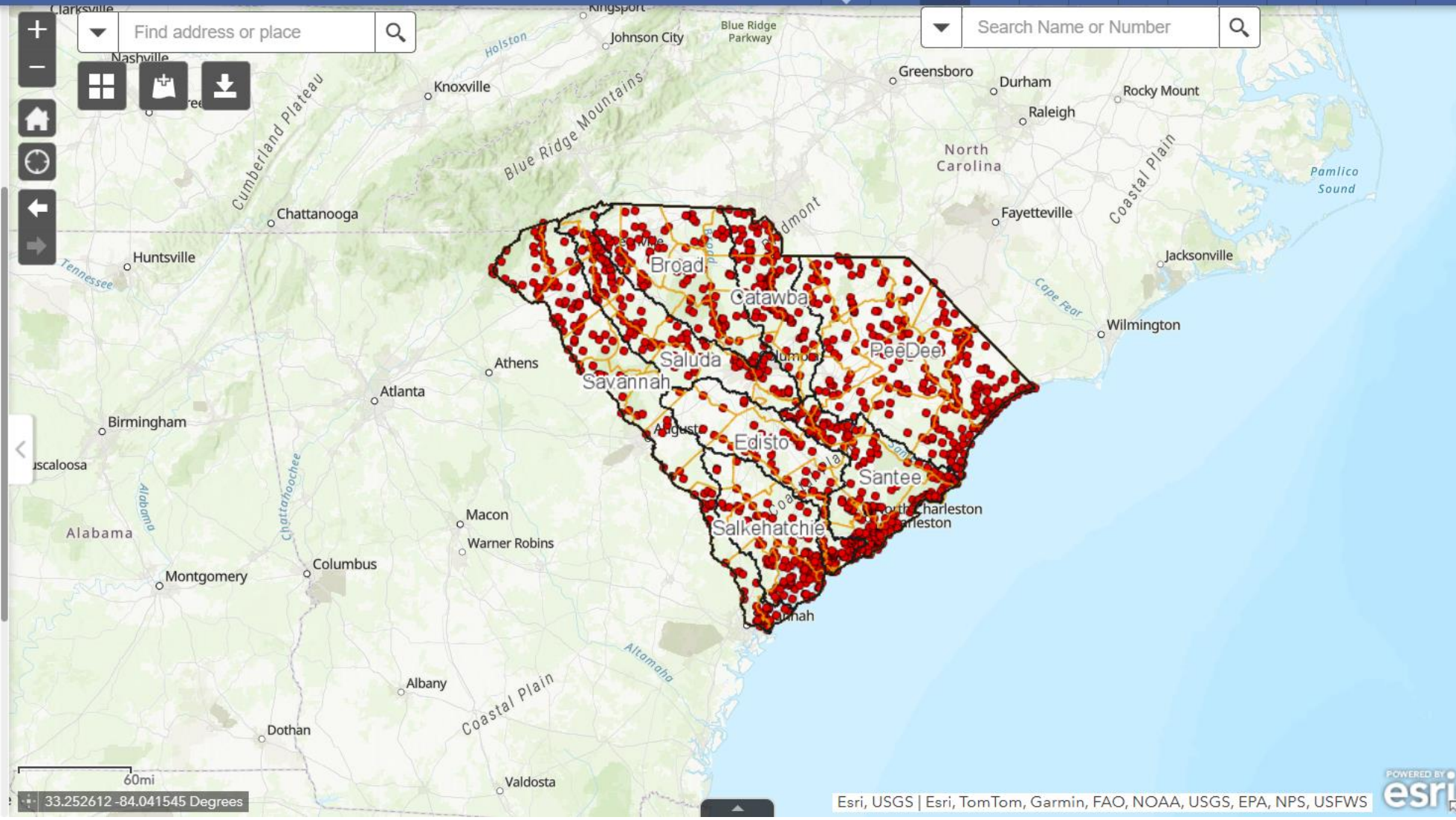
SC Watershed Atlas

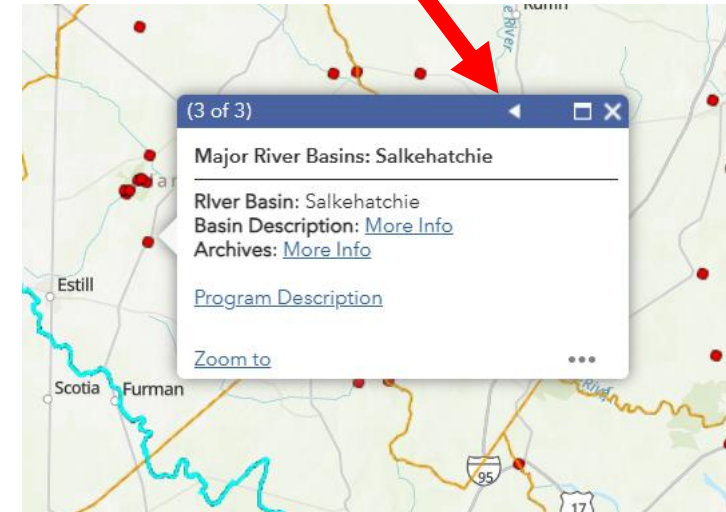
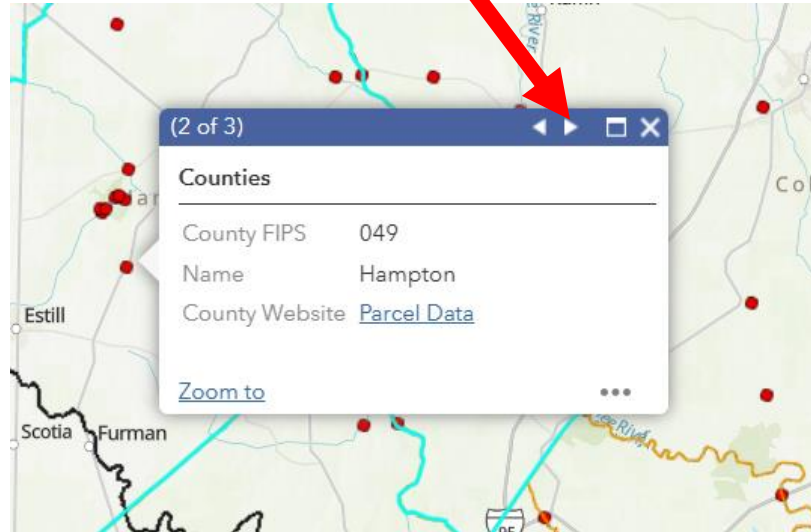
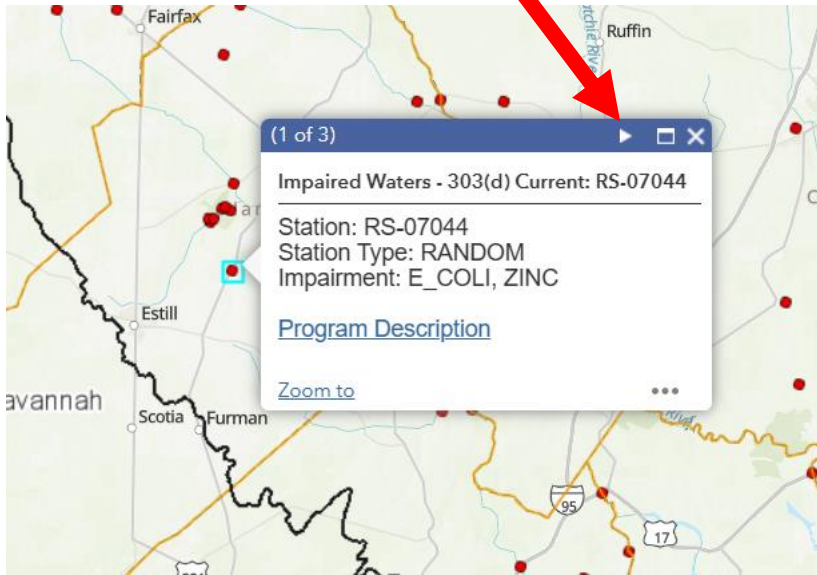
<https://gis.dhec.sc.gov/gisportal/apps/webappviewer/index.html?id=5748b81cf2d84668be4175eed2511654>

- Layers**
- Watershed Coordinator Contacts
 - Flood Hazard Zones - (Zoom in to view)
 - Current Wildfires
 - Nat'l Watershed Boundaries
 - Counties
 - SCDES Regulated Permits
 - SCDES Wetland Permits
 - Public Water Supply
 - Water Quality Monitoring
 - Adopt-A-Stream Sampling Sites
 - Water Quality Assessments
 - Nonpoint Source Program
 - Water Advisories
 - MS4 - For reference only
 - NERR and OCRM Critical Area



- SCDES Wetland Permits
- Public Water Supply
- Water Quality Monitoring
- Adopt-A-Stream Sampling Sites
- Water Quality Assessments
 - 2024 Use Support
 - Impaired Waters - 303(d) Current
 - Impaired Waters Historical Comparison
 - Waters of Concern
 - Approved TMDL Sites
 - Approved TMDL Watersheds
 - Modeled Stream Reaches
 - Shellfish Harvest Mgt. Areas
 - Shellfish Harvest Classifications
- Nonpoint Source Program
- Water Advisories



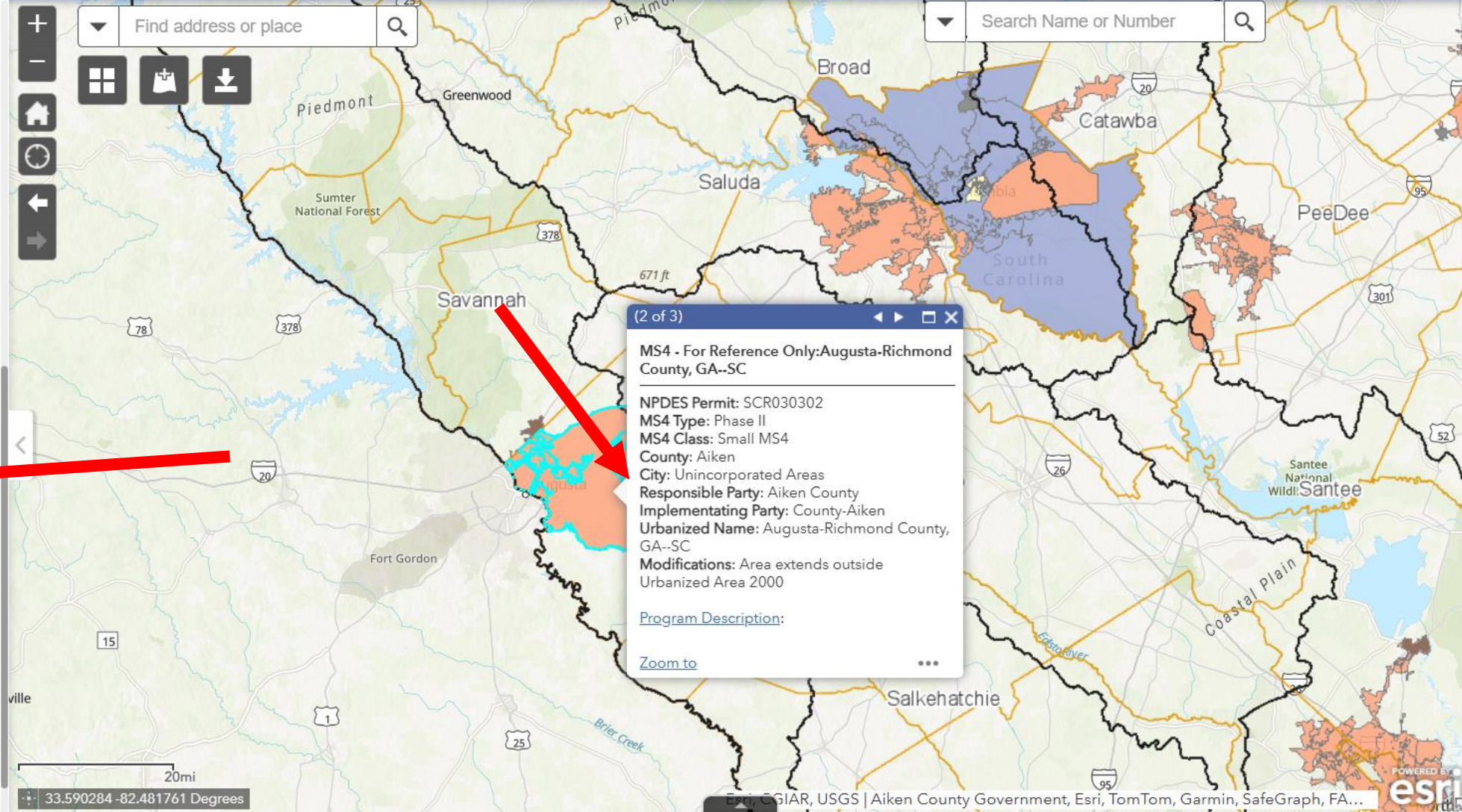


SC Watershed Atlas

Watershed Program Water Quality Data Portal Portal Instructions Contact Us



- Impaired Waters Historical Comparison
- Waters of Concern
- Approved TMDL Sites
- Approved TMDL Watersheds
- Modeled Stream Reaches
- Shellfish Harvest Mgt. Areas
- Shellfish Harvest Classifications
- Nonpoint Source Program
- Water Advisories
- MS4 - For reference only
- MS4 - For Reference Only
- NERR and OCRM Critical Area
- NHD Labeled Streams - Zoom in to view
- Water Classifications - PROVISIONAL - Zoom in to view
- Ecoregions
- National Land Cover 2021



Find address or place

Map navigation controls: Home, Full Screen, Print, Download, Previous View, Next View, Zoom In, Zoom Out

Search Name or Number

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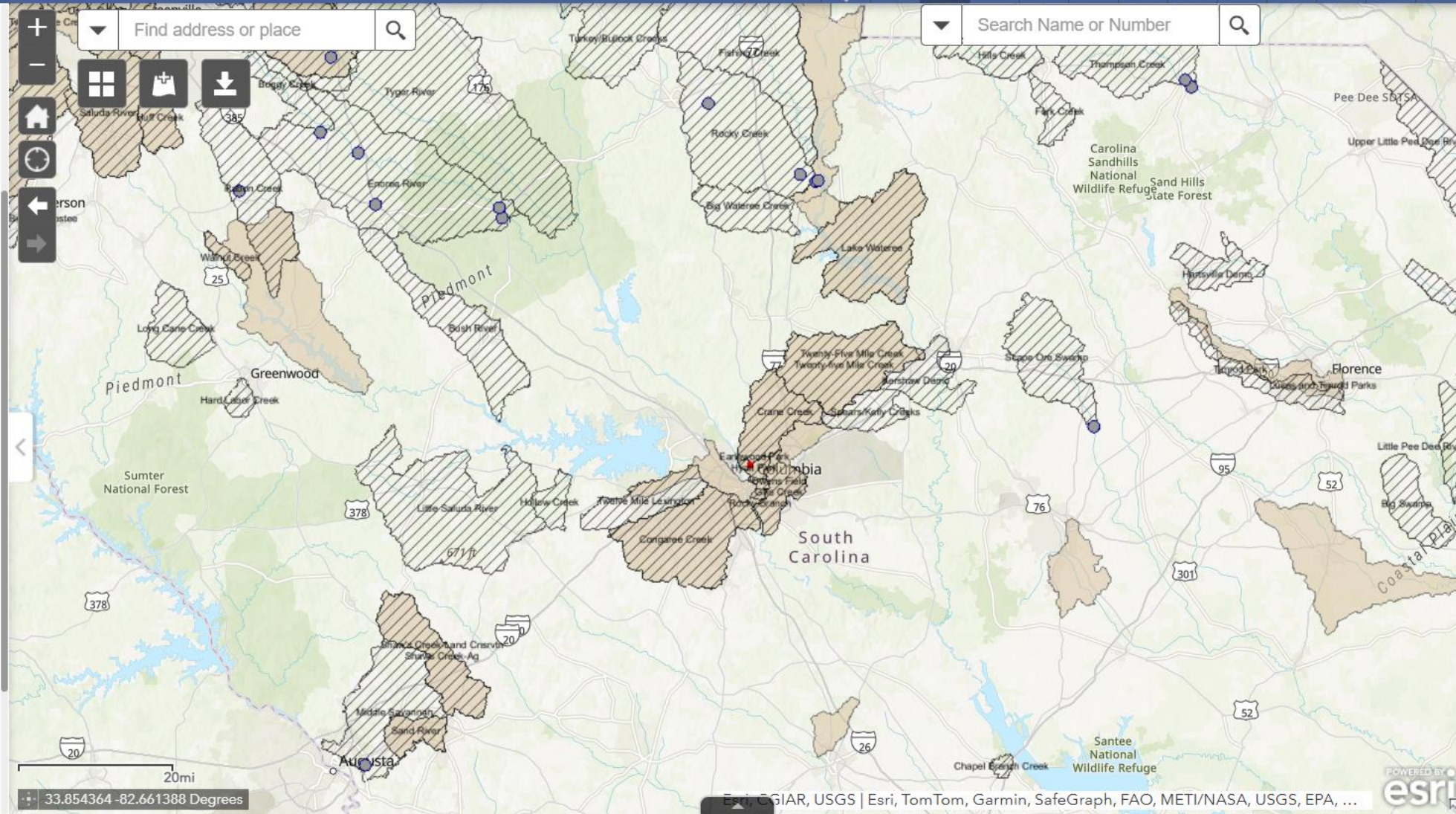
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SC Watershed Atlas

Watershed Program Water Quality Data Portal Portal Instructions Contact Us



- SCDES Regulated Permits
- SCDES Wetland Permits
- Public Water Supply
- Water Quality Monitoring
- Adopt-A-Stream Sampling Sites
- Water Quality Assessments
- Nonpoint Source Program
 - Section 319 Success Stories
 - Section 319 - Other Success Stories
 - Section 319 Grant Projects
 - Watershed-Based Plans
- Water Advisories
- MS4 - For reference only
 - MS4 - For Reference Only
- NERR and OCRM Critical Area
- NHD Labeled Streams - Zoom in to view
- Water Classifications - PROVISIONAL - Zoom in



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Scenario

Fluid Solutions



Welcome to Manckeville!

Intellectus naturae est clavis ad bene vivendum



- MS4s regulated like point source, but focus on the NPS aspects
- “What if we don’t want to grow”
- Must hit all 6 required mandates
- Students aren’t actually doing the MS4 – they’re preparing the public with a plan.