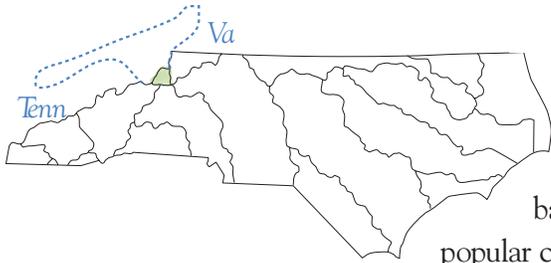


WATAUGA RIVER BASIN



Towering 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 (origin or source waters) 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 drain undisturbed, forested mountains of the Blue Ridge.

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

profile:

Total miles of streams and rivers: 270

Municipalities within basin: 6

Counties within basin: 2

Size: 205 square miles

Population: 23,676 (2000)

(in North Carolina)



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



originates on the north slopes of Grandfather Mountain on land protected by The Nature Conservancy. The highest peak in the Blue Ridge Mountains 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 peregrine falcon, Carolina northern flying squirrel, Virginia big-eared bat and spruce-fir moss spider.

CHARLES BRASWELL JR.



fast FACTS:

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 nery 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 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 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.

Eight aquatic animals in the Watauga River Basin are state-listed as endangered, of special concern or significantly rare. The green floater is an endangered mussel that lives in smaller, slow-flowing streams. The banded sculpin, a threatened fish, is limited to far western Virginia and North Carolina. A large, long-lived salamander, the hellbender, is a species of special concern in the basin. Several rare aquatic insects—including species of mayflies, stoneflies and caddisflies—also live here.

The basin includes 18 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. Also, 32 miles of High Quality Waters in the basin include the entire main stem of the Watauga River and parts of Beech Creek. These waters also are the targets of special strategies to manage water quality. Over half the streams in the basin (55 percent) are classified as trout waters, which means additional treatment is required at wastewater treatment plants. Also, 25-foot buffers of shrubs and trees must be maintained between trout streams and graded construction sites to filter runoff and prevent erosion.



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

Steep slopes limit the land suitable for development and crop production. Except for Christmas tree farms, most agriculture and development activities are concentrated in the valleys alongside rivers and streams. Real estate for retirement and vacation homes is at a premium. Many new homes are being built in the upper portion of the basin. The ski resort town of Sugar Mountain is a fast-growing municipality.

Polluted runoff from land is the biggest threat to water quality in the basin, and it comes in a one-two punch. First, as land is cleared for development, rainwater and melting snow pick up eroded sediment and carry it to streams and rivers. This sediment also binds to and carries other pollutants—such as fertilizers, pesticides and road salts—across the landscape and into waterways. It interferes with fish respiration and spawning by clouding the water and smothering prime trout habitat. Second, as natural areas are covered by hard surfaces like roads and parking lots, the volume of runoff increases. This flow causes downstream erosion and habitat loss and transports pollutants that are no longer able to filter slowly through soil.

So far conservationists in the basin have had the luxury of maintaining the basin's good water quality, rather than trying to restore life to degraded streams. But as development pressures increase, so will soil erosion and polluted runoff. Efficient wastewater treatment—whether through home septic systems or treatment plants—will pose challenges too. Waters with notable water quality concerns include the upper Watauga and its tributaries; Laurel Fork and its tributaries; and Lance Creek. Many property owners share responsibility for these problems. Individuals can help by learning how to prevent erosion on their property and limit or more wisely apply fertilizer and other chemicals that might wash into nearby waters.

Several projects have been undertaken to enhance fish habitat, stabilize streambanks and secure easements along rivers and to preserve wetlands and bogs. The town of Banner Elk is establishing greenways along a pond and two creeks and constructing an urban stormwater demonstration project. Volunteer citizens also are monitoring water quality at 23 sites along the basin's rivers and streams.

WATAUGA RIVER BASIN

You may notice "Watauga River Basin" signs posted along highways throughout the basin. The signs are part of a statewide educational program to raise public awareness that we all live in a river basin and that our individual actions affect the quality of its waters. Signs in all 17 river basins of the state are made possible by a partnership between the N.C. Department of Environment and Natural Resources and the N.C. Department of Transportation, along with funds from the Federal Transportation Enhancement Program.

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 the Camp Broadstone Environmental Education Center to discover more about your ecological address.

For information about Environmental Education Centers in North Carolina, call the Office of Environmental Education at (919) 733-0711, or check out the Web site at <http://www.ee.enr.state.nc.us>.

WHAT CAN I DO ?

- Do your part to positively influence water quality in the Watauga River Basin.
- Get involved in basinwide planning or a local organization interested in rivers and streams in the river basin.
- Take the time to learn about the environmental consequences of your actions.

WHO SHOULD I CONTACT ?

The following contacts can provide information:

- North Carolina Office of Environmental Education, Department of Environment and Natural Resources, (800) 482-8724 or (919) 733-0711, Web site <http://www.ee.enr.state.nc.us>
- Stream Watch Program, Division of Water Resources, Department of Environment and Natural Resources, (919) 733-4064, Web site <http://www.ncwater.org>
- Blue Ridge Rural Land Trust, (828) 263-8776
- Blue Ridge Resource Conservation and Development Council, (828) 297-5805
- Friends of the Watauga River, c/o Sierra Club-Blue Ridge, PO Box 587-DTS, Boone 28607
- High Country Conservancy, (828) 264-2511
- Watauga River Basin Volunteer Monitoring Program/Kids in the Creek, (828) 264-3061
- The Nature Conservancy, Mountains District Coordinator, (828) 749-1700
- N.C. Cooperative Extension Service—Avery County, (828) 733-8270, Web site <http://www.ces.ncsu.edu/avery>, Watauga County, (828) 264-3061, Web site <http://www.ces.ncsu.edu/watauga>
- Soil and Water Conservation Districts, Division of Soil and Water Conservation, Department of Environment and Natural Resources. Go to <http://www.enr.state.nc.us/DSWC> for a listing of all county offices. Call (919) 733-2302 or check the county government listings in your local phone book.

To find out more about water quality in the Watauga River Basin, contact the Division of Water Quality's Basinwide Planning Program, Department of Environment and Natural Resources, at (919) 733-5083, Web site <http://h2o.enr.state.nc.us/basinwide/>.