



Water Allocation Committee

Watauga River Basin Water Resources Plan (Information Item) July 2018

*Department of Environmental Quality
Division of Water Resources
Planning Section*



Watauga River Basin Water Resources Plan (draft 2018)

General Statute Requirements

- ☐ Basin plans shall be developed, reviewed and revised at least every 10 years under NC General Statute Chapter 143, Article 21 (§143-215.8B)
- ☐ Basin plans shall provide that all point and nonpoint sources of pollutants jointly share responsibility in reducing pollutants in the State's waters [§143-215.8B(b)(1)]
- ☐ Basin plans should also include information about all transfers in and out of the basin as required under G.S. 143-215.22H [§143-215.8B(a)(2)]



Watauga River Basin Water Resources Plan (draft 2018)

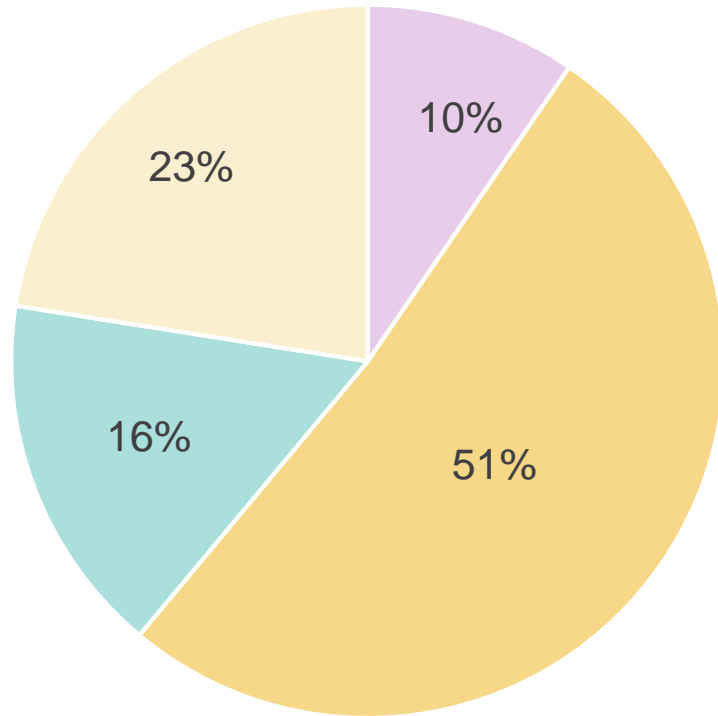
Outline

- ☐ General Chapters (HUC 8)
 - ☐ Geography, Land Use, Population
 - ☐ Nonpoint Source Pollution, Programs to Protect Water Quality
 - ☐ Permits
- ☐ Water Use
- ☐ Monitoring Data and Water Quality Assessment
- ☐ Watershed Chapters (HUC 10 and HUC 12)



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Annual Average Total Water Use (2015)



- Mining
- Public Water Supplies
- Golf Course (Recreation)
- Snow Making (Recreation)

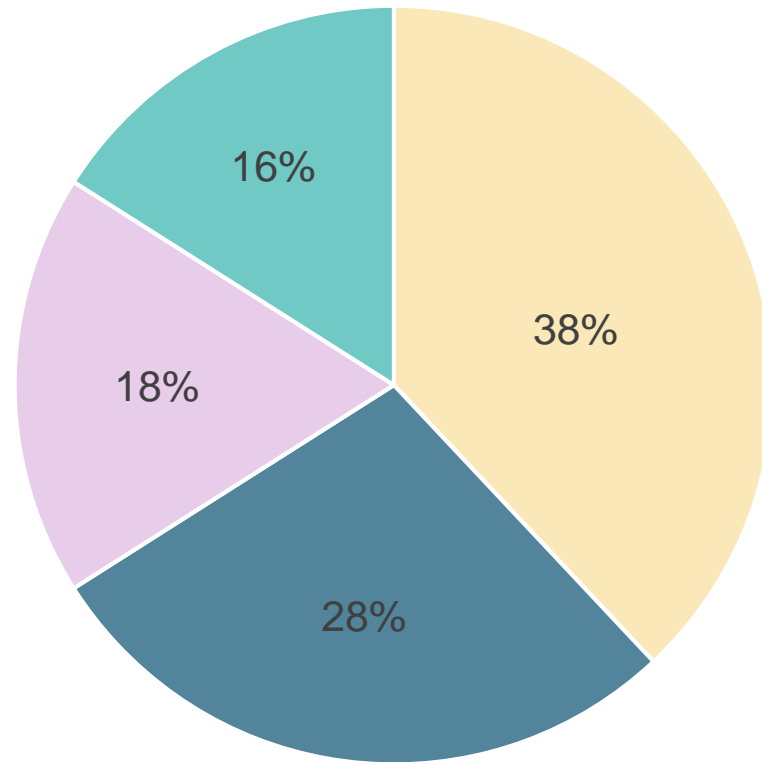
Total water use in the basin in 2015 was 2.029 mgd with the 51% being used by PWS systems or community wells.

Five PWS systems are required to submit local water supply plans (LWSP). Residential use is expected to **increase** from 35% to 41% of total use by 2060. Non-residential use, system processes and unaccounted-for water is expected to **decrease** by 1% to 3% by 2060.

There are no interbasin transfers, interconnections or emergency connections between the PWS systems. Each system is independent of the other due to terrain, elevation and physical location.

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Registered Water Use (2015)



- Snow Making
- Golf Course (Irrigation)
- Public Water Supply (PWS) System/Community Well
- Mining

Water Withdrawal and Transfer Registration (WWATR) Database

Withdraw more than 100,000 gallons per day or 1 mgd for agriculture operations.

Total number of facilities/entities: 13

Total Annual Average Withdrawn: 1.197 mgd

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- ❑ No ground water monitoring wells. Ground water monitoring wells can be used by DWR Ground Water Management Branch (GWMB) to estimate ground water availability and determine if the supply can support current and future demands.
- ❑ To understand how surface water withdraws can change water availability in the basin, a hydrologic computer model is being developed. A model can assist with planning for increased water use, assist with regulatory decisions on waste assimilative capacity and help manage resources during drought conditions. A hydrologic model is being developed for the Watauga, New and French Broad River basins.

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No issues detected x A story map f t

- Overview
- Population
- Land Cover
- Stream Flow
- Monitoring Data
- Watauga River Headwaters
- Dutch Creek
- Cove Creek
- Beech Creek
- Beaverdam Creek
- Elk River
- Basin Planning Website

Beaverdam Creek HUC 060101030304



Beaverdam Creek LF5 (Poor)
2013

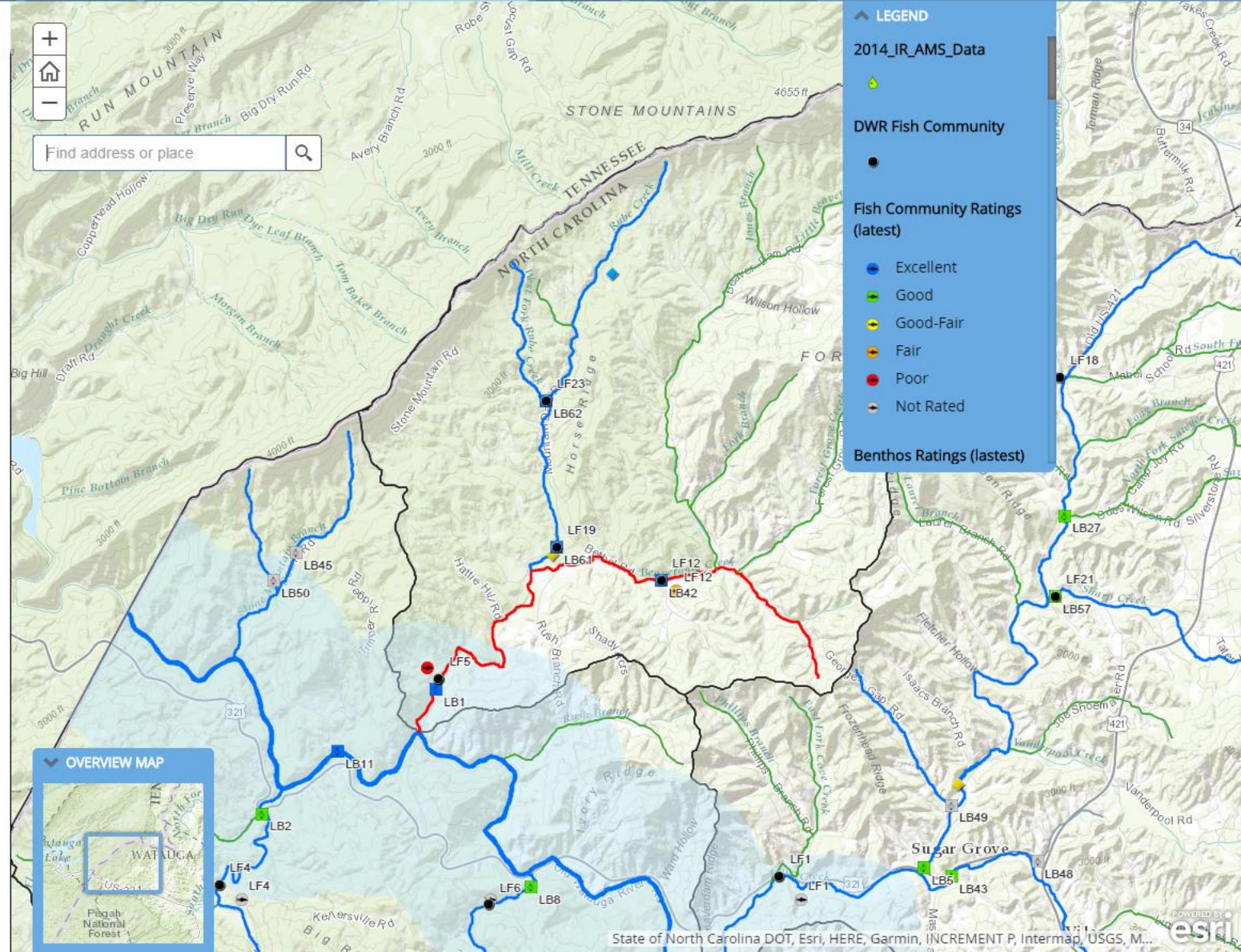
Land Use	
Forest	78.8%
Developed	3.3%
Agriculture	15.9%

Biological Sampling Sites		
Cycle 4	2 Benthic	2 Fish
Cycle 5	3 Benthic	3 Fish

Permits	
NPDES Wastewater Permit	1
Non-Discharge Permits	0
Stormwater Permits	0

Water Supply	
Public Water Supply Systems	1
Local Water Supply Plans	0
Registered to Withdraw Water	0

Beaverdam Creek encompasses just over 20 square miles. Land use is mostly forested with agricultural and rural residential properties scattered throughout and only one town - Bethel - located in the heart of the community. Agricultural lands are a mix of pasture, small row crops and fallow fields with row crops and animal grazing being the primary uses (WRP, 2014). Stone Mountain (Locust Gap) - located on the state line - is identified



A story map

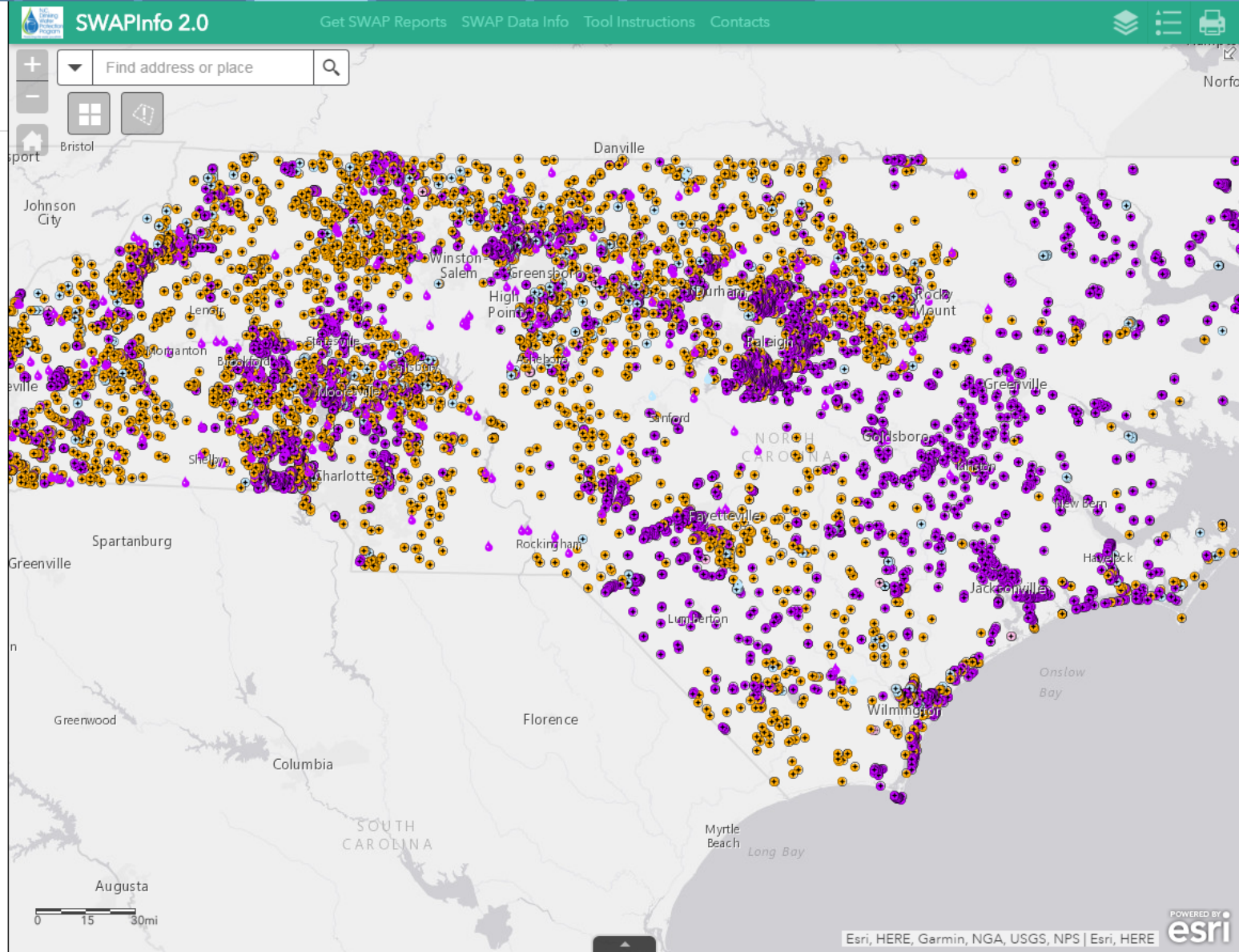
Beech Creek

HUC 060101030305

Water Use

North Carolina's Source Water Assessment Program (SWAP) provides detailed assessments of all public drinking water intakes across the state. The adjoining map provides general geographic locations of drinking water supply sources and includes a Susceptibility Rating. The Susceptibility Rating is used to indicate the relative risk of source contamination. There are three Public Water Supply (PWS) Systems located in the Beech Creek watershed. Two are community systems and serve an estimated population of 2,443 people. The third is listed is a non-community well. Out of these, the Town of Beech Mountain is required to submit a Local Water Supply Plan (LWSP) based on the number of connections and the population it serves. Residents not served by one of these systems rely on private ground water wells for drinking water.

In 2012, DWR determined that the town's LWSP could not be approved because the reported supply could not meet the current and long-term water supply needs of its customer base. (This includes a year-round and seasonal population.) The concern was formally documented in a memo sent to the town mayor in February 2014. In March 2014, the town passed a resolution requesting that the Town enter into an agreement with DEQ to identify water supply needs, sources and storage options and conduct the associated studies, environmental evaluations, and planning and budget estimates needed for acquiring a new or additional source for water supply.



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Next Steps

- ☐ Public Comment Period
- ☐ Address Public Comments
- ☐ EMC Final Approval



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Photos: DWR Biological Assessment Branch (BAB)

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