

# Step 4

## *Setting Water Quality Goals and Defining the Watershed*

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# Defining Goals and Objectives

## Goals

- Desired outcome of the WMP

## Objectives

- Efforts that are necessary to accomplish the goal

## Actions

- Specific steps that must occur to accomplish each objective

# Example

## Primary Goal

**Restore impaired water quality in the watershed.**

### OBJECTIVES

- 1 Conduct data collection and analysis to accomplish objectives.
- 2 New development and redevelopment does not create additional water quality impairments.
- 3 Stormwater reduction techniques are applied on public properties.
- 4 The target volume of stormwater runoff is reduced from existing private land uses.
- 5 Periodic monitoring and review is conducted.
- 6 Community is educated about stormwater pollution and volume reduction needs and engaged in accomplishing objectives.

# Example

## Objective 5. Periodic monitoring and review is conducted.

Action #	Specific Action
5-1	Maintain an inventory and then monitor performance of stormwater reduction retrofits that have been installed in this plan.
5-2	Conduct yearly, scheduled assessment of the plan and progress made to date with the project team.
5-3	Update the plan every 5 years based upon findings from water quality data and the status of implementation and findings from yearly assessment review of plan implementation (see Action 5-1).
5-4	Document the volume of stormwater reduced by each retrofit by utilizing the Runoff Reduction Calculator tool.

# Determine the Appropriate Indicator

- Indicators are a measurable variable to determine condition of water quality
  - Examples: Enterococci, E. coli, pH, Dissolved Oxygen, Turbidity, etc.

Issues	Source	Indicator
<b>Not suitable for shellfishing or swimming</b>	Bacteria	<ul style="list-style-type: none"><li>• Fecal coliform levels</li><li>• Enterococci levels</li><li>• Shellfish closures</li><li>• Beach advisories</li></ul>

**Example of  
Measurable  
Indicator**

**Restore water  
quality of  
shellfishing and  
swimming  
waters**

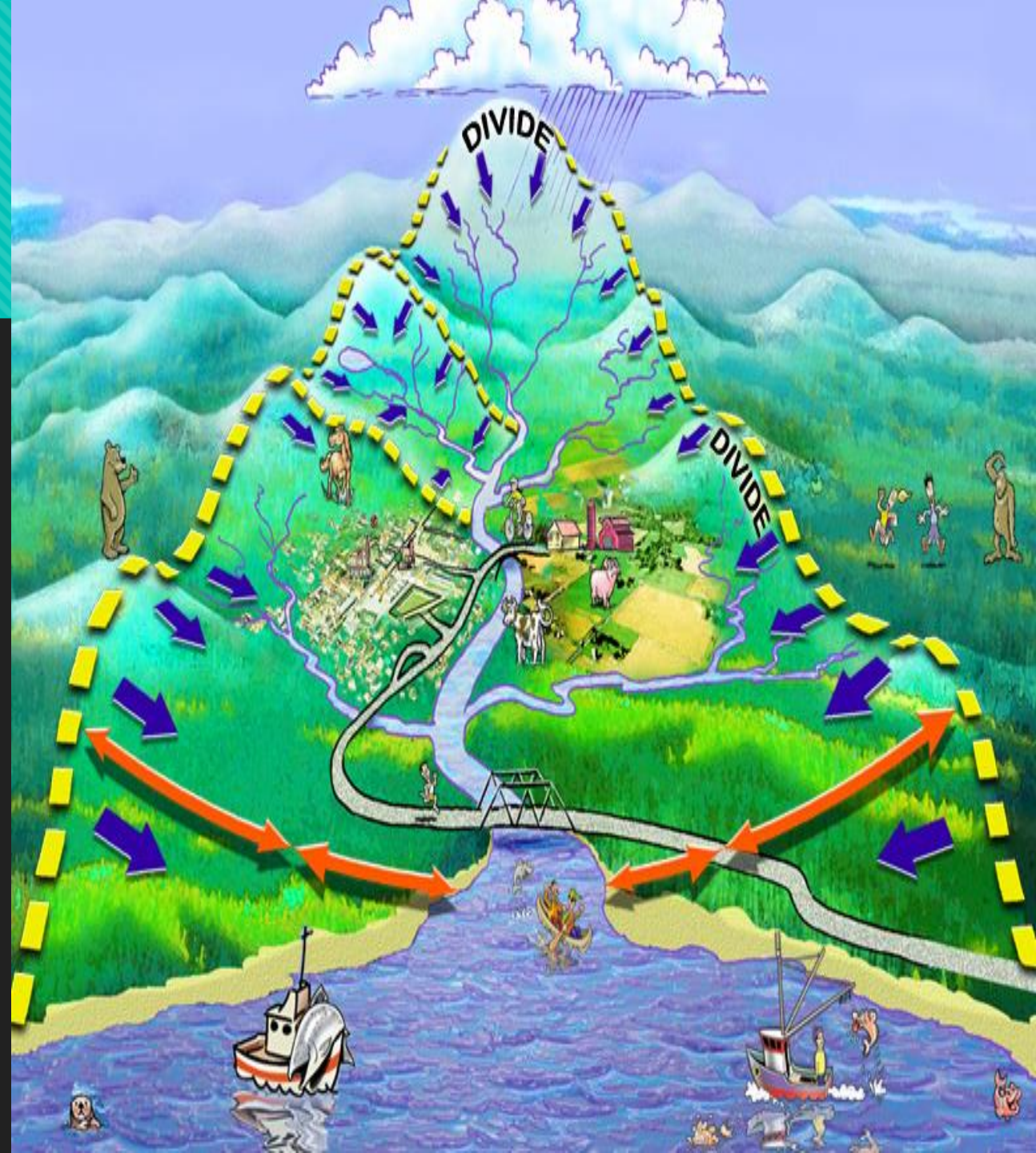
**SA Waters**  
Fecal  
Coliform  
>14/100mL

**Tier 1**  
Enterococci  
>35/100mL



# Watershed and Hydrologic Unit Code

- **Hydrologic Unit Code (HUC)** are used by agencies to identify spatial scope of drainage areas
- Important to know HUC
  - Preexisting Management Plans
  - Find data and research
  - Find TMDL
  - Funding Opportunities



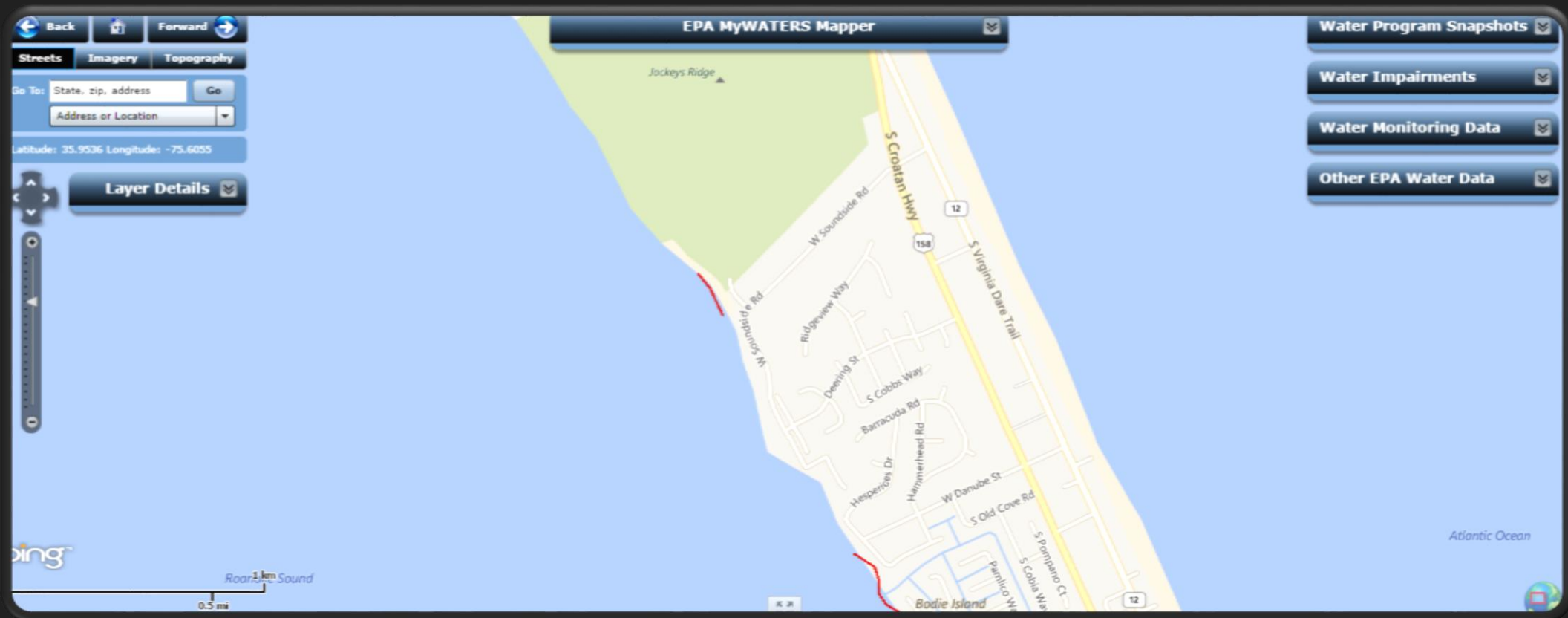
**Now is an excellent  
time to bring in a  
partner who has GIS  
skills**

HUC Name	HUC Digits	Approx. Number
Region	2	21
Subregion	4	222
Basin	6	370
Subbasin	8	2,200
Watershed	10	22,000
Subwatershed	12	160,000
Catchment	14	+400,000



# Determine 12-digit HUC

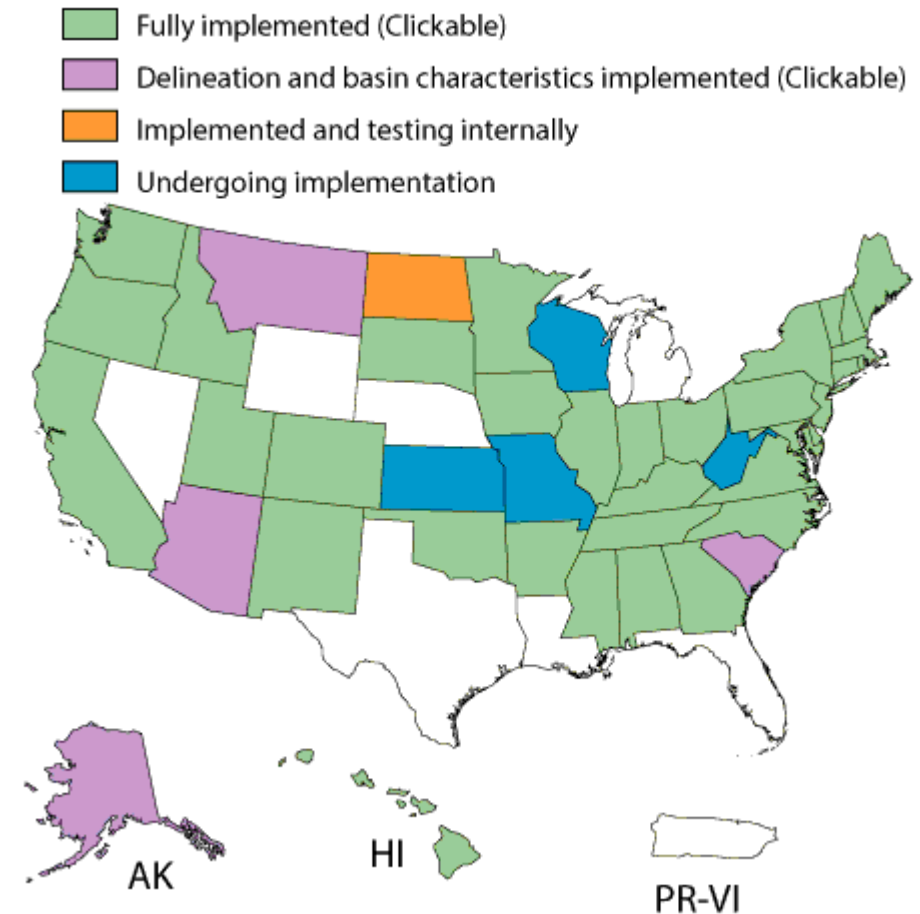
- ## ○ Using MyWATERS Mapper OR *Geospatial Data Gateway*



# Delineate a Watershed Boundary

- USGS StreamStats
- Appendix D alternative Delineation method

Beta Version 4 has just come out  
We recommend using **Version 3**





Zoom In  
Zoom Out  
Pan  
Identify

Gage Info

- ☒ State Applications
- ☒ Study Area Bndys
- ☐ Base Layers
  - ☐ Imagery
  - ☐ Street Map
  - ☐ World Topo
  - ☐ USA Topo
  - ☐ Canadian Topo
  - ☒ TNM Topo



Scale: 1 : 72,224

Latitude: 35.7712  
Longitude: -75.66124 NC

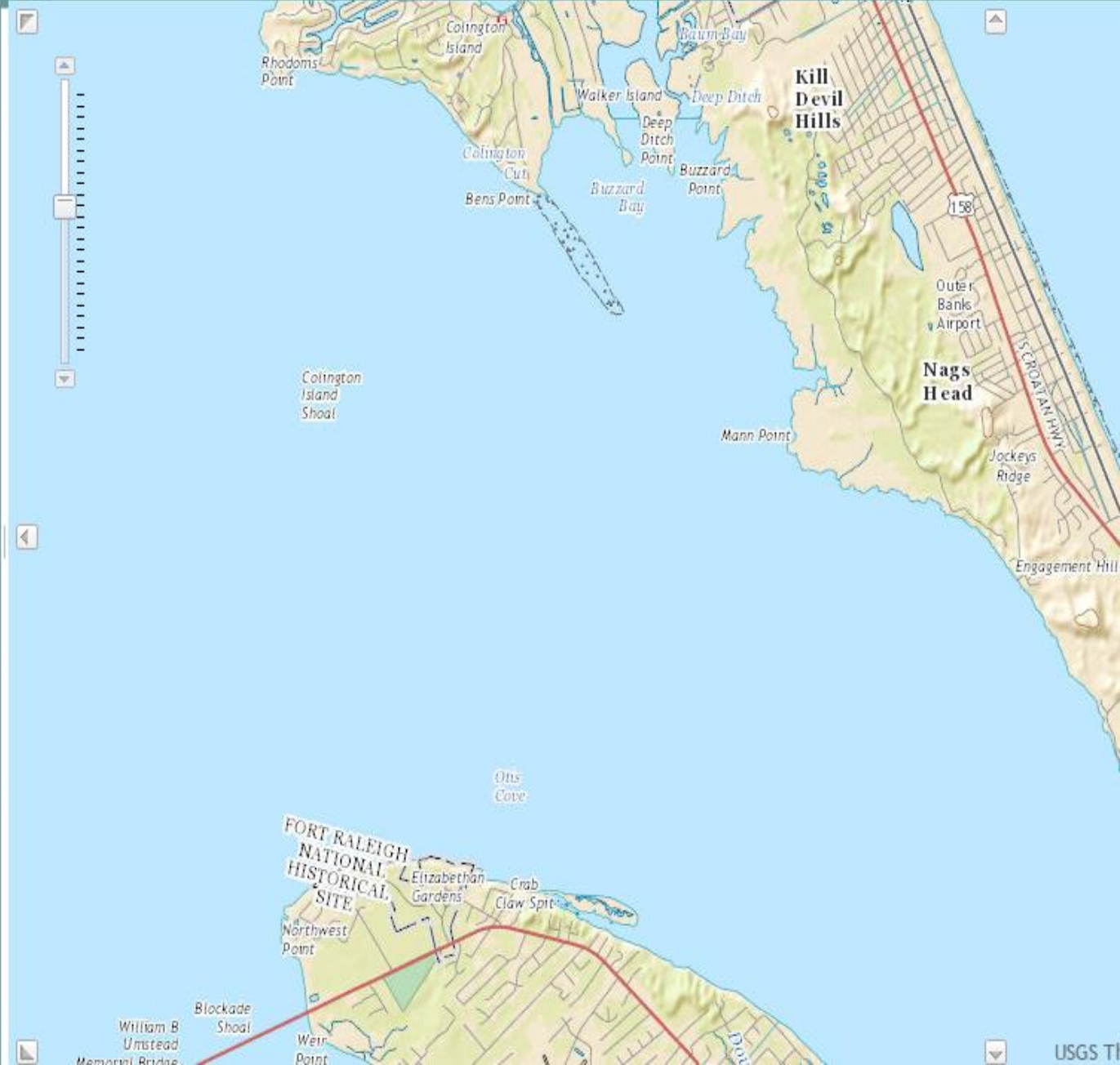


Zoom in until the **scale**  
**is 1:24,000** or smaller

StreamStats Version 3.0 : NC



Zoom To: ▼



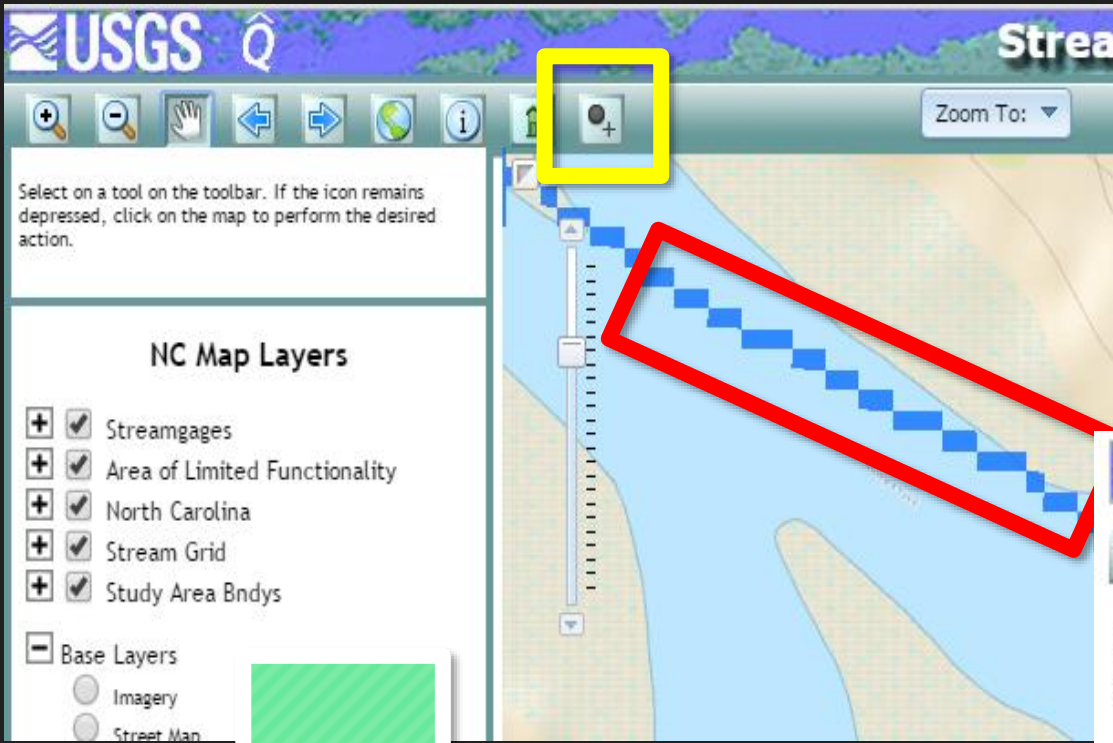


**USGS** **Q** **Stream**

Select on a tool on the toolbar. If the icon remains depressed, click on the map to perform the desired action.

**NC Map Layers**

- ☒ Streamgages
- ☒ Area of Limited Functionality
- ☒ North Carolina
- ☒ Stream Grid
- ☒ Study Area Bndys
- ☐ Base Layers
  - ☐ Imagery
  - ☐ Street Map

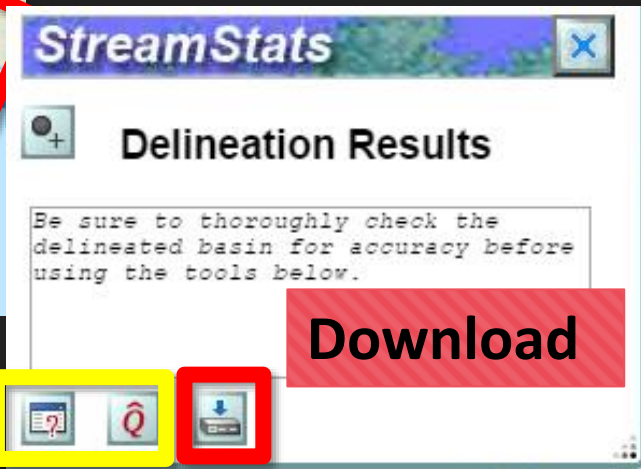


**StreamStats**

**Delineation Results**

Be sure to thoroughly check the delineated basin for accuracy before using the tools below.

**Download**



**Basin Characteristics  
Flow Statistics**





Questions?