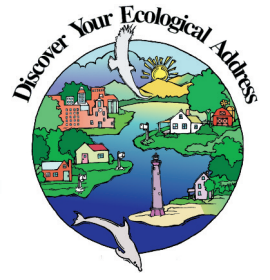
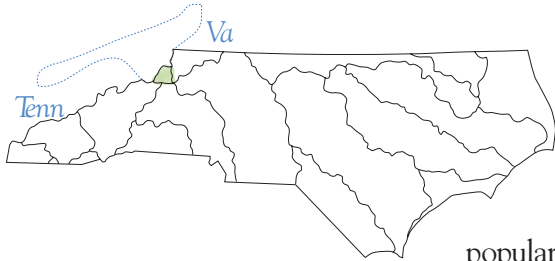


WATAUGA RIVER BASIN



Lowering peaks, snowskiing, flyfishing, clear mountain streams and year-round scenery are the hallmarks of the Watauga River Basin. The North Carolina portion of the Watauga River Basin includes the headwaters and tributaries of the Elk and Watauga rivers. These two rivers flow northwest into Tennessee, and their waters eventually empty into the Gulf of Mexico via the Mississippi River.



The Watauga River Basin is trout country. Anglers find wild populations of native brook trout alongside hatchery-raised rainbow, brown and brook trout in the streams of the upper basin. Rock bass and smallmouth bass are other popular catches. Thousands of tourists also flock to this

region to ski, hike and golf. Breathtaking vistas are another offering that visitors discover in abundance. The Watauga River Gorge, where the river drops sharply as it enters Tennessee, is one of the most beautiful stretches in the basin. Parts of the basin are traversed by the scenic Blue Ridge Parkway and contained within the Pisgah National Forest.

The basin includes parts of Watauga and Avery counties and only six incorporated towns, including Banner Elk, Beech Mountain and a portion of Boone. Although the year-round population of this basin is low, the area hosts vast numbers of seasonal visitors. Overall water quality is excellent—most of the streams flow undisturbed through the forested mountains of the Blue Ridge. The entire length of the Watauga River is classified as High Quality Waters by the North Carolina Division of Water Quality.

profile:

Total miles of streams and rivers: 279

Municipalities within basin: 6

Counties within basin: 2

Size: 205 square miles

Population: 25,329 (2010 U.S. Census)



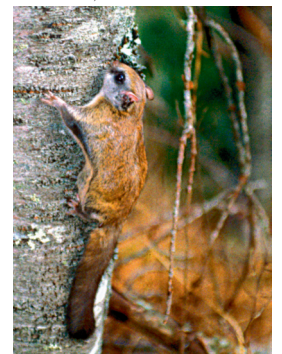
BILL LEA

BILL LEA



Trout fishing on the Watauga (above); fall visits the Pisgah National Forest (left); Carolina northern flying squirrel (below)

KEN TAYLOR, WILDLIFE IMAGES



The second smallest river basin in the state, the Watauga River Basin makes up in rugged beauty for what it lacks in size. The Watauga River originates on the north slopes of Grandfather Mountain on land protected by The Nature Conservancy. The highest peak along the Blue Ridge Escarpment at 5,964 feet, Grandfather Mountain is considered the most biologically diverse mountain in eastern North America. It is an outstanding example of the globally endangered, high-elevation spruce-fir ecosystem. The mountain's rare animal residents include the Carolina northern flying squirrel and the Virginia big-eared bat, both federally listed endangered species.

CHARLES BRASWELL JR.



White Water

From December to April, spectacular white-water rapids with names like "Hydro" and "Edge of the World" can be found in the Watauga River Gorge, which crosses the North Carolina-Tennessee border. Continuous Class III and IV rapids and a few dramatic Class V drops entice nifty paddlers to navigate the challenging gorge when water levels allow.

Several high-quality mountain bogs throughout the basin contain many rare plants and animals, including the federally threatened bog turtle. Mountain bogs are a type of wetland that is fast disappearing—nearly 90 percent have been destroyed in North Carolina, and fewer than 150 are thought to remain in the entire Southeast. Mountain bogs are topped with layers of sphagnum moss and saturated with water most of the year. The spongy sinks are natural water purifiers and contribute to the high-quality water at the headwaters of many streams. Several good examples of Southern Appalachian bogs are found in Julian Price Park on the Blue Ridge Parkway.

Several types of animals are found in the Watauga River Basin. The green floater, a mussel that lives in smaller, slow-flowing streams, is considered endangered. A large, long-lived salamander, the hellbender, is a species of special concern in the basin and is routinely monitored. Several rare aquatic insects—including mayflies, stoneflies and caddisflies—also live here. These insects are so attractive to trout that flyfishermen make artificial lures that look like these creatures.

Because mayflies, stoneflies and caddisflies have distinct tolerances to pollution, biologists look at their diversity and abundance to gauge the health of streams. Stoneflies are especially sensitive to excess sediment and quickly disappear from polluted waters. These aquatic insects are known as indicator species because they are good indicators of water quality.

The basin includes 19 miles of state-designated Outstanding Resource Waters along Boone's Fork Creek that receive extra protection due to excellent water quality and exceptional ecological and recreational resources. More than half of the



BILL LEA

Spruce-fir forest on Grandfather Mountain



Virginia big-eared bat

U.S. FISH AND WILDLIFE SERVICE,
JOHN MCGREGOR

DOUG WECHSLER, VIREO



peregrine falcon

streams in the basin are classified as trout waters, which means additional treatment is required at wastewater treatment plants. In addition, 25-foot buffers of shrubs and trees must be maintained between trout streams and graded construction sites to filter runoff and prevent erosion.

Much of the land disturbance in the basin takes place on steep mountain slopes, which are naturally vulnerable to soil erosion. Alteration of natural areas may damage or destroy wildlife habitat and harm surrounding waters. As land is cleared, rain and melting snow (stormwater) pick up eroded sediments, pesticides, fertilizers and road salt and carry them to streams and rivers. Runoff of human and animal waste is also a problem. Proper construction and maintenance of septic systems and efficient municipal wastewater treatment are critical to protecting water quality. Responsible management of land activities is also needed to help protect streams and rivers.

Many stressors combine to negatively influence water quality. Every person, industry, landowner, town and county influences water quality. A variety of skills, knowledge and talents is necessary to solve water quality problems—which is why it’s so important for many different people, organizations and agencies to pool their resources to protect a community’s natural resources. Many of these cooperative strategies are at work in the Watauga River Basin.

Several communities within the Watauga River Basin tackle stormwater management from a watershed perspective. Among the initiatives is an urban stormwater demonstration project in the town of Banner Elk. The town is using constructed wetlands and other innovative techniques to help detain and cleanse runoff from streets. It has also built a greenway along a pond and two creeks. “Kids in the Creek” brings river basin theater to schoolchildren through its “stream doctor” and mayfly presentations. Several organizations have banded together to create an annual river celebration festival to raise awareness about water quality issues and strengthen collaboration among community groups.

Roan Mountain, which lies in the southwest corner of the basin, contains several rare and exceptional natural communities, including bogs and wetlands.

KEVIN ADAMS



BILL LEA



Yellow poplar forest
(left); spruce-fir
forest (right)

CHARLES BRASWELL, JR.



BILL LEA



WHERE SHOULD I GO

What makes the Watauga River Basin so special? See for yourself. Visit these Environmental Education Centers to discover more about your ecological address.

- Blue Ridge Parkway

For more information about Environmental Education Centers in North Carolina, check out the Office of Environmental Education and Public Affairs' website at www.eenorthcarolina.org.

HOW CAN I HELP

You can gain a sense of community pride by learning more and helping to protect streams, rivers and lakes in the Watauga River Basin. The organizations listed below can help you do just that. To find out about local river organizations and conservation groups, contact your local soil and water conservation district.

Clean Water Management Trust Fund
<https://cwmtf.nc.gov/>

N.C. Cooperative Extension Service
Avery County:
<http://avery.ces.ncsu.edu>
(828) 733-8270
Watauga County:
<http://watauga.ces.ncsu.edu>
(828) 264-3061

North Carolina Association of Soil & Water Conservation Districts
www.ncaswcd.org

North Carolina Division of Water Resources Education Programs
<https://deq.nc.gov/about/divisions/water-resources/water-resources-training/public-involvement/project-wet>

North Carolina Water Science Center
<http://nc.water.usgs.gov/>

Watauga Basinwide Plan*
<https://deq.nc.gov/about/divisions/water-resources/planning/basin-planning>

**Basinwide water quality planning is a nonregulatory, watershed-based approach to restoring and protecting the quality of North Carolina's surface waters. The N.C. Division of Water Resources welcomes community input.*

▶ To order additional brochures on any of North Carolina's 17 river basins, a general river basin booklet or a poster, fill out the online order form at www.eenorthcarolina.org.

Office of Environmental Education and Public Affairs, N.C. Department of Environmental Quality. Editor Carla Burgess Designer KC Schott, Red Gate Design • Special Thanks to the N.C. Wildlife Resources Commission, N.C. Division of Water Resources and N.C. Natural Heritage Program • Date: 2018 • 5,000 copies of this public document were printed at a cost of \$1,300 or \$0.26 per copy.