



Water Spotlight The Lower Tar-Pamlico River

By Forrest English

The Albemarle-Pamlico estuary is the second largest estuarine complex in the lower 48 states. It also holds another interesting distinction as the largest lagoonal estuary in the world, due to the ecosystem created by the Outer Banks. The Tar-Pamlico River is one of 6 major rivers that flow into this estuary; an estuary of vast ecological and economic resources. About 90% of the United States' recreational fisheries catch and 75% of its commercial catch spend time in estuaries, such as the Pamlico River estuary, all of which fuel a billion-dollar recreational and commercial fishing economy.

However, all has not been well on the Pamlico River. In 1989 the Director of the North Carolina Division of Marine Fisheries declared the Pamlico River "commercially dead." Community members held a funeral procession in downtown Washington. Dressed in black, concerned citizens were not there to mourn; they were there to send a message. Stated best by then PTRF executive director, Dave McNaught, "The river itself is not dead. If we act now we can breathe life back into the Pamlico."

In the mid-1980's, the recorded commercial catch in the river fell from 5 million pounds of crab and more than 1 million pounds of fin-fish to less than half that by 1988. Fish and crab kills greatly increased over the same time period. Fungal diseases that cause open

sores, now common in Pamlico estuarine fish, were first reported by commercial fisherman in 1984.

Since that time, an array of environmental problems have occurred in the Pamlico estuary: algal blooms, dead water zones, loss of aquatic vegetation & habitat, fish kills, and crab & fish diseases. Human-induced stressors, such as nutrient pollution, play a significant role in the frequency and amounts of algal blooms, fish kills, as well as the presence of open sores on fish.

The Pamlico River estuary has improved from the days described as "commercially dead." That is partially due to the nutrient management measures put in place in the 1990's and early 2000's to aid in improving water quality and the fisheries environment. Such improvements are the direct result from these measures, but we still have a long way to go.

The Lower Tar-Pamlico River flows through our communities, providing drinking water to the towns of Tarboro and Greenville, and is heavily used for fishing and recreation in the region. This section of the River holds a special place in people's hearts, and protecting it from the threats it faces is incredibly important to Sound Rivers. We advocate for the health of our rivers, so they remain the beautiful centerpieces of our region.

See "Things to Know" on P. 2 for more!



Lower Tar-Pamlico River

Greetings from Leadership



Busy Bees

by Heather Deck

Whew! What a Spring it has been for Sound Rivers and the communities we serve. Since the

beginning of March, we have held 14 outreach events and cleanups, launched a new water monitoring program, initiated work on a new stormwater wetland, and our Riverkeepers' continued to work hard on issues that threaten the health of our waterways.

- **8 outreach events** in Raleigh, Oriental, Kinston, Greenville, and New Bern reaching 2,000+ people
- **6 River Cleanups** removing over 4,000 lbs of trash from waterways in Washington, Rocky Mount, Tarboro, New Bern, Raleigh and Greenville
- **Launched Swim Guide** - a weekly water sampling effort at 20 locations, made possible by 35 volunteers.
- Completed **campus stormwater assessments** at 4 schools. Began work on a new stormwater treatment wetland in Greenville.
- **Voice for the river** on current threats; from new mines, industrial agriculture, emerging contaminants, sewer spills, Atlantic Coast Pipeline, highway construction, and more

Our strong start in 2018 bodes well for the future of our organization. It has been three years since the Neuse and Pamlico-Tar River Foundations made the bold decision to merge into one organization, Sound Rivers. From the wonderful foundation of two of the state's oldest environmental organizations, our current and past board of directors, members, staff and partners have forged a strong organization to face today's challenges. At Sound Rivers, we are all about the business of clean water, from Raleigh and Oxford to Ocracoke, and believe that everyone deserves the right to have a fishable, swimmable, drinkable river.

The challenges are many, and those issues affecting clean water impact each and every one of us daily. But we remain steadfast in our belief that we can protect our common good and quality of life for all. For almost 40 years, we have remained true to our mission. Thank you for your continued support!

"A river cuts through rock, not because of its power, but because of its persistence" - Jim Watkins

The Lower Tar-Pamlico - Things to Know!

Population: 40,900* (*2010 census data)

Largest Tributary: The 30-mile-long Pungo River

Also Known As: The Pamlico River was explored in 1584 when it was initially named the Cipo River, for sipowi, the local Native American word for "river." Some maps also suggest the river was called both Pampticco and Pamticough in the 1600s and 1700s.

Economy: Water based recreation in the Albemarle-Pamlico Estuary region provides over \$4 billion dollars to the economies of North Carolina and Virginia.

History: The Tuscarora tribe lived along the banks of the Pamlico River before European explorers arrived.

Fauna: 1/2 of the juvenile fish habitat from Maine to Florida is represented in the Albemarle-Pamlico Estuary.

Upcoming Events

Visit soundrivers.org for more info

Saturday, August 4, 2018-Loose on the Neuse
10am - 3pm Anderson Point Park, Raleigh, NC

Saturday, September 8, 2018 - End of Summer Party & Save The Neuse with Sweetwater Brewing Details TBA

Saturday, September 22, 2018- Sound Rivers' Beer & Boil
6pm - 10pm Rocky Mount Mills, Rocky Mount, NC

Saturday, November 10, 2018- 33rd Annual Oyster Roast
6pm, Washington Civic Center, Washington, NC

Sound Rivers would like to thank the
**Z. Smith Reynolds Foundation and the
Eddie and Jo Allison Smith Family
Foundation for their continued support of
Sound Rivers and our mission to protect
the Neuse and Tar-Pamlico Rivers**

Your Rivers!

Event Spotlight

Swim Guide Keeps You Safe This Summer!



This summer Sound Rivers is conducting our own recreational water quality sampling program to screen popular recreational sites every week.

The Neuse and Tar-Pamlico rivers face large amounts of fecal bacteria pollution from agriculture, stormwater runoff, and other sources. This can result in waters growing large enough populations of bacteria to be harmful to wildlife and people. Our summer interns and riverkeeper staff have coordinated a network of volunteers to collect weekly samples from sites along the Lower Neuse and Tar-Pamlico rivers to monitor for these bacteria.

Sound Rivers has been collaborating with the NC Department of Environmental Quality and the NC Division of Marine Fisheries to select sampling sites and develop methods to detect E. coli bacteria and the Enterococcus family of bacteria. Using water health standards set by the EPA, we determine if a water body meets



Interns Duncan and Katie sampling the Neuse

regulation and if it is safe for recreation. These results will also help us advocate for the proper enforcement of environmental laws, alongside the Division of Marine Fisheries' program that also samples throughout the region.

We hope to implement this program each summer, and are sampling from Memorial Day weekend to Labor Day weekend. Check out our Weekly Water Reports each Friday!

Find our most recent results on our website:
soundrivers.org/swimguide

To view beaches and rivers sampled nationwide,
go to: theswimguide.org/find

Get immediate notice of sampling results:
text **SWIM to 33222**

Sound Rivers Annual Meeting



Lower Neuse Riverkeeper Katy Langley with her Volunteer of the Year, Marcos Siler



Senator Mike Woodard accepts his award from Executive Director Heather Deck

Efforts to protect the Neuse and Tar-Pamlico Rivers by volunteers, businesses and public officials were recognized on Thursday, May 31 at Sound Rivers' annual meeting in New Bern. The evening included an overview of the state of Sound Rivers by Executive Director Heather Deck. The Neuse and Pamlico-Tar Riverkeepers provided brief updates on advocacy issues and wins from 2017, including the successful legal effort to Save Blounts Creek. Matt Butler, Program Director, highlighted the numerous restoration projects underway as well as the launch of the Swim Guide program.

Annual awards were presented to outstanding volunteers, elected officials, businesses and longtime supporters. Many thanks to Brutopia for hosting us, and to Tiny Tornado for serving up delicious food, and donating a portion of their proceeds to Sound Rivers!

2017 Volunteers of the Year

Upper Neuse: Jake Thurmond & Jason Harriman, Raleigh, NC
Lower Neuse: Marcos Siler, New Bern, NC
Pamlico-Tar: Grace Lekson, Washington, NC

2017 River Friendly Businesses

Restoration Systems, Raleigh, NC
The New Village Brewery & Taproom, Oriental, NC
Inland Waterway Provision Company, Oriental, NC
Uptown Brewing Company, Greenville, NC

2017 Public Official Conservation Awards

Senator Mike Woodard, Durham, NC
Representative Jean Farmer-Butterfield, Wilson, NC

2017 Blue Heron Award Winners

Natalie Baggett, New Bern, NC
David Emmerling, Greenville, NC
Lynne Davenport and Holly Willis, New Bern, NC

Advocacy Updates

Advocating for Greener Transportation

On behalf of Sound Rivers, the Center for Biological Diversity and Clean Air Carolina, the Southern Environmental Law Center filed a slew of claims in their lawsuit challenging the \$2.2 billion



540 toll highway. In the claims, the groups challenge the agencies' failure to adequately study and disclose the impact of the massive toll highway and to adequately consider alternatives that would be less destructive and more cost effective. The lawsuit is in response to NCDOT and Governor Cooper's unwillingness to pause the expensive, outdated loop highway concept and pursue lower-cost, less damaging options.

The proposed highway would pave over 70 acres of wetlands, destroy more than 55,000 feet of streams, and cut through habitat essential to rare and endangered aquatic wildlife in the Neuse watershed.

Swift Creek is one of the most important watersheds in the Neuse River basin. In fact, 250 acres of the watershed are rated as exceptional under the significant natural heritage area, which is the highest rating. Swift Creek watershed is also one of 25 areas in North Carolina essential for the continued survival of 13 rare and endangered species.

“The health of Swift Creek and its vast aquatic diversity is of vital importance to protecting the overall health of the Neuse River,” said Upper Neuse Riverkeeper Matthew Starr. “Protecting Swift Creek is not just about one species, but about protecting an environmental system that supports numerous rare aquatic species and performs vital ecosystem services.”

Sound Rivers and partners have put forward an alternative solution, ACCESS2040, which would rely on upgrading existing roads and innovative transportation improvements to reduce congestion throughout the complete 540 project area at a much lower cost. ACCESS2040 would cost just \$293.7 million above already-planned improvements, compared to the \$2.2 billion price tag accompanying the 540 proposal. Unlike the 540 extension, ACCESS2040 would be open to all users—not just those able to pay a pricey toll. ACCESS2040 would also cause significantly less environmental destruction.

Fishing for Facts: *Your source of information on NC legislation impacting our rivers*



Governor Cooper and NC Department of Environmental Quality (DEQ) officials noted that the agency needed \$14.5 million dollars allocated in this year's

budget to begin to deal with harmful contaminants, like the highly publicized GenX. Instead, the legislature passed a budget in June that provides little funding to DEQ and opted to send \$5 million to the UNC collaboratory. The collaboratory is able to conduct some research, but cannot take actions to address pollution or require industries to clean up their pollution.

After lobbying by chemical manufacturers, the bill limits the monitoring to only the class of chemicals similar to GenX and supplies DEQ with limited equipment capabilities. Other dangerous contaminants are left out of the monitoring budget.

In addition, the budget included a provision that delays the implementation of much needed pollution reduction measures for Falls Lake, the drinking water source for 570,000 people. This delay, the fifth since 2011, sets a deadline of 2024 for the writing of new pollution reduction rules.

Get the latest on environmental legislation by going to soundrivers.org/fishing-for-facts

Fraud at Industrial Hog Facilities

Two state agencies' recent investigation has revealed efforts to mislead regulators about the content of 55 waste lagoons at 35 hog operations in eastern North Carolina. These facilities are permitted to use the lagoon and sprayfield system to dispose of animal waste, but spraying may be prohibited when nutrient or heavy metal levels in the sprayfields are too high.

In March, samples from the 35 facilities investigated were sent to the NC Dept. of Agriculture and Consumer Services laboratory. Those samples were analyzed, and the Division of Water Resources (DWR) inspectors also collected their own samples from each facility. The difference between the pollutant concentrations in the samples submitted by operators and those collected by DWR was astounding.

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Advocacy Updates

Update: Atlantic Coast Pipeline

The Atlantic Coast Pipeline (ACP) is a proposal by both Duke and Dominion Energy to run gas from fracking fields up north, through West Virginia, Virginia, and North Carolina. The proposal would cross hundreds of streams, rivers, and wetlands, many of them right here in the Tar-Pamlico and Neuse watersheds.

As of this writing, the State of North Carolina has issued the project all the major permits, but the company may be running into hurdles before beginning construction in earnest in North Carolina.

First, ACP tried, and failed, to get an extension to allow them to fell and clear trees on the pipeline route. FERC turned them down informing them that migratory birds would be using those trees for nesting regardless of ACP's desired schedule.

Second, the 4th Circuit Court of Appeals ruled in favor of several environmental groups, invalidating a key federal authorization needed for the ACP. The court found that limits set in the U.S. Fish and Wildlife Service (USFWS) permit did not sufficiently safeguard species protected by the Endangered Species Act (ESA), and vacated the permit that allowed harm to those species. ACP contends that it can continue construction even though a valid permit is required by a number of other state and federal authorizations.

Lastly, a small freshwater mussel called Yellow Lance, found in the Tar and Neuse Rivers, has recently been listed as threatened under the ESA. Neither ACP nor the USFWS considered the Yellow Lance during the permitting process, and additional protections must be implemented before the project goes forward.

Even with the legal hurdles, we're hoping for the best and preparing for the worst. Should construction pick up in North Carolina, we're working to launch a monitoring program to ensure compliance with environmental protection measures and we need your help! Volunteers will be given resources and trained to look for issues at construction sites. This information will be used to report problems to regulatory agencies, and make sure every required effort is being taken to protect our communities and waterways.

*Interested in volunteering? Please visit:
www.soundrivers.org/acp*

Blounts Creek, Year 7



Photo by Bob Daw

In 2011, Sound Rivers discovered a permit request by Martin Marietta Materials to discharge up to 12 million gallons per day into the Creek for a new mine. After years participating in the public permitting process, Sound Rivers and Blounts Creek community legally challenged the permit in 2013. Finally, in December 2017 we won.

However, we are back to the courts to defend that win. In late December, a state superior court vacated Martin Marietta Materials' permit. In January the company appealed the decision to the NC Court of Appeals. In addition, they filed a motion to stay the Superior Court decision until the Appeals court hearing, which could take more than a year to schedule. The motion was approved by the NC Court of Appeals. The NC Department of Environmental Quality also appealed Superior Court decision that vacated the state permit.

Sound Rivers is extremely disappointed that DEQ and Martin Marietta chose to appeal rather than switching to a more viable alternative. However, we remain hopeful that all sides will agree that legal options are available that will protect Blounts Creek and limit the impact to our environment. Blounts Creek is a special place and we'll continue working to protect it.

Fraud at NC CAFOs, cont. from P.4

The greatest discrepancy by far was found in the level of heavy metals reported. For each of the 8 facilities for which DWR provided records, levels of zinc were misreported by as much as 101,108%, and the difference in levels of copper was as great as 34,955%.

Copper and zinc can be toxic at high levels to fish and other aquatic life. High levels of nutrient pollution, in part caused by industrial agriculture, leads to algal blooms and fish kills that creates unsafe swimming conditions during the summer months.

Both DWR and the State Bureau of Investigation are investigating.

Member Minute

Why I Give, with John Preyer

By Corinne Everett Belch



John Preyer has been supporting Sound Rivers (then the Neuse Riverkeeper Foundation) since the 1990's, when he lived in New Bern and noticed fish kills along the Neuse River. These days, John lives in Chapel Hill with

his wife Joanie, two children and two dogs, and is in the business of restoring wetlands and streams for a living. He started his company, Restoration Systems, 20 years ago; the company is headquartered in Raleigh, not far from the Neuse River.

Restoration Systems recently received a River Friendly Business award from Sound Rivers for their dedication, led by John, to the protection of our waterways and support of Sound Rivers. John mentioned that he's enjoyed working with many Riverkeepers since Sound Rivers/NRF's inception, and specifically praised our Upper Neuse Riverkeeper, Matthew Starr, for his effectiveness at what he does.

When considering charitable giving, John prefers to give as locally as possible, and is especially interested in groups like Sound Rivers, he said, "which are run 'lean' and still able to accomplish big things and do so without undue pretense and fanfare. 'Deeds not words' is one of my favorite mottos, and Sound Rivers demonstrates this in its work."

Sound Rivers and Restoration Systems recently celebrated a wonderful victory with the demolition of the Milburnie Dam - the Neuse River is now a free-flowing river for its entire length for the first time since the early 1700s. "The Neuse now has whitewater where the Milburnie dam used to be and it is extraordinarily pretty—Sound Rivers holds an easement on this and it is a jewel on the Neuse so I have to give praise for this," John said. Cleanups are also a passion of his, he says it can be galling to see what selfish people discard into our beautiful rivers.

When asked why someone should consider a gift to Sound Rivers, John replied, "I'd encourage anyone who lives in the Neuse or Tar-Pamlico basin to give to give to Sound Rivers. Whether or not you consider

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Volunteer Spotlight: Betsy Hester

By Heather Deck



For Betsy Hester, volunteering "is at the core of what it means to be part of the human community." Betsy and her husband, Joe, live in Nash County on Swift Creek, a water she treasures. Betsy said her life on the

creek, and her husband's passion for protecting clean water, inspired her deep appreciation of conservation and sparked her desire to volunteer. Joe was a board member of Pamlico-Tar River Foundation and the first chair for the N.C. Clean Water Management Trust.

Betsy's commitment to service is evident in her professional life. She is the International Diploma Program Coordinator at Rocky Mount High School, and she seeks to inspire her students to take up the mantle of volunteerism as she has. "Each year, with each class of students, I try to inspire them to do something great, something worthy, something that will make this world better," Betsy said. "If I expect them to give back, then I too must do the same thing, though my passion for volunteer work dates back to a time in my life before I started teaching."

Beyond teaching, Betsy's volunteer efforts over many years have included participation in river cleanups, local conservation efforts, and support of our annual Oyster Roast fundraiser. One of Betsy's conservation efforts these days involves her opposition to the Atlantic Coast Pipeline. "I got to work in the earliest stages. In fact, I began writing letters and meeting with local politicians before it was general public knowledge," Betsy said.

Betsy believes that water in eastern North Carolina is a finite resource. "It is at the center of our survival as a region," she said. "From recreation to quality of life, we must be sustainable in all things, and volunteers are the hands that make things happen."

Thank you Betsy, for all you do for today's youth and for NC's Waterways!

Riffles & Runs

Interns Help Launch Swim Guide

Sound Rivers' summer interns are working with citizen scientists to regularly monitor water quality at popular recreational sites and provide weekly water quality assessments to the public.



Katie McQuillian is the summer Swim Guide Intern for the lower Neuse River. Katie is a rising senior at UNC Chapel Hill majoring in Environmental Science with minors in Statistics and GIS. She has worked for the Institute for Marine Sciences

at UNC as a research assistant evaluating the impacts of living shorelines on ecosystem health. Katie currently works in the global hydrology lab studying the storage and movement of surface water.

Duncan Anderson, interning in our Pamlico-Tar office, is currently working on his bachelor's degree in Environmental Technology and Management at NC State University, where he pursues his interests in environmental toxicology and environmental management. During the academic year he works alongside graduate and doctoral students to investigate the hydrologic and water quality effects of a municipal wastewater treatment plant in Jacksonville, NC.



Why I Give, cont. from P. 6

yourself affected by the river, you are. These rivers are a great amenity to all residents in these basins and there is no better way to help protect these resources - which may add considerable value to your house, your business, your community - than to give money to Sound Rivers.”

Thank you so much for your longtime support, John, and to all our members and donors - we couldn't continue our work without you!

Our Tar River Getaway

By Peggy Schaeffer and Diane Bryson



The view from a Sound Rivers Camping Platform

Someone gave me a fridge magnet that shows a canoe with the message, "Getting Away Works Wonders." My vehicle of choice is a kayak, and May is a good month for paddling and camping in NC, so with the urging of my friend & fellow adventurer Diane, we made a plan. It took about 10 minutes on the Sound Rivers website to peruse the platform map, pick out & reserve "our" platform, named Cypress Hideaway, just up the Tar River from little Washington. It's an easy paddle from town and near a few small creeks for more exploring. We thought two nights there would give us a chance to settle in and relax.

Between us we were able to rustle up the gear and provisions we needed, especially because half the platform is screened-in and roofed, so no need for tents, and with the warm weather, no need for sleeping bags. A trial packing session made it seem like we'd be able to fit everything in our 2 sea kayaks. Food, water-- lots of water, bug repellent, sunscreen, flashlights, camera, personal stuff-- it was really pretty simple. I had worried that our stuff would not fit, but we are both pretty spartan travelers, and the boats have lots of space if you can jam things into little spots. We began to feel ready for anything!

Read the rest of Peggy and Diane's adventure at a Tar-Pamlico Water Trail platform, visit soundrivers.org/tarrivergetaway!

For more information and to reserve a camping site visit: tarpamlicowatertrail.org

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