



The New River Project

Why does Boone need a new water intake facility?

As a municipality, the town of Boone has a responsibility to provide clean water to its citizens. In 2004, a study revealed that Boone is rapidly approaching maximum capacity from its existing water sources. In 2005, the Town began a water conservation program, asking people to voluntarily conserve water. Some of the details of that effort follow.

When a water system reaches 80 percent of capacity, the N.C. Department of Environment & Natural Resources recommends a plan for expansion. When the system reaches 90 percent capacity, N.C. recommends the expansion be under construction. If not underway, the state could impose a moratorium on new water hookups.

Boone surpassed the 80 percent mark in 2006 and is projected to hit the 90 percent mark in 2009.

The town of Boone has a Tier 1 rating.
That means N.C. says Boone has less than a 100 day supply of water.

The Town is working to conserve water

Projections* show Boone's population will almost double over the next 50 years.

2010 = 15,953

2060 = 29,555

Projections* show the number of residences, businesses and other users of Boone's water system will more than double over the next 50 years.

2010 = 11,143

2060 = 27,722

In addition, the Town started a system of approving water requests on a case-by-case basis in order to monitor our ability to provide water.

In July, Boone accepted the governor's recommendation and raised water rates, so the people and businesses that use larger quantities of water will pay more for it.

** Projections calculated by W.K. Dickson using methodology approved by the N.C. Office of State Budget and Management.*

The proposed site on the South Fork of the New River is the best option for the water intake facility

Engineers from W.K. Dickson, a 72-year-old engineering firm headquartered in Charlotte, N.C., explored more than 27 possible water sources. The options span the area from Watauga Lake in Tennessee to the Yadkin River, including several sites on the South Fork of the New River.

The best site from a location and economic standpoint is the one currently being environmentally reviewed and assessed. If approved, this water intake facility on the South Fork of the New River near Brownwood Road would provide water for the people in Boone and to other portions of Watauga County outside of the Appalachian State University campus. ASU has its own water source and water system.

W.K. Dickson is very familiar with the project, which is why the company was retained to develop the environmental assessment. Their assessment will be carefully reviewed by at least 18 different governmental departments and agencies, including U.S. Fish & Wildlife.

The proposed site has sufficient water flow from which to withdraw water and still meet state and environmental requirements. Two independent engineering consultants calculated the flows in order to ensure accurate information prior to the Town selecting the Todd property. Three different ways of calculating the water flow were used. Two of those have been approved by the N.C. Department of Environment & Natural Resources.

The *Watauga Democrat* reported that on Aug. 12, 2008 a monitoring station on the South Fork of the New River recorded a flow of 96 cubic feet per second. That equals 62 million gallons of water a day. The article reported the all-time-lowest recorded flow on Sept. 5, 1925 was 65 cubic feet per second, just over 42 million gallons a day.

The requested permit asks for a maximum of 4 million gallons per day to be withdrawn from the river. Initially, about one-third of that amount would be withdrawn. The process will put

and is a good environmental steward.

water back into the New River upstream from the point where it is proposed to be taken out. This will keep flows close to “original” levels. Information about the water put back into the river is listed below.

Withdrawn water is put back into the New River

Currently, most of the water withdrawn from the river is being put back in after going through Boone’s advanced treatment facility. That water contains fewer impurities than when it was taken out and meets strict governmental standards.

Testing upstream from the existing water withdrawal site for Boone and downstream from the discharge site, where water is now put back into the river, reveals the following:

- + The oxygen levels downstream from the existing discharge area are higher than those upstream from the existing intake site. This is good news for aquatic life.
- + The clarity (turbidity) of the water is better downstream from the discharge area than upstream from the existing intake site. This means the water is clearer after going through the advanced treatment facility.

Current conservation and stewardship efforts include:

- TV and radio spots about water conservation;
 - A free leak detection program for toilets;
 - Rain barrel giveaways to Boone citizens;
 - A rain barrel sale in the works with the Cooperative Extension Service;
 - Free home and business water audits for Boone citizens, including a kit with plumbing fixtures to conserve water;
 - Civic group presentations on water conservation;
 - Water use audits of the town’s properties;
 - A 5,000 gallon cistern for watering plants, washing fleet vehicles and making salt brine;
 - Children’s events to promote conservation & recycling; and
 - A workshop for local hotels/motels on the wise use of water (*in the planning process*).
- The town of Boone also:
- Organizes two river cleanups each year to keep waterways clear;
 - Sweeps the roads in Boone to keep debris and silt out of waterways;
 - Offers an Adopt-A-Stream program to encourage people to care for waterway areas;
 - Started a composting program with composting unit giveaways to citizens of Boone - 10 years ago;
 - Began a curbside recycling program - almost 15 years ago;
 - Has a motor oil recycling program for citizens. (The Public Works building is heated with recycled motor oil.); and
 - Has acquired more than 60 acres of perpetual green space.

Responding to needs and concerns

The town of Boone recognizes that the New River is a national treasure. That's why environmental stewardship is vital.

We also understand the concern about taking water out of a river that has already been lowered by drought conditions. That is especially important to the people who use the river for recreational purposes, whether for business or for pleasure.

There is a need for safe, clean, usable water in Boone that conservation alone will not meet. The town of Boone has been and continues to take steps to be a good steward of the environment. There is enough water at the proposed site to make this work and still keep the New River in good shape. With much of the water being put back into the river under strict health and environmental guidelines, the water flow should remain approximately the same.

In addition, there will be special efforts to ...

- make any facilities aesthetically pleasing;
- reduce any noise from the facilities; and
- landscape to blend with the natural surroundings.

Best of all for residents of Todd, as a result of the water intake facility being located in Todd, the state may impose new watershed protection regulations. This will further protect the river from unrestricted development.

N.C. recommends that the town of Boone have the plan for expanding potable water resources underway. We hope this information helps you better understand the need for the water intake facility and its impact on the New River, Todd and Boone communities.

Important links and resources

For questions and comments, contact Rick Miller, public utilities director, at rick.miller@townofboone.net or Greg Young, town manager, at greg.young@townofboone.net. Both may be reached by dialing (828) 268-6200.

More information about the current status of the town of Boone's public utilities is available by going to www.townofboone.net. You may check the home page or click on the "Public Utilities" link under "Departments."