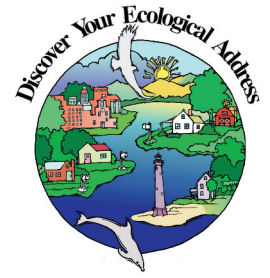
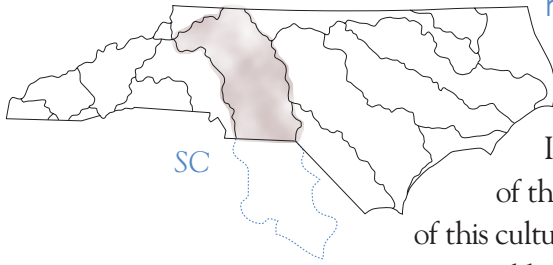


YADKIN-PEE DEE RIVER BASIN



The Yadkin-Pee Dee River Basin is the cradle of civilization in the Carolinas. Here, evidence of 12,000 years of activity documents the history of Native Americans in the Southeast. The basin's gently contoured Uwharrie Mountains, the oldest mountain



SC

range in North America, played as much a role in human settlement as the fertile rivers that slice through them.

In the early 19th century, the basin was the scene of the nation's first documented gold discovery. All of this cultural bounty is set in a landscape ripe with aquatic resources—cold-water and coolwater trout streams, slower-moving

Piedmont streams, and even streams with Coastal Plain characteristics. Much of the Yadkin River is bound by a series of man-made lakes.

From its headwaters near Blowing Rock, the Yadkin River flows east and then south across North Carolina's densely populated midsection. It travels 203 miles—passing farmland; draining the urban landscapes of Winston-Salem, Statesville, Lexington and Salisbury; and fanning through seven man-made reservoirs before its name changes to the Pee Dee River below Lake Tillery. The Pee Dee courses another 230 miles to the Atlantic, leaving North Carolina near the community of McFarlan and ending its journey at South Carolina's Winyah Bay. The Yadkin-Pee Dee River Basin bisects North Carolina, running north to south, neatly separating counties on its journey.

KEN TAYLOR, WILDLIFE IMAGES



BILL LEA

Bald eagle (above);
Blewett Falls Lake,
Pee Dee River (left)

profile:

Total miles of streams and rivers:
5,862

Total acres of lakes:
22,988

Municipalities within basin: 93

Counties within basin: 21

Size: 7,221 square miles

Population:
1,675,937
(2010 U.S. Census)

Back from the Grave

The robust redhorse is a large species of suckerfish discovered on the Yadkin River in 1869.

Biologists considered it extinct in North Carolina until they rediscovered one in 1985. Since then, researchers have collected more than 60 individual fish in the Pee Dee River. A bottom-dweller with a crimson tail fin, the fish can grow to 30 inches long and weigh up to 17 pounds. This lunker usually prefers mollusks in the streambed to an angler's bait. The redhorse is the largest sucker species in North America. The Robust Redhorse Conservation Committee (RRCC) was created in 1995 to improve the status of the species throughout its former range. The RRCC is a cooperative, voluntary partnership formed under a Memorandum of Understanding (MOU) between state and federal resource agencies, private industry, and the conservation community. The RRCC is facilitating the recovery efforts and conservation measures by conducting research to answer scientific questions and address management needs.



Hardaway-Dalton—late Paleo Indian projectile point between 10,000 and 12,000 years old

FROM THE COLLECTION OF THE NC OFFICE OF STATE ARCHAEOLOGY

ARTIFACTS PAVE A ROAD TO THE PAST

The Yadkin-Pee Dee River Basin contains some of the most significant remnants of early American civilization and the oldest cultural remains in North Carolina. A succession of Native American cultures began settling in the region as long ago as 12,000 years. The renowned Hardaway archaeological site is situated on a ridgeline near the Narrows of the Yadkin River. First revealed to state archaeologists in 1937, the site has since yielded more than 7 metric tons of cultural material, including more than 3,000 projectile points, 5,000 scrapers and other stone tools and stone-chipping debris dating back more than 12,000 years. To fashion their tools, Native Americans quarried the Uwharries for rhyolite, a strong but malleable volcanic rock they found in abundance on mountaintops.

Major tributaries of the Yadkin-Pee Dee River include the Mitchell, Ararat, Uwharrie and Rocky rivers and Dutchmans, Long and Abbotts creeks. The uppermost reservoir in the basin is W. Kerr Scott Reservoir. Six reservoirs farther downstream are known as the Yadkin chain lakes: High Rock, Tuckertown, Badin (Narrows), Falls, Tillery and Blewett Falls. They were all built in the first half of the 20th century to power aluminum smelters and electric utilities.

High Rock is the first and largest of the Yadkin chain lakes. Badin, the oldest in the chain, was built in 1917 just below the gorge called “the Narrows” to power the aluminum plant in Badin. Badin Lake has been described as a bassmaster's paradise, where largemouths lurk around the forested shoreline's rocky points. Bald eagles visit Badin and other reservoirs, making ample meals of fish below the dams' turbines.

Forested land covers half of the basin, including the federal lands of the Pee Dee National Wildlife Refuge, the Blue Ridge Parkway and the 50,000-acre Uwharrie National Forest, which lies completely within the basin.

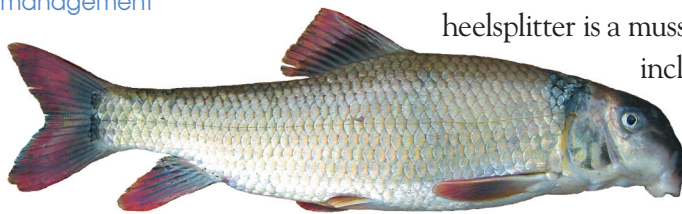
Since it originates in the Blue Ridge and drains portions of the Piedmont, Sandhills and Coastal Plain, the Yadkin-Pee Dee River Basin contains a wide variety of habitat types, as well as many rare plants and animals. There are more than 30 species of rare aquatic animals in the basin, two of which are federally listed as endangered. The shortnose sturgeon is a migratory marine fish that once spawned in the river but has not been spotted in the basin since 1985, and the Carolina

heelsplitter is a mussel now known from only 10 populations in the world, including the lower basin's Goose Creek. The upper portion of the Yadkin River watershed contains habitat for several rare mussel species, in addition to the lower Pee Dee River watershed, particularly below Blewett Falls Lake and in the Uwharries.

MELISSA MCGAW, NCWRC



Badin Dam



robust redhorse



CHARLES BRASWELL JR.

Uwharrie National Forest (above); Pilot Mountain (above right)



CHARLES BRASWELL JR.

The Uwharries were created from an ancient chain of volcanic islands that were caught between the colliding continents of Africa and North America and thrust upward. This tectonic event happened before the uplift of the Appalachians. Today's 1,000-foot hills were once 20,000-foot peaks. Geologists more precisely refer to the Uwharrie peaks as monadnocks, rounded caps of erosion-resistant rock that have survived millions of years of erosion. In the northern part of the basin, a remnant of the ancient Sauratown Mountains offers up another classic example of a monadnock—Pilot Mountain. Once thought to be part of an extinct volcano, the pinnacle of Pilot Mountain State Park is actually an outcrop of the hard, metamorphic rock quartzite. The Saura Indians called the prominent landmark Jomeokee, meaning “the great guide” or “pilot.”

CHARLES BRASWELL JR.



Replica of a 16th-century burial house at Town Creek Indian Mound

Town Creek Indian Mound, which sits on a low bluff overlooking the Little River in Montgomery County, is another significant archaeological excavation. A reconstructed site from around the 1200s includes a large earthen mound—a place for religious ceremonies, political meetings and feasts; the burial hut; and the surrounding stockade. It is a national historic landmark and the only North Carolina historic site dedicated to interpreting the state's Native American heritage. The people who lived at the site have been called Pee Dee Indians, and their lifestyle the Pee Dee culture, but the term “Pee Dee” is an archaeological designation. Researchers believe the Native Americans who lived in the region were culturally unaffiliated.

The Yadkin-Pee Dee earth has revealed more than the secrets of early civilization. In 1799, a 12-year-old boy found a 17-pound yellow stone in Meadow Creek. It was worthy only to be the family doorstep until it was identified as gold three years later. This part of the North Carolina Piedmont soon ushered in a spirited period of gold prospecting well before the California Gold Rush of 1848. Hobbyists can still pan for gold on most streams in the Uwharrie National Forest using manual panning techniques. Suction dredging and metal detecting are not allowed in the forest. Rock hounds are allowed to take a small amount



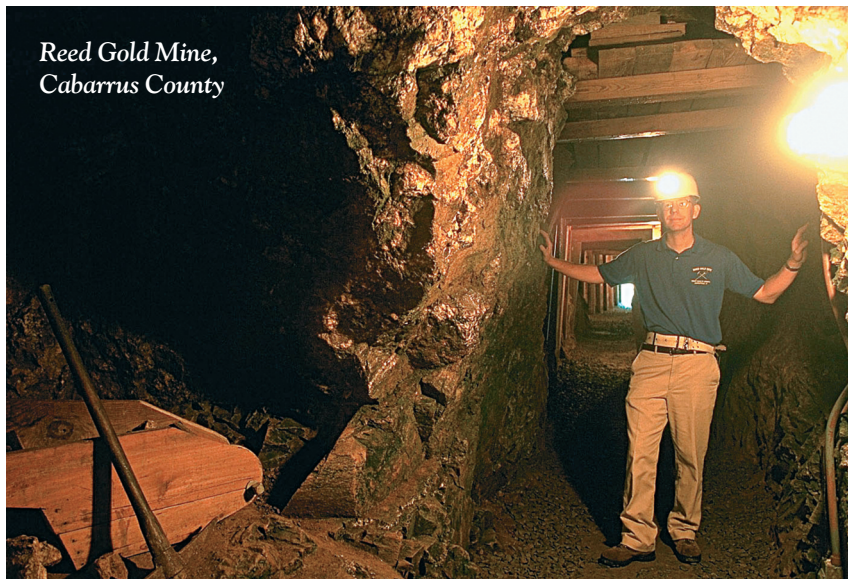
KEVIN ADAMS

Sunrise over a farm field in Randolph County.



NCWRC

Goose Creek



*Reed Gold Mine,
Cabarrus County*

PHOTO COURTESY OF N.C. DIVISION OF TOURISM, FILM AND SPORTS DEVELOPMENT

of surface collections from the variety of igneous, sedimentary and metamorphic rocks found in the forest. Collectors are encouraged to contact the Uwharrie National Forest (910-576-6391) for a complete list of rules and regulations.

Agriculture was once thought to be the primary source of one of the basin's most serious pollutants—eroded soil. This sediment smothers mussels and aquatic insect larvae and buries the gravel streambeds essential to fish reproduction. It also clouds the water in reservoirs (High Rock Lake is heavily polluted by sediment, among other contaminants). Starting in the mid-1990s, farmers in the basin took part in intensive soil-conservation programs designed to control eroded soil washing from farm fields and pastures. It turns out that huge reductions in farm run-off didn't significantly decrease the amount of sediment flowing into rivers. The lay of the land was changing—from rural to more urban uses—and it became clear that leveling of land for housing, businesses and roads was doing its share to send muddy sediment pouring into the streams and lakes.

Population growth is accompanied by removal or alteration of natural areas, which damages or destroys wildlife habitat and harms surrounding waters when pollutants wash into them. Rain and melted snow (stormwater) carry eroded soil, fertilizer, pesticides, metallic chemicals and other pollutants from construction sites, residential areas and paved surfaces that don't allow water to soak into the soil. Proper land-use design and management will be necessary to help control stormwater runoff in both urban and rural areas.

Rapid growth in urban areas has prompted a need for wiser, more efficient land-use planning in counties and cities. The upper basin includes part of the Triad metropolitan area (Winston-Salem, Greensboro and High Point), and the lower basin touches the Charlotte/Mecklenburg metropolitan area. This growth could eventually create a solid band of urban counties from Raleigh to Charlotte. Every person, business, industry, landowner, town and county share responsibility for the health of waters in the basin.

Dam Relicensing

When most hydropower dams were built, the focus was mainly on the benefits of electricity, flood control and water supply. However, damming rivers alters the natural hydrology with impacts both upstream and downstream. Dam relicensing has been a hot topic in the Yadkin-Pee Dee basin as well as other basins. When dam operations are reviewed for permit relicensing, partners representing many interests work together to strike a balance to protect water quality, wildlife habitat and the economy.

KEN TAYLOR, WILDLIFE IMAGES



The Upper Mitchell River flows through dense forest and runs clean and clear. It is designated as one of the state's Outstanding Resource Waters.

A model for conservation in the basin is the Greater Uwharrie Conservation Partnership. The mission of this partnership is to work for the long-term conservation and enhancement of biological diversity and ecosystem sustainability throughout the Greater Uwharries landscape. The partnership includes a network of organizations, landowners and local, state and federal agencies working together to protect and enhance the region.

Wood ducks are among thousands of wintering waterfowl in the basin.

Meanwhile, Yadkin Inc., the Alcoa subsidiary that controls land development around High Rock, Tuckertown, Badin and Falls lakes, has implemented some progressive shoreline management strategies to protect water quality. These include forested buffers and minimum setback requirements for new homes. Duke Energy Progress Carolinas has a shoreline management plan for Tillery and Blewett Falls lakes, which the company manages.



KEN TAYLOR, WILDLIFE IMAGES

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 Yadkin-Pee Dee River Basin.

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 \$1,768 or \$0.354 per copy.

WHERE SHOULD I GO



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

- Allison Woods Outdoor Learning Center
- Arboretum at Tanglewood
- Blue Ridge Parkway
- Boone's Cave Park
- Caraway Conference Center and Camp
- Catawba College Center for the Environment
- Horizons Unlimited
- Kaleideum North
- The Joseph Andres Gutierrez Geology and Earth Science Education Center
- Morrow Mountain State Park
- North Carolina Zoo
- Pilot Mountain State Park
- Reedy Creek Nature Center
- Rendezvous Mountain Educational State Forest
- Reynolda Gardens of Wake Forest University
- Rowan Wild at Dan Nicholas Park
- Stone Mountain State Park
- Turtle Island Preserve
- W. Kerr Scott Dam and Reservoir
- YMCA Camp Hanes
- YMCA at Herring Ridge



CHARLES BRASWELL JR.

W. Kerr Scott Reservoir

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 Yadkin-Pee Dee 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.

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

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/>

Yadkin-Pee Dee 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.