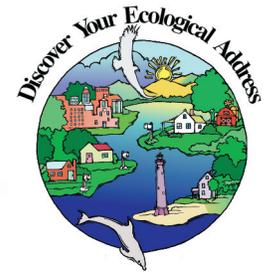
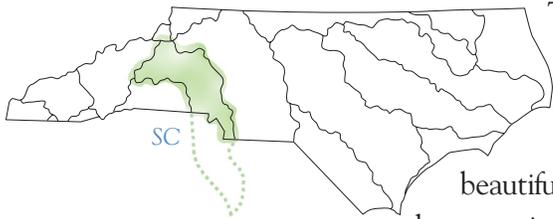


# CATAWBA RIVER BASIN



The Catawba River Basin in North Carolina is a place of extremes—you can discover both urban and wild adventures within its boundaries. The basin contains a large national wilderness area near its headwaters and a major metropolitan area where the Catawba River flows into South Carolina. This haven of natural wonders includes the 6,000-foot Grandfather Mountain, the Pisgah National Forest, Linville Falls, one of the most beautiful and popular cascades in the Appalachian Mountains, and Linville Gorge, one of the deepest canyons in the eastern United States.



The Catawba River begins on the eastern slopes of the Blue Ridge Mountains in McDowell County.

It flows east, then south into Lake Wylie on the North Carolina-South Carolina border. Many

beautiful, clear streams in the upper reaches of the basin have received state and national attention for their unspoiled

character. The 23-mile Wilson Creek was designated a National Wild and Scenic River by Congress in 2000. It flows through the Pisgah National Forest and flows through the Wilson Creek Gorge before joining the Johns River. The basin's Linville River also has special scenic character—the lower 13 miles is designated a State Natural and Scenic River. It spills dramatically through the rugged Linville Gorge and then flows into Lake James. Other large tributaries in the Catawba River Basin include the Johns, South Fork Catawba, Henry Fork and Jacob Fork Rivers.

## profile:

Total miles of streams and rivers: 9,389

Total acres of lakes: 50,764

Municipalities within basin: 64

Counties within basin: 11

Size: 3,285 square miles

Population: 1,560,563 (2010 U.S. Census)

The basin is also a land of lakes. The Catawba River contains the most major dams of any North Carolina river. The longest free-flowing stretch of the Catawba River in North Carolina is only about 17 miles. Most of the 224-mile river exists as a chain of seven man-made lakes, which first supplied electric power for industry and now provide recreation, drinking water and electricity for expanding Piedmont towns and cities. One of these reservoirs, Lake Norman, is the largest man-made lake in the state. At 32,000 acres, it's often called North Carolina's "inland sea." (The river feeds four additional reservoirs in South Carolina.)

CHARLES BRASWELL JR.



Lake James

## CHAIN OF LAKES

Dams along the Catawba River in North Carolina created seven reservoirs. When many hydropower dams were built, the focus was mainly on the benefits of electricity, flood control and water supply, though today the lakes are also a cherished recreational resource. Damming rivers, however, has had some negative effects on the environment in terms of altering hydrology and wildlife ecosystems. The Catawba-Wataree Water Management Group is a non-profit organization that was created through the dam relicensing in the Catawba River Basin. For more information on the organization and the latest information regarding the basin's water and energy saving projects, please visit their website at [www.catawbawatareewmg.org](http://www.catawbawatareewmg.org).

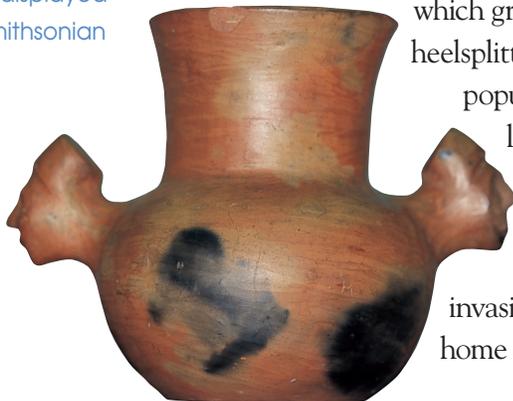


Boats anchored on Lake Norman

CHARLES BRASWELL, JR.

### People of the River

The Catawba Indians and their ancestors have lived in the Catawba River Valley for more than 10,000 years. Their name for themselves in their own language, *yi kátapu*, means "people in the fork of the river." The river provided the clay that allowed the Catawba to become master potters. The tribe is renowned for its aboriginal pottery, which is displayed in the Smithsonian Institute.



JODY DUGGINS, NCRWC

The Catawba River was named for the tribe that first settled its banks. Today the Catawba is the most densely populated river basin in the state. More than 2 million people now make their home here. Charlotte, the largest municipality in the state, contains almost half of the basin's population—more than 730,000 people.

The basin is also home to a large variety of animal residents, many of them unique and rare. A globally rare dragonfly, Edmund's snaketail, is only known to exist in two locations, Upper and Wilson Creeks in Burke and Caldwell counties. The Linville River above Linville Falls is home to the endemic Grandfather Mountain Crayfish, which is found nowhere else on earth. The federally endangered Carolina heelsplitter, a freshwater mussel, is found in a small section of Waxhaw Creek in Union County and Sixmile Creek on the Union and Mecklenburg county line. There are only three populations in North Carolina and 10 total populations in the world of this sharp-edged mollusk, which grows to only about four inches long. Like all freshwater mussels, the heelsplitter is sensitive to changes in water quality. Some Carolina heelsplitter populations have been reduced to a few dozen mussels. Sediment pollution is a culprit in the mussel's decline. As well as muddying the water, sediment tends to bind to and carry other pollutants across the landscape and into waterways. Sediment also covers the spawning beds of fish and, by decreasing the depth of lakes, adds to invasive weed, mosquito and water-warming problems. Agriculture and home or road construction are typical sources of sediment pollution.



Edmund's  
snaketail  
dragonfly



Linville Falls

PHOTO COURTESY OF NC DIVISION OF TOURISM, FILM, AND SPORTS DEVELOPMENT

**Linville Gorge Wilderness** The rugged, spectacularly scenic Linville Gorge has been called the “Grand Canyon of the East.” From the rim of the gorge, the view plunges 2,000 feet. Thrill-seekers kayak the gorge’s white-water, and backcountry hikers brave primitive trails to enjoy a primeval experience. Casual explorers can glimpse the gorge from numerous highway overlooks. Spanning more than 12,000 acres, Linville Gorge was one of the first National Wilderness Areas designated by the Wilderness Act of 1964. It is bound by Linville Mountain to the west and Jonas Ridge to the east and carved by the Linville River. The river spills over the double-cascading Linville Falls at the beginning of the gorge. The walls of the gorge provide a

remarkable window into an unusual geologic phenomenon—billion-year-old hard rocks atop softer ones only half that age. The forces of ancient continental collisions thrust younger metamorphic rock underneath the hard cap of granite-gneiss. As the river has undermined the soft rock underneath over millions of years, the top layer has continued to collapse. Through this process, Linville Falls is thought to have moved some 12 miles upstream from its original location, creating the gorge as it migrated.

PHOTO COURTESY OF NC DIVISION OF TOURISM, FILM, AND SPORTS DEVELOPMENT



Linville Gorge



PHOTO COURTESY OF NC DIVISION OF TOURISM, FILM, AND SPORTS DEVELOPMENT

**Linn Cove Viaduct** The section of the Blue Ridge Parkway that snakes around Grandfather Mountain is a marvelous feat of engineering and a monument to environmental sensitivity. Construction took place over a period of eight years and was completed in 1987 when the viaduct was opened to the public. At 4,100 feet, the 1/4-mile stretch of road was built from the top down without massive cuts into the mountain and by removing only those trees in the direct path of the new road. Builders used 153 pre-cut, custom-made concrete segments weighing 50 tons each. These were then lowered into place using cranes. The National

Park Service and private landowners compromised to make sure this vital connecting road didn't destroy the character of the mountain. With sinewy curves, it hugs the mountain and affords spectacular panoramic views. Designers even tinted the concrete with iron oxide to blend the structure with the existing rock outcroppings. The roadway has received multiple prestigious design awards and has been dubbed "the most complicated concrete bridge ever built."

**Grandfather Mountain** At 5,964 feet, Grandfather Mountain is the highest point along the Blue Ridge Escarpment. Its biological diversity is as impressive as its size and grandeur—it provides habitat for more globally rare species than any other mountain east of the Rockies. Within the span of 4,500 acres are 16 distinct ecological communities. In 2009, nearly 2,500 acres of Grandfather Mountain's "backcountry" became Grandfather Mountain State Park. The top half of the mountain and the attractions are managed by the Grandfather Mountain Stewardship Foundation, a non-profit organization dedicated to preservation and environmental education. Though development will never mar the mountain's backcountry character, air pollution and non-native insects are taking their toll on trees in the mountain's spruce-fir forest, one of the country's rarest ecosystems. The tiny spruce-fir moss spider, which is on the Endangered Species List, is one of the native creatures struggling to survive. The spider and the Virginia big-eared bat are among 66 rare and endangered species found in the preserve.

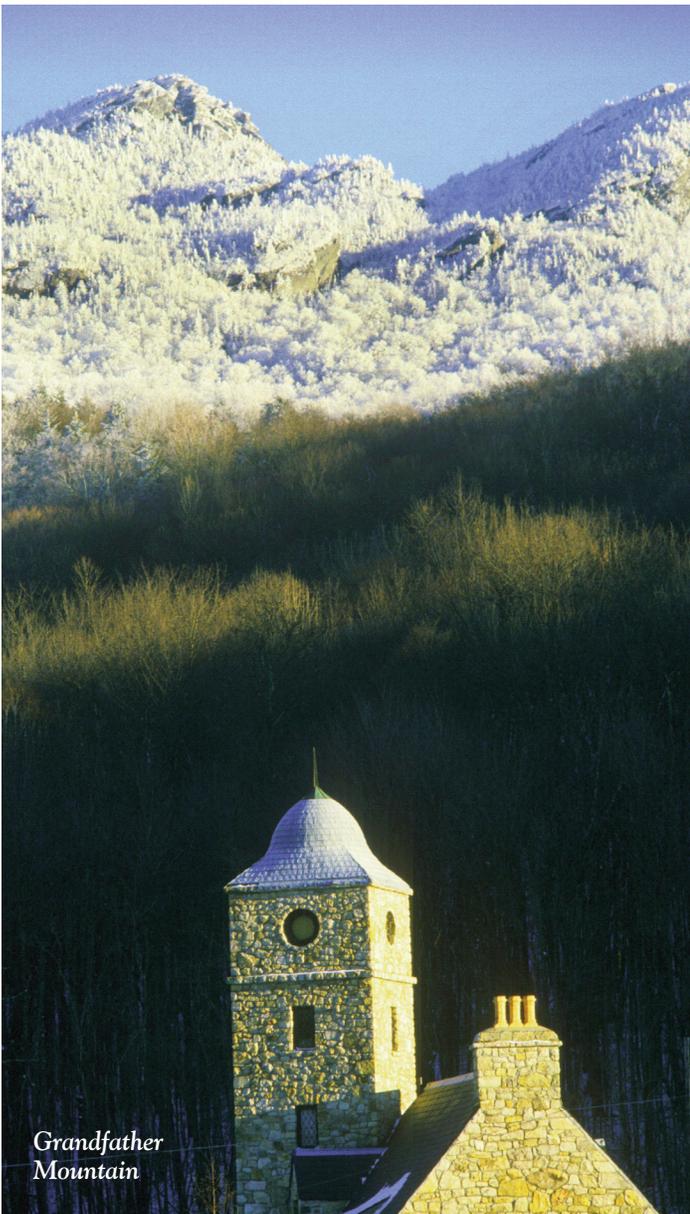


PHOTO COURTESY OF NC DIVISION OF TOURISM, FILM, AND SPORTS DEVELOPMENT

Several of the Catawba lakes are showing signs of stress from excessive amounts of nitrogen and phosphorus in stormwater runoff (rain and melted snow flowing across land). In small amounts, these nutrients are beneficial to aquatic life, but excessive amounts can trigger algae blooms. These can affect the water's taste and odor and rob the water of oxygen, which can cause fish kills. Nutrients and other contaminants (eroded soil, fertilizer, pesticides, metallic chemicals, and human and animal waste) wash from construction sites, residential areas, cropland, pastures and paved areas that don't allow water to soak into the soil (roads, parking lots, driveways and sidewalks).

Citing explosive urban growth in the region, the national conservation organization American Rivers ranked the Catawba River as the most endangered river in America in 2008. Local governments, as well as state agencies and conservation groups, are working to tackle water pollution throughout the Catawba River Basin. You can help reduce the impacts of runoff on water quality by keeping fertilizer, pesticides, and yard and animal wastes out of streets and storm drains. You can also get involved in the many conservation organizations working to address environmental problems in the basin.

CHARLES BRASWELL, JR.



KEN TAYLOR, NCWRC



## WHERE SHOULD I GO ?



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

- Carolina Raptor Center
- Catawba Science Center
- Crowders Mountain State Park
- Daniel Stowe Botanical Garden
- Discovery Place
- Energy Explorium
- Grandfather Mountain State Park
- Grandfather Mountain Stewardship Foundation
- Lake James State Park
- Lake Norman State Park
- Latta Plantation Nature Preserve
- McDowell Nature Center
- Mountain Island Educational State Forest
- Schiele Museum of Natural History and Planetarium
- South Mountains State Park
- Tuttle Educational State Forest
- Wing Haven
- YMCA Camp Thunderbird

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](http://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 Catawba River Basin. The contacts 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.

### Catawba Basinwide Plan\*

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

### Clean Water Management Trust Fund

<https://cwmtf.nc.gov>

### North Carolina Association of Soil & Water Conservation Districts

[www.ncaswcd.org](http://www.ncaswcd.org)

### North Carolina Division of Water Resources

<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/>

### Charlotte-Mecklenburg Storm Water Services

<http://charmck.org/stormwater/regulations/Pages/WhatareSWIMBuffers.aspx>

*\*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](http://www.eenorthcarolina.org).

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