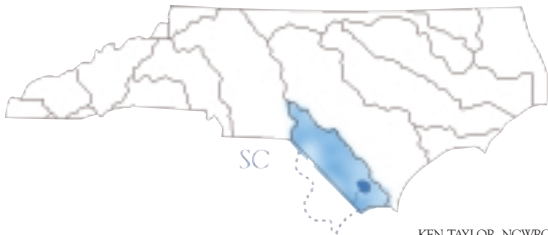


LUMBER RIVER BASIN

The Lumber River basin is a rich ecological expanse of flat land, gently rolling hills and swamp waters. Part Sandhills but mostly Coastal Plain, the basin is a flatwater paddler's dream and an ecologist's wonderland.



KEN TAYLOR, NCWRC



Lumber River,
Robeson County

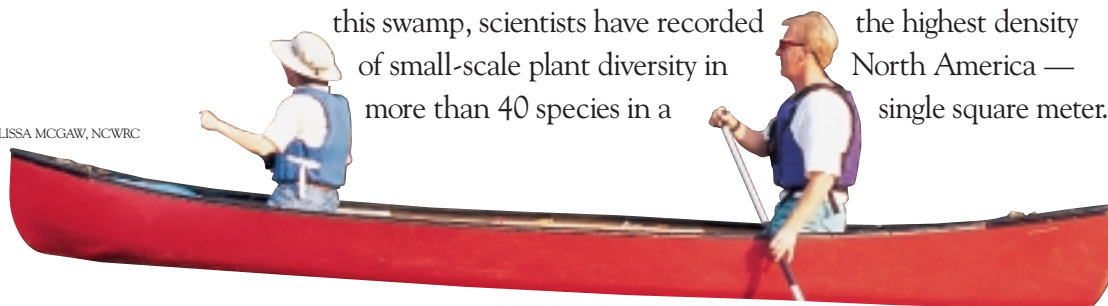
Even though it is named for the Lumber River, the Lumber River basin is actually four distinct river systems that include the Lumber River, the Waccamaw River, the headwaters of the Little Pee Dee River and a system of small coastal rivers that empty into the Atlantic.

The Lumber River is one of the state's four Natural and Scenic Rivers, and 81 miles of the river is designated a National Wild and Scenic River. In bestowing the federal designation, the National Park Service determined the Lumber River has "outstandingly remarkable" resources, which include recreation, fish, wildlife, scenery and botany. The wildness of the Lumber and Waccamaw rivers draws canoeists and other paddlers by the thousands. The pinwoods darter and the Sandhills chub are two unique fish in the Lumber that are species of special concern in the state. Sarvis holly, which grows all along the river, is a candidate for the federal endangered species list.

The Waccamaw River flows from Lake Waccamaw, the most biologically diverse lake in North

Carolina and one of the most species-rich lakes in the Western hemisphere. It has 52 fish species, 11 species of snails and 15 species of mussels and clams, many of them rare and endemic to the lake, meaning they have been found nowhere else on earth. The Waccamaw's watershed also includes a large portion of the Green Swamp. In wet savannas of this swamp, scientists have recorded the highest density of small-scale plant diversity in North America — more than 40 species in a single square meter.

MELISSA MCGAW, NCWRC



profile:

Total miles of streams and rivers: 2,283 miles

Municipalities within basin: 50

Counties within basin: 9

Size: 3,336 square miles

Population: 298,296 (2000)

(in North Carolina)

fast FACTS:

Biodiversity refers to all of the organisms (plants, animals, fungi, bacteria, etc.) and ecosystems that can be found in a region. A high level of biodiversity indicates that natural systems are in balance and that the environment is healthy. We depend on biodiversity for many natural goods and services, such as the pollination of crops and wild plants, the cycling of air and water, the regeneration of soil, and the development of new foods and medicines.

THOSE *Mysterious* CAROLINA BAYS

About the time scientists started studying craters on the moon, the public began debating the earthly mystery of the Carolina bays. Captured in a 1930s aerial photograph, these oval-shaped depressions were curious repeating patterns concentrated in the Carolinas but scattered along the East Coast. Wild theories of their origins abounded—were they dinosaur footprints? prehistoric whale wallows? spaceship landing pads? Today, the most widely accepted theory is that prevailing Ice Age winds reshaped existing bodies of water into elliptical pools. These unique wetlands are important breeding grounds for frogs and salamanders. They range in size from 45 feet to 7 miles long (Lake Waccamaw).

Horseshoe Lake, Bladen County



KEN TAYLOR, NCWRC

fast FACTS:

Oh, Blackwater

Tributaries and smaller streams that form within Coastal Plain swamps receive lots of decaying organic material with tannins that impart a dark color. These waters are known as “blackwater” streams.

MELISSA MCGAW, NCWRC

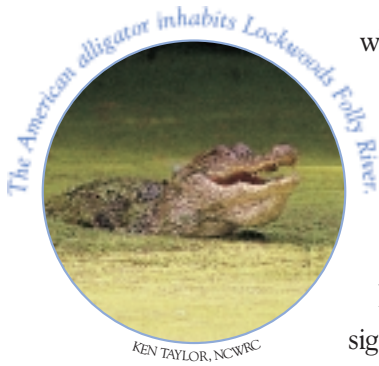


Some of these intriguing plants include insect-eaters such as flytraps, pitcher plants and sundews, plus an array of orchids.

Lake Waccamaw is a special kind of wetland known as a Carolina bay. Of puzzling origin, Carolina bays are elliptical depressions that collect rainwater throughout the year. Concentrated in the Carolinas, many of these bays are scattered throughout the Lumber River basin. Lake Waccamaw is the largest permanently water-filled Carolina bay in North Carolina. The degree of aquatic diversity is unusual because most Carolina bay lakes are highly acidic; but outcrops of limestone on the northeast shore of Lake Waccamaw lower the acidity of the water to a neutral pH in which diversity thrives. Two fish, the federally endangered Waccamaw silverside and the Waccamaw darter, are endemic. Two mussels, the Waccamaw spike and the Waccamaw fatmucket, are also found only in this one place in the world. Even though an estimated 778 million spike mussels live on the lake bottom, ecologists warn that just one catastrophic event could have an irreversible effect on a species with such a limited distribution.

The lake and the headwaters of the Waccamaw River make up Lake Waccamaw State Park. Just below the lake, River Swamp is the largest remaining blackwater cypress-gum swamp in the state. The Waccamaw River is one of North Carolina’s largest blackwater rivers. Its tea-colored waters are nearly free of sediment and would be clear if not for the stain of decayed organic matter from surrounding swamp forests. About 90 percent of all the waters in the Lumber River basin are swamp waters.

The Little Pee Dee watershed includes part of Sandhills Game Lands and its longleaf pine communities, another rare and diminishing habitat. The coastal part of the Lumber basin includes Boiling Springs Lake and other scattered Carolina bays. The American alligator,



which inhabits Lockwoods Folly River, is considered rare because it is at the northernmost part of its range. Because of cooler climate, our full-grown alligators are smaller than those in more southern states.

Water quality in the Lumber River basin is generally good. However, growth in human population and animal farms is significant. The number of people in the Lumber River basin is expected to increase 30 percent by 2020.

For now, the water quality in the basin's streams and rivers is good enough to support swimming and boating as well as shellfish harvesting in some estuary areas. But some fish species have been contaminated by mercury. Power plant and incinerator emissions are important sources of this pollutant. Certain household and medical wastes also contain mercury. State officials advise limited consumption of largemouth bass, chain pickerel and bowfin throughout the basin because of high levels of mercury in their flesh.

Another concern in the basin is that more than half the shellfishing areas in coastal rivers are closed because of high levels of fecal coliform bacteria. This kind of bacteria indicates contamination from animal, and possibly human, waste. Wastes leaking from animal lots and outdated or malfunctioning septic systems are potential sources of contamination.

Because some of these pollution sources involve leaked household chemicals and household solid waste, each individual in the basin can make a difference. The residents of the Lumber River basin have the opportunity to protect their waters as the region grows. They are learning valuable lessons from other river basins that are now grappling with polluted wastewater and development issues. Many local citizens are working together to preserve and protect the waters of the Lumber River basin.

MELISSA MCGAW, NCWRC



MELISSA MCGAW, NCWRC



LUMBER RIVER BASIN

You may have noticed "Lumber 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 North Carolina Department of Environment and Natural Resources and the North Carolina Department of Transportation and funds from the Federal Transportation Enhancement Program.

Pitcher plants and flytraps are intriguing plants that thrive in the Green Swamp.



Lake Waccamaw, Columbus County

CHARLES BRASWELL JR.

WHERE SHOULD I GO ?

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

- Lumber River State Park
- North Carolina Museum of Forestry
- Lake Waccamaw State Park
- Museum of Coastal Carolina

For more information about all the Environmental Education Centers in North Carolina, call the Office of Environmental Education, Department of Environment and Natural Resources, 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 Lumber River Basin.
- Get involved in basinwide planning or a local organization interested in rivers and streams in the river basin.
- Take the time to become more knowledgeable 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>
- Lumber River Conservancy, (910) 738-5257
- 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/files/dos.htm> for a listing of all county offices, call (919) 733-2302 or check your local phone book in the county government blue pages.

To find out more about water quality in the Lumber 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/>.