

A person wearing a dark wading vest and light-colored shirt is standing in a shallow, rocky river. The person is looking down, possibly at something in the water or on the rocks. The river is surrounded by dense, lush green trees and foliage, creating a shaded and natural environment. The water appears to be flowing over rocks, creating some white water. The overall scene is a natural, outdoor setting.

NC Department of Environmental Quality
Division of Water Resources (DWR)
Basin Planning Branch

Michelle Raquet (michelle.raquet@ncdenr.gov)

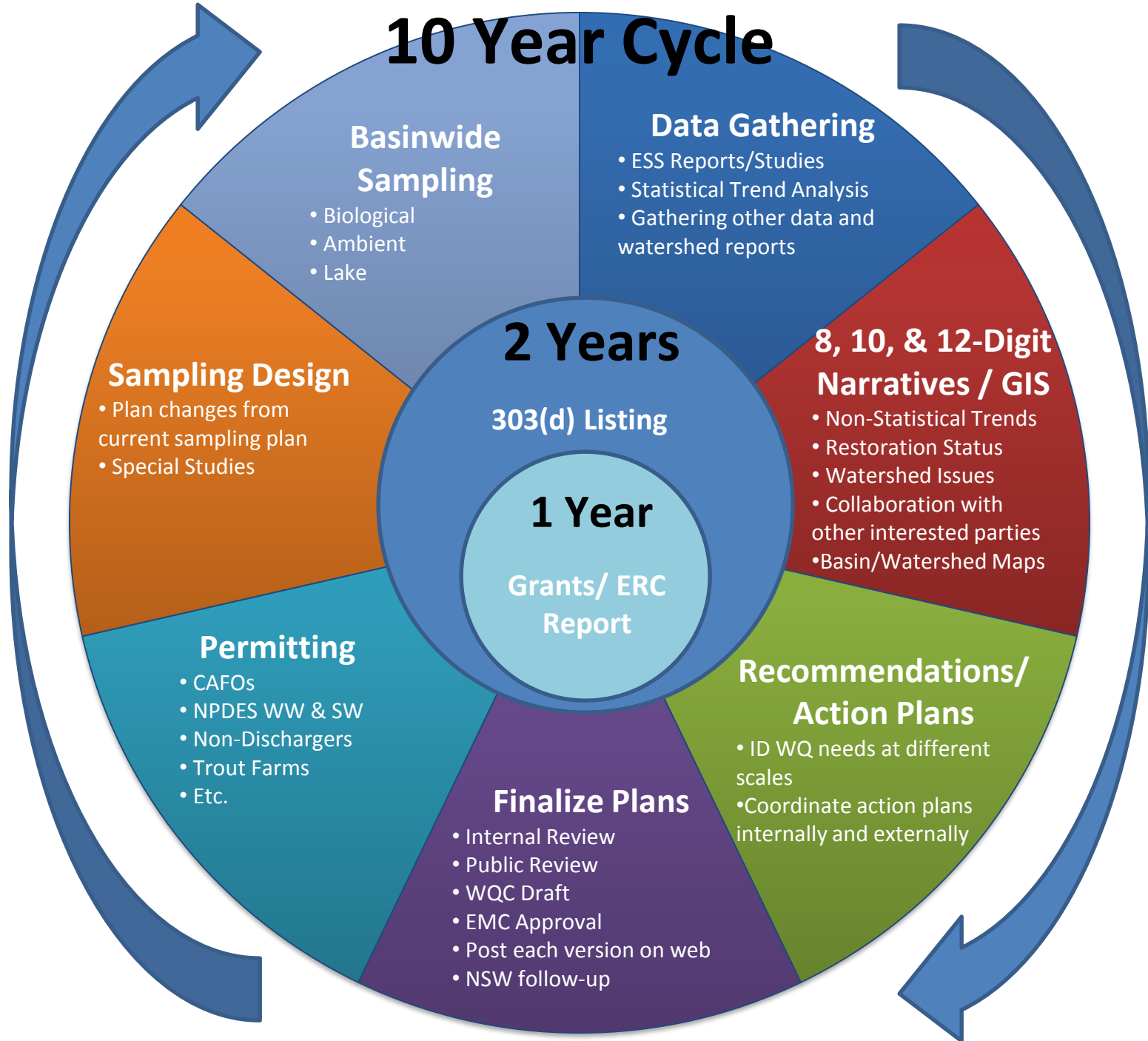
April 2018

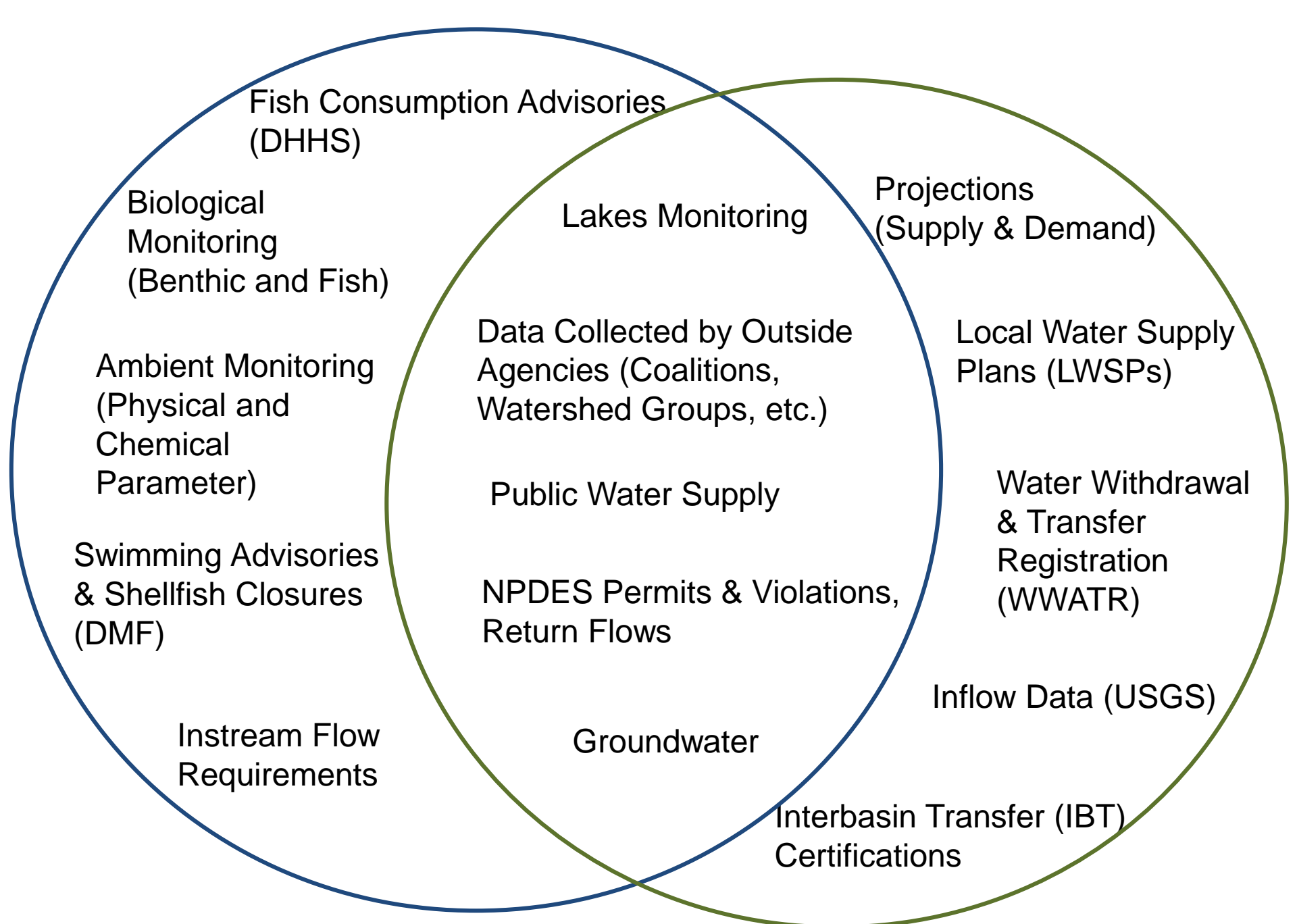
Water Resource Basin Plans

- Primary vehicle for consolidating data collected and issues identified by all water related resource agencies
- Provide a single location to present the water quality and water quantity related evaluations developed by state agencies
- Provide a platform for resource agencies to highlight water related issues that are important to each agency's mission
- Watershed-based approach to river basin water resource management
- Considers the cumulative impacts to all activities across a river basin (point and nonpoint sources of pollution)



10 Year Cycle





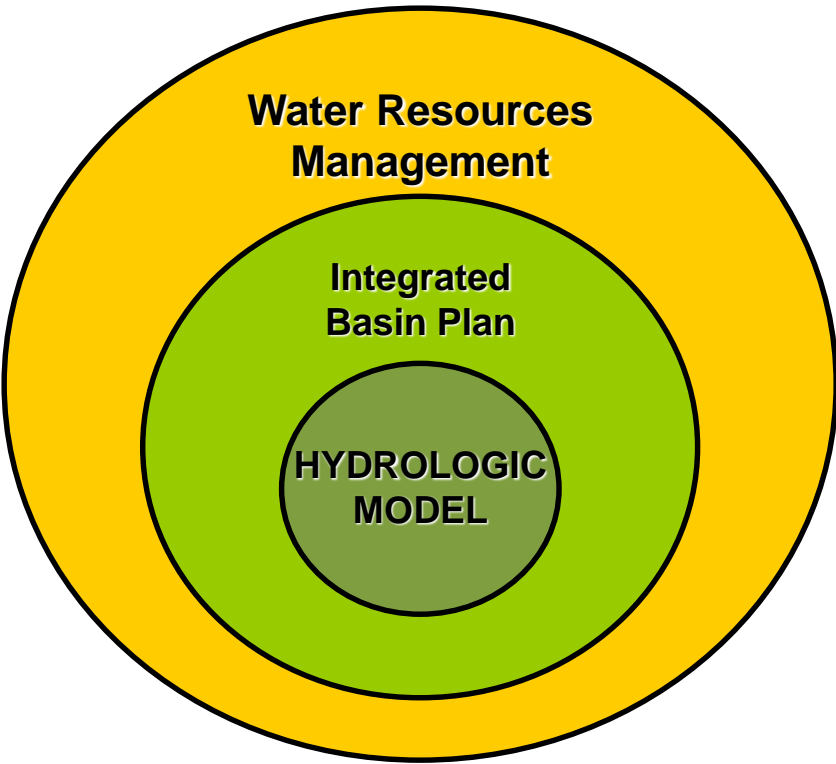
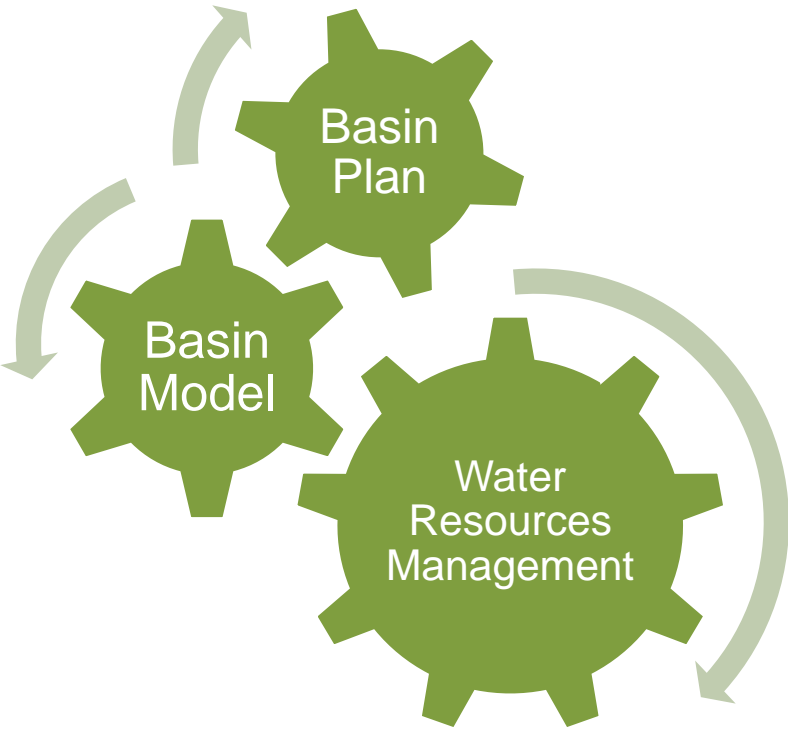
Surface Water Quality Assessment

- Waters are assessed based on parameters of interest and determined to be:
 - Supporting**
(meeting standards/criteria)
 - Impaired**
(exceeding standards/criteria)
 - Data Inconclusive**
(data does not allow for an assessment to be made)
 - No Data**
- Data that is collected is used to generate the Integrated Report (303(d)/305(b))

<http://deq.nc.gov/about/divisions/water-resources/planning/classification-standards/surface-water-standards#WQSTables>

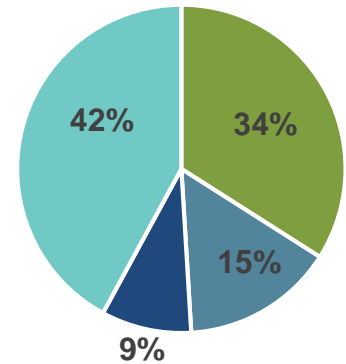
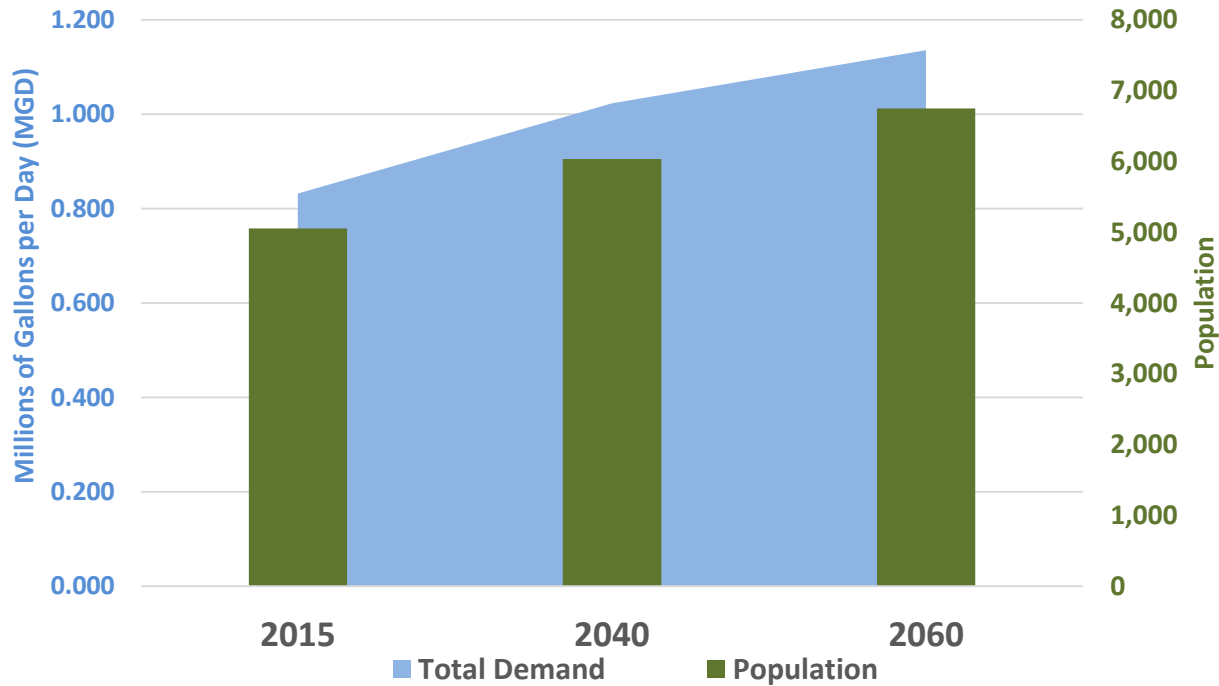


Water Resources River Basin Management



Water Quantity

Current and Projected Water Use and Population
Local Water Supply Plans (LWSP)



- Residential
- Non-Residential
- System Processes
- Unaccounted-for Water



Water Quantity Using Hydrologic Modeling

- Models need to answer 3 questions:
 - Locations and time when yield may be inadequate to meet all essential uses.
 - Locations and times when yield may be inadequate to meet all needs.
 - Locations and times ecological flow may be adversely impacted.
- Models are not rule-making and will not change any existing regulations nor will they add new regulations.

“All models are wrong, but some are useful”

Andrew Gelman, Professor of Statistics, Columbia University



Water Quantity Using Hydrologic Modeling

- Models can also answer water resource planning issues as they relate to:
 - Identifying alternative sources for water supply
 - Developing and implementing water shortage response plans (are triggers adequate or can they be improved)
 - Impacts related to generating hydroelectric power
 - Impacts to recreational areas (rivers, lakes, boat launches)



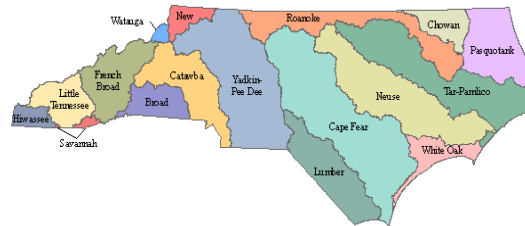
Basin Planning Branch

[Home](#) » [About](#) » [Divisions](#) » [Water Resources](#) » [Water Planning](#) » Basin Planning Branch

Basin Planning Branch

[Maps](#) | [Archives](#) | [About](#) | [Contacts](#) | [Other Resources](#)

Click a basin below for basin planning information.



[Basinwide Water Quality Plan Archives](#)

[Basin Water Resources Plan Archives](#)

[Ecological Flow Planning](#) & [Science Advisory Board](#)

Water Planning

Basin Planning

[About Us](#)

[Maps](#)

[Archives](#)

[Water Resource Plans](#)

[Staff Contacts](#)

[Other Resources](#)

[Cape Fear - Neuse Combined River Basin Model](#)

[Presentations](#)

[Use Restoration Watershed](#)

[Jordan Lake Water Supply Allocation](#)

<http://deq.nc.gov/about/divisions/water-resources/planning/basin-planning>



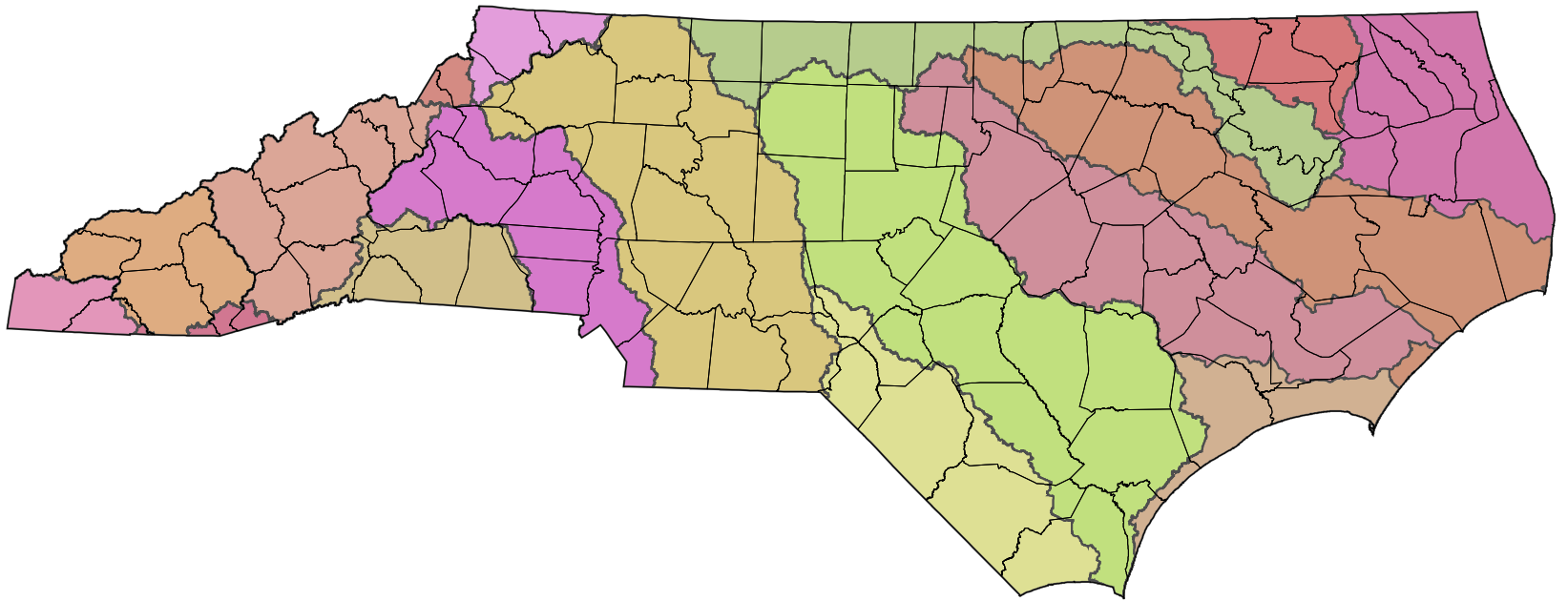
Michelle Raquet
michelle.raquet@ncdenr.gov
919.707.9006

Towns desperate for water



Above, Clint Beam, a Shelby firefighter, monitors a jury-rigged Shelby County water system to Shelby. Using the fire truck





KEY ISSUES THAT SHAPE CURRENT NC WATER PLANNING

Drought of 1998-2002

Towns desperate for water



Above: Clint Deary, a Shelby firefighter, monitors a jury-rigged system that County water system to Shelby. Using the fire truck as a pump.



2007-08 Drought

Fontana Lake (Sept 9-10, 2007)



2008 Report of the Water Allocation Study of the NC Environmental Review Commission



Interbasin Transfer

South Carolina vs. North Carolina - Key Facts

- ❑ Case originates in the Supreme Court. South Carolina seeks an equitable amount of the Catawba River which starts in North Carolina and flows into South Carolina.
- ❑ October, 2007 - Granted
- ❑ October, 2009 - Argued
- ❑ December, 2010 - Dismissed

New (July 2011) and Watauga (draft 2017) River Basins

- ❑ High volumes and velocity of stormwater
- ❑ Increased water temperatures and sedimentation
- ❑ Aging and/or failing septic tanks
- ❑ Livestock access to streams
- ❑ Lack of riparian buffers

