

Source Water Protection Planning in NC

HB894 Stakeholder Meeting
December 16, 2014

Rebecca Sadosky, PhD

Overview

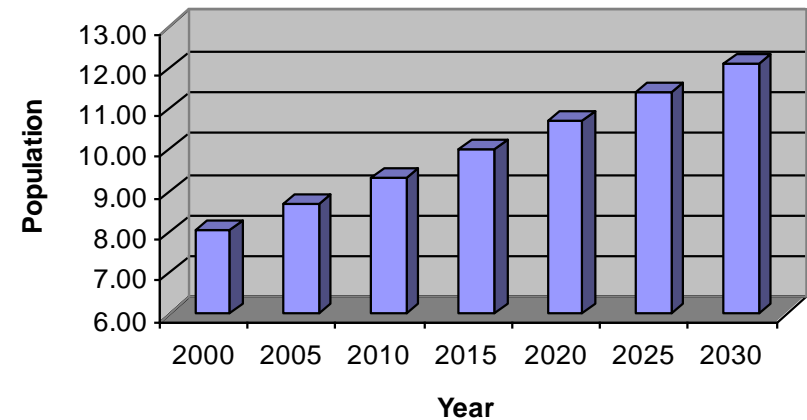
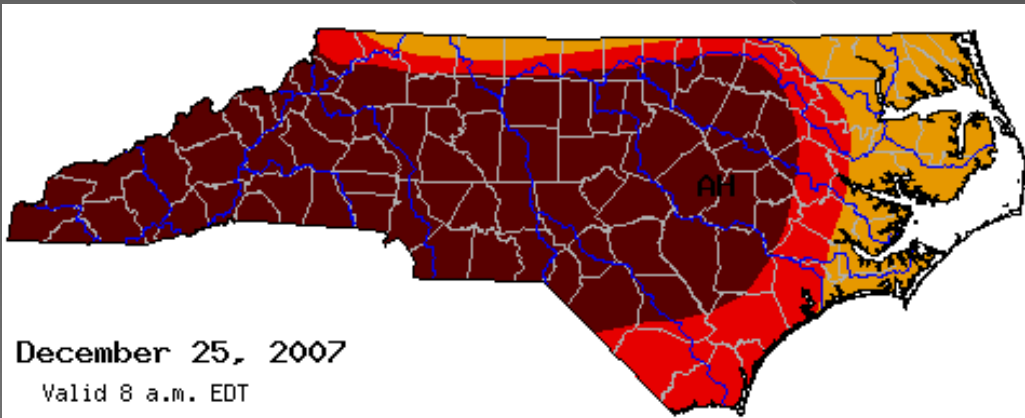
- ◉ Current State of Affairs
- ◉ SWPP Process
- ◉ SWPP Resources/Tools
- ◉ Success Stories – Approved Plans

Current State of Affairs

- ◉ Recognized by EPA as a top strategy
- ◉ Procedures already exist
- ◉ Supporting data is available
- ◉ Economic incentives are available

Current State of Affairs

- Politically correct
- Increasing demand on limited resource



Motivation



SWPP Process

- Form a local SWP development team
- Examine your source water assessment
- Inventory potential contamination sources
- Define focus areas and action items
- Develop a contingency plan
- Create a schedule for implementing the plan
- Submit the plan for approval

SWPP Available Resources

- ◉ Guidance manual
- ◉ Supporting data - tools
- ◉ Economic incentives
- ◉ State personnel
- ◉ NCRWA specialist

SWPP Tools

- ◉ SWAP report
 - > Watershed areas
 - > PCSs
- ◉ SWAP application
- ◉ Project locator

SWAP Report – Watershed Areas

Query/Selection Results - Google Chrome

about:blank

Watershed Boundary

ZONE	EPA Source ID	PWS_ID
WAA	58	0304010
WAA	88	0377109

Critical Area (NA for WS-I)

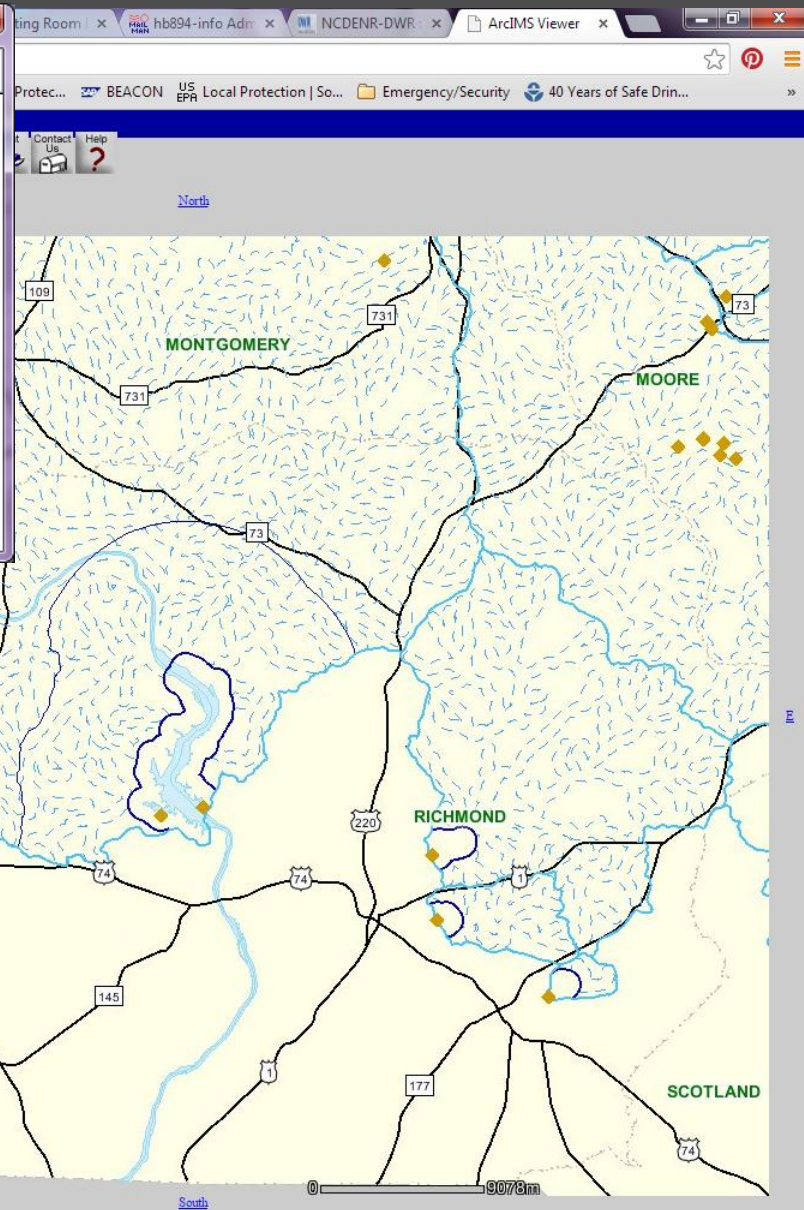
ZONE	SRC_NAME	PWS_ID
CDS	PEE DEE RIVER	0304010
CDS	PEE DEE RIVER	0377109

Hydrology

LABEL	FIP S
421	153
421	7

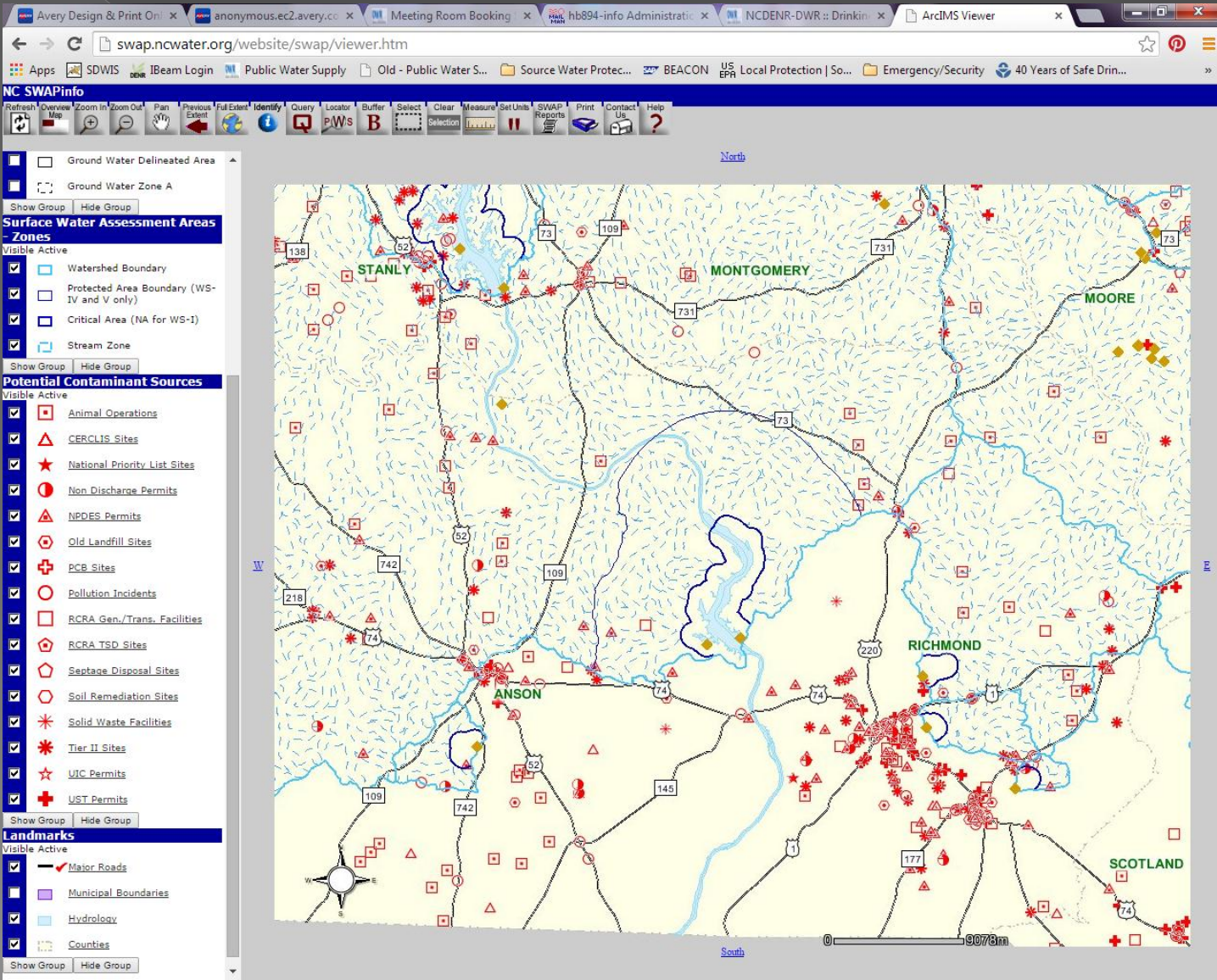
Counties

COUNTY NAME	CO_ABBR	ACRES
ANSON		343581.743
RICHMOND		306888.518



- Ground Water Delineated Area
- Ground Water Zone A
- Show Group Hide Group
- Surface Water Assessment Areas - Zones**
- Visible Active
- Watershed Boundary
- Protected Area Boundary (WS-IV and V only)
- Critical Area (NA for WS-I)
- Stream Zone
- Show Group Hide Group
- Potential Contaminant Sources**
- Visible Active
- Animal Operations
- CERCLIS Sites
- National Priority List Sites
- Non Discharge Permits
- NPDES Permits
- Old Landfill Sites
- PCB Sites
- Pollution Incidents
- RCRA Gen./Trans. Facilities
- RCRA TSD Sites
- Septage Disposal Sites

SWAP Report - PCSs



SWAP Report - PCSs

swap.ncwater.org/swap_app/pdfreports/0304010_6_11_2014_17_22.PDF

Apps SDWIS IBeam Login Public Water Supply Old - Public Water S... Source Water Protec... BEACON US EPH Local Protection | So... Emergency/Security 40 Years of Safe Drin...

**Table 4. (Cont.) Potential Contaminant Source Attributes
ANSON COUNTY WATER SYSTEM
PWS ID: 03-04-010, PEE DEE RIVER**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
Oldcastle Stone Products/Bonsal Mining-Richardson Mine	NCG020259	Permit Type	Mining Activities Stormwater Discharge COC
Oldcastle Stone Products/Bonsal Mining-Richardson Mine	NCG020259	PERMIT ISSUE DATE	10/15/2010
Oldcastle Stone Products/Bonsal Mining-Richardson Mine	NCG020259	Permit Expiration Date	12/31/2014
Oldcastle Stone Products/Bonsal Mining-Richardson Mine	NCG020259	Receiving Stream	Smith Creek
B V Hedrick-Lilesville Quarry	NCG020220	Permit Type	Mining Activities Stormwater Discharge COC
B V Hedrick-Lilesville Quarry	NCG020220	PERMIT ISSUE DATE	1/1/2010
B V Hedrick-Lilesville Quarry	NCG020220	Permit Expiration Date	12/31/2014
B V Hedrick-Lilesville Quarry	NCG020220	Receiving Stream	Savannah Creek
Blewett Falls Hydroelectric Plant	NCG500190	Permit Type	Non-contact Cooling, Boiler Blowdown Wastewater Discharge COC
Blewett Falls Hydroelectric Plant	NCG500190	PERMIT ISSUE DATE	8/3/2012
Blewett Falls Hydroelectric Plant	NCG500190	Permit Expiration Date	7/31/2015
Blewett Falls Hydroelectric Plant	NCG500190	Receiving Stream	PEE DEE RIVER

PWS ID: 03-04-010 10 June 11, 2014

SWAP Application

The screenshot displays the SWAP Application web interface. The browser address bar shows the URL `swap.ncwater.org/website/swap/viewer.htm`. The page title is "NC SWAPinfo". The interface includes a toolbar with various GIS tools such as Refresh, Overview Map, Zoom In, Zoom Out, Pan, Previous Extent, Full Extent, Identify, Query, Locator, Buffer, Select, Clear Selection, Measure, Set Units, SWAP Reports, Print, Contact Us, and Help.

The main content area features a map of North Carolina with various environmental layers overlaid. The map is surrounded by a compass rose and a scale bar indicating 108619m. The legend on the left side of the map is organized into several sections:

- Public Water Supply Sources**
 - Visible Active
 - Adjacent
 - Campground
 - Community
 - Non-Transient Non-Community
 - Transient Non-Community
 - Show Group | Hide Group
- Wellhead Protection Areas**
 - Visible Active
 - Wellhead Protection Areas
 - Show Group | Hide Group
- Ground Water Assessment Areas**
 - Visible Active
 - Ground Water Delineated Area
 - Ground Water Zone A
 - Show Group | Hide Group
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 - Visible Active
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 - RCRA Gen./Trans. Facilities
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 - Septage Disposal Sites

Project Locator

A screenshot of a web browser displaying the Project Locator application. The browser's address bar shows the URL `149.168.87.14/pws/`. The page header features the NCDENR logo and the text "North Carolina Division of Water Resources".

The main interface is divided into a search panel on the left and a map area on the right. The search panel includes the following sections:

- Search:** A text input field containing "512 N Salisbury St. Raleigh, NC" and a "Locate" button.
- Search by DD or DMS:** Input fields for "Latitude(DD)" (00.00) and "Longitude(DD)" (-00.00), with a "Handle DDCoords" button.
- Latitude(DMS) / Longitude(DMS):** Input fields for degrees, minutes, and seconds, with a "Handle DMSCoords" button.
- Clear / Reset Page:** Two buttons at the bottom of the search panel.

The map area displays an aerial view of a city street grid. A red pin is placed on the map at the intersection of W Peace St and N Salisbury St. The map includes street names such as Capital Blvd, Seaboard Ave, W Franklin St, and N Salisbury St. At the bottom left of the map, the coordinates "Long Lat: -78.644, 35.788" are displayed. The bottom right corner of the map area contains the text "NC OneMap, NC Center for Geographic Information and Analysis, NC 911 Bo." and the Esri logo.

Barriers

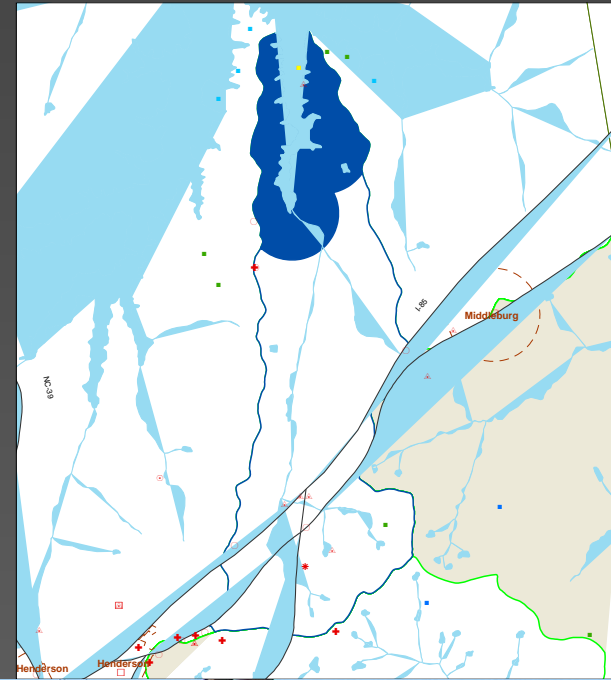
- ◉ Voluntary effort
- ◉ Length of process
- ◉ Staff turnover
- ◉ \$ for implementation

SWPP Plans

- 7 approved plans (3 incoming)
- 9 systems covered by plans
- 227,229 - population served by systems covered by plans

Kerr Lake Regional Water Sys.

- Population served: 50,000+
- 1st approved plan in NC
- Supplies water to Vance, Granville, and Warren Counties



Kerr Lake plan addresses:

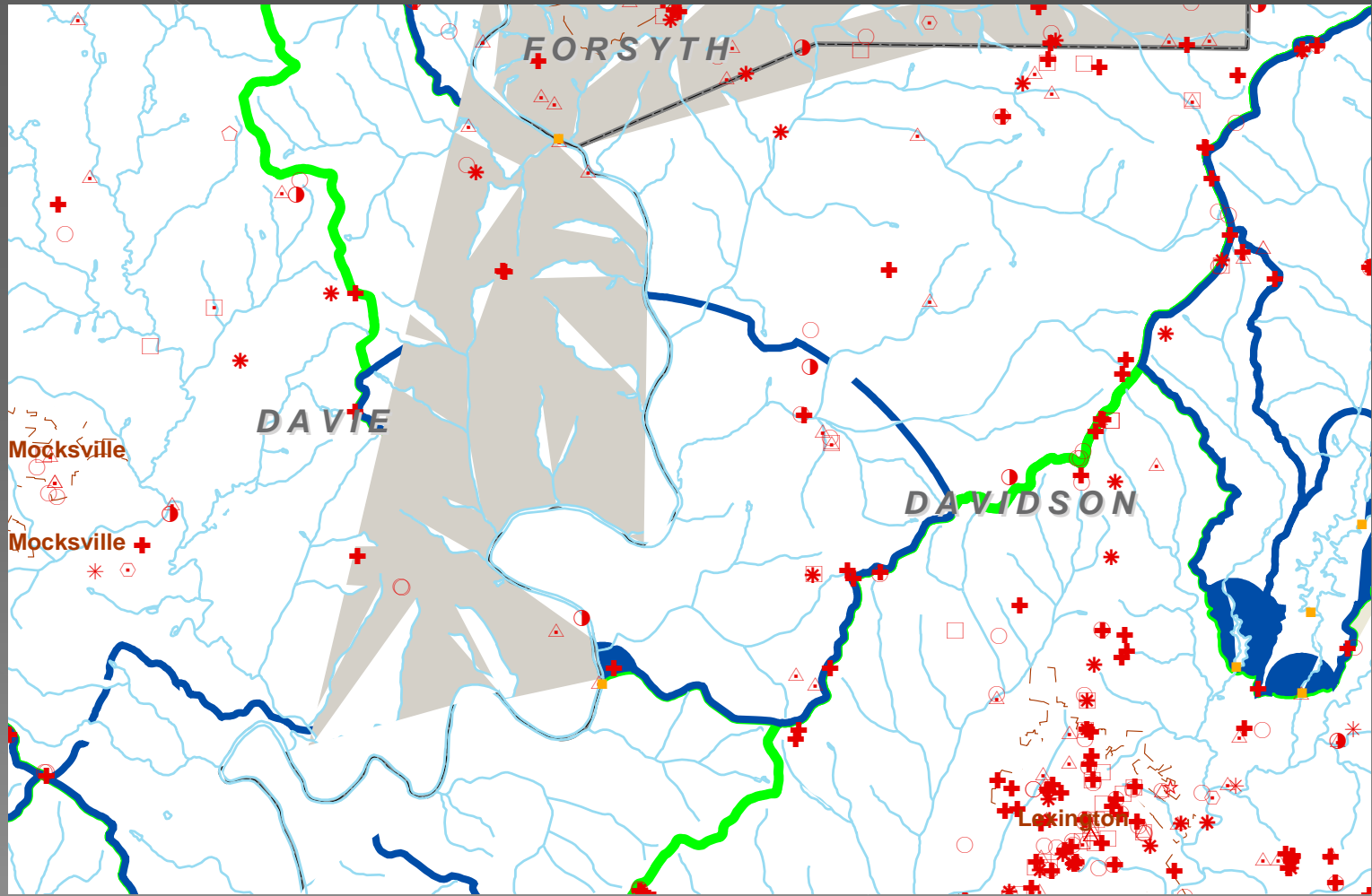
- > Public education campaign
- > Illegal stream dumping
- > Incentives program
- > Land acquisition
- > Pollution reduction ordinances



DAVIDSON WATER, INC.

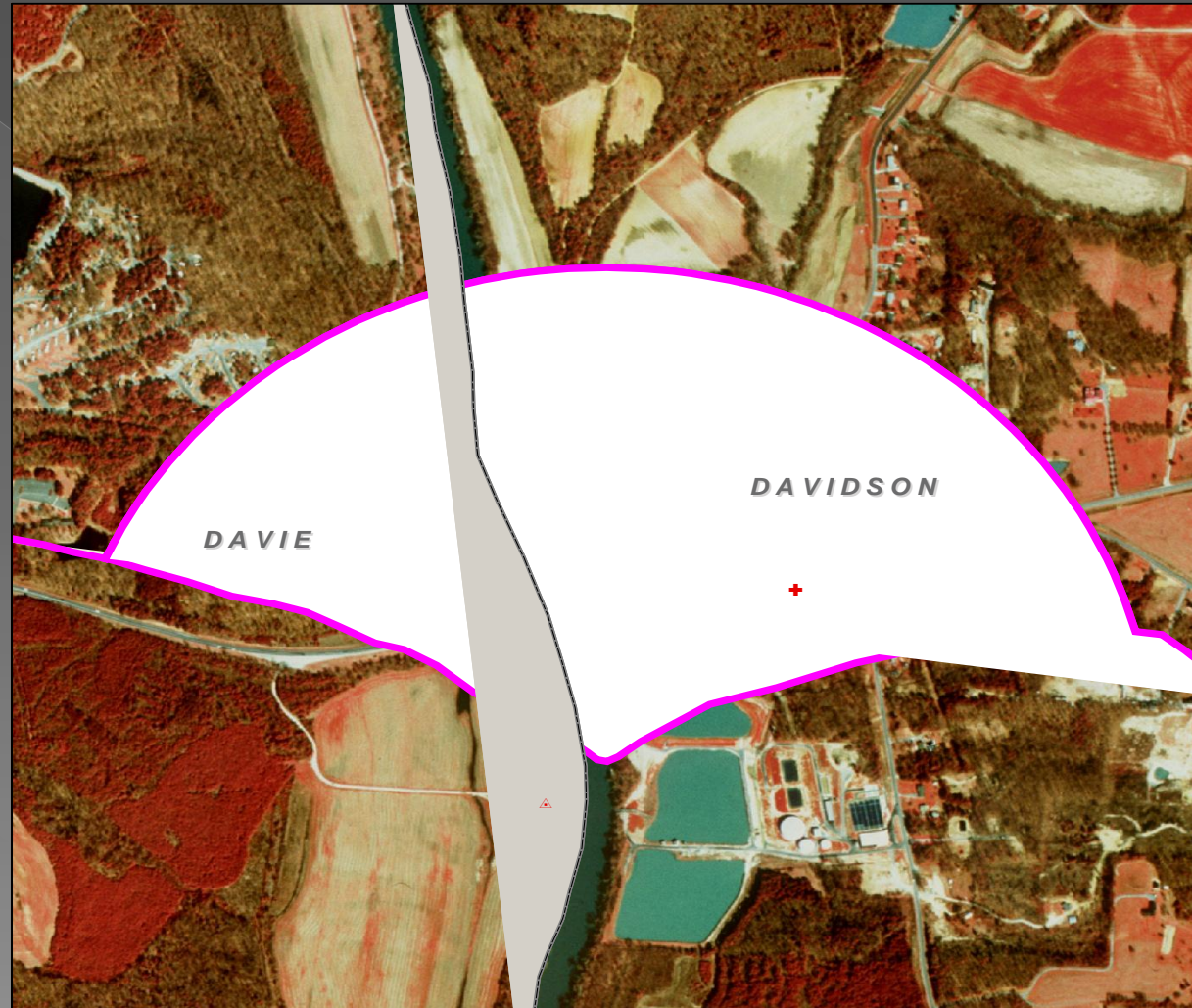


- Population Served: 130,000
- Yadkin River Intake




Davidson Water's Focus Areas

- Zoning – adopt new water quality policies
- Assist start-up of Yadkin Riverkeepers
- Education and outreach





Where main street
meets the mountains

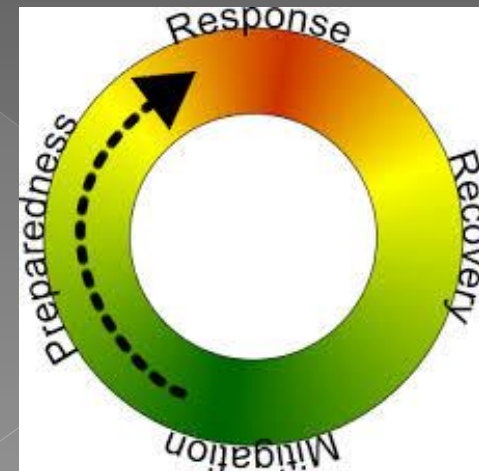


Marion

North Carolina

Marion SWP Plan Highlights

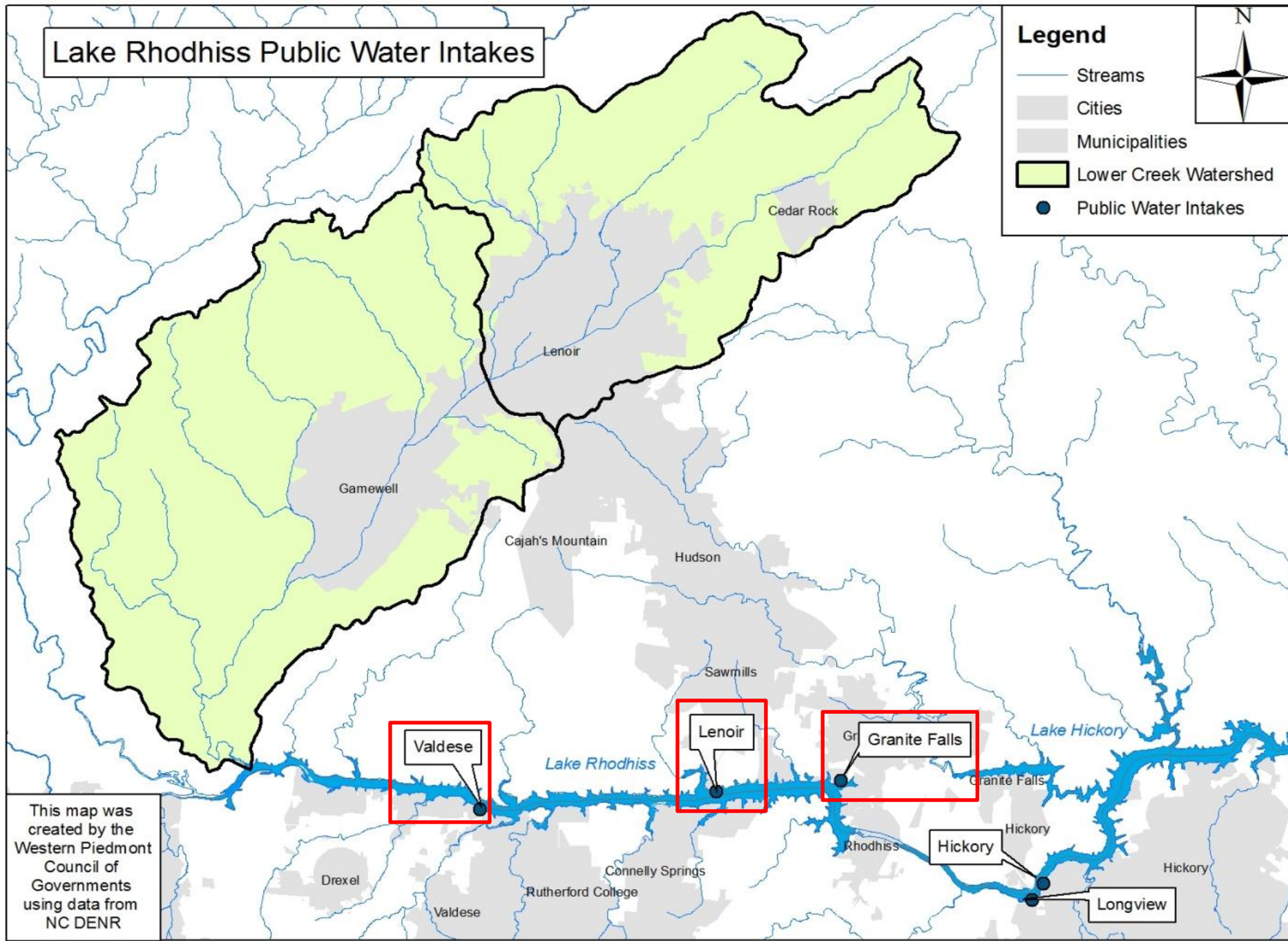

- Water quantity agreement (collecting data)
- Control of recreational activities
- Partnership with Extension Service
- Establish/maintain riparian buffers
- Emergency response planning



Lake Rhodhiss Public Water Intakes

Legend

- Streams
- Cities
- Municipalities
- Lower Creek Watershed
- Public Water Intakes



This map was created by the Western Piedmont Council of Governments using data from NC DENR

Lower Creek SWP Plan Highlights

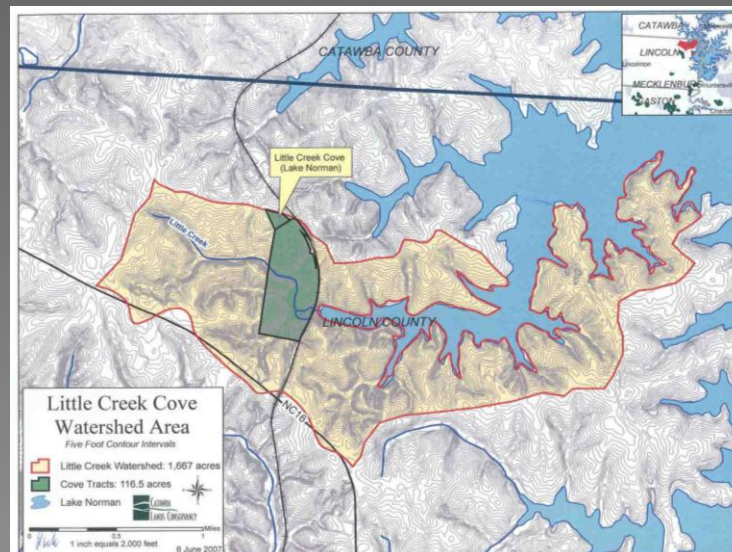
- Adopt comprehensive ordinances to protect water quality improvement (stormwater, land use, buffers, slope)
- Develop public education program (clean-ups, BMPs)
- Continue to seek funding for preservation, restoration, and BMP projects
- Continue water quality monitoring
- Develop waste drop-off programs



Lincoln County Protection Planning



- Land acquisition for conservation
- Create a SWP overlay district
- Enact stricter stormwater ordinances
- Assume buffer enforcement responsibility
- Reduce sewage lift station spills



Ivy River Watershed SWP Plan Highlights

- Develop a cooperative agreement between multiple municipalities
- Develop a watershed stakeholder group
- Expand water quality monitoring
- Increase education and community involvement
- Ag BMPs planning and installation
- Funding
 - > CWMTF
 - > 319



Pilot Mountain SWP Plan Highlights

- Pursue Ag BMPs
 - > Livestock
 - > Timber harvesting
- Increase sampling to identify sources of FC
- Public Education
 - > Signage
 - > Storm drain stenciling
 - > Support scouting projects
- Prioritize buffer enhancements
- Emergency response planning
- Emergency interconnection



Questions?

Rebecca Sadosky, PhD

Drinking Water Protection Program Coordinator
and Security/Emergency Contact

Public Water Supply Section, DWR

Rebecca.Sadosky@ncdenr.gov

(919)707-9096