



NC OneMap: Building the Statewide Geospatial Data Resource

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Center for Geographic Information and Analysis

November 17, 2004

NC OneMap is ...

- ❁ free, statewide data resource
- ❁ distributed network of servers
- ❁ Internet-based map viewer
- ❁ decision support tool with geospatial data as the hub

NC OneMap is ...

- ❖ resource for technical and management staff in federal, state, and local agencies
- ❖ geospatial data discovery tool for the public
- ❖ NC's contribution to the *National Map*

Geographic Information Coordinating Council

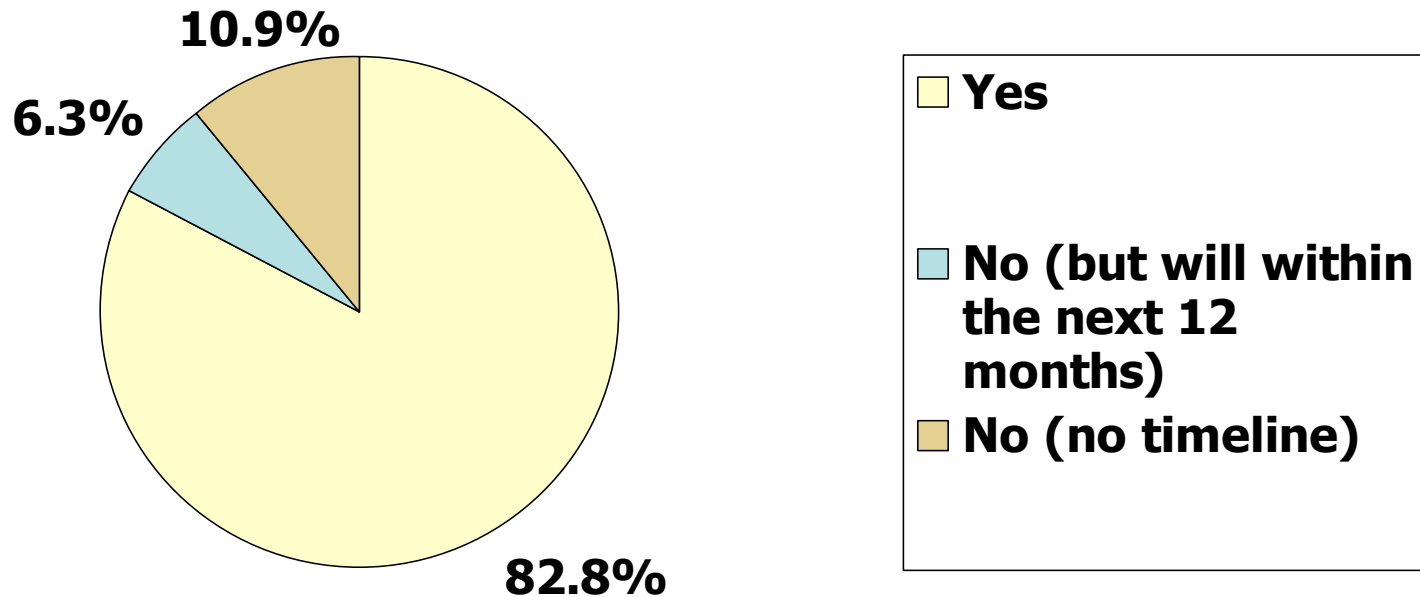
- ⊕ Gen. Stat. §143-725
- ⊕ GIS policy group
- ⊕ 33 members
- ⊕ Local, regional, state,
and federal participation
- ⊕ Advises the Governor
and General Assembly



Data Inventory

- ❖ Data, web mapping, applications
- ❖ Display and update online
- ❖ Local government inventory
- ❖ State survey underway

Local Governments Who Create/ Update/Integrate/Distribute GIS Data



*Estimated \$162M investment has
been made at the local level*

Requirements

- ⊕ Interviews
- ⊕ Data
- ⊕ Functionality
- ⊕ Direction for Release One Development

Summary of Requirements

- ✚ Easy to Use Viewing – Cross Jurisdictional
- ✚ Address Locator; Zoom To Tools; Router
- ✚ Metadata
- ✚ Print
- ✚ Download
- ✚ Overview Map

Summary of Requirements

- ✚ Buffer
- ✚ Impact Area
- ✚ Search From Point
- ✚ Supporting Data
- ✚ Design Elements: Data Groupings, Avoid Clutter; Avoid Animation; Base Layer Default Strategy

Involvement

- ⊕ Core Team
- ⊕ Community GIS Coordinators
- ⊕ City/County Managers
- ⊕ Private Sector
- ⊕ USGS, CGIA, State Agencies, Regions
- ⊕ Years of Partnering on NSDI

Results, and work in progress

- ⊕ June 30 release and ongoing updates
- ⊕ 48 Communities today, 92 interested
- ⊕ 30 Counties, 14 Cities/Towns, 4 COGS
- ⊕ 185 data layers from state & local

Results, and work in progress

- ⊕ Cost of local aerials on NC OneMap today is \$4.5 million
- ⊕ Federal, state and private streaming
- ⊕ 18 Functions
- ⊕ Distributed network, distributed Services

How does NC OneMap work?

- ⊕ Map viewer for web browser
- ⊕ High speed Internet
- ⊕ Geospatial backbone: Open GIS protocols enabling multiple servers to serve maps to the viewer
- ⊕ Culture: data sharing, standards, consistency, maintenance, metadata

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!**

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

Upcoming Events on NC OneMap:

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

NC OneMap Quick Links:

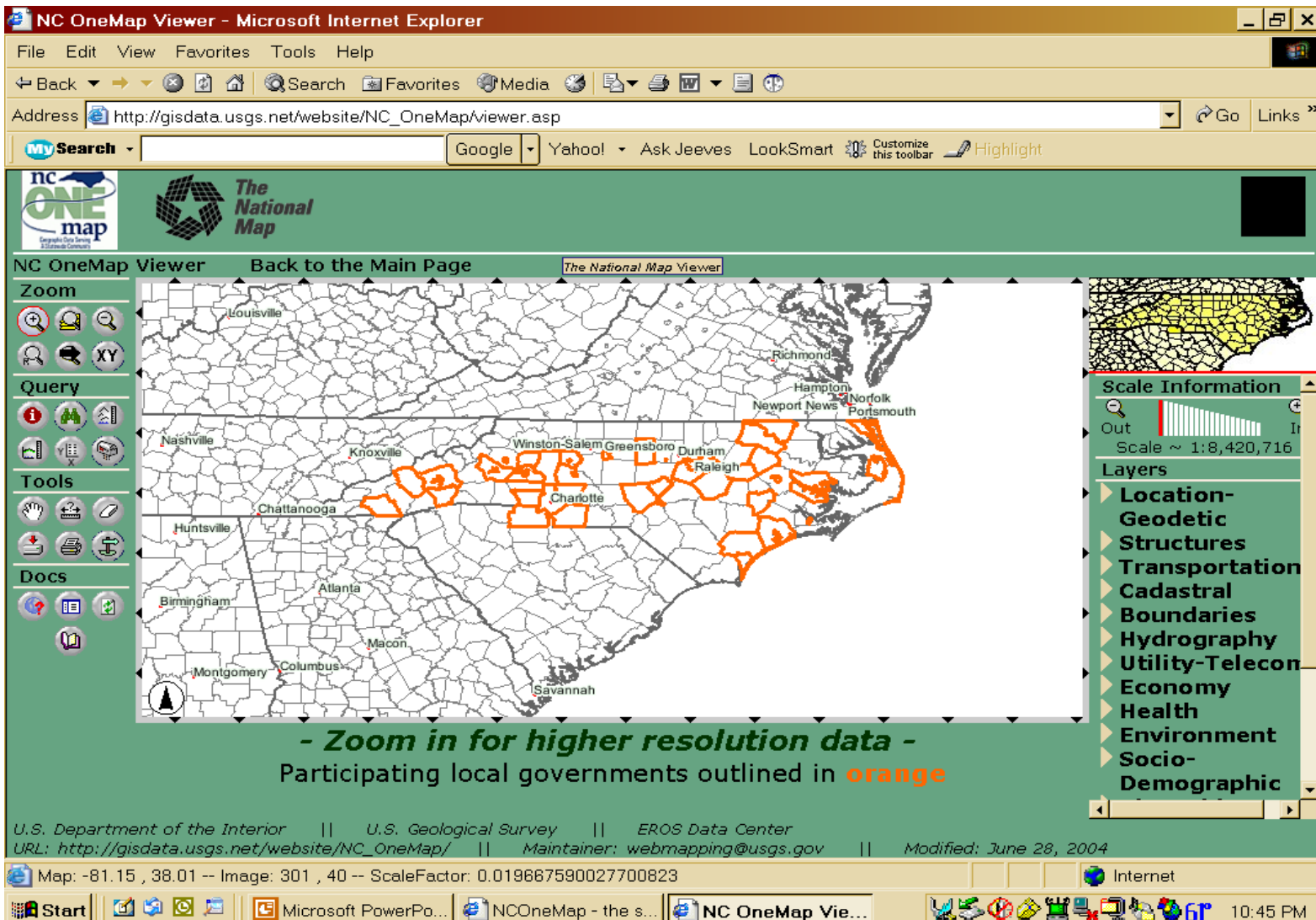
[FGDC Guidelines for Providing Appropriate Access to Geospatial Data in Response to Security Concerns](#)

[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.

NC OneMap Viewer



NC OneMap Viewer - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://gisdata.usgs.net/website/NC_OneMap/viewer.asp

mySearch Google Yahoo! Ask Jeeves LookSmart Customize this toolbar Highlight

nc ONE map The National Map

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

Zoom

Query

Tools

Docs

Scale Information

Scale ~ 1:8,420,716

Layers

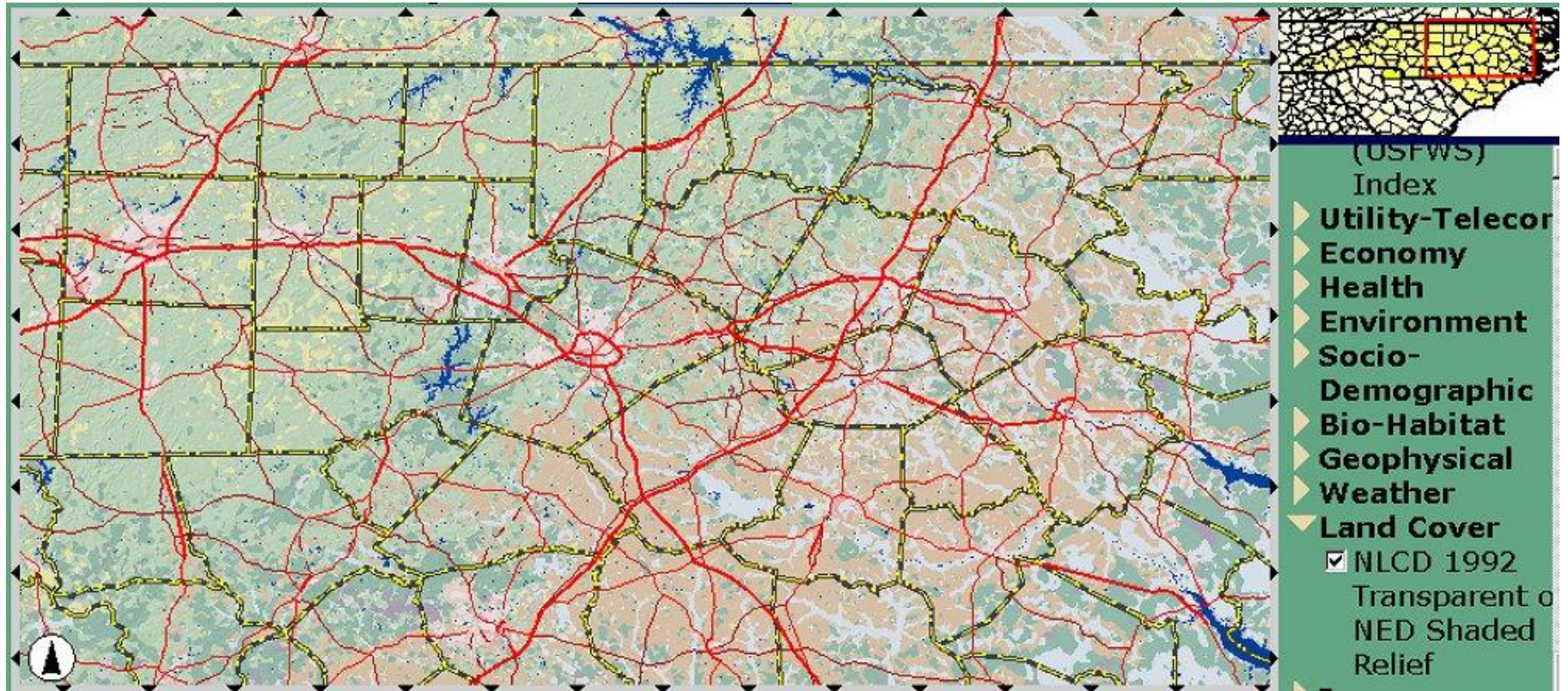
- Location-Geodetic
- Structures
- Transportation
- Cadastral
- Boundaries
- Hydrography
- Utility-Telecon
- Economy
- Health
- Environment
- Socio-Demographic

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

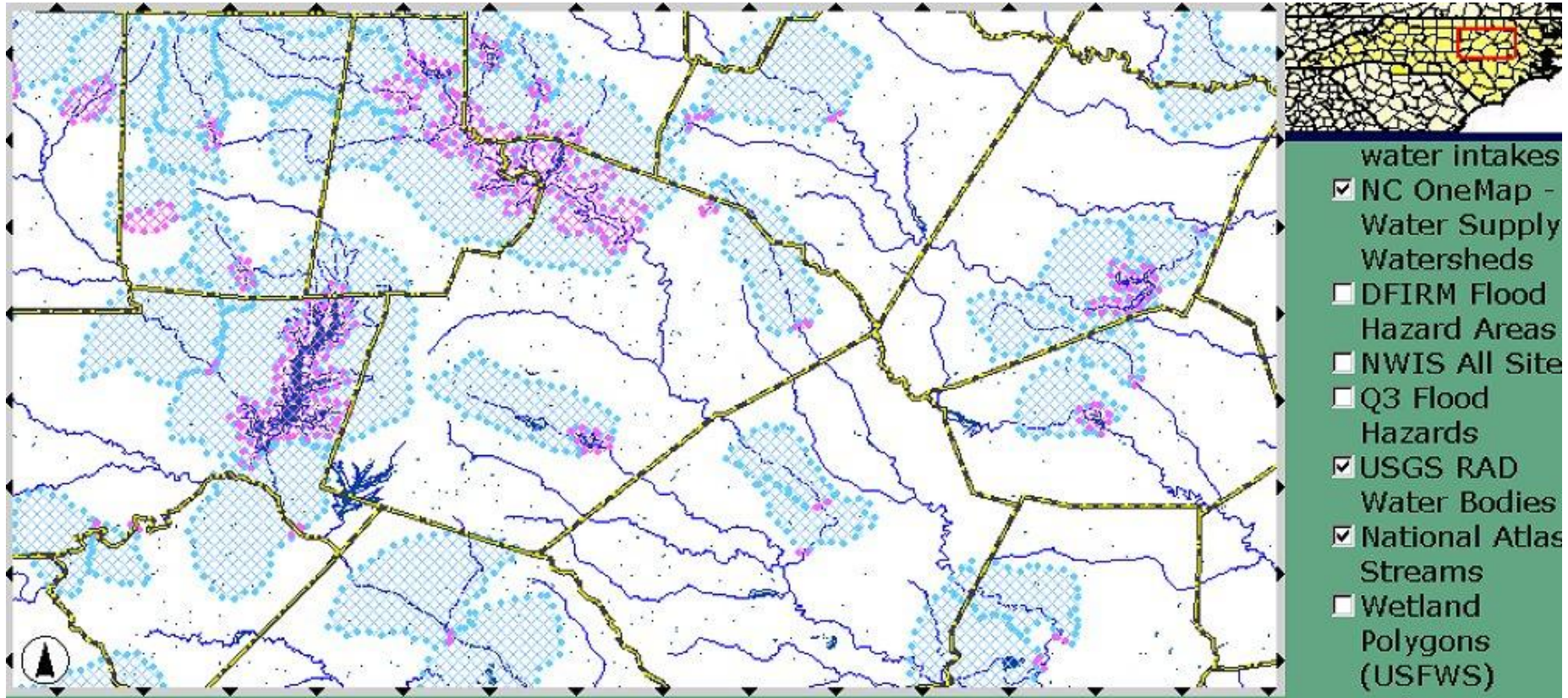
U.S. Department of the Interior || U.S. Geological Survey || EROS Data Center
URL: http://gisdata.usgs.net/website/NC_OneMap/ || Maintainer: webmapping@usgs.gov || Modified: June 28, 2004

Map: -81.15 , 38.01 -- Image: 301 , 40 -- ScaleFactor: 0.019667590027700823

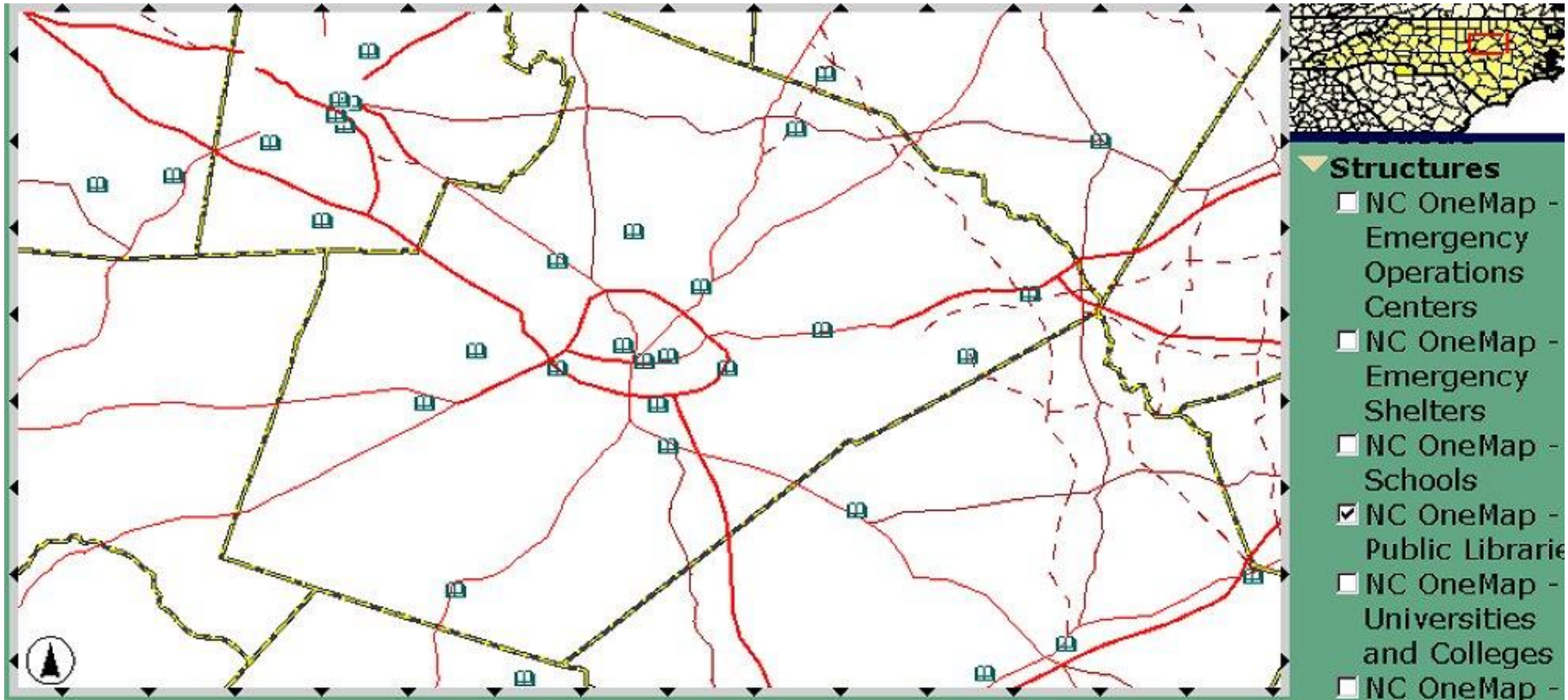
Start Microsoft PowerPo... NCOneMap - the s... NC OneMap Vie... 10:45 PM



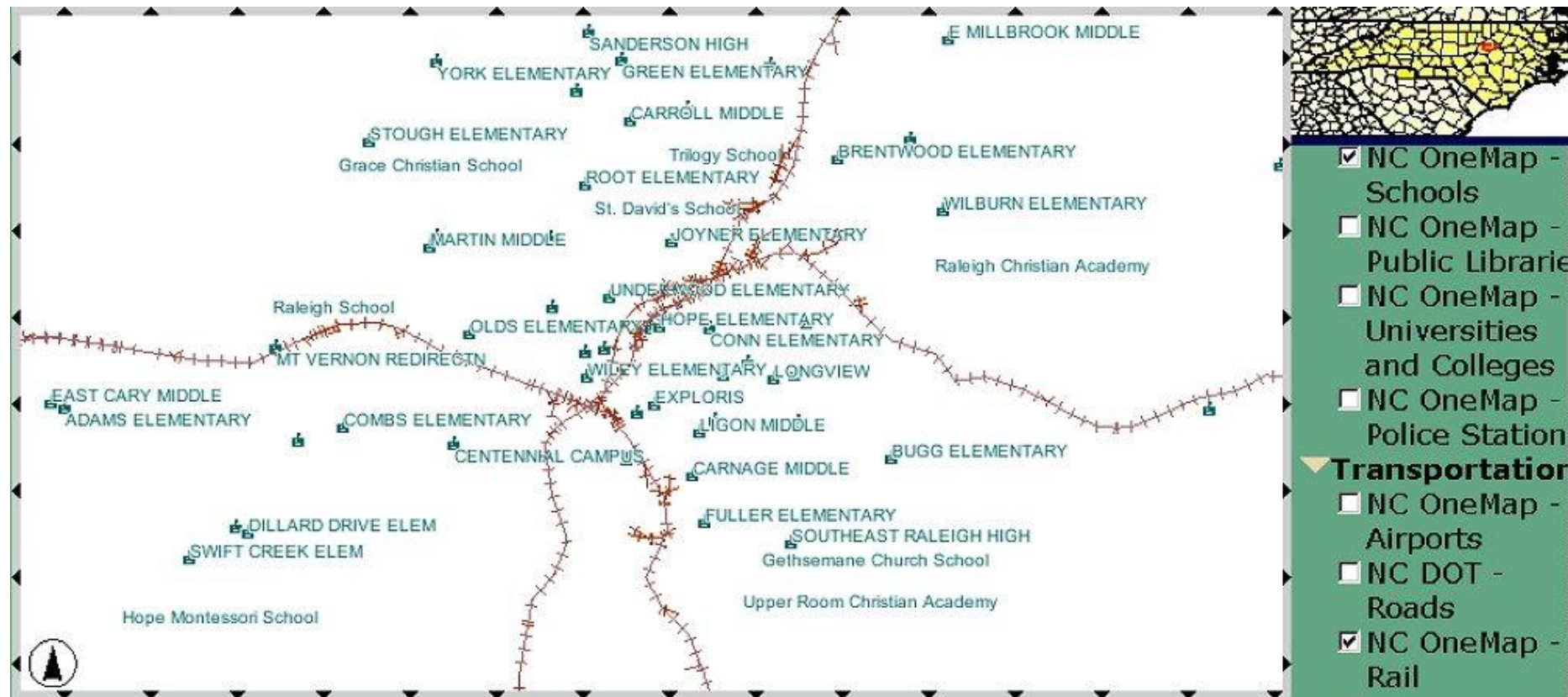
Zoom to a region and display federal data: land cover and roads



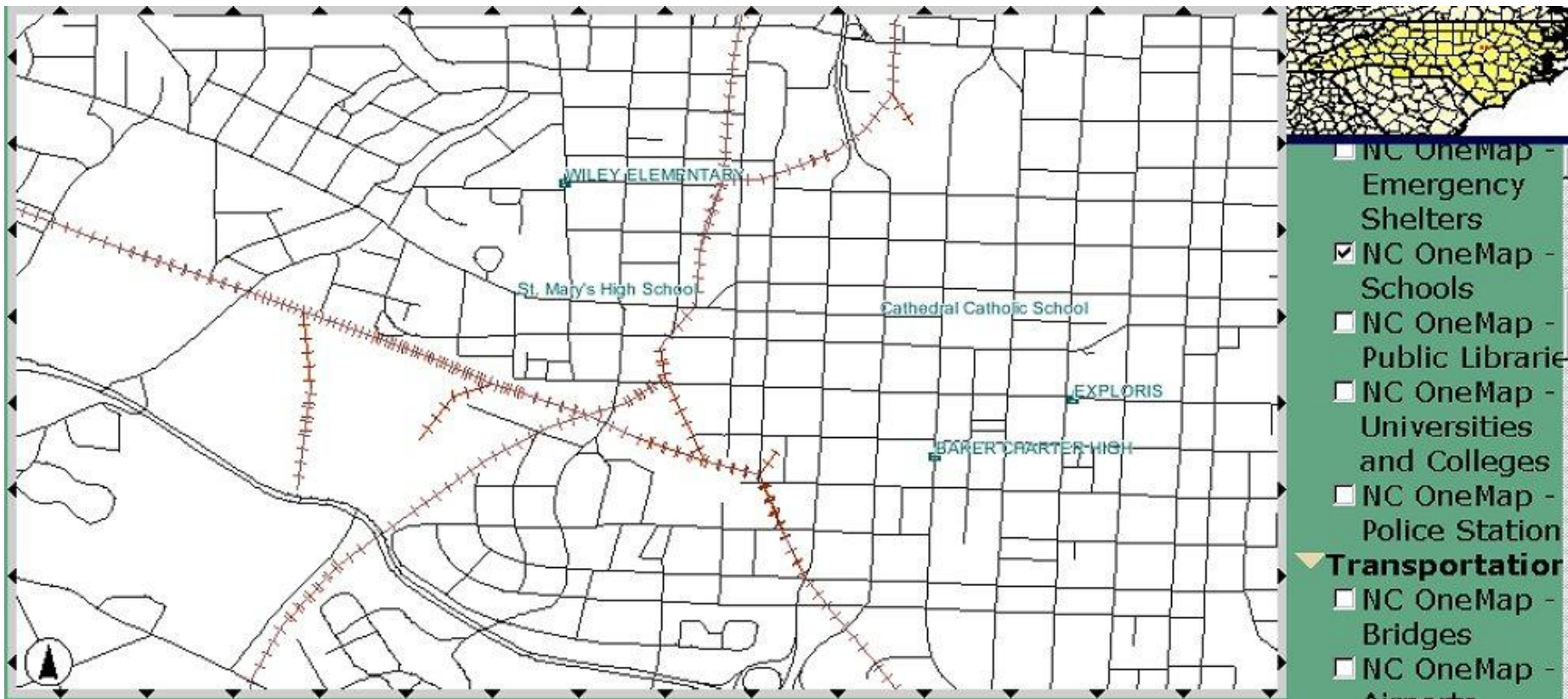
Zoom to a set of counties and display water supply watersheds



Zoom to a county and display sites and major roads (Wake County)



Zoom within a county and display labeled points and a reference theme



Zoom to a neighborhood and display local streets (Wake County)



Zoom to a site and display imagery (Wake County)



Address http://gisdata.usgs.net/website/NC_OneMap/viewer.asp

Google Search Web 12 blocked AutoFill Options



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

Zoom

Query

Tools

Docs



- ▶ Structures
- ▶ Transportation
- ▶ Cadastral
 - Buncombe Co, NC Tax Parcels
- ▶ Boundaries
- ▶ Hydrography
- ▶ Utility-Telecom
- ▶ Economy
- ▶ Health
- ▶ Environment
- ▶ Socio-Demographic
- ▶ Bio-Habitat
- ▶ Geophysical
- ▶ Weather
- ▶ Land Cover
- ▶ Imagery-Basemap
 - Buncombe Co, NC Orthophotos (1998)
 - Urban Area Mosaic
 - Coverage Index



Tax parcels and imagery, Nags Head



High resolution imagery served from Mecklenburg County



Contents

- [Welcome](#)
- [Internet Mapping](#)
- [NC OneMap Viewer](#)
 - [Map Viewer](#)
 - [Application Tools](#)
- [Layer Specification](#)
- [Additional Information](#)




Copyright 2004, NC OneMap

NC OneMap Application Tools

Navigation Tools:

-  [Zoom In](#)
-  [Zoom to Full Extent](#)
-  [Zoom Out](#)
-  [Zoom to Region or Area](#)
-  [Zoom to Previous Extent](#)
-  [Zoom to a Point](#)

Identify and Query Tools:

-  [Identify](#)
-  [Geographical Place Search](#)
-  [Elevation Profile](#)
-  [Elevation Query](#)
-  [US National Grid Query](#)
-  [Address Finder Query](#)

Other Tools:

-  [Pan](#)
-  [Measure](#)
-  [Clear](#)
-  [Extract](#)
-  [Create PDF Image](#)
-  [Route Finder Query](#)



Contents

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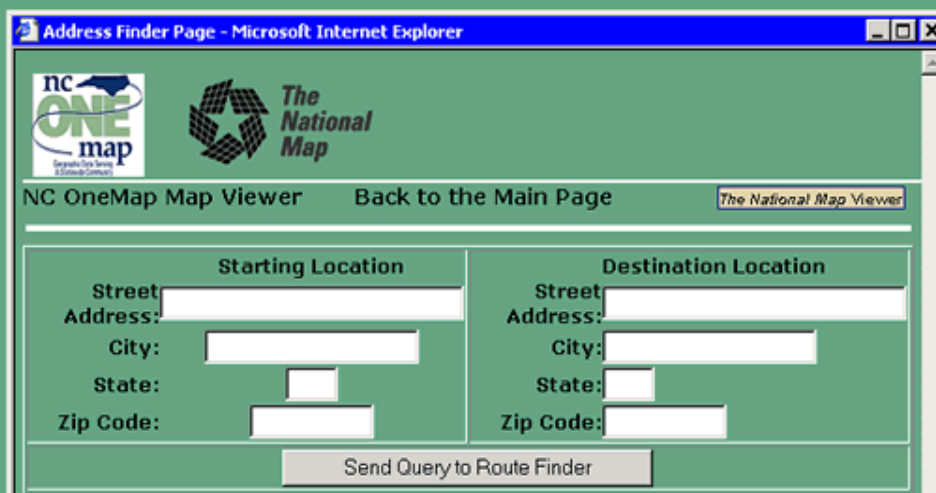
NC OneMap Application Tools

Route Finder Query Tool:

This tool was designed to provide destination information through an online mapping image and a set of driving directions. This tool is also useful in pinpointing locations and assembling a specific route.

Steps:

1. Click on the tool. The interface below will appear in a new window.



Starting Location		Destination Location	
Street Address:	<input type="text"/>	Street Address:	<input type="text"/>
City:	<input type="text"/>	City:	<input type="text"/>
State:	<input type="text"/>	State:	<input type="text"/>
Zip Code:	<input type="text"/>	Zip Code:	<input type="text"/>



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Copyright 2004, NC OneMap

NC OneMap Application Tools

2. Enter a full address for the starting and destination locations. See example below:

Starting Location		Destination Location	
Street Address:	1801 Fayetteville Street	Street Address:	5511 Capital Center Drive
City:	Durham	City:	Raleigh
State:	NC	State:	NC
Zip Code:	27707	Zip Code:	27606

Send Query to Route Finder

U.S. Department of the Interior // U.S. Geological Survey // EROS Data Center
URL: http://gisdata.usgs.net/website/NC_OneMap/ // Maintainer: webmapping@usgs.gov // Modified: June 28, 2004

3. Click 'Send Query to Route Finder' when you have finished.

The web form will display the route map along with maneuvering directions. See the the image below for a full route from the starting point to the destination



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NC OneMap Application Tools

3. Click 'Send Query to Route Finder' when you have finished.

The web form will display the route map along with maneuvering directions. See the the image below for a full route from the starting point to the destination location.

WebForm1 - Microsoft Internet Explorer

Depart 1801 Fayetteville St, Durham, NC 27707
Go West on E Lawson St
Drive < 0.1 mile(s) ~ < 1 minute

nc
ONE
map
Geographic Data Services
A Statewide Community

NC OneMap

Zoom

Query

Tools

Docs

Explorer User Prompt

Script Prompt:

Please Enter the XY coordinates in either NC State Plane Feet (Nad 83) -or- Longitude, Latitude in Decimal Degrees:

-78.63,35.78

OK

Cancel

Zoom to a Point tool request

Zoom



Query



Tools



Docs



Zoom to a Point tool result

Zoom



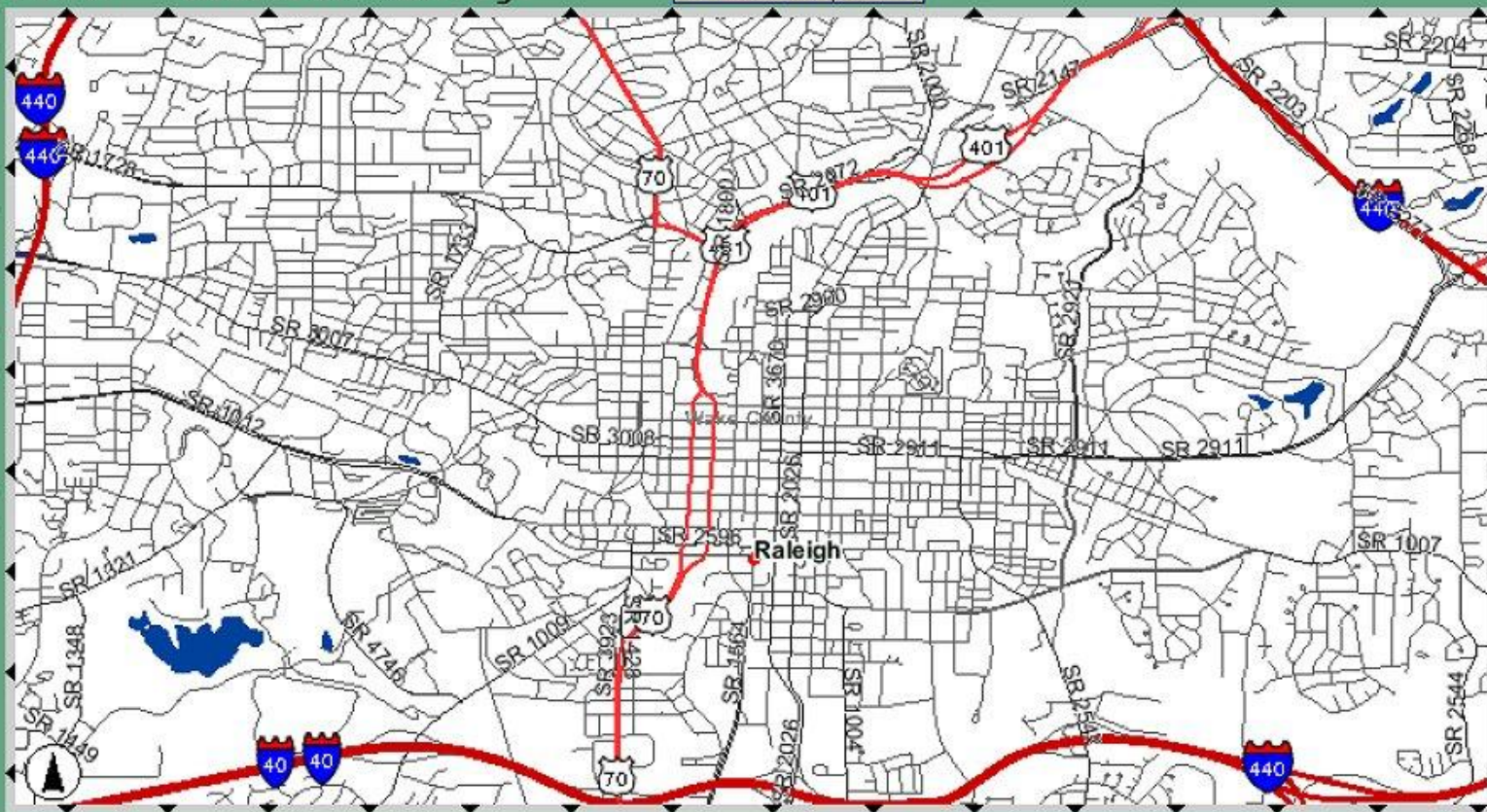
Query



Tools



Docs



Street:

Show Labels?

City:

State:

Zip:

Address Lookup tool request



NC OneMap Viewer

[Back to the Main Page](#)

The National Map Viewer

Zoom



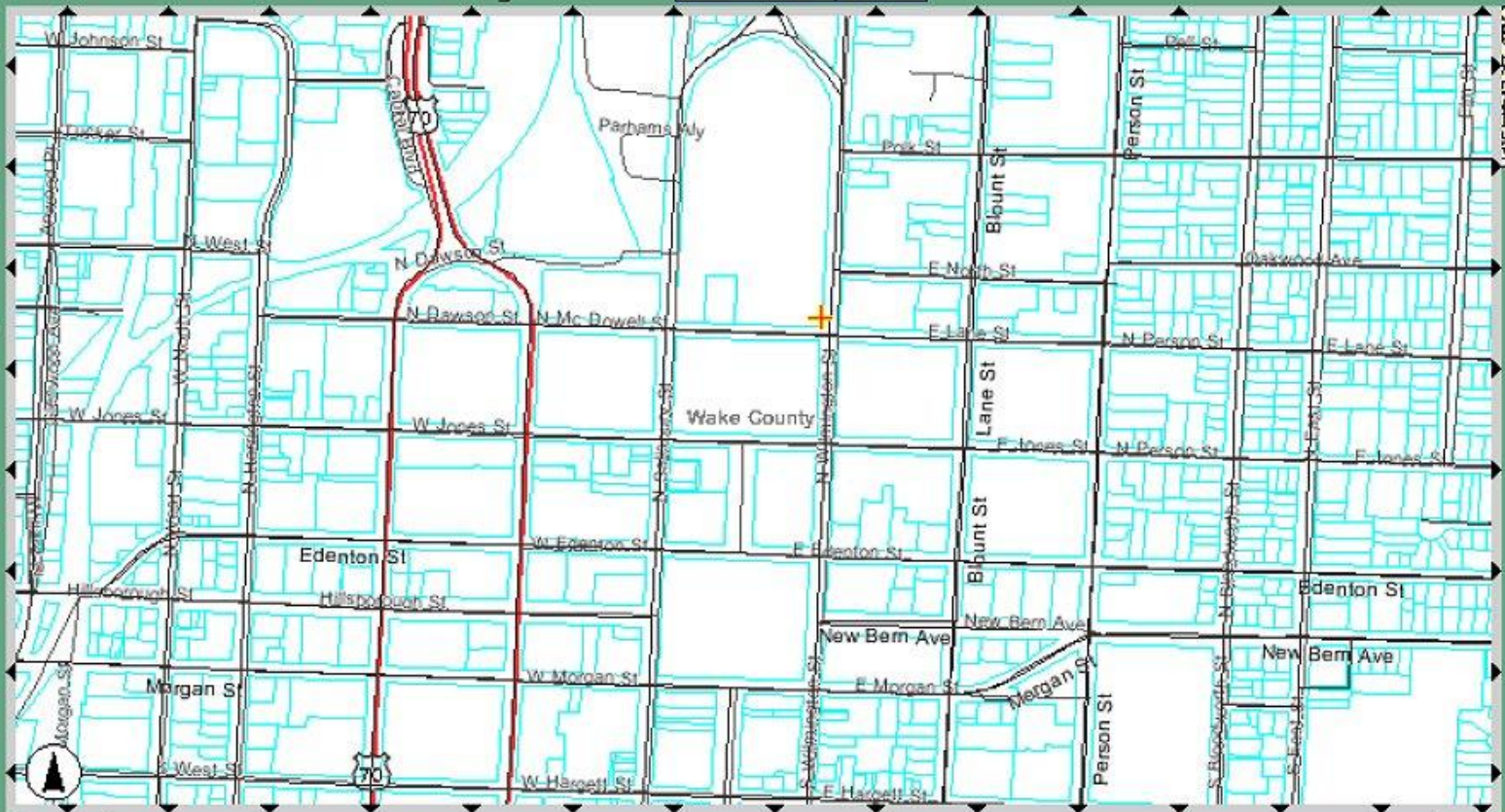
Query



Tools



Docs



Goto Address

X

Y

Goto 301 N WILMINGTON ST,RALEIGH,NC 27601 078 38 17.04 W 35 47 02.56 N

Address Lookup tool result

Zoom



Query



Tools



Docs



Total: 0.46 MILES

Segment: 0.44 MILES



Measure tool result

Zoom

Query

Tools

Docs



- ▶ **Location-Geodetic**
- ▶ **Structures**
 - City of Raleigh - NC - Building Footprints
 - NC OneMap - Emergency Operations Centers
 - NC OneMap - Emergency Shelters
 - NC OneMap - Schools
 - NC OneMap - Public Libraries
 - NC OneMap - Universities and Colleges
 - NC OneMap - Police Station
- ▶ **Transportation**
- ▶ **Cadastral**
- ▶ **Boundaries**
- ▶ **Hydrography**
- ▶ **Utility-Telecom**
- ▶ **Economy**
- ▶ **Health**

Goto Address	X	Y
Goto 5400 ETTA BURKE CT, RALEIGH, NC 27606	078 43 00.74 W	35 47 18.03 N



Zoom

Query

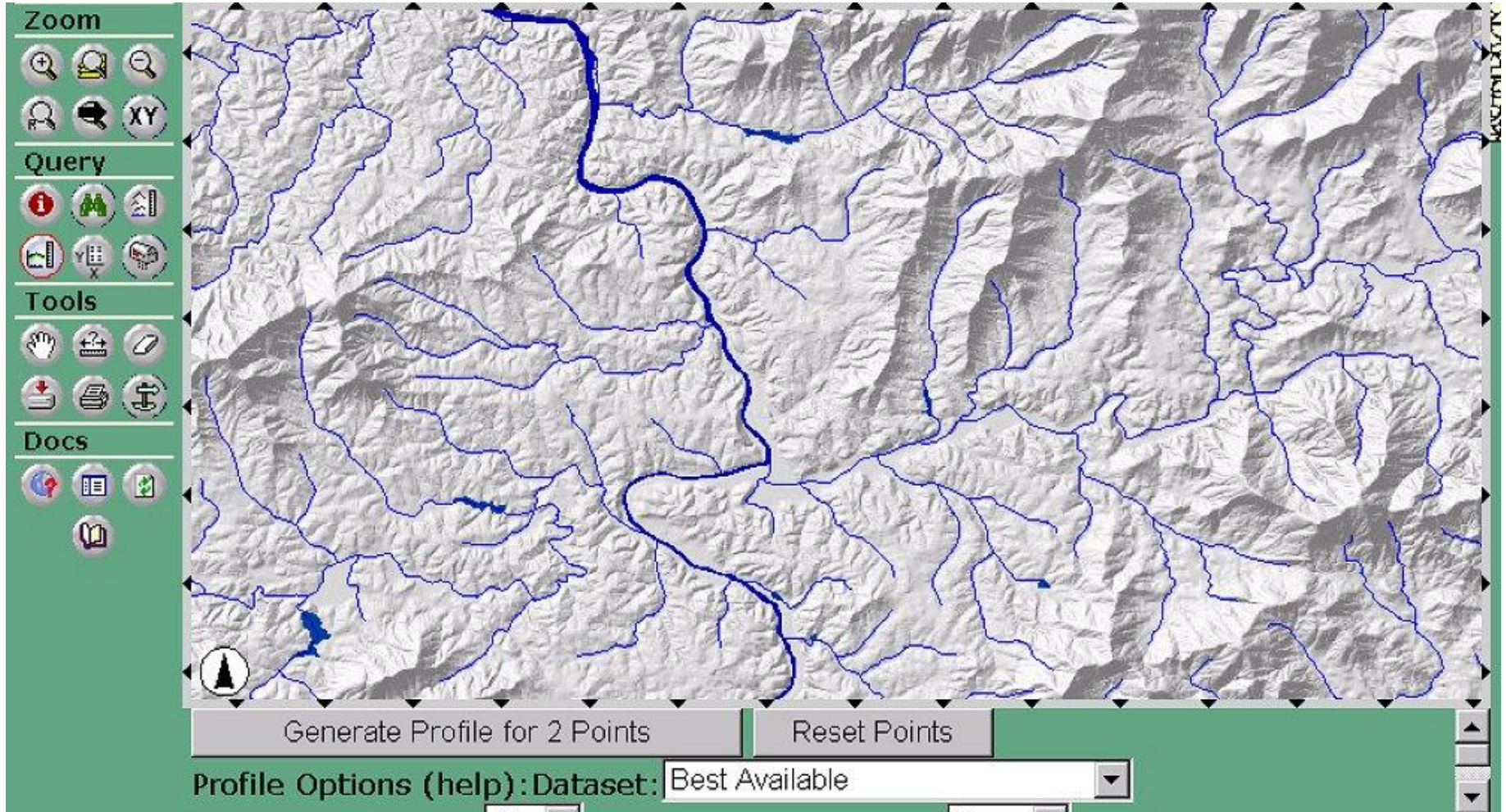
Tools

Docs

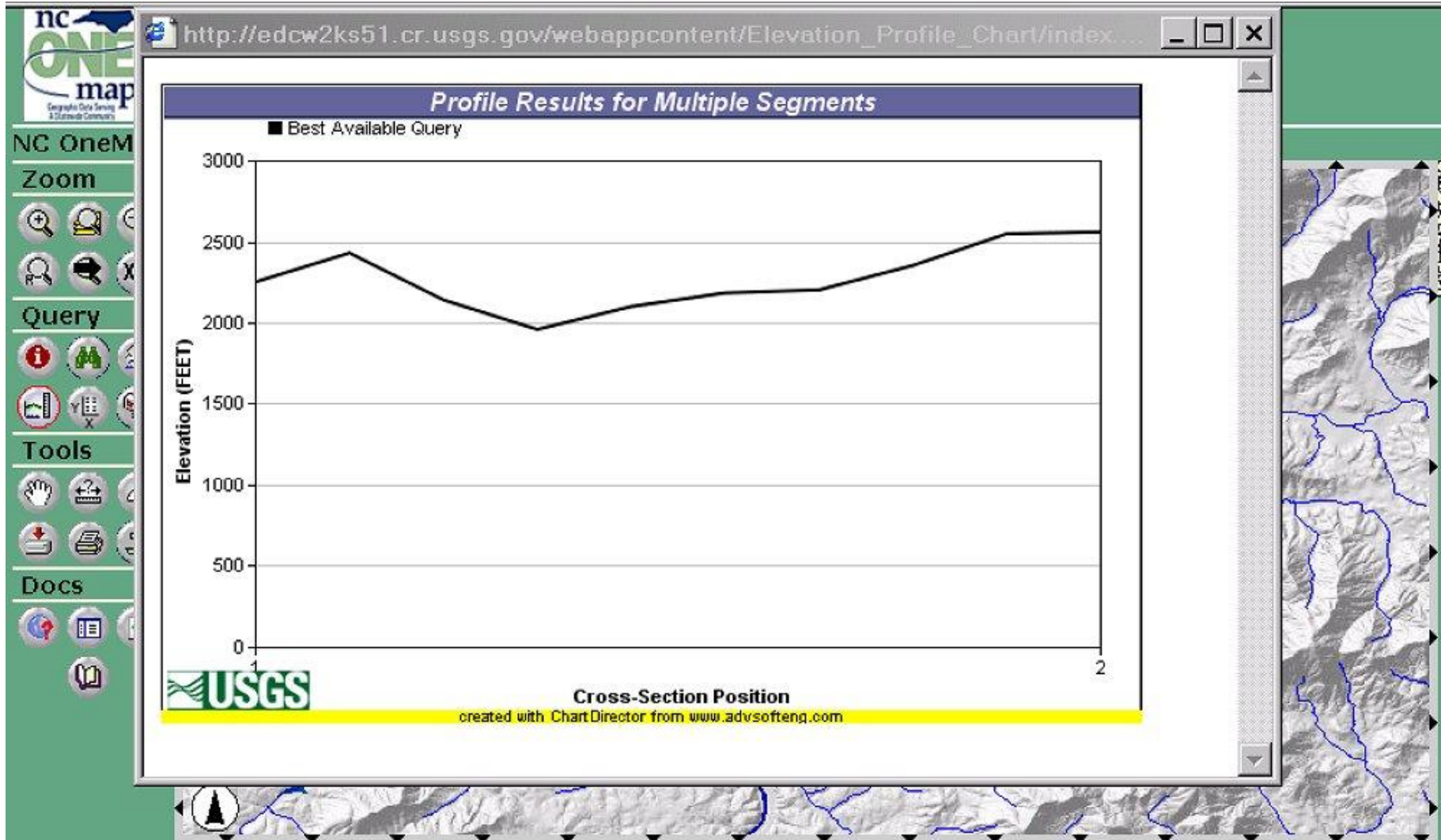
WEBMAP.MESSAGES
Measure Totals cleared.

- USGS RAD
- Water Bodies
- Wetland Polygons (USFWS)
- Utility-Telecor
- Economy
- Health
- Environment
- Socio-Demographic
- Bio-Habitat
- Geophysical
- Weather
- Land Cover
- Imagery-Basemap
- Elevation**
 - NED Shaded

Asheville region with shaded relief and major streams



Elevation Profile tool request



Elevation Profile tool result

Zoom



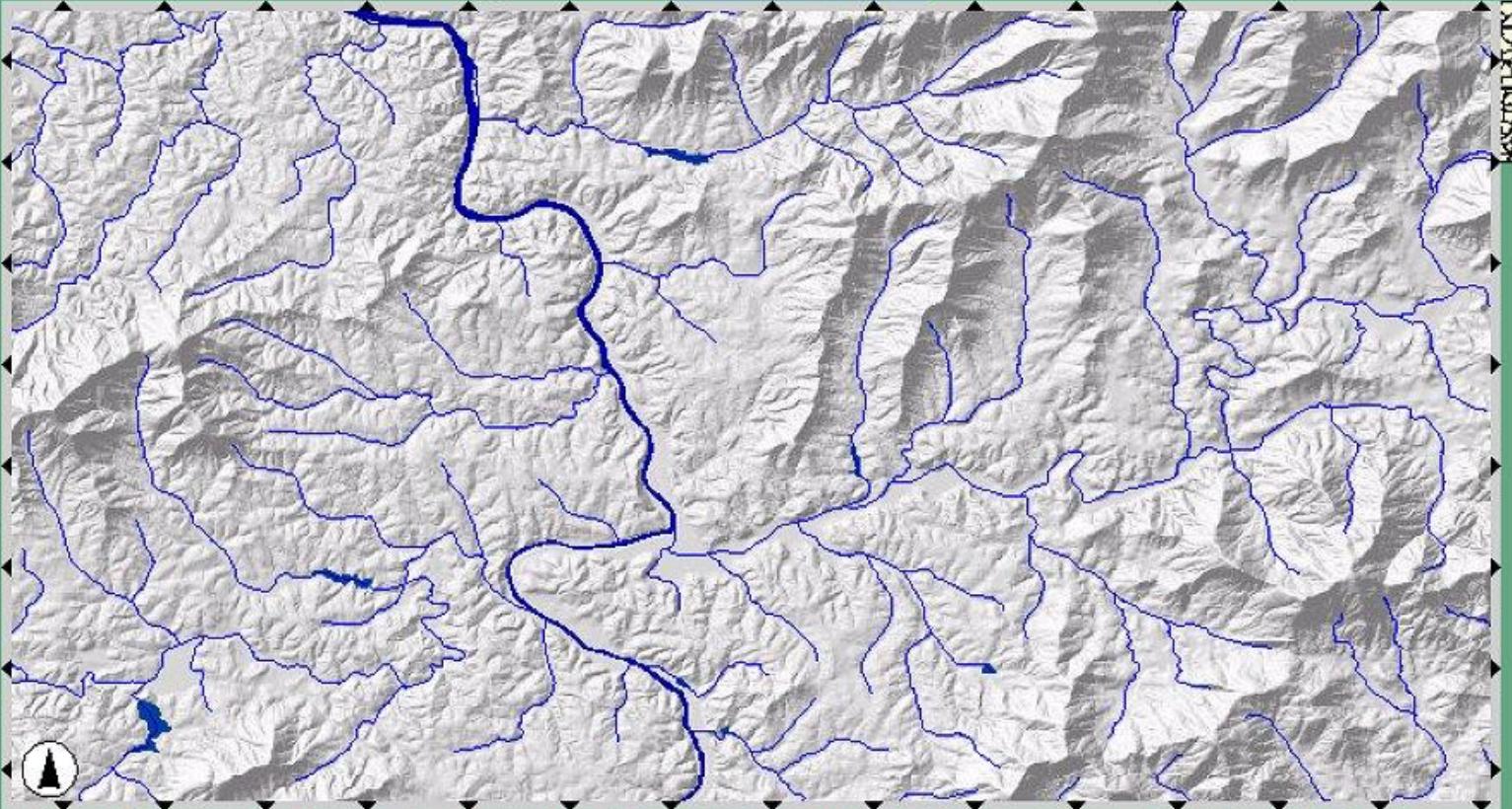
Query



Tools



Docs



Elevation: 2665.19 FEET Latitude: 35 36 19.57 N Longitude: 082 32 14.77 W
Data Source: NED CONTIGUOUS U. S. 1/3E ARC SECOND ELEVATION DATA

Elevation Query tool result





The National Map

NC OneMap Viewer [Back to the Main Page](#) [The National Map Viewer](#)

Zoom

⊕ ⊖ XY

Query


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Tools

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Docs

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Geophysical

▶ **Weather**

▶ **Land Cover**

▶ **Imagery-
Basemap**

Wake Co, NC
Orthophotos
(1999)

Fall 2003 NC
2ft Ortho

Urban Area
Mosaic:
Coverage
Index

Urban Area
Mosaic

NC DOQQ CIF

Landsat Mosa

▶ **Elevation**

Elevation: 360.15 FEET Latitude: 35 46 48.92 N Longitude: 078 38 20.00 W

Data Source: NED CONTIGUOUS U. S. 1 ARC SECOND ELEVATION DATA

Elevation Query tool result – Old Capitol Building

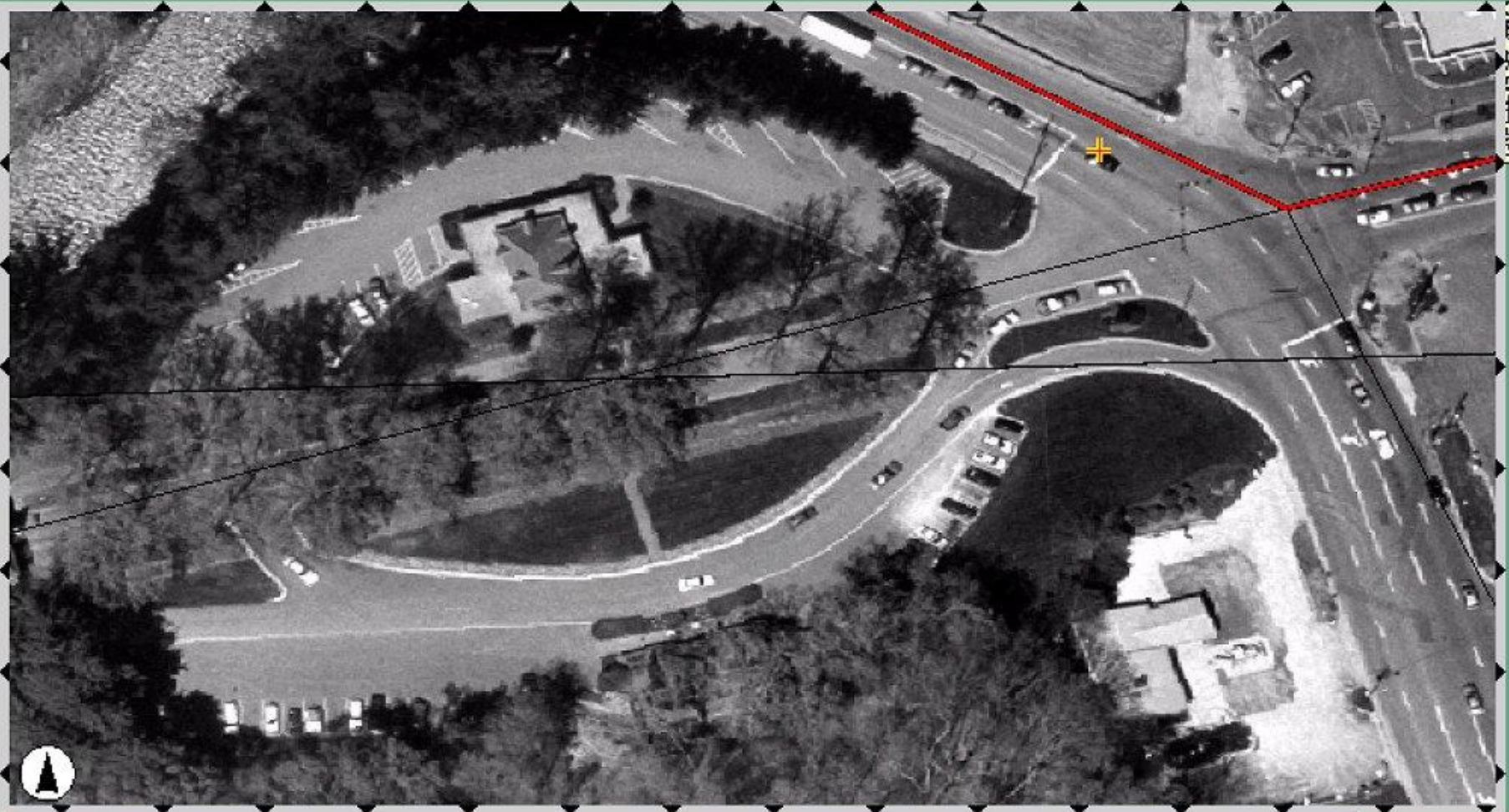
The image displays an interactive web-based map interface. The main map area shows a topographic view of the Asheville region in North Carolina, with a network of orange lines representing utility or telecommunication infrastructure. Labels on the map include Weaverville, Asheville, Enka, Biltmore Forest, Skyland, Swannanoa, Black Mountain, and Gerton. A legend on the right side of the map lists several data layers: Wetland Polygons, Index, Utility-Telecom, Economy, Health, Environment, Socio-Demographic, Bio-Habitat, Geophysical, Weather, Land Cover, Imagery-Based, and Elevation. The 'Elevation' layer is currently selected and checked, with a sub-option for 'NED Shaded (second)'. Below the legend is a small inset map of the United States with a red dot indicating the location of Asheville. At the bottom of the interface, there are search fields for 'Street', 'City', 'State', and 'Zip', along with a 'Show Labels?' checkbox. The search fields contain the following information: Street: 1 Approach Rd, City: Asheville, State: NC, Zip: 28803.

Street: 1 Approach Rd Show Labels?

City: Asheville State: NC Zip: 28803

- Wetland Polygons
- Index
- Utility-Telecom
- Economy
- Health
- Environment
- Socio-Demographic
- Bio-Habitat
- Geophysical
- Weather
- Land Cover
- Imagery-Based
- Elevation
 - NED Shaded (second)
 - USGS Shaded

Address Lookup tool



Goto	Address	X	Y
Goto	1 APPROACH RD, ASHEVILLE, NC 28803	082 32 41.33 W	35 34 01.87 N

Address Lookup tool result – Biltmore Estate entrance

NC OneMap Viewer

[Back to the Main Page](#)

The National Map Viewer

Zoom



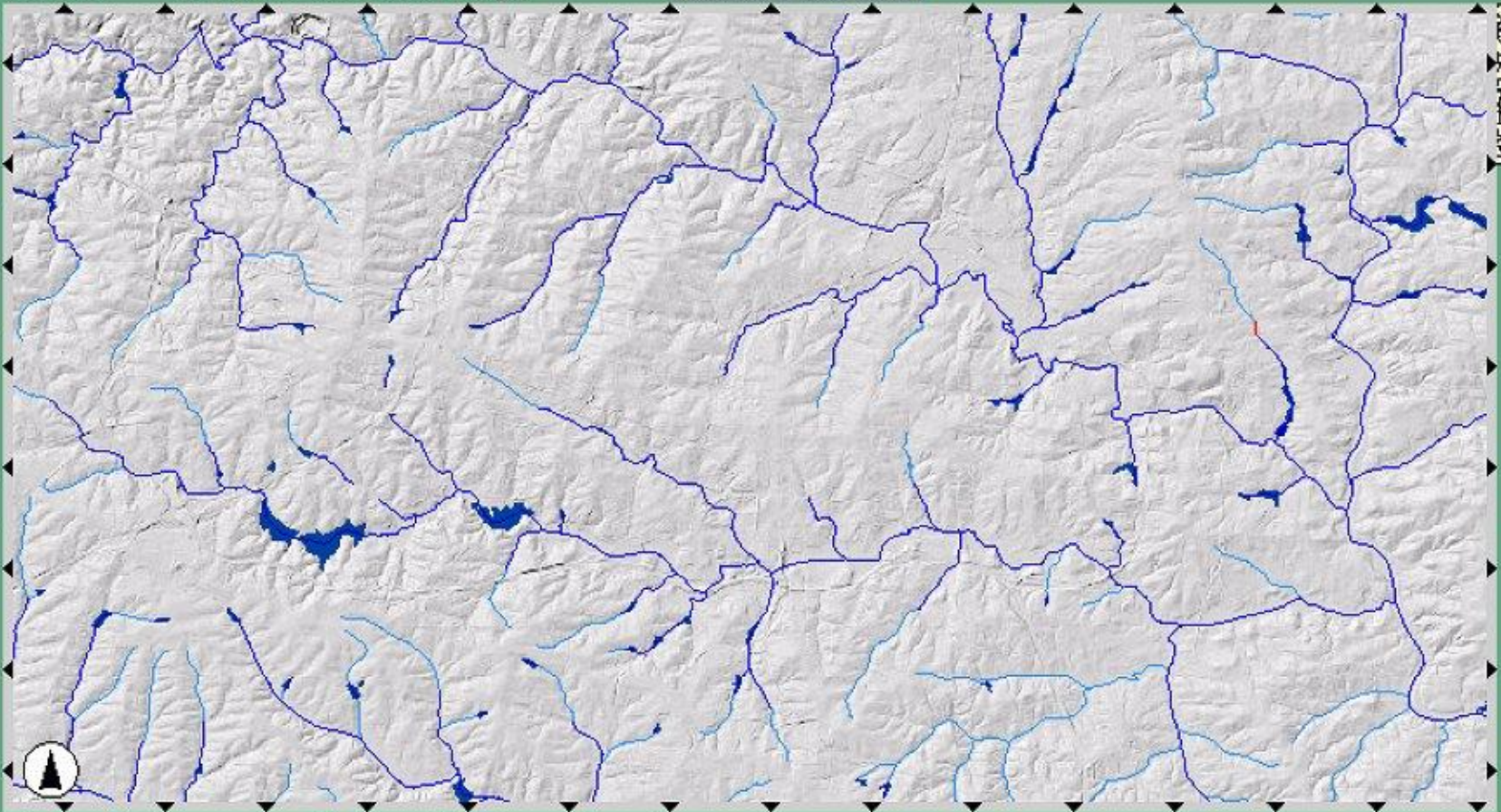
Query



Tools



Docs



Select Layer to Extract/Download:

Select Layer to Extract/Download

Select Layer to Extract/Download

NED Shaded Relief (1/3 arc second)

USGS RAD Water Bodies

USGS RAD Streams

National Atlas County Boundaries

available and are visible in the current extent are listed here.


SDDS Request Summary Page

Help!

Your data request consists of **1 product(s)**, broken into **1 individual piece(s)**. The data will be delivered through an **on-line download interface**. The 'Modify Data Request' button will allow you to specify different formats, products, or media. Clicking on the name of the Product will allow you to order the entire dataset from pre-mastered originals using the EROS Data Center Order pages. You may bookmark this page to return to this data request and download the same pieces.

Modify Data Request

Data Extraction Request Pieces:

Product	Southwest (Bottom Left) Corner	Northeast (Top Right) Corner	Size (MB)	Link
1/3" NED - ArcGrid format				
	35.717123 N, 78.764232 W	35.849620 N, 78.516225 W	16	Download

Data Extract tool request summary

Goals of Strategic Plan

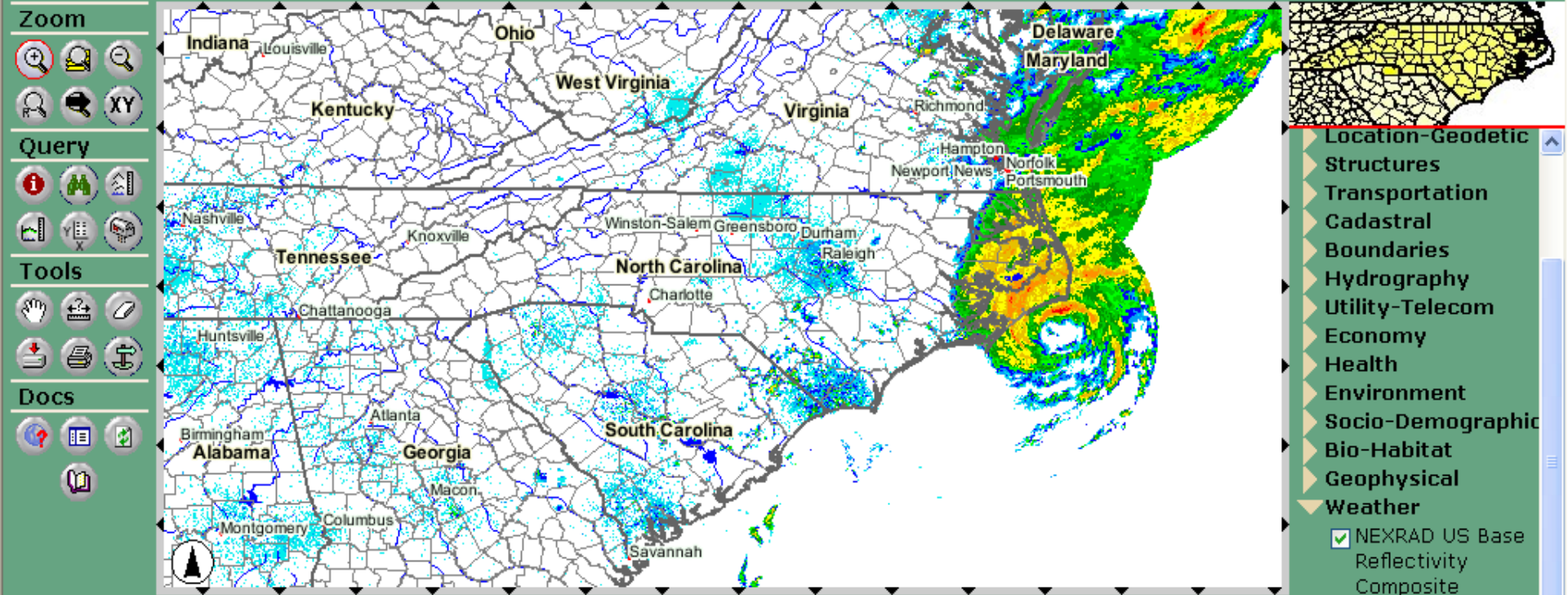
- ❖ Establish NC OneMap foundation
- ❖ Capture the major investments needed
- ❖ Identify needs for maintenance of the resource
 - ❑ Data
 - ❑ Infrastructure: hardware, software, applications, system hosting services, staff

Benefits of 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



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



- Location-Geodetic
- Structures
- Transportation
- Cadastral
- Boundaries
- Hydrography
- Utility-Telecom
- Economy
- Health
- Environment
- Socio-Demographic
- Bio-Habitat
- Geophysical
- Weather
 - NEXRAD US Base
 - Reflectivity
 - Composite
- Land Cover
- Imagery-Basemap
- Elevation

- Zoom in for higher resolution data -

Benefits of NC OneMap

- ➊ More efficient use of finite staff resources across all governments
- ➋ Better, more consistent products from an integrated data resource

NC OneMap

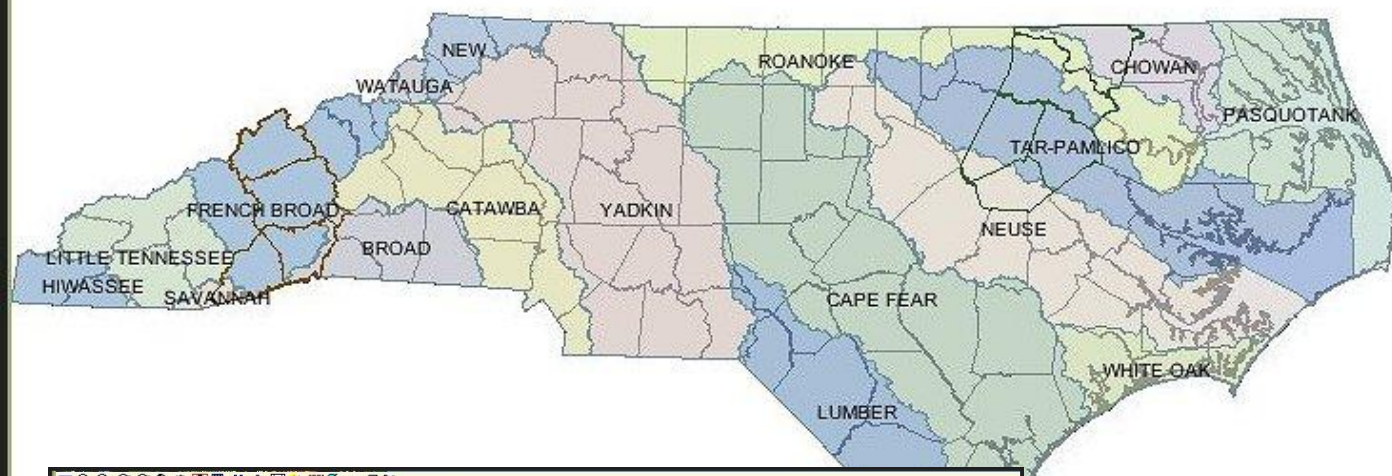
- ⊕ Showcase what is available
- ⊕ Expose what is missing
- ⊕ Framework for custom map viewers

What About APNEP?

- ➊ Approach 1: Add more data to NC OneMap
- ➋ Approach 2: Create a “topical viewer” that features selected themes, derived data and custom functions

North Carolina Conservation Land Mapper

Promoting the Conservation of North Carolina's Natural Resources



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

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

LAND_ID	MANAGEMENT	MA_TYPE	OWNER	OWNER_TYPE	TRA
829804751372	NATIONAL AUDUBON SOCIETY	CONSERVATION GROUP	NATIONAL AUDUBON SOCIETY	CONSERVATION GROUP	PERMAN

- High Capacity Reservoirs
- Water Supply Watershed
- Local Watershed Plans
- Targeted Local Watersheds
- Subbasins
- River Basins
- Hydrologic Units
- Floodplains
- Habitats
 - Natural Heritage Element of
 - Designated Trout Waters
 - Anadromous Fish Spawning
 - Fisheries Nursery Areas
 - Cond. Approved Shellfish
 - Closed Shellfish Harvesting
 - Significant Aquatic Endang
 - Significant Natural Heritag
 - Secondary Ecological Area
 - Primary Ecological Areas
 - Southeastern Ecological P
- Legislative Districts

Refresh Map

Auto Refresh

What are the topics?

- ⊕ Shoreline
- ⊕ Land cover
- ⊕ Impervious surface
- ⊕ Projects
- ⊕ Others _____

Who are the users?

- ⊕ Coastal managers
- ⊕ Conservation organizations
- ⊕ Public policy and advocacy
- ⊕ Research and analysis
- ⊕ Others: _____

What are the common questions and requests?

- ❖ Where are water quality improvement opportunities?
- ❖ Where are conservation opportunities?
- ❖ Where is development planned or most likely to occur?
- ❖ Others _____

Thank you!

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919-733-2090

www.nconemap.net