



***One North Carolina Naturally
Internet Mapping for
Decision Support***

Jeffrey Brown

Center for Geographic Information and Analysis

November 17, 2004

Internet Mapping

- ⊕ NC OneMap – the geospatial backbone
- ⊕ Example for conservation planning
- ⊕ Focused application—conservation map viewer
- ⊕ Where we are headed

www.nconemap.net

Welcome to NC OneMap



Welcome to **NC OneMap** - a new [vision](#) for data coordination and distribution in North Carolina.

Users will be able to **view geographic data** seamlessly across North Carolina, **search for and download data** for use on their own GIS, **view and query metadata**, determine who has what data through an **on-line data inventory**, and more!

There is much more to come on **NC OneMap** - North Carolina's new geographic data resource of the future. **Stay tuned!**

Upcoming Events on NC OneMap:

Event	Location	Date
-------	----------	------

NC OneMap Quick Links:

[FGDC Guidelines for Providing Appropriate Access to Geospatial Data in Response to Security Concerns](#)

[How do I participate in the NC OneMap viewer?](#)

[NC OneMap data viewer FAQ](#)

[RAND Corporation report](#) assessing the homeland security implications of geospatial information.

Page last updated on: 07/22/2004 07:56:34

NC OneMap Home

Map Viewer

Map Viewer page

Go directly to Map Viewer

How do I participate?

Viewer FAQ

Participants

GIS Data Inventory

Metadata

Documents and Links



Internet



NC OneMap Viewer Back to the Main Page The National Map Viewer

Zoom

Zoom In Zoom Out XY

Query

Info Layers Measure

Tools

Hand Print Scale

Docs

Home Print

Scale Information

Out In

Scale ~ 1:8,420,716

Layers

- ▶ Location-Geodetic
- ▶ Structures
- ▶ Transportation
- ▶ Cadastral
- ▶ Boundaries
- ▶ Hydrography
- ▶ Utility-Telecon
- ▶ Economy
- ▶ Health
- ▶ Environment
- ▶ Socio-Demographic

- Zoom in for higher resolution data -
 Participating local governments outlined in **orange**

Zoom

Query

Tools

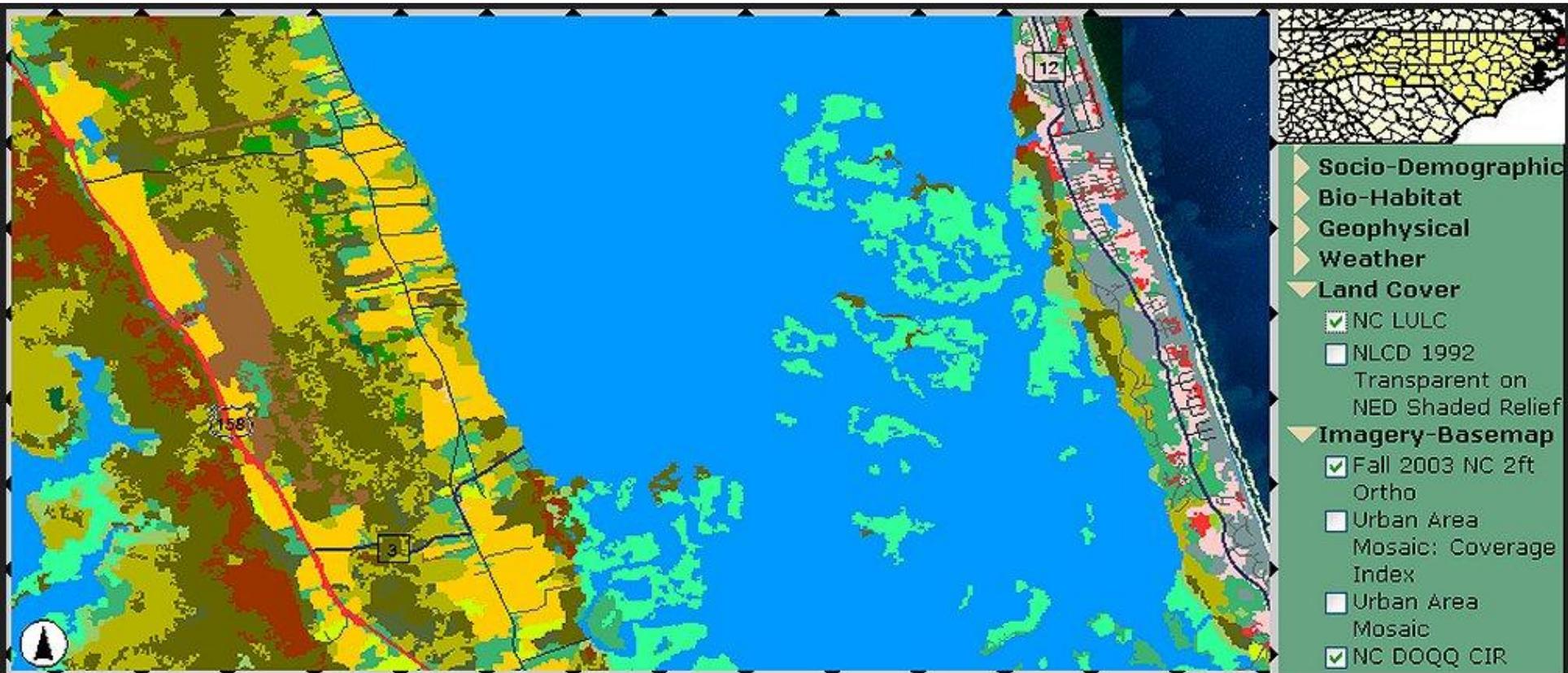
Docs

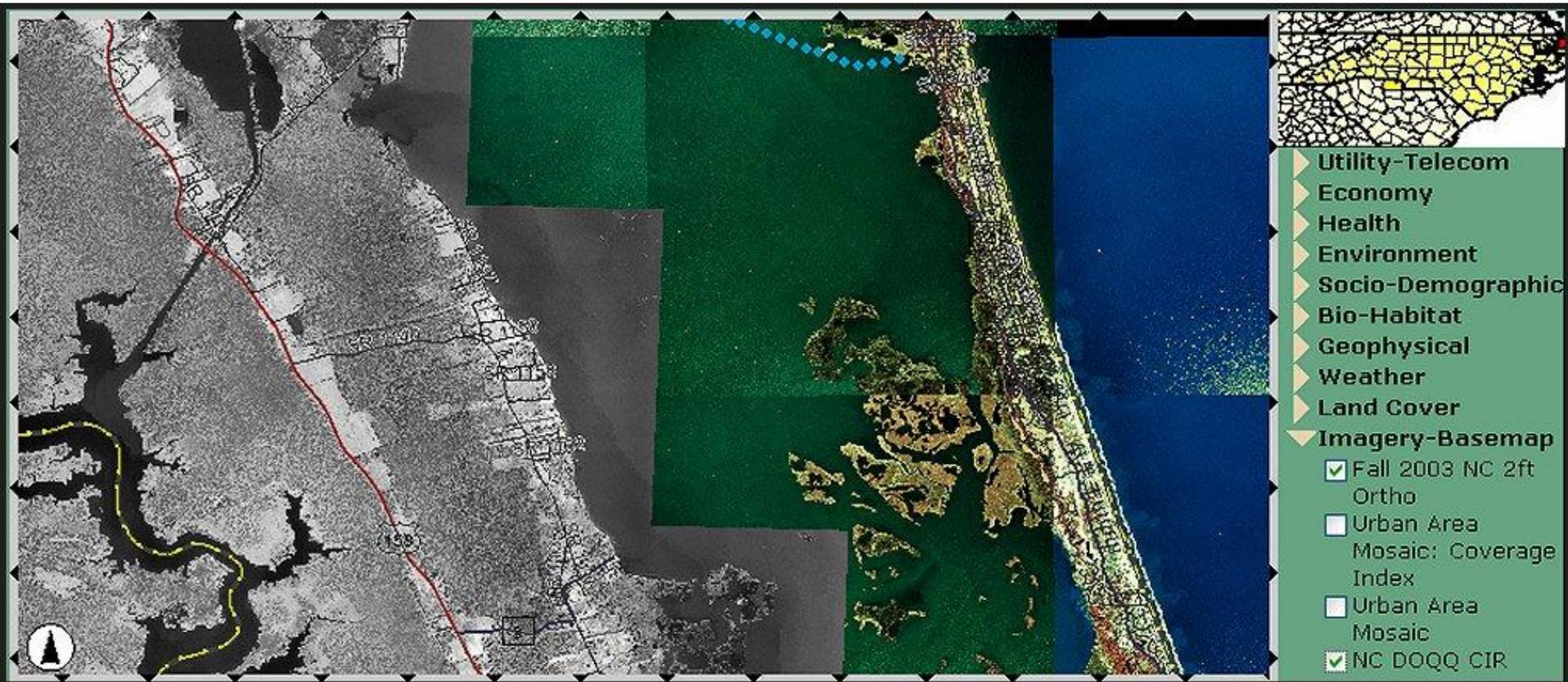


- Transportation
 - NC OneMap - Airports
 - NC OneMap - Ferry Routes
 - NC DOT - Roads
 - NC OneMap - Rail
 - NC OneMap - Hurricane Evacuation Routes
 - BTS Roads
 - National Atlas and ESRI Road Labels
- Cadastral
- Boundaries
 - County/City Index
 - NC OneMap - NC County Names
 - NC OneMap - Municipality Names

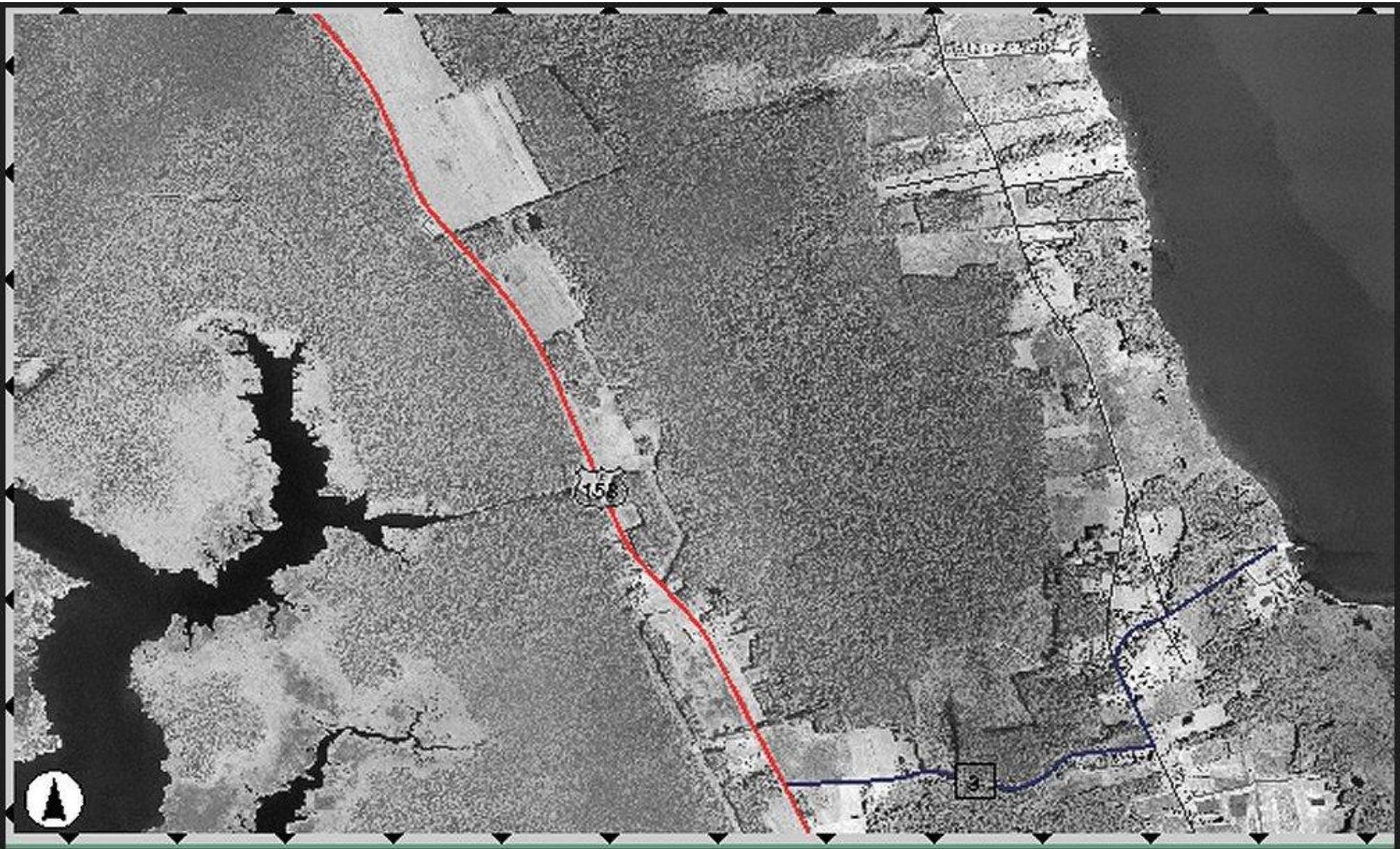
- Zoom in for higher resolution data -
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- NC OneMap - Hurricane Evacuation Routes
- BTS Road Labels
- BTS Roads
- ▼ **Cadastral**
- Currituck Co, NC - Tax Parcels
- ▼ **Boundaries**
- NC OneMap - NC County Names
- NC OneMap - Municipality Names
- NC OneMap - Incorporated Municipalities
- NC OneMap - NC



OGC Identify Features

[Back to the Main Page](#)

The National Map **Viewer**

Currituck Co, NC - Tax Parcels ()

AREA	PERIMETER	PARCELS5_0	MSLINK	PARCEL_ID	SUBD_CODE	#SHAPE#	#ID#
5709236.89431	11818.58337	158234	4383	0093-000-0097-0000		[Geometry]	16713





Custom Map Viewer

- ⊕ purpose
- ⊕ partners
- ⊕ web-based map viewer
 - ⊞ statewide data
 - ⊞ regional data
 - ⊞ tools
- ⊕ examples
 - ⊞ looking for opportunities
 - ⊞ regional priorities

Purpose

- ❖ Inventory of lands managed for conservation and open space
- ❖ Conservation planning priorities and focus
- ❖ Support decisions
- ❖ Widespread access to interactive maps

Partners

- ⊕ Clean Water Management Trust Fund
- ⊕ One North Carolina Naturally
- ⊕ Carolina Environmental Program
- ⊕ Center for Geographic Information & Analysis
- ⊕ Lead Regional Organizations

Map Viewer

- ❖ free, statewide resource
- ❖ web-based map viewer
- ❖ decision support tool with geospatial data as the hub
- ❖ framework for discovering, communicating and maintaining information

North Carolina Conservation Lands Map Viewer



Promoting the conservation of North Carolina's Natural Resources



[Go To Map Viewer](#)

[Map Viewer Help](#)

[ONCN](#)

[About Us](#)



Clean Water Management Trust Fund, One NC Naturally, and the Carolina Environmental Program: Diverse Agencies With Common Goals.

The One NC Naturally Program's mission is to lead in developing and implementing a comprehensive statewide conservation plan that involves the public, governmental agencies, private organizations, and landowners. ONCN's mandate is to maintain functional ecosystems, biological diversity and working landscapes through the stewardship of land and water resources, and to implement a plan that will conserve and restore the state's natural heritage and sustain a healthy life for all North Carolinians and visitors.

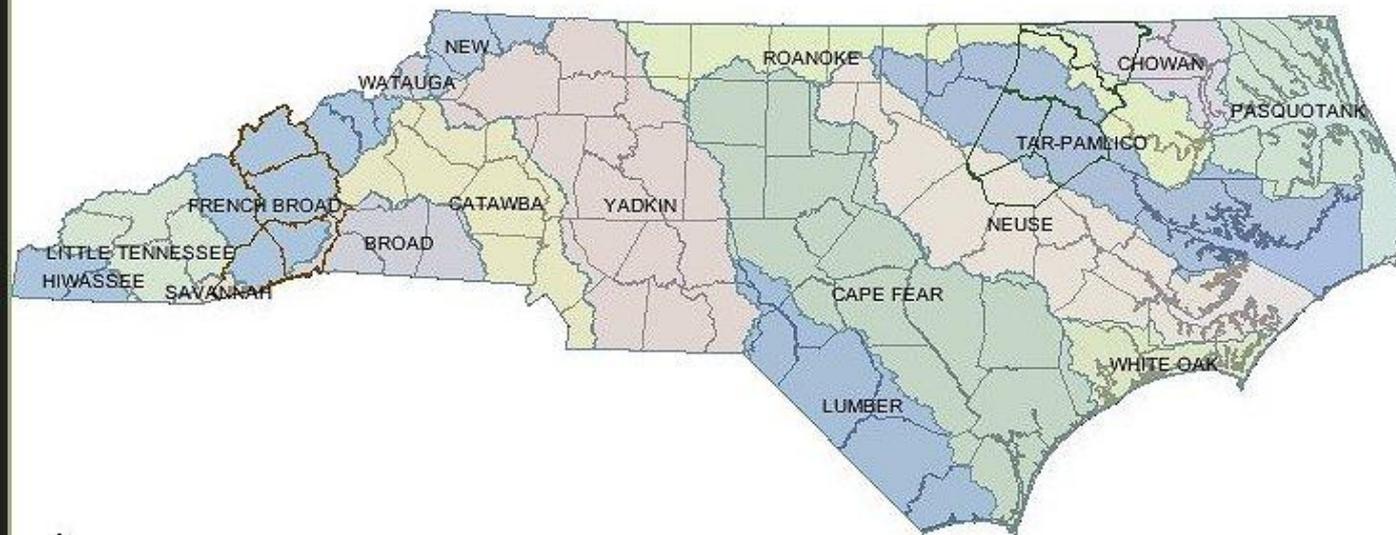
The Carolina Environmental Program's threefold mission is to act as the public face of all environmental programs on the UNC Chapel Hill campus, bring various programs together to tackle interdisciplinary environmental problems, and to create new interdisciplinary areas of study.

The Clean Water Management Trust Fund was established in 1996 to help finance projects that enhance or restore degraded waters, protect unpolluted waters, and/or contribute toward a network of riparian buffers and greenways. CWMTF estimates that more than \$10.5 billion is needed to protect and restore water quality in North Carolina.

This online mapping viewer and database system will enable partners to track existing properties and target new ones for permanent preservation.

North Carolina Conservation Land Mapper

Promoting the Conservation of North Carolina's Natural Resources



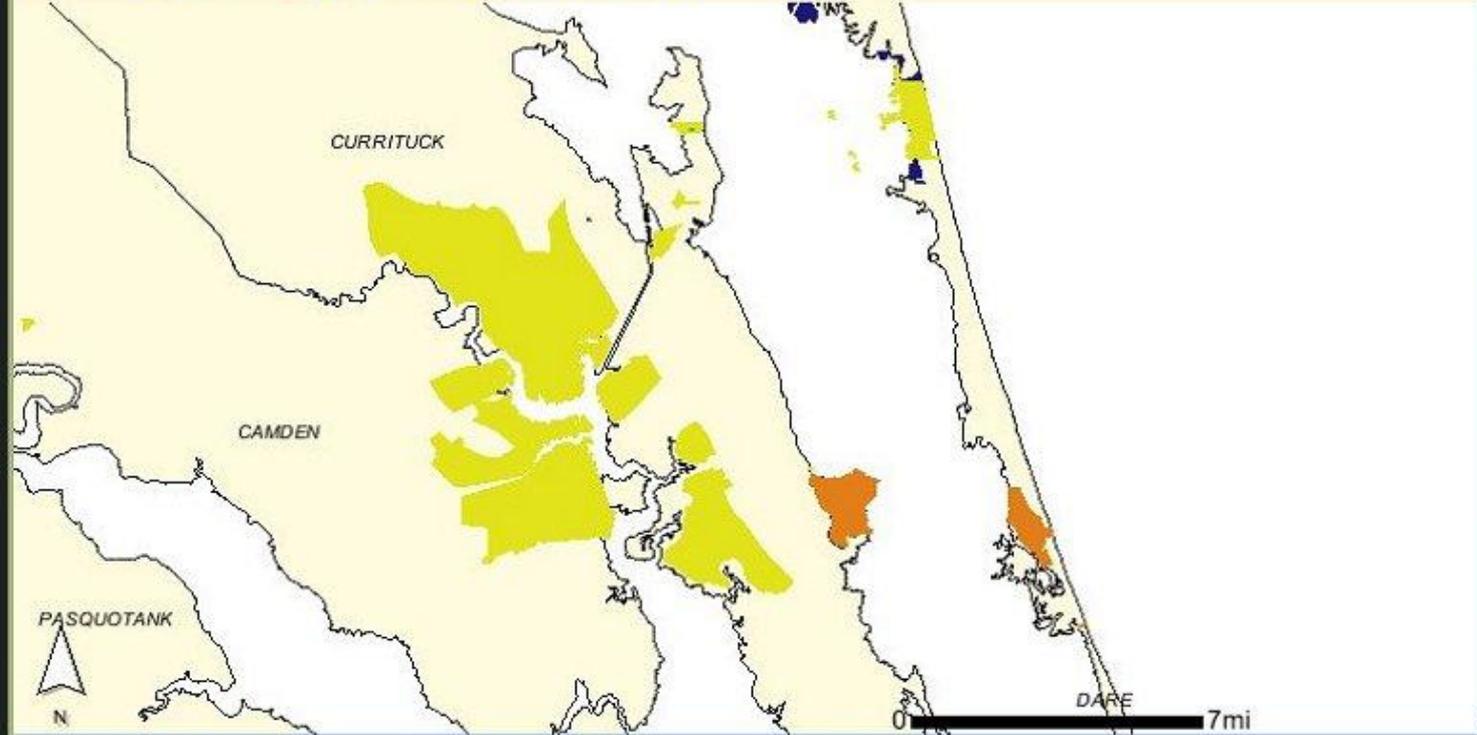
0 106mi

LAYERS

- All Layers
- Transportation (NC DOT)
- Boundaries
- Conservation
 - CWMTF Land Acquisition
 - Hazard Mitigation
 - Managed Conservation Lands
 - Federal
 - State
 - Land Trust
 - Conservation Group
 - Other Non-Profit
 - County
 - Municipal
 - City/County
 - Other Public
- Regions
- Hydrography
- Floodplains
- Habitats
- Legislative Districts

[Refresh Map](#)

Auto Refresh



Legend

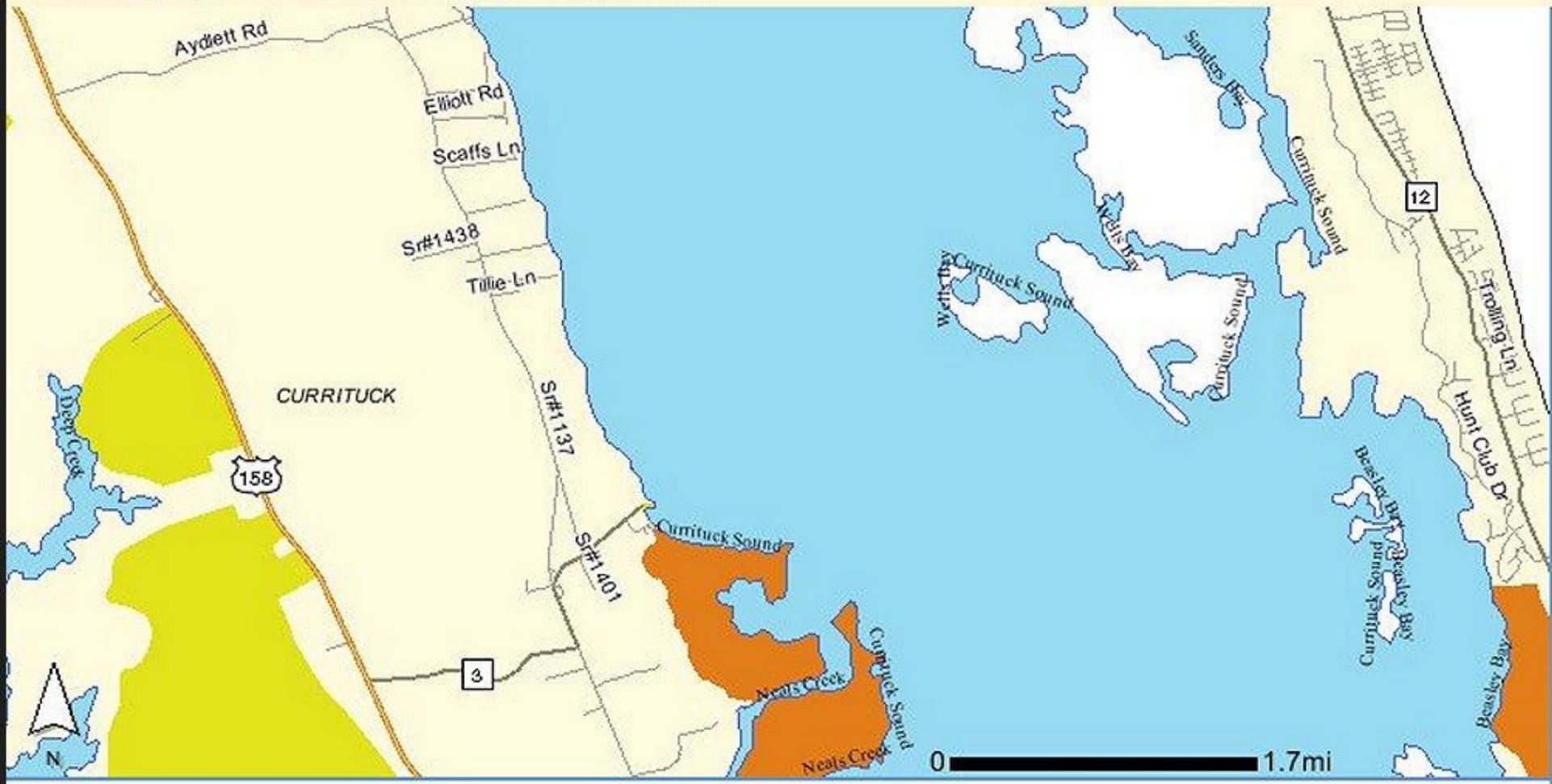
- Hazard Mitigation
- Managed Conservation Lands
 - Federal
 - State
 - Land Trust
 - Conservation Group
 - Other Non-Profit
- County
- Municipal
- City/County
- Other Public

Regions

- Hydrography
 - Detailed Hydrography
 - Major Hydrography
 - Major Streams
 - Major Waterbodies
 - High Quality Resource Watersheds
 - Water Supply Watersheds
 - Local Watershed Plans
 - Targeted Local Watersheds
 - Subbasins
 - River Basins
 - Hydrologic Units

LAND_ID	MANAGEMENT	MA_TYPE	OWNER	OWNER_TYPE	TRANS_TYPE	AREA_NAME
828863222110	WILDLIFE RESOURCES COMMISSION	STATE	STATE OF NORTH CAROLINA	STATE	NOT SURE	WRC NORTH RIVER GAMELAND







Legend for Managed Conservation Lands and Hydrography:

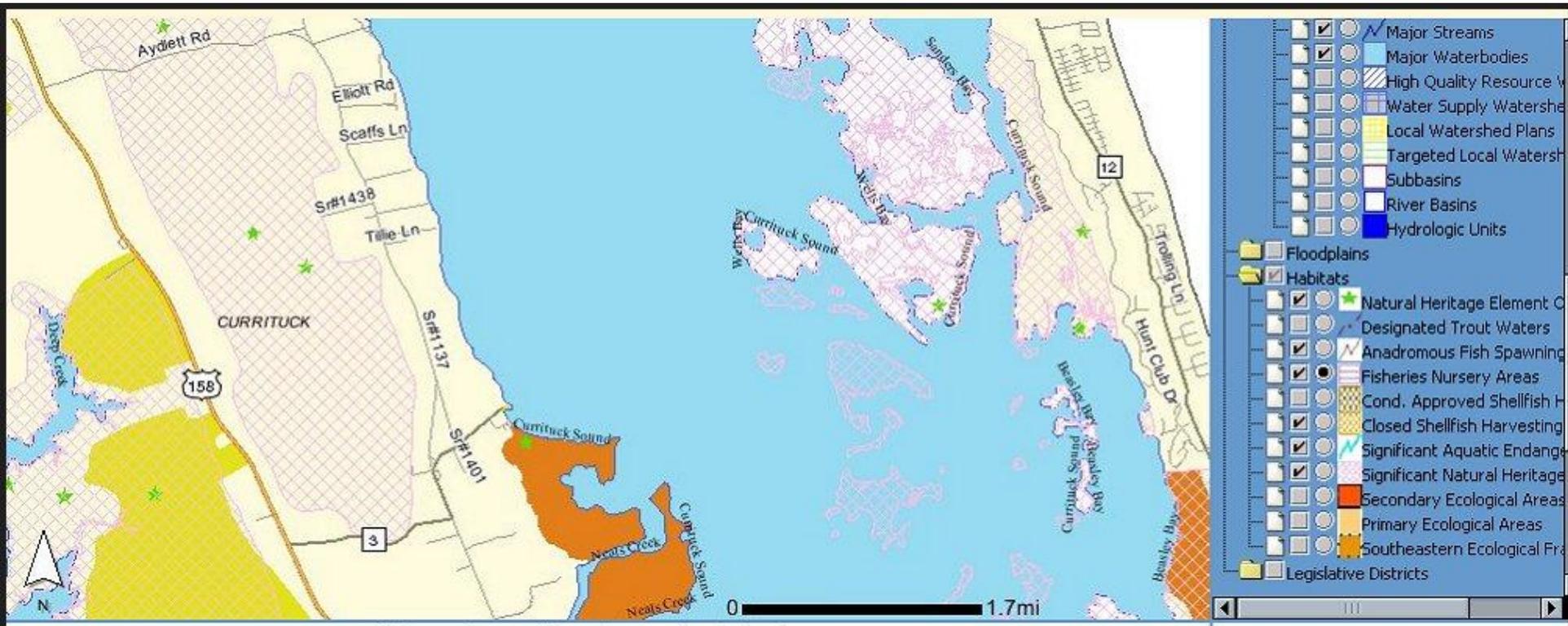
- Managed Conservation Lands
 - Federal (Purple)
 - State (Magenta)
 - Land Trust (Green)
 - Conservation Group (Light Green)
 - Other Non-Profit (Light Blue)
 - County (Dark Red)
 - Municipal (Red)
 - City/County (Orange)
 - Other Public (Yellow)
- Regions
- Hydrography
 - Detailed Hydrography
 - Major Hydrography
 - Major Streams
 - Major Waterbodies
 - High Quality Resource Watersheds
 - Water Supply Watersheds
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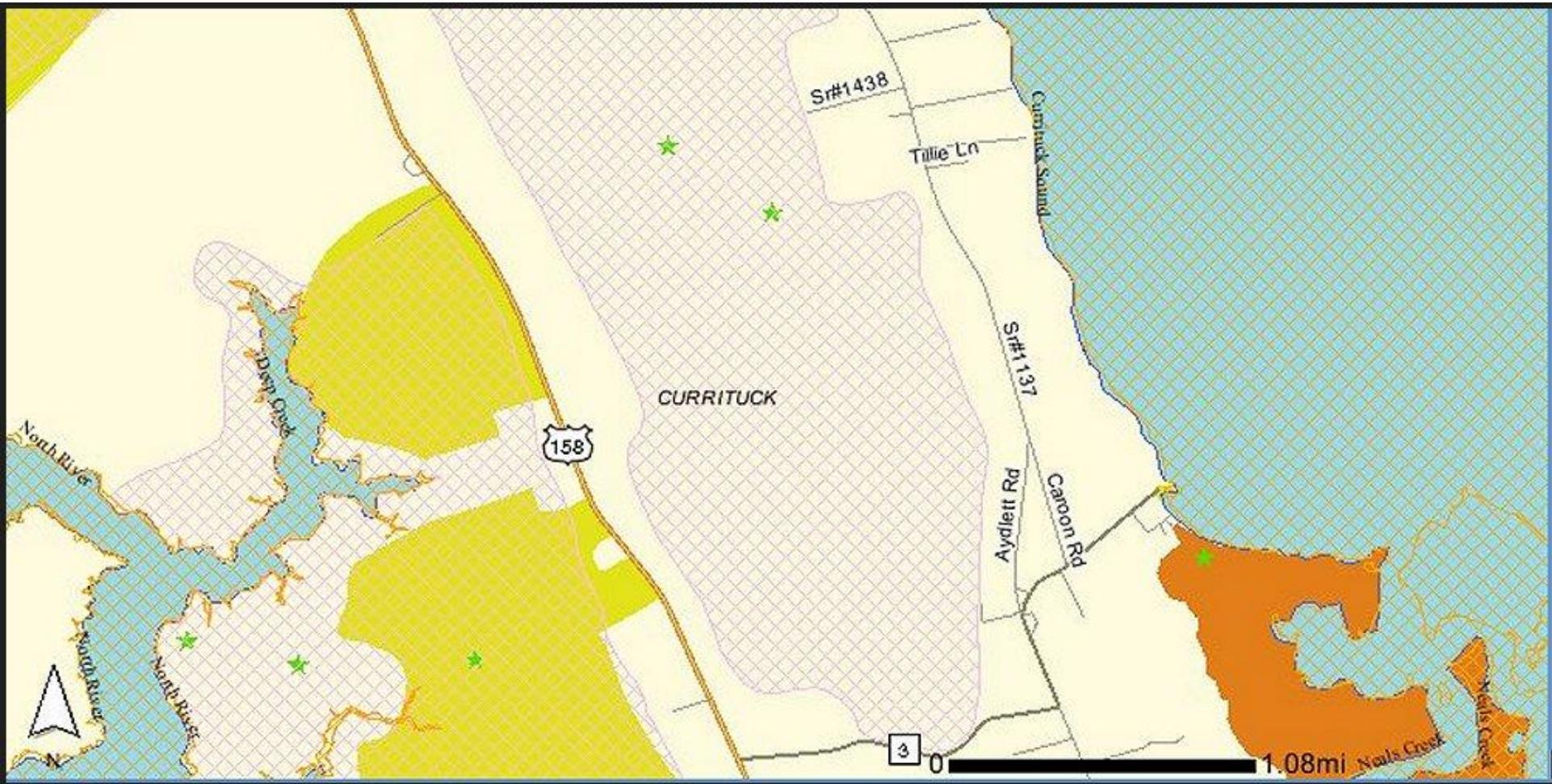
LAND_ID	MANAGEMENT	MA_TYPE	OWNER	OWNER_TYPE	TRANS_TYPE
29804751372	NATIONAL AUDUBON SOCIETY	CONSERVATION GROUP	NATIONAL AUDUBON SOCIETY	CONSERVATION GROUP	PERMANENT EASEMENT





LAND_ID	MANAGEMENT	MA_TYPE	OWNER	OWNER_TYPE	TRANS_TYPE	AREA_NAME
8863222110	WILDLIFE RESOURCES COMMISSION	STATE	STATE OF NORTH CAROLINA	STATE	NOT SURE	WRC NORTH RIVER GAMLAND





Status

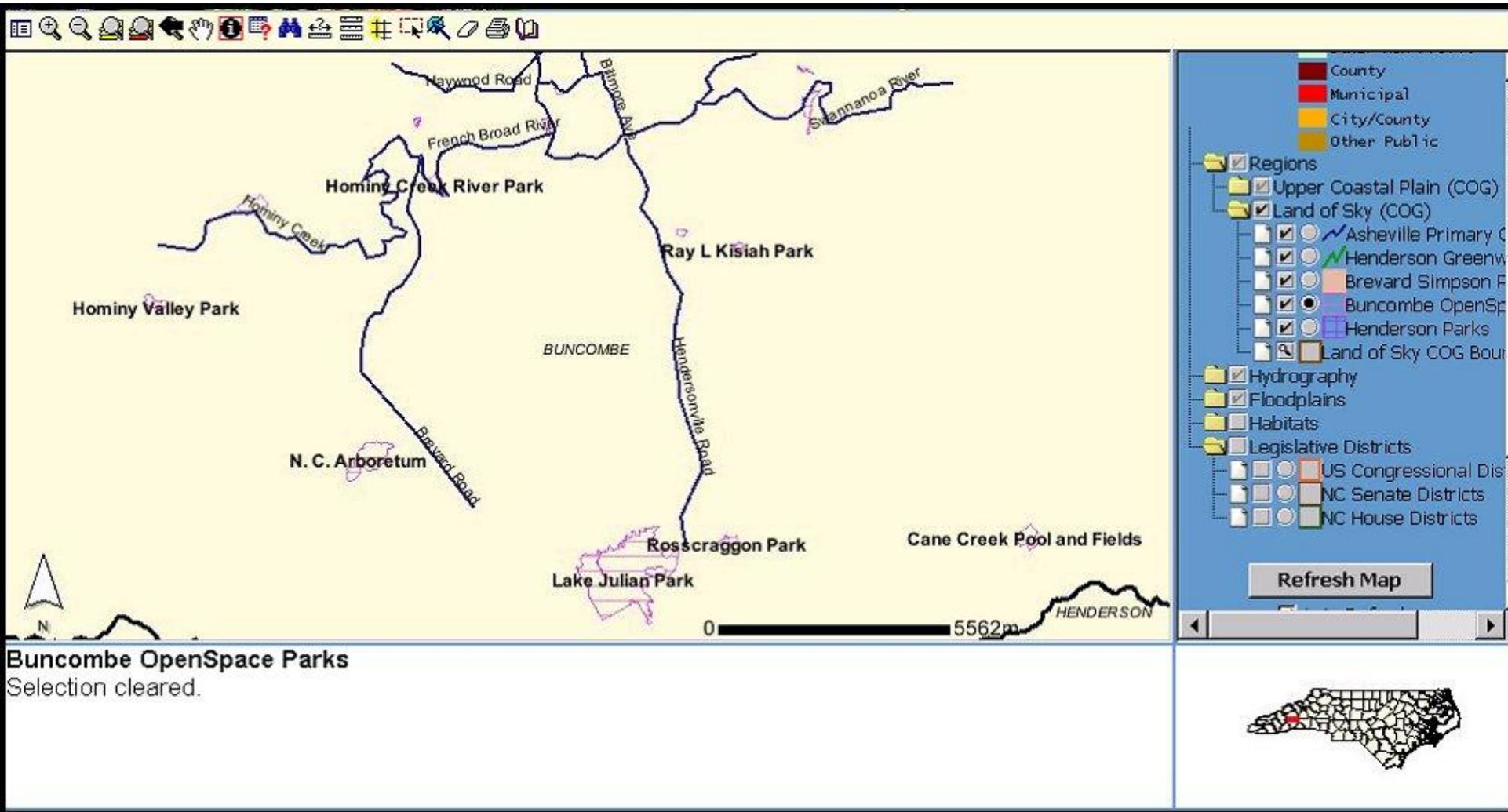
- ⊕ Map viewer in progress
- ⊕ Feedback needed
- ⊕ Data entry tool under development
- ⊕ Table generator under development

Integration with NC OneMap

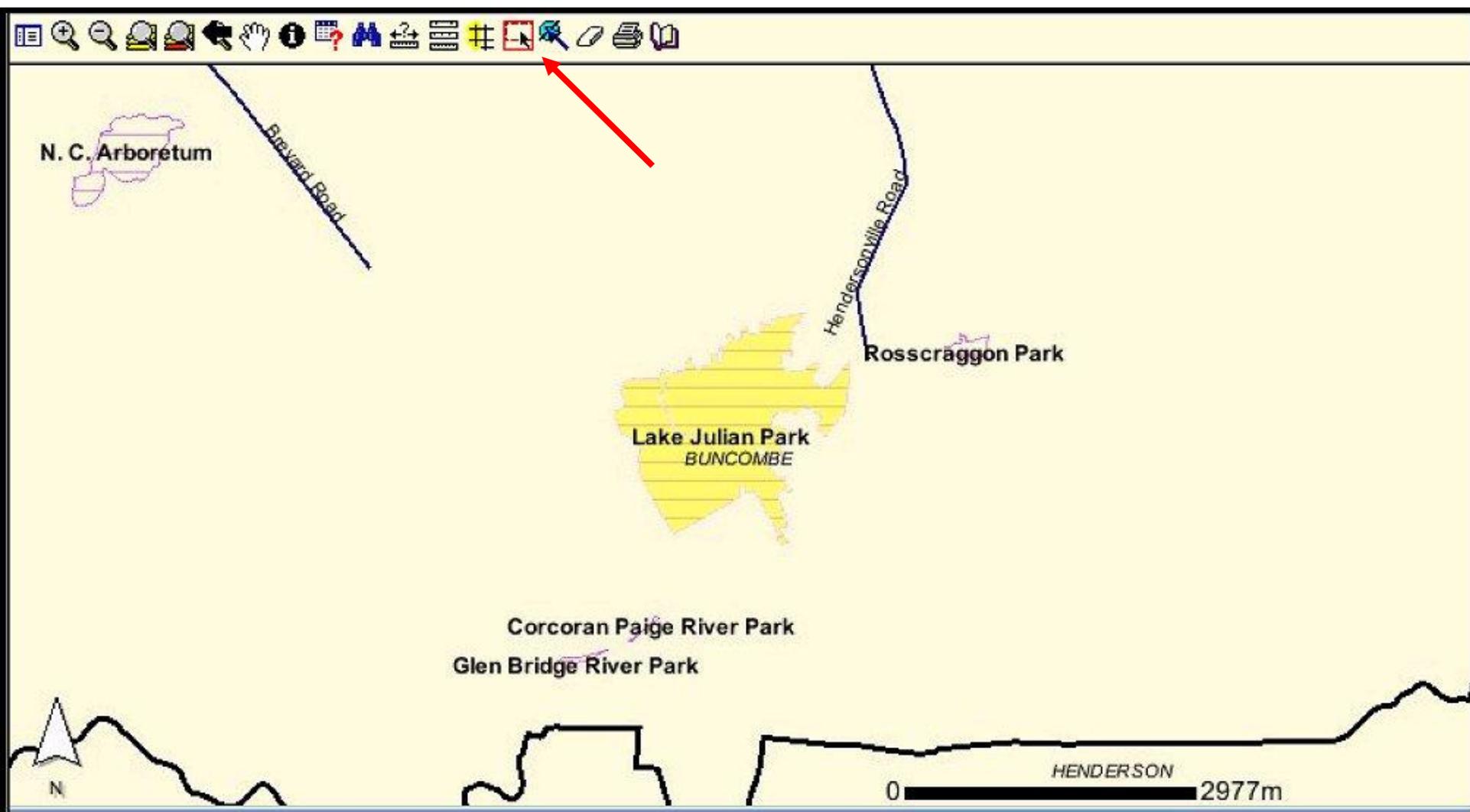
- ✦ Imagery and more
- ✦ Local data streaming in
- ✦ More functions
- ✦ Other “topical viewers” likely

Regional data examples

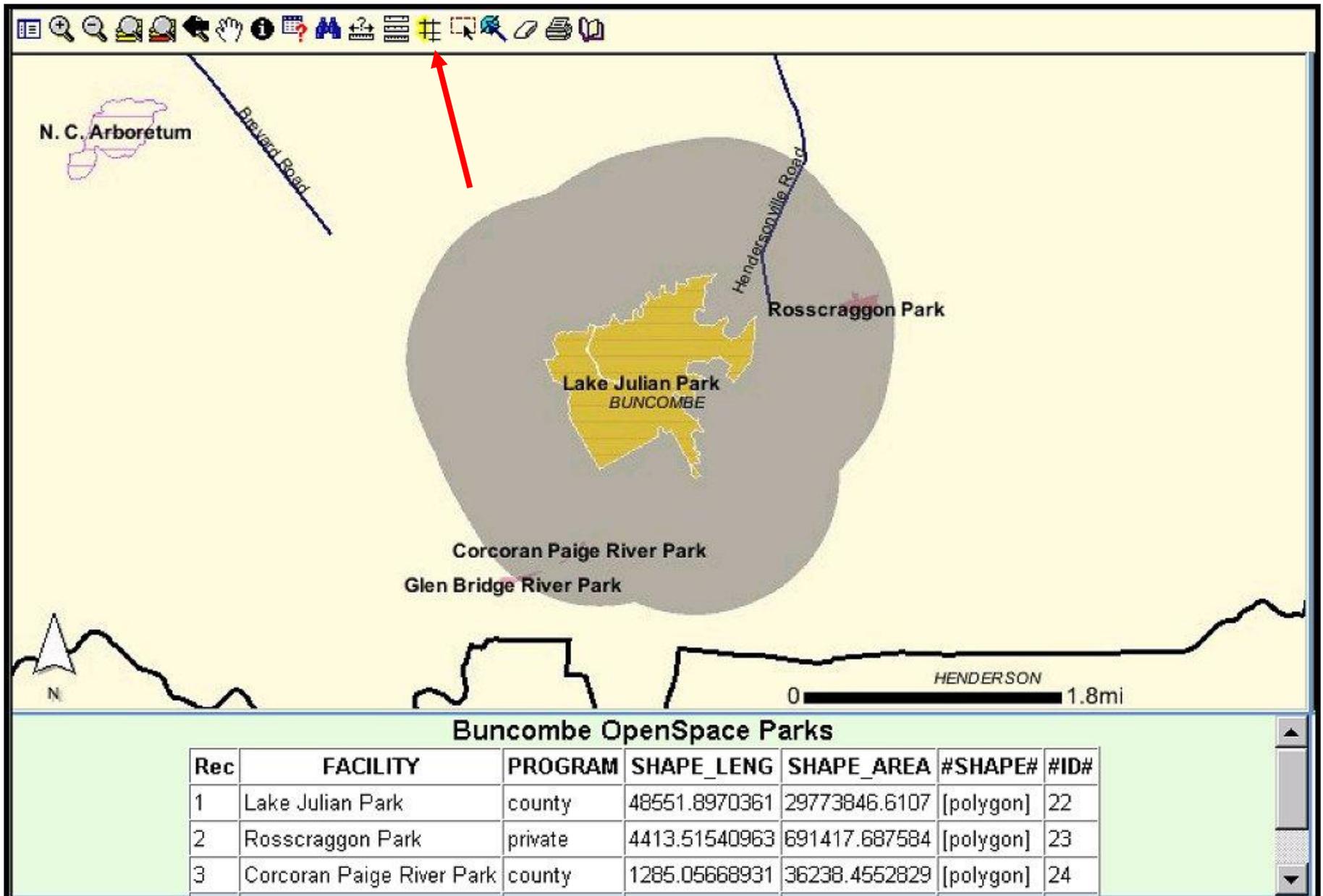
- ✦ Land-of-Sky Council of Governments—highlighting open space
- ✦ Upper Coastal Plain Council of Governments—connections and future focus



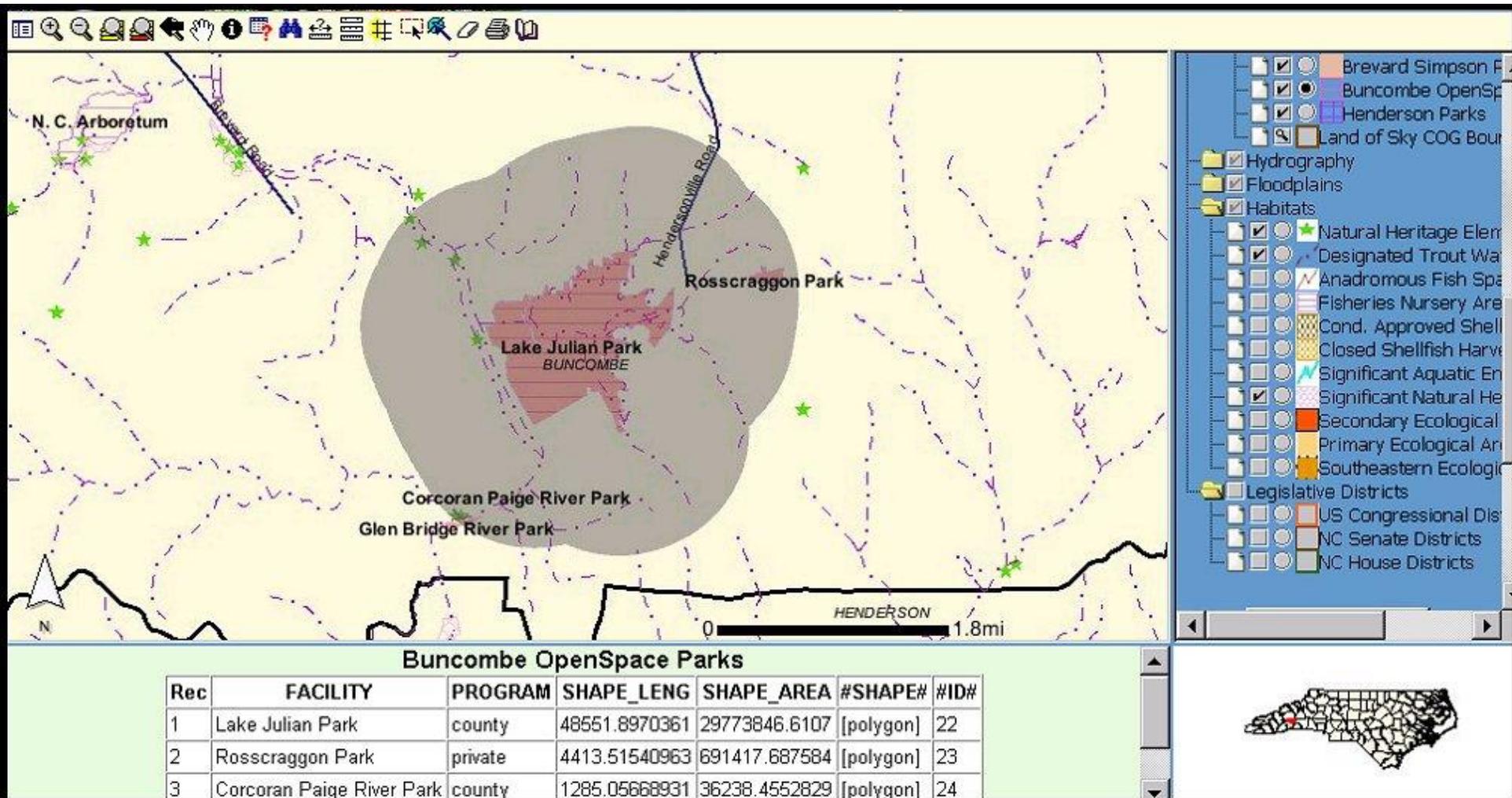
Southern Buncombe County Parks and Greenways



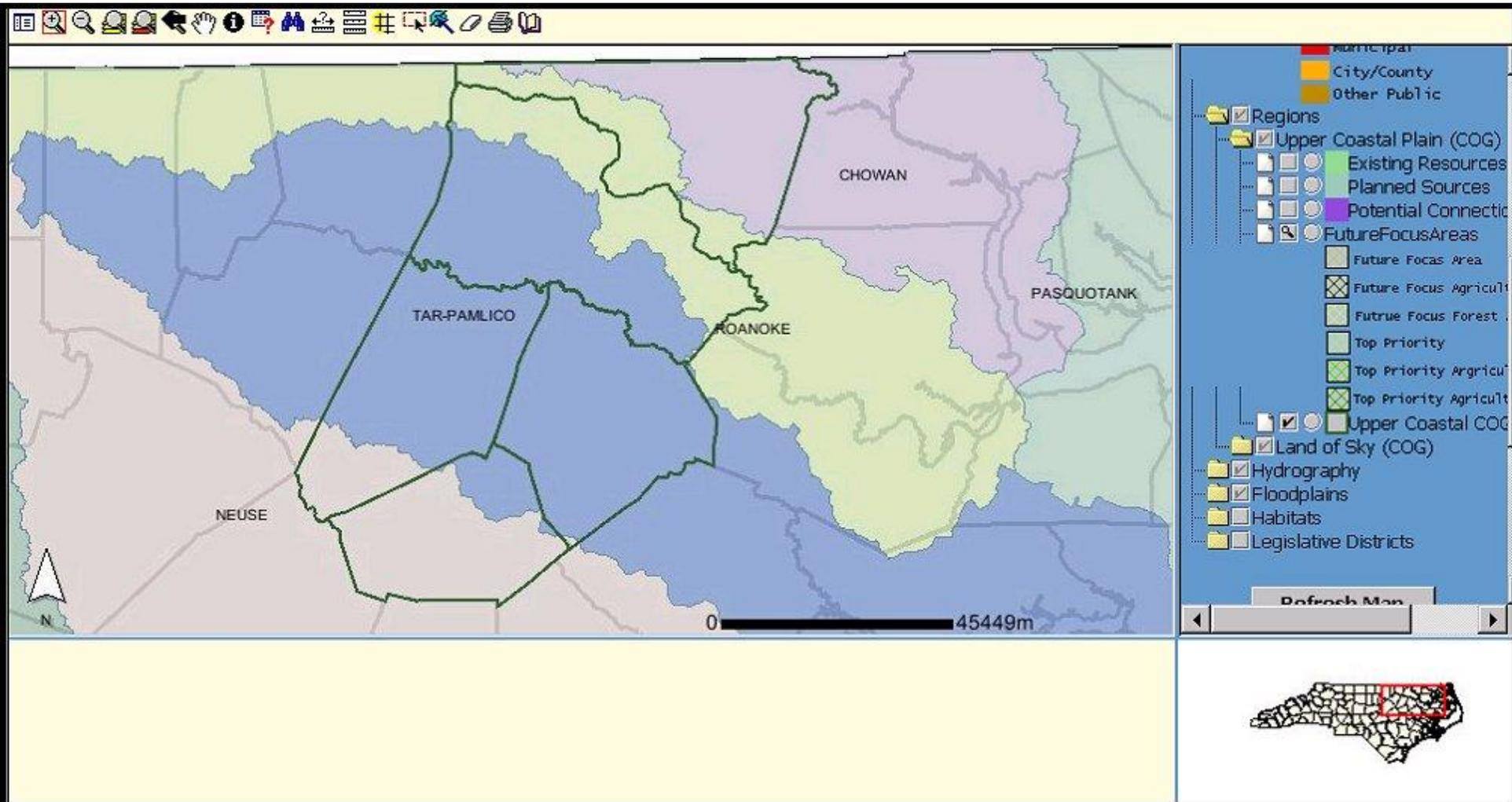
Select a feature



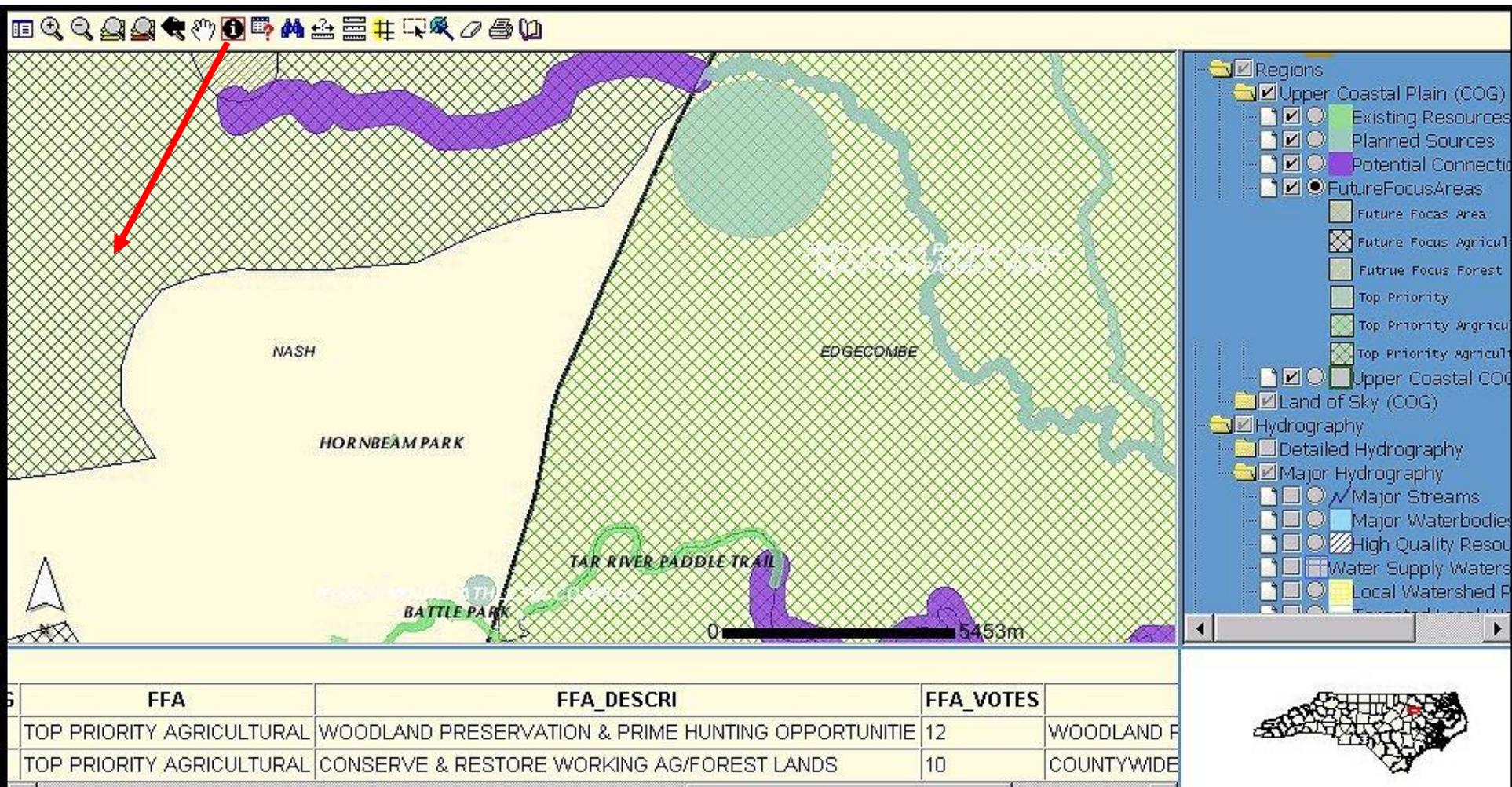
Parks within 1 mile of selected park



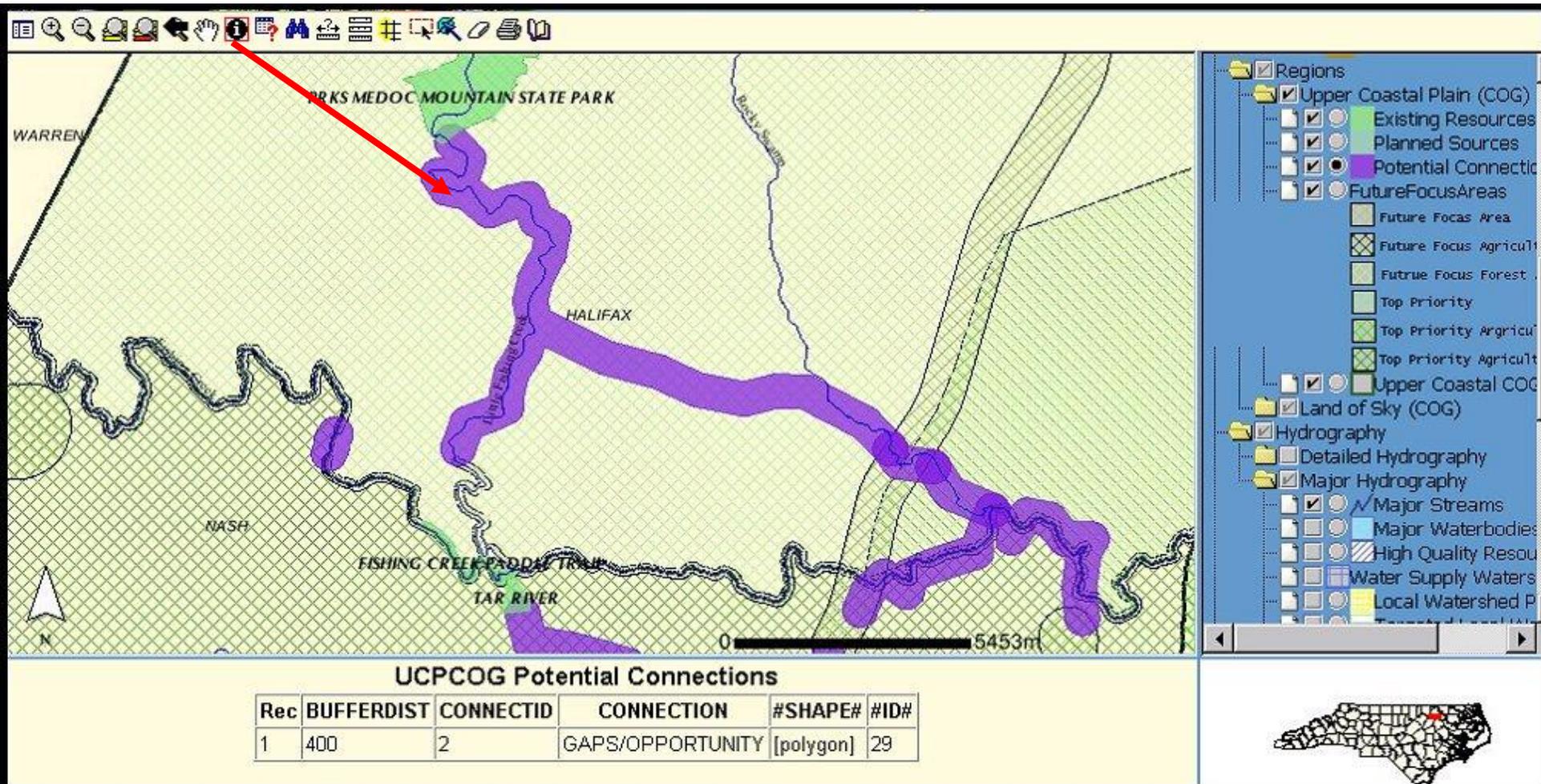
Habitat features in the vicinity



Upper Coastal Plain Council of Governments



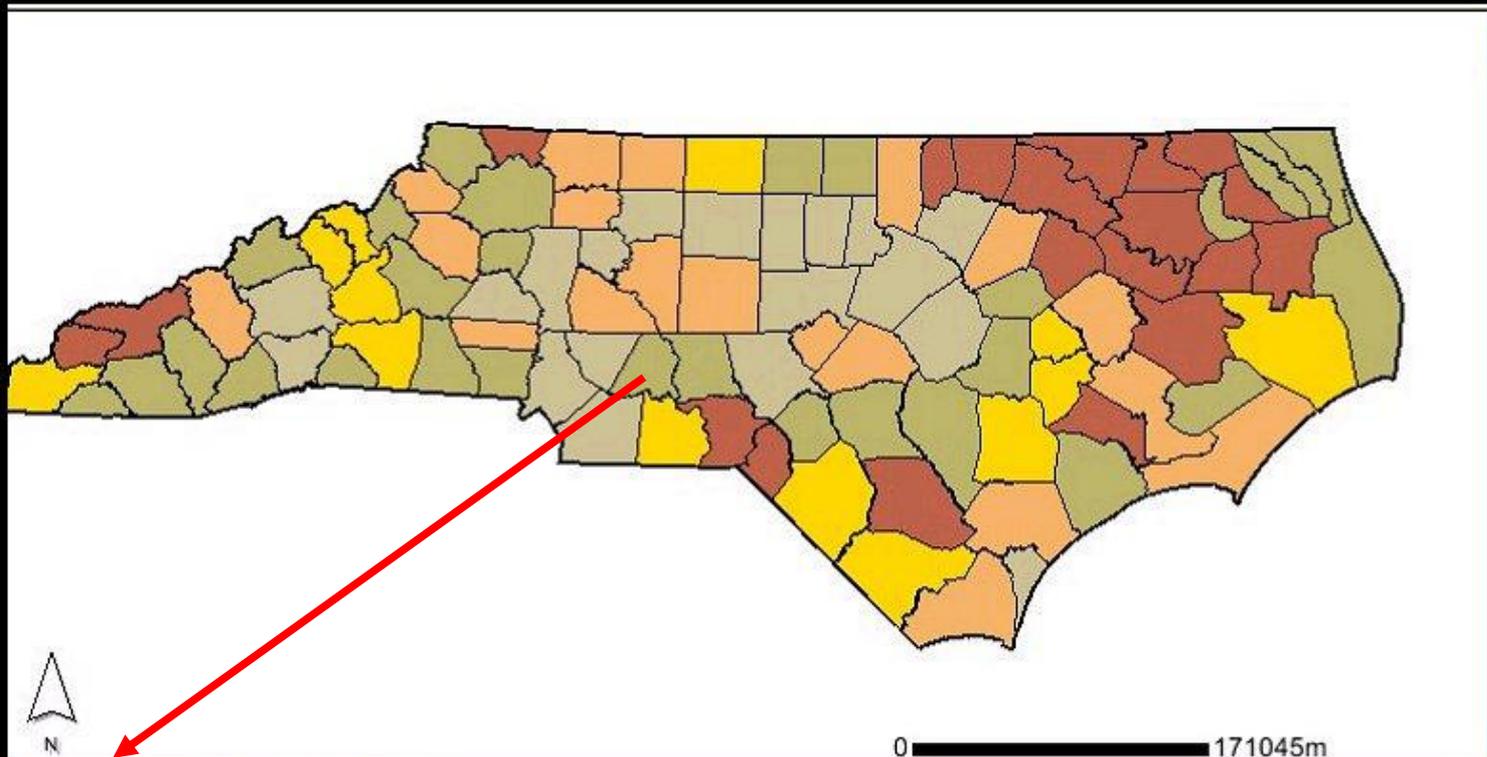
Existing, planned and potential areas



Potential connections

Other data in Map Viewer

- ✦ County boundaries with economic distress tiers
- ✦ Legislative districts
- ✦ Southeastern Ecological Framework



LAYERS

- All Layers
- Transportation (NC DOT)
- Boundaries
 - City
 - Economic Distress Tier
 - 1 - Most Distressed
 - 2
 - 3
 - 4
 - 5 - Least Distressed
 - County
- Conservation
 - CWMTF Land Acquisit
 - Hazard Mitigation
 - Managed Conservation L
 - Federal
 - State
 - Land Trust
 - Conservation Group
 - Other Non-Profit
 - County
 - Municipal
 - City/County

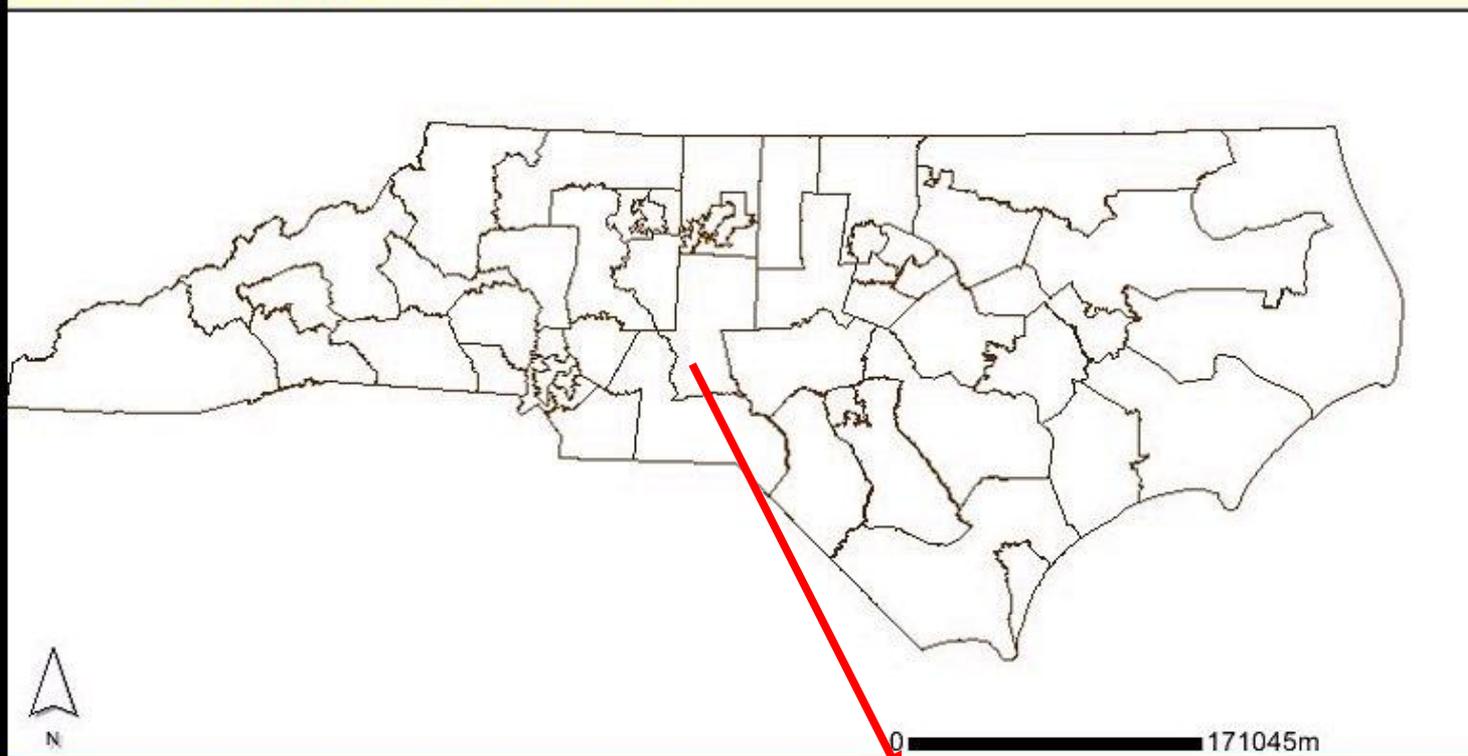


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County Economic Tier 03

CO_NAME	ACRES	CO_NUM	STATE_REGI	DCA_REGION	COG_REGION	COG_NAME	DENR_REGIO	DOT_DIVISI	DOT_D
STANLY	258667.23	167	Piedmont	Mooreville	F	Centralina COG	Mooreville	10	1





Floodplains
 Habitats
 Legislative Districts

US Congressional Dis
 NC Senate Districts
 NC House Districts

Refresh Map

Auto Refresh

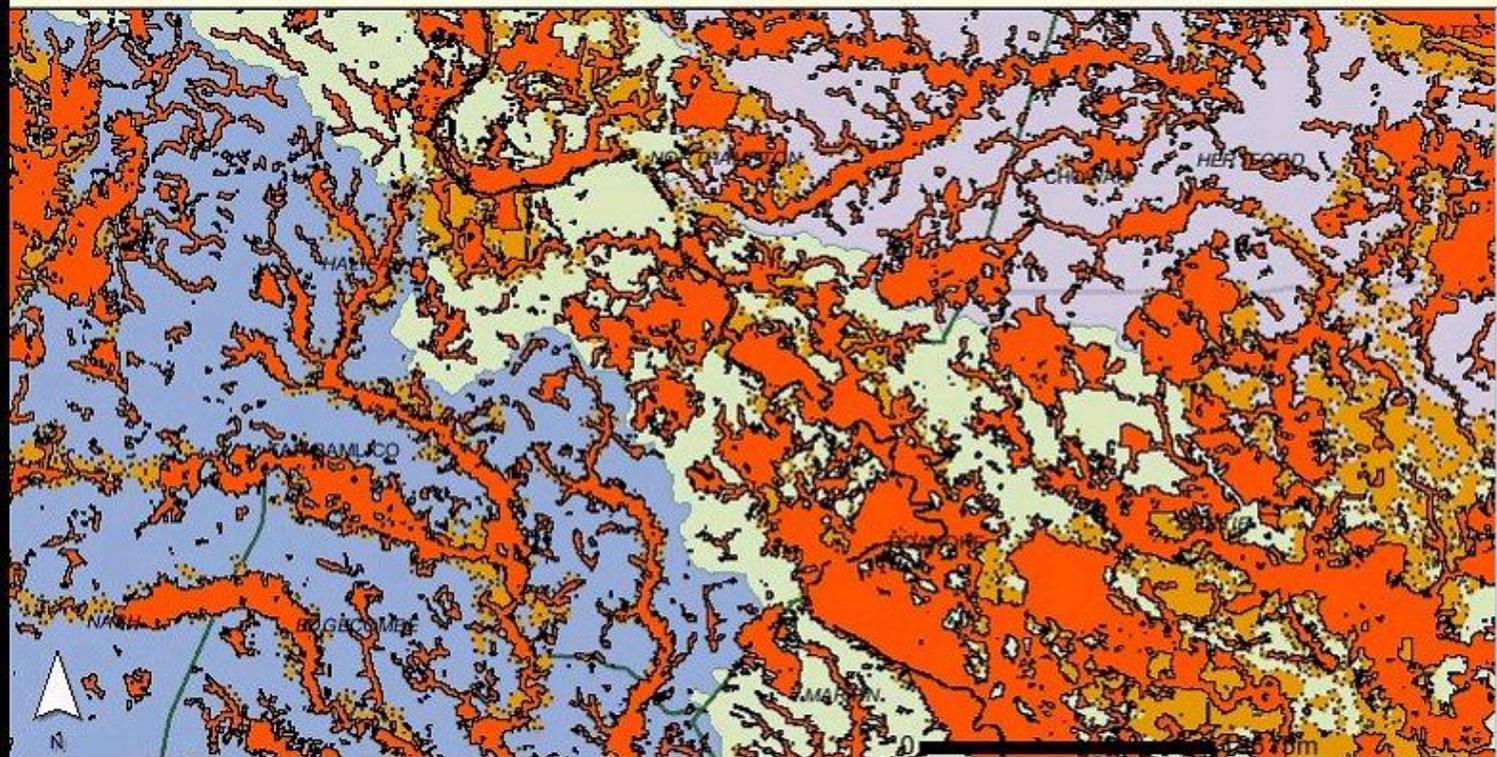
Help:

- A closed group, click to open.
- An open group, click to close.
- A map layer.
- A hidden group/layer, click to make visible.
- A visible group/layer, click to hide.
- A visible layer, but not at this scale.
- A partially visible group, click to make fully visible.
- An inactive layer, click to make active.
- The active layer.

NC Senate Districts

Rec	AREA	PERIMETER	SENATE_	SENATE_ID	DISTRICT	COUNT	#SHAPE#	#ID#
1	3344546300	307711.22	25	24	29	5262	[polygon]	24





- Floodplains
- Habitats
 - Natural Heritage Element
 - Designated Trout Waters
 - Anadromous Fish Spawning
 - Fisheries Nursery Areas
 - Conditional Approved Shellfish Harvesting
 - Closed Shellfish Harvesting
 - Significant Aquatic Ecosystems
 - Significant Natural Heritage
 - Secondary Ecological
 - Primary Ecological Areas
 - Southeastern Ecological
- Legislative Districts

Refresh Map

Auto Refresh

Help:
A closed group, click to open

Southeastern Ecological Framework
Selection cleared.



Links to more information

- ⊕ One North Carolina Naturally
- ⊕ Carolina Environmental Program
- ⊕ Clean Water Management Trust Fund

One North Carolina *Naturally*

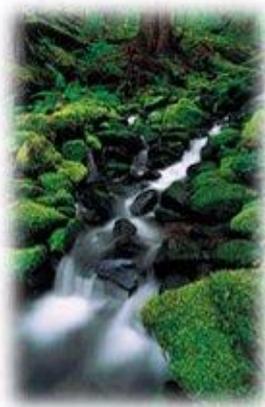
Office of Conservation & Community
Affairs

Mission

Contact
Us

DENR
Home

NC
Gov.com



Conservation
Links

Documents

*One NC Draft
Plan*

Summer
Newsletter

Impact Facts

Program Areas

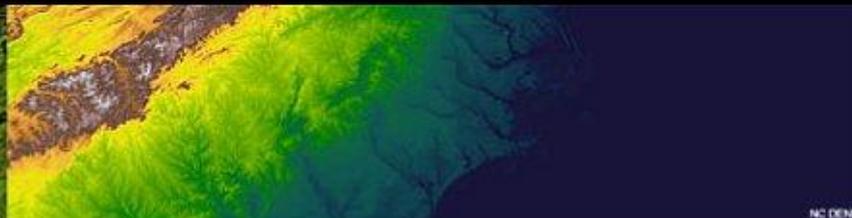
Regional Planning
Efforts
Survey Results

Register for Regional
Meetings



The Office of Conservation & Community Affairs / 1601 Mail Service Center / Raleigh, North
Carolina 27699-1601

[Disclaimer/Privacy](#)



GIS MAPPING TOOL

A state-wide, online GIS mapping tool for beginners and experts interested in regional land conservation

DECISION SUPPORT

Help with answering tough questions about land conservation goals, environmentally-relevant topics, and other important considerations

HELP

The basics about Geographic Information Systems (GIS), learning how to use the online GIS Mapping Tool, making the GIS Mapping Tool work for you, and troubleshooting

CONTACT

Contact information for One North Carolina Naturally project partners

FEEDBACK

Help us make this site more useful to you

LINKS

Useful links to a variety of helpful,



North Carolina Clean Water Management Trust Fund

[Home](#)

[Meetings Calendar/Board Actions](#)

[Staff Directory](#)

[Contact CWMTF](#)

[Search](#)

Quick Links

- [CWMTF Trustees meet Oct. 10-11 in Raleigh \(Agenda\) \(Project Scopes of Work\) \(News Release\)](#)
- [Clean Water Management Trust Fund Board Presents Conservation Award to Senator Kerr Sunday, September 12 in Kinston](#)
- [General Assembly's Budget Includes \\$62 Million for CWMTF](#)

Created in 1996, the Clean Water Management Trust Fund makes grants to local governments, state agencies and conservation non-profits to help finance projects that specifically address water pollution problems.

About CWMTF

[CWMTF and Local Governments: A Valuable Resource](#)
[Fact Sheet](#)
[Our Mission, Enabling Legislation, Field Offices, Board of Trustees, Job Listings, Directions to CWMTF Office, Mailing Address](#)

CWMTF Projects/Places



[Lake James State Park Expansion Announced](#)
[Photo Gallery](#)
[Project Map](#)



What do we have?

- ⊕ NC OneMap in progress
- ⊕ Map viewer in progress
- ⊕ Regional data
 - ▣ inventories
 - ▣ plans
- ⊕ Framework for maintenance and decision support

Benefits of ONCN Tools

- ❖ Common framework for planners, grant applicants and grant awarders
- ❖ Easier access to data for addressing local, regional, and statewide issues
- ❖ Spend your time discovering, analyzing, planning and making maps

Support and Leverage NC OneMap

- ❖ Cost savings in data collection through regional and statewide approaches
- ❖ Data consistency across jurisdictions
- ❖ Much easier access to data for addressing local, regional, and statewide issues

ONCN Map Viewer

📍 Questions?

📍 Suggestions?

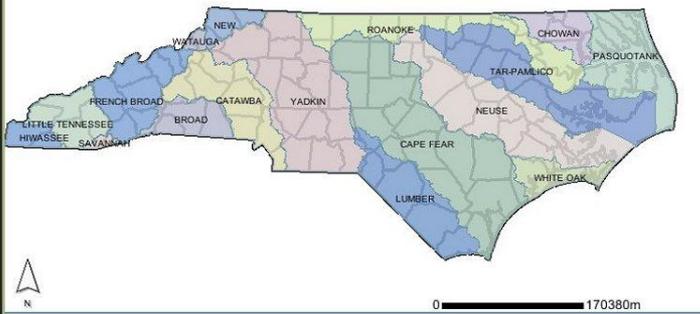
📍 Opportunities?

Thank you!

jeffrey.p.brown@ncmail.net
919-733-2090

www.nconemap.net

North Carolina Conservation Land Mapper
Promoting the Conservation of North Carolina's Natural Resources



LAYERS

- All Layers
- Transportation (NC DOT)
- Boundaries
- Conservation
- Regions
- Hydrology
- Floodplains
- Habitats
- Legislative Districts

Refresh Map

Auto Refresh

Help:

- A closed group, click to open.
- An open group, click to close.
- A map layer.
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- A partially visible group, click to make visible.
- An inactive layer, click to make active.



LAYERS

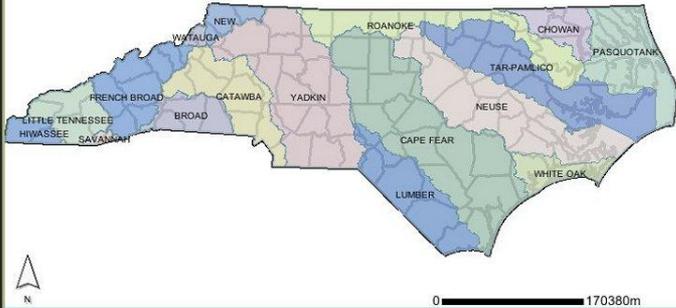
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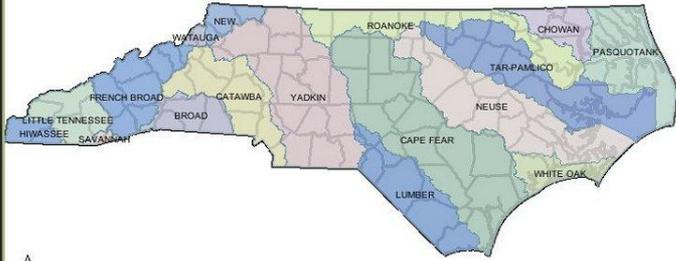
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Zoom In

LAYERS

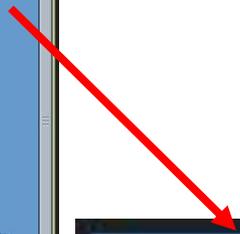
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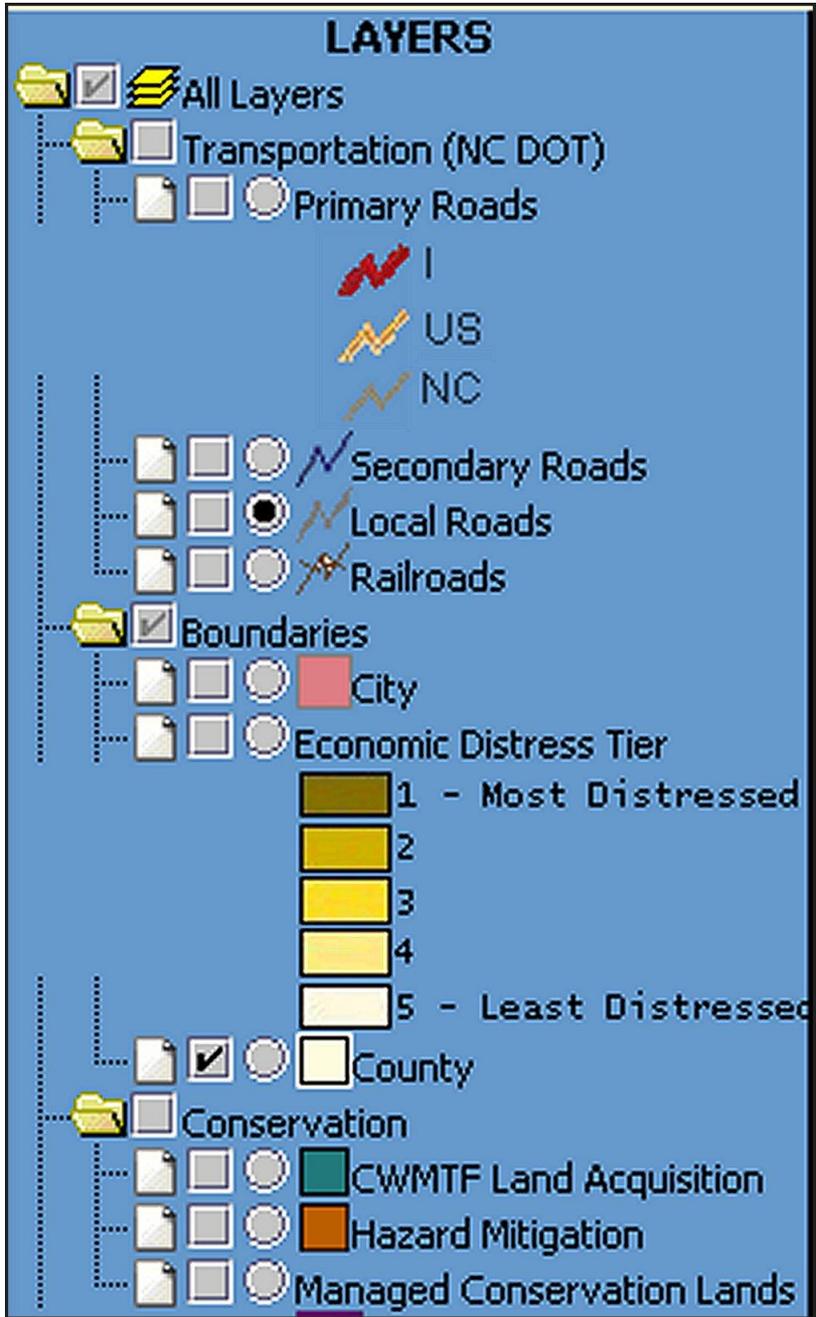
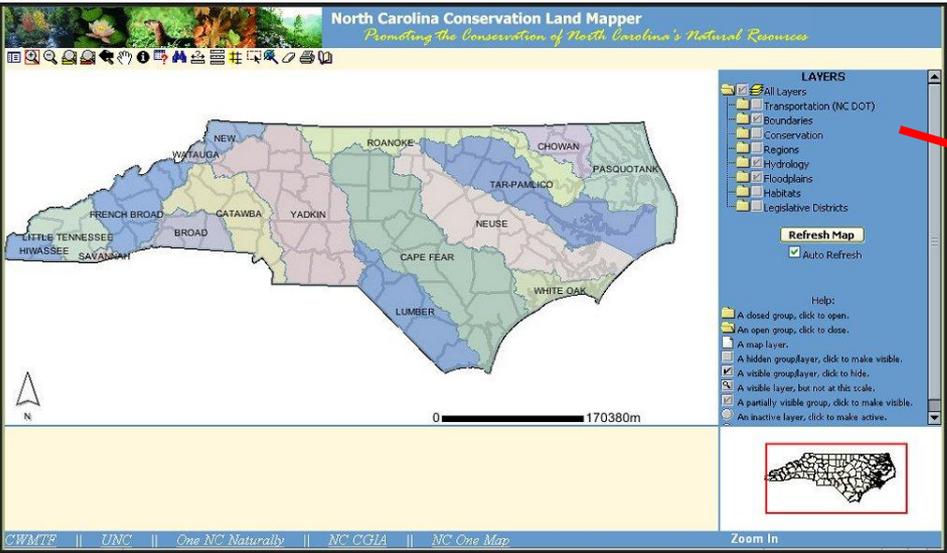


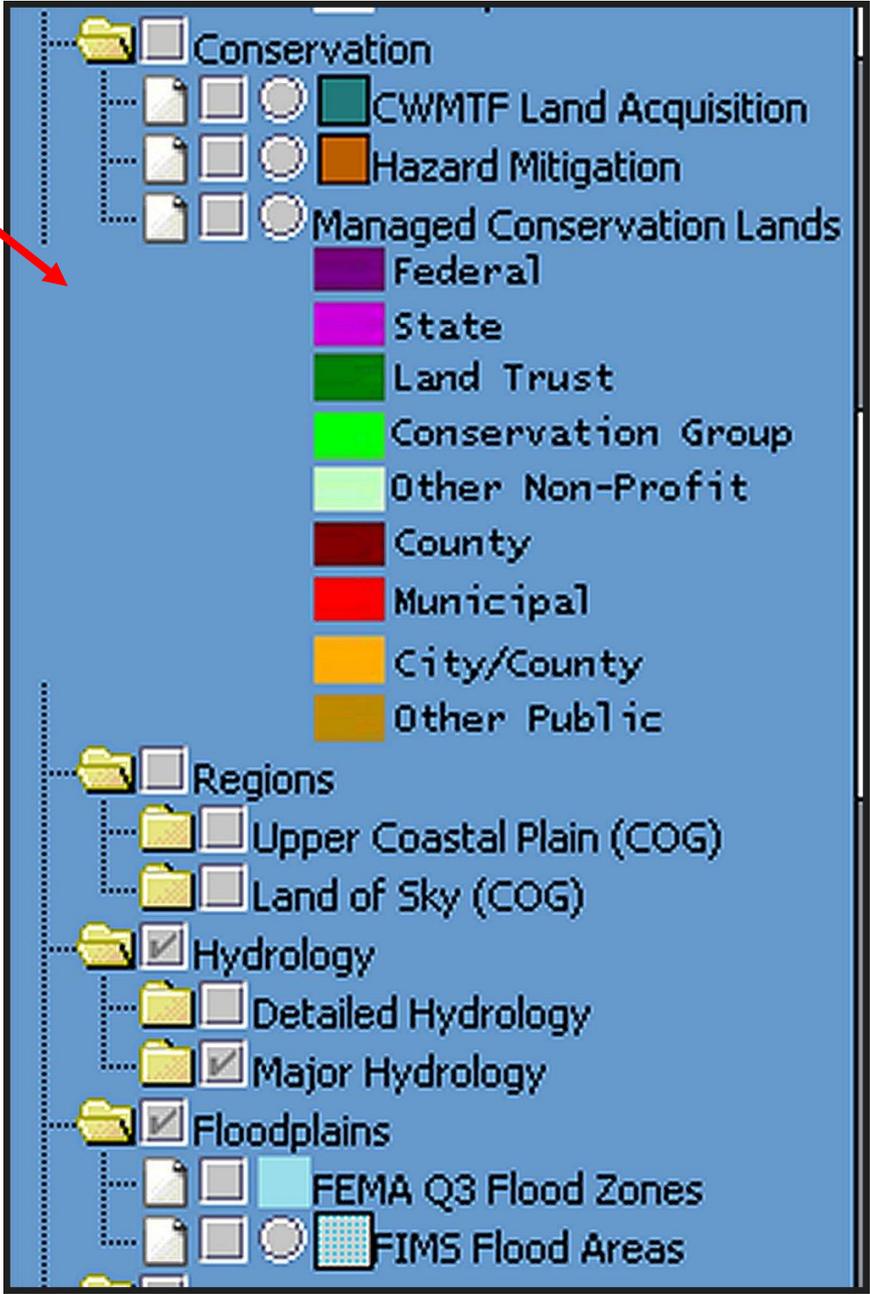
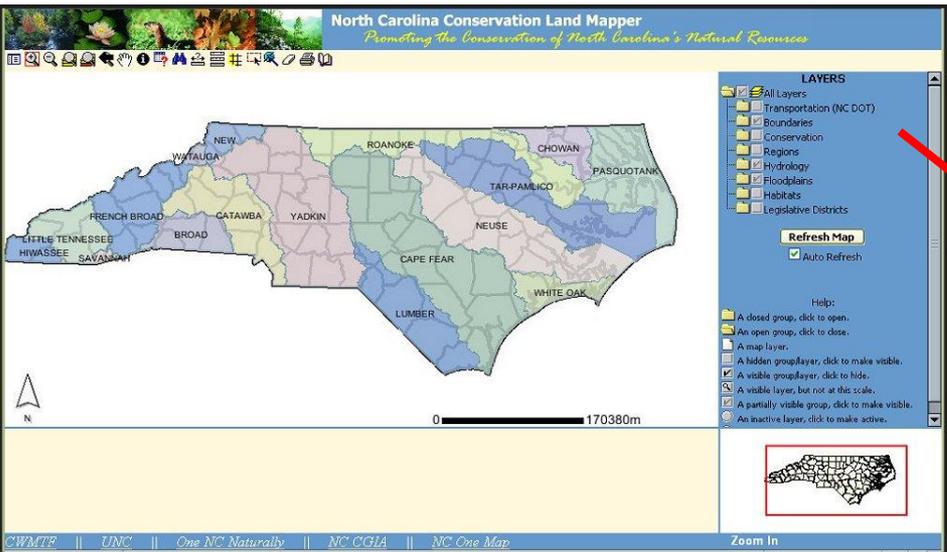
LAYERS

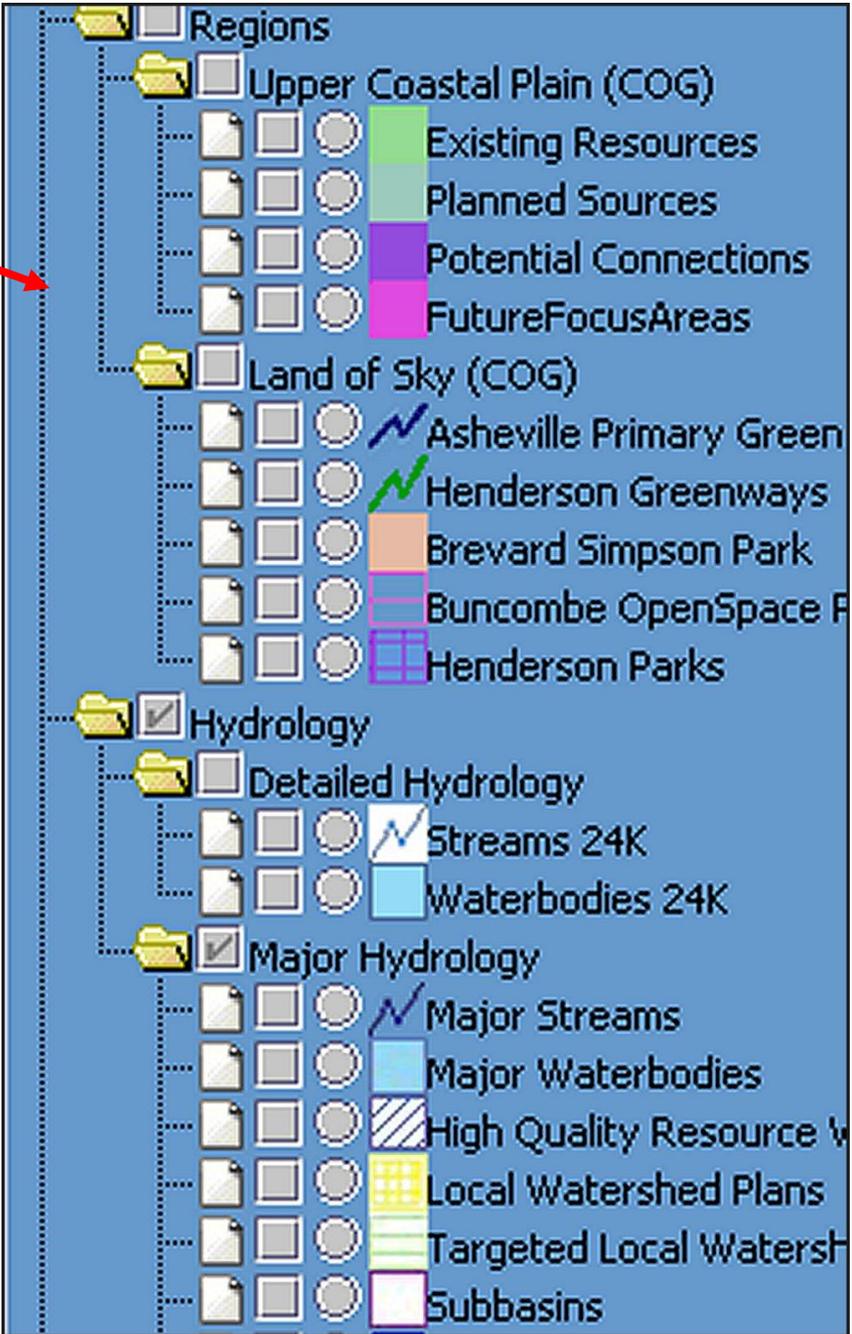
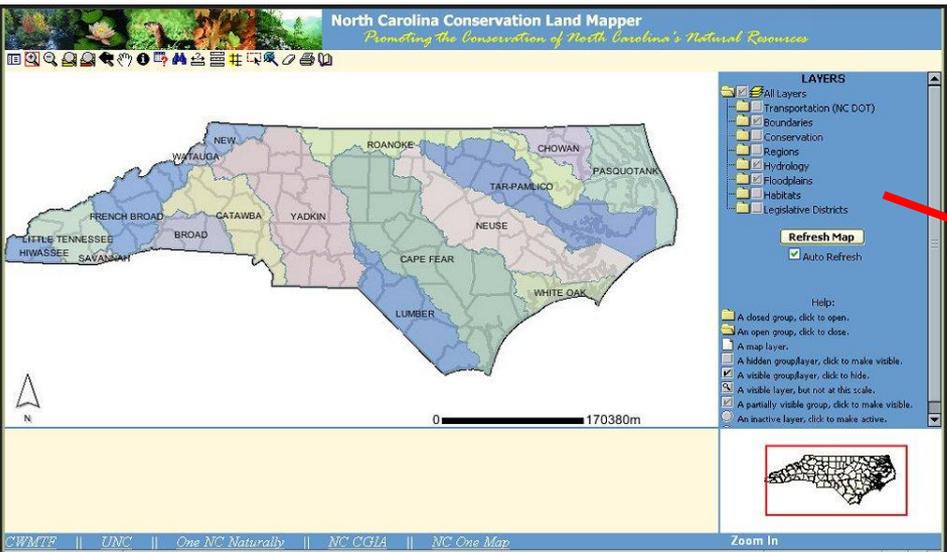
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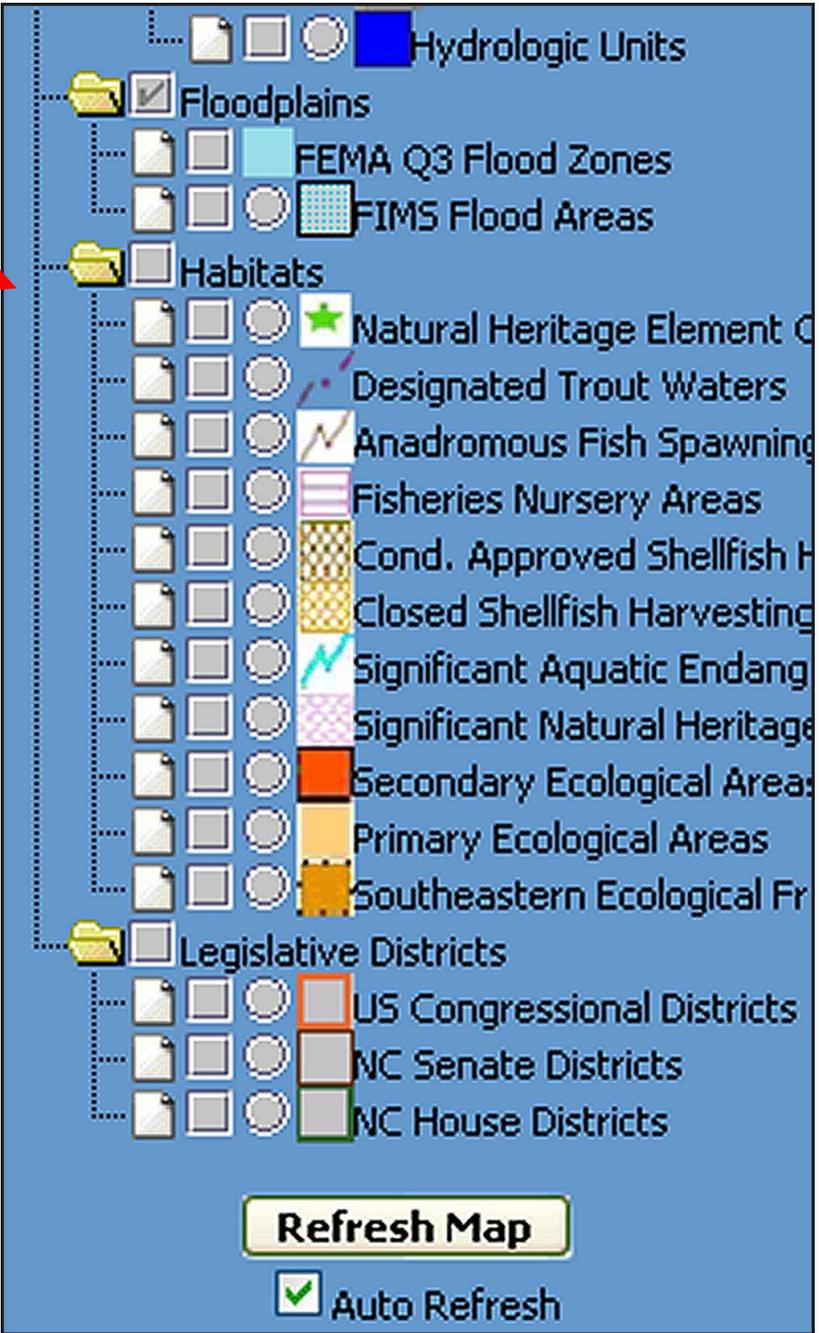
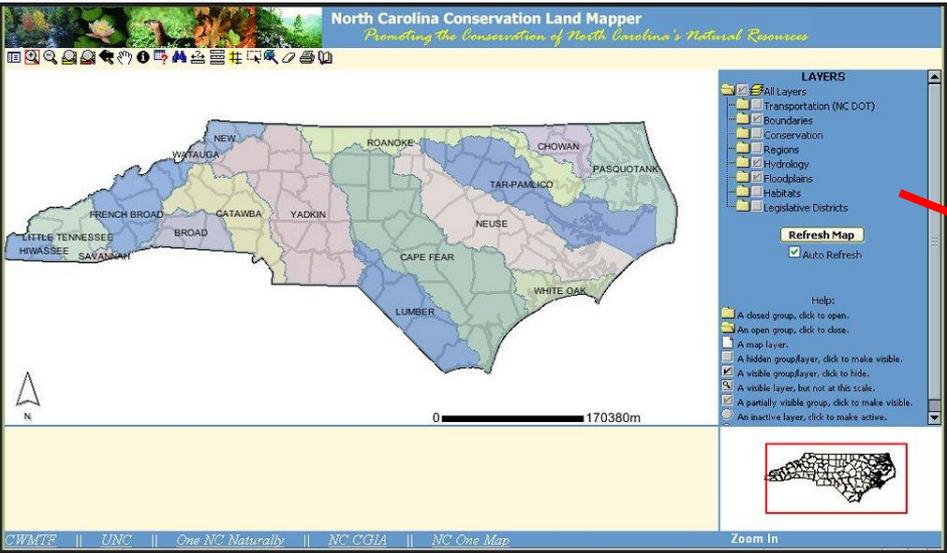
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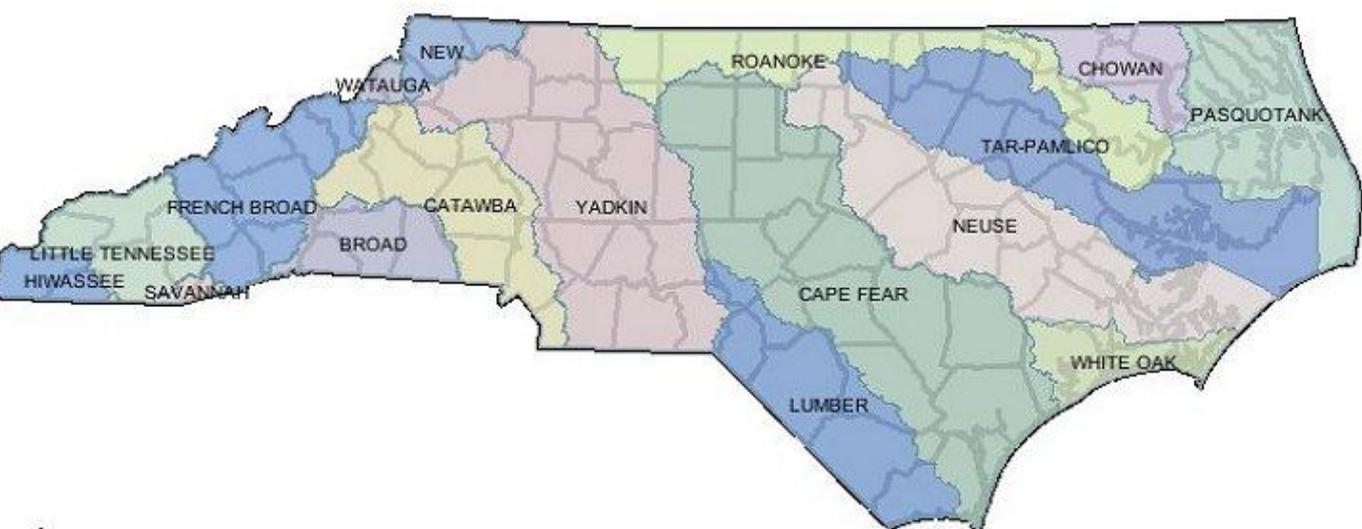






North Carolina Conservation Land Mapper

Promoting the Conservation of North Carolina's Natural Resources



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Zoom In

North Carolina Conservation Land Mapper

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Contents

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- Map Viewer**
- Application Tools

Copyright 2004, NC CGIA



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 - NC DOT Rail
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 - City
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1

Toolbar

The Web Application Toolbar contains all the tools and buttons offered in the map viewer. For more information on how to use these tools, click here: [Application Tools](#).

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2

Map Frame

The map frame is the center window that contains that the map area that you are viewing. To zoom in and out or move around (panning) the map, see the [Application Tools](#). If you receive an error while zooming in and out or panning the map, you should reload the viewer by clicking the 'Refresh Map' button (paste image here) located in the TOC/Layer List.

3

Layer List/Table of Contents (TOC)

LAYERS

- All Layers
 - Transportation
 - NC DOT Highways
 - NC DOT Rail
 - Boundaries
 - County
 - Economic Tier
 - City
 - Floodplains
 - Legislative Districts
 - Habitats
 - Hydrology
 - Conservation
 - CWMTF Land Acquisition
 - Conservation Group**
 - County**
 - Federal**
 - Land Trust**
 - Multiple**
 - Municipal**
 - Other Non-Profit**
 - Other Public**
 - State**
 - Managed/Conservation Lands

Refresh Map

Auto Refresh

Explanation of the layer list and its functions:

- A closed group, click to open.
- An open group, click to close.
- A map layer.
- A hidden group/layer, click to make visible.
- A visible group/layer, click to hide.
- A visible layer, but not at this scale.
- A partially visible group, click to make visible.
- An inactive layer, click to make active.
- The active layer.

To view a layer's classification/legend, simply click on the image next to the layer name. The legend will be displayed in the TOC beneath the layer name. Click the image once more to hide the layer classification.

While Auto Refresh is checked, the viewer will automatically be updated with the requests made on the map. Uncheck Auto Refresh and be sure to click Refresh to apply the any new changes made to the map viewer.

4

Overview Map

The NC Conservation Lands Map Viewer overview map indicates the portion of the State that is currently being shown in the main map (Map Frame - [create link here](#)). This is depicted by a red rectangle. Also, you can quickly move to another area of the map by clicking around the overview map.

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Identify & Query Frame

The Identify and Query Frame is used by several [Application Tools](#) to retrieve and disseminate information from and to you, the user.

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Important Links

The following links provide quick access to significant websites.

CWMTF (Clean Water Management Trust Fund) <http://www.cwmtf.net/>

UNC (University of North Carolina) <http://www.unc.edu/>

One NC Naturally <http://www.enr.state.nc.us/officeofconservation/>

NC CGIA (NC Center for Geographic Information & Analysis) <http://www.cgia.state.nc.us/>

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-  [Introduction](#)
-  [NC CLMS Viewer](#)
-  [Map Viewer](#)
-  [Application Tools](#)

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NC Conservation Lands Application Tools - Under Construction

[Previous Topic](#)

Click on the hyperlink to view instructions on how to use a particular tool in the NC Conservation Lands Map Viewer.

Navigation Tools:

- | | |
|---|--|
|  Zoom In |  Zoom To Active Layer |
|  Zoom Out |  Zoom To Last Extent |
|  Zoom To Full Extent |  Pan |

Identify & Query Tools:

- | | |
|--|--|
|  Identify |  Set Units |
|  Query |  Buffer |
|  Find |  Select by Line/Polygon |
|  Measure |  Select by Rectangle |

Other Tools:

- | | |
|---|---|
|  Show Legend |  Clear Selection |
|  Print | |

Zoom In Tool

Use this tool to enlarge or show a greater detail of a portion of the map. This tool can be demonstrated in two ways.

Steps:

1. Select the tool.
2. Click and draw a box on the map around the area that you wish to see in more detail.

OR

1. Click on a point in the map without drawing a box. You will enlarge the area of the map around that point by a factor of 2.

The map will refresh and draw the zoomed in area.

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Zoom Out

The Zoom Out Tools is the opposite of the Zoom In Tool. Use this tool to view a larger map area, but in less detail. Again, this tools can be demonstrated in two ways.

Steps:

1. Select the tool.
2. Click and draw a box on the map.

The map will redraw at a reduced scale. A smaller box will zoom out more than a larger box.

OR

1. Click on a point in the map without drawing a box. You will zoom out from the area of the map around that point by a factor of 2.