



Beech Mountain Water System Update – Why We Need the Lake Coffey Reservoir Project

What is the Town's current water supply and capacity?

Buckeye Lake is currently the Town's single source of water. State and federal regulations require the Town to release a regulated amount of water over the Buckeye Lake dam to ensure the health of the water system below the lake.

Buckeye Lake holds around 35 million gallons of water when full. The Town's average withdrawal of water from Buckeye Lake is about 470,000 gallons of water per day. Buckeye Lake has never been able to meet the Town's water needs during times of drought. In the summer months or when Town occupancy soars, up to 900,000 gallons of water a day are treated. The State estimates that Buckeye Lake can actually only yield an average of 210,000 gallons per day, which is why a secondary water source is needed.

In 2015, the N.C. Division of Water Resources confirmed that the single water source does not meet the needs of the Town and mandated that the Town work to secure a secondary supplemental water source. The Town has pursued many options, including wells, the Watauga River Intake Project and the Lake Coffey Reservoir Project.

Why was the Town recently placed under voluntary water restrictions?

The Town is often out of compliance with the regulatory minimum release requirements and has to negotiate with State agencies to minimize fines. The Town's water demand has only been met by retaining all water that does not go over the spillway. The recent voluntary water restrictions were enacted by the Town due to seasonal high water demand and lack of rain. The area has experienced drought like conditions in 16 out of 17 recent years and the Town has twice been within days of running out of water.

What is the status of the Town's current water infrastructure system?

The Town faces significant water loss within the distribution system due to its age and poor initial construction. The Town has a total of over 60 miles of main water lines. Currently, the Town loses about 60% of its water due to numerous leaks throughout the distribution system. Engineers estimate that water loss can be reduced to about 30% and the Town is actively upgrading its water distribution system.

Over the past ten years, the Town Council has taken aggressive steps to upgrade the water infrastructure system. A new \$4,800,000 state of the art water treatment facility was completed in 2017, which uses innovative technologies to increase the efficiency of water treatment and the quality of water. In 2021 the Town replaced 17,300 feet of water main lines. At present, construction is underway to replace 22,700 feet of water main lines. Another project underway is the replacement of approximately 350 service connections. In 2020 the Town replaced approximately 2.5 miles of old main lines during the Spruce Hollow Transmission Main Project. The Town has also drilled several wells, one of which was successful and will add about 100,000 gallons per day to the system, at a cost of over \$400,000.

In total, the Town is spending about \$2,000,000 annually upgrading the water and sewer systems. However, due to the myriad of problems within the system, the Town will need to spend about this amount each year for the foreseeable future. These upgrades are funded through a variety of source; including increased water and sewer rates, property tax increases, and state and federal grants. The Town uses a long range capital improvement plan and model to project future needs, their cost and how they will be funded.

Does the Town have enough water to meet current demand?

No. The Town's current and only water source, Buckeye Lake, is out of compliance with state and federal minimum release requirements every year. The Town's water demand has only been met by retaining all water that does not go over the spillway. The Town can only meet current demand by violating state and federal regulations. Twice within the past ten years the Town was within days of running out of water.

How has the Town's growth affected water demand?

Population growth on Beech Mountain has also contributed to the problem. Over the past five years, the Town's full-time population has increased from about 350 to 680. In the past two years, 69 new homes have been built. In addition, more people are working from homes on Beech Mountain and the short-term rental market has exploded. As a result, water demand has increased during all seasons.

What is the Lake Coffey Water Project?

The proposed project will build a dam and a 30 million gallon reservoir from two lakes which are fed by three streams and build a pumping station to transport the water from the new reservoir to the existing water treatment plant. The new reservoir will be constructed by linking two existing reservoirs, Lakes Coffey and Santis, and increasing their combined storage volume by excavation and building a larger dam. The design calls for two large pumps and a transmission line to the water plant. The project will also create a Town recreation area at the combined lakes.

What is the estimated time to complete the Lake Coffey Lake Santis Project?

The Town is currently working with state and federal authorities to finalize all necessary permits for the project. Final permits are expected by early 2024 and once funding is in place, the Town estimates that the project will be placed for bid next summer (2024) and completed within 30 months of bid.

How will this project be funded?

The project cost, estimated at around \$15,000,000, will be funded through a variety of sources. The Town has applied for both state and federal grant funding. It is expected that the current state budget will include some funding for the project. The Town has also applied for a FEMA grant, which should be decided by fall, 2023. Finally, the Town Council has voted to submit a twenty year \$15,000,000 general obligation bond referendum to voters in November. If approved, the bond proceeds can only be used, as necessary, to supplement other funding sources to complete the project. The bond's annual cost will be paid 70% from property taxes and 30% from increased water rates. In this manner, all property owners would pay for the benefits of the project.

What are some ways I can conserve water?

There are many ways you can help. Here are a few ways to conserve water every day:

- If you are hand washing dishes, fill your sink with water instead of letting it run while you're scrubbing.
- Turn off the tap while brushing your teeth. Water comes out of the average faucet at 2.5 gallons per minute. Don't let all that water go down the drain.
- Don't run the dishwasher/washing machine until its full. Those half loads add up to gallons and gallons of wasted water.
- Take shorter showers.
- Replace old toilets with new water efficient models.
- Get a rain barrel and have free water for watering your lawn and garden and washing your car.

For More Information

Please visit <http://Beechmtnwater.com> or contact Beech Mountain Town Hall at 828.387.4236.