

STOKES SOIL & WATER CONSERVATION DISTRICT (SWCD)

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## STREAMFLOW REHABILITATION ASSISTANCE PROGRAM (StRAP)

The Streamflow Rehabilitation Assistance Program (StRAP) is a new state program that provides funding for projects throughout the state of North Carolina that help reduce flooding and restore streamflow. The program was created by the NC General Assembly, which approved a program budget appropriation of \$38 million for the 2021-2022 fiscal year. StRAP is administered by the NC Soil & Water Conservation Commission, while working closely with the Division of Soil & Water Conservation within the NC Department of Agriculture and Consumer Services. The funding opportunity was open to any department or organization throughout the state that was interested and eligible to apply, not just the Soil & Water Conservation Districts.

At the initial release of the program by the state of North Carolina and the NC Soil & Water Conservation Commission, the types of projects that would be accepted for program funding were broad. After the application process, it was decided at the state level that only stream debris removal would be covered by the program, along with projects in PL-566 watersheds throughout the state. There has been overwhelming interest in the program throughout the state, which has brought a lot of attention and conversation about the topic of stream debris removal. Stream debris hinder stream flow and the integrity of drainage structures. The purpose of StRAP is to remove potentially dangerous hindrances in streams and watersheds to prevent the unnecessary impoundment of water and potential loss of life, land, and infrastructure. Large rain events in the last few years have exasperated the issues and magnified the need to remove hindrances to restore stream flow. Any debris removed from streams must be moved out of the 100-year flood plain as referenced in flood mapping technology systems such as FEMA maps.

The Stokes Soil & Water Conservation District is handling all project management, funding allocations, and the hiring of qualified contractors to complete the work for the eligible applications and projects in Stokes County that were turned into our office at the time of program advertisement in March. Please contact our office if you have debris in any streams on your property and would like to be considered for future allocations. ♦

## ACCEPTING APPLICATIONS FOR COST SHARE FUNDING

The Stokes Soil & Water Conservation District is now accepting applications for the 2023 Program Year of Cost Share funding to install best management practices that prevent erosion and improve water quality and quantity on agricultural land. We will accept applications on a running basis. Eligible applications will be ranked amongst other applications and will be funded based on the ranking and conservation priority level as they are received. Call us for more information about programs and services that our office can provide, or visit our website at [www.stokesswcd.org](http://www.stokesswcd.org). ♦

### DISTRICT BOARD

James Booth, *Chairman*

Marvin Cavanaugh, *Vice Chairman*

Johnny East, *Secretary/Treasurer*

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### STAFF

Janice Pack, *Soil & Water Conservation Director*

McKayla Sawyers, *District Soil/Watershed Conservationist*

Roger Toledo, *NRCS Supervisory Soil Conservationist*

## LOCAL WATERSHED ISSUE AVERTED DUE TO COORDINATION OF LOCAL & STATE AGENCIES

This summer, beavers have been busy at work causing issues at Little Yadkin 25, a local PL-566 federally funded watershed structure where the dam is maintained by the Stokes Soil & Water Conservation District office. Nature's architects were not the known culprits at initial inspection, but with the help of the landowner, it was discovered that they were hard at work to build one of their most successful dams yet; holding back a watershed that collects drainage from approximately 148 acres.

The Watershed Protection and Flood Prevention Act (PL-566) authorized the USDA Natural Resource Conservation Service to work with sponsors to install flood control structures. The watershed flood control structures have been designed and constructed over the past 50+ years by the USDA Natural Resources Conservation Service on private lands through agreements with landowners. Stokes County landowners have 24 of these flood control structures that must be maintained and upheld to the regulations of the North Carolina Department of Environmental Quality Dam Safety Division and the NC Dam Safety Law of 1967. These structures provide flood control for 56,579 acres in the Town Fork Creek watershed area, and 36,536 acres in the Little Yadkin watershed area. The Stokes Soil & Water Conservation District serves as the liaison between landowners and regulatory departments, and ensures that correct measures are communicated to protect the structures. With time, these structures hold back flood waters at a controlled rate and collect sediment that would otherwise go downstream.

In order to function properly and alleviate flooding upstream and to surrounding properties, the watersheds need to flow at the designed rate for the water level at all times. Beavers like to block the flow of water in retention ponds so that they can impound large amounts of water, giving them protection from predators. By instinct, they automatically gravitated toward the principal spillway pipe because of the water flowing. They ended up almost completely plugging the trash rack over the principal spillway pipe by packing mud, sticks, and leaves around it that formed a dam, only allowing minimal amount of drainage to exit. It did not take long for the water level to rise, especially with constant inlet flow from a stream and rain episodes.

In August, water levels had risen so that the principal spillway pipe was submerged under 8+ ft. of water; causing water to back up onto the front of the dam and into the emergency spillway. Even though emergency structures were installed for high water levels, prolonged elevated water levels can cause excess pressure on the dam, and if not resolved, can result in long-term structural damage.

When Soil & Water staff were informed of the issue, we began to investigate and organize a plan. This effort included help from the NC Forest Service in Stokes County, Hanging Rock State Park Maintenance, Stokes County Maintenance, the Yadkin County Soil & Water Conservation District, and the watershed landowner. We met on site and immediately began to work together to get equipment set up that would draw down the water enough so that we could see the principal spillway pipe, and ultimately disassemble the beaver dam in the appropriate manner.

Drawing the water down took five pumps: two from the Forest Service, one from Hanging Rock State Park, two Forest Service utility trucks, and over 500 ft. of pipe. It took 4 days to get the water down approximately 4 feet using the pumps. At that point, staff from the NC Forest Service and Hanging Rock State Park took a john boat out and were able to pinpoint where the pipe was located by using cross-sections taken from GIS imagery. Once located, the underwater pipe was flagged.

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*Water had backed up the front side of the dam coming within 10 ft. of reaching the top.*



*Pumps were used to draw down water in order to locate the principal spillway pipe that was submerged.*



*Soil & Water staff worked to dislodge debris packed around the principal spillway pipe to allow adequate drainage.*

The water level drawdown process was taking much longer than expected, so the landowner decided to attempt to remove some of the debris himself while in the water. This proved successful and the water level dropped 4 more feet at a controlled rate overnight, which then revealed the top of the principal spillway riser. At that point, staff from the Stokes and Yadkin Soil & Water offices took the john boat back out and continued to remove debris, clearing all the drainage outlets. It took 7 days in total to get the watershed down to normal water level. This will be an ongoing project to monitor and continue work on. Our office is extremely grateful for the help of all the agencies that united their resources and sacrificed their time at a moment's notice to make the project possible. It is great to know that departments, whether state or county, are able to assist one another for the improvement of our natural resources and the area as a whole. ♦



Water levels returned to normal after drainage outlets cleared.

### NATURE'S ARCHITECTS AND ENGINEERS

The beaver is the largest North American rodent with the average adult weighing approximately 35-40 pounds; although there have been reports of beaver as large as 70 pounds. These primarily nocturnal rodents have webbed hind feet, brown fur, and a broad and flattened scaly tail. Although awkward and uncoordinated on land, they are incredibly skillful and fast in the water and can hold their breath for up to 15 minutes while traveling over half a mile. Another interesting fact is that once they reach 2.5 years of age, they select mates for life.

Beavers have been longstanding residents of NC, but were trapped to near extinction in the 1800's for their fur. In 1939, 29 beavers were released into NC to restock the population. More were released between 1951 and 1956. Beavers currently occupy most counties in NC. Beaver are vegetarians that feed on the inner bark of woody plants and herbs, along with some agricultural crops. They will store cut sticks underwater for winter feeding. Although there are some wildlife habitat benefits to beaver constructed dams, they can be burdens to landowners, flooding out land and feeding off of an area until they deplete their resources and move on to a different location. Beaver breed in December and January, give birth anywhere from March to May after a 3 to 4-month gestation, then force the young out of the colony at 2 years of age to start their own colony. Litters can vary in size from 1-8 kits, but 2-4 kits are most common. Beaver only have one litter per year, but a colony can have as many as 5-7 beavers total between the adults, yearlings, and kits. With few natural predators, the species can thrive anywhere with a suitable habitat.



Source: beaver-pair-USFWS.jpg (4288x2848) (ncwildlife.org)

According to the NC Wildlife Resources Commission, trapping has been the most effective and practical method for beaver population control and management. All state laws and regulations must be followed, which include that any trapped beaver must either be euthanized or released on site instead of being relocated. Beaver trapping season is November 1st through March 31st and can be completed by the landowner or a licensed trapper. Outside of the beaver trapping season, landowners who have damage to their land from beavers can control the population without a depredation permit by shooting or trapping. Byproducts from the animal cannot be sold outside of the trapping season. For more information about hunting and trapping regulations, contact the NC Wildlife Resources Commission or visit [www.ncwildlife.org](http://www.ncwildlife.org). ♦

Reference: <https://www.ncwildlife.org/Learning/Species/Mammals/Beaver2#44731644-have-a-problem>

### NO-TILL SOD DRILL AVAILABLE FOR LEASE

Please call or email our office to schedule your lease dates.

#### Sod Drill Requirements:

- 40 horsepower tractor minimum with hydraulics
- Open hole pin hitch
- Does NOT work on disked or plowed ground

**Rental Rate:** \$10 per acre (\$50 minimum)



## SOIL & WATER CONTESTS EXPAND TO INCLUDE ALL MIDDLE & HIGH SCHOOL STUDENTS

### Contests to be held on February 9<sup>th</sup> – Contest Theme is “Water...the Cycle of Life”



The Stokes Soil & Water office is expanding our annual contests to include more students in an effort to increase awareness of natural resources while encouraging life-long stewardship.

The Essay and Slideshow Contests have typically been open to 6<sup>th</sup> graders only but this year will be offered to 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> grade students, competing on individual grade levels, as well as open to 9<sup>th</sup> through 12<sup>th</sup> graders, who will compete as one group.

The annual Poster Contest will be open to 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> grade students, on individual grade levels, same as in the past. This contest gives students an opportunity to become aware of and share their concerns for soil and water conservation through poster art.

The theme for all contests will be “Water...the Cycle of Life”. All 1<sup>st</sup> and 2<sup>nd</sup> place winners will win cash prizes and medallions (1<sup>st</sup> Place \$50; 2<sup>nd</sup> Place \$30). First place county winners will advance to the regional level to compete against entries from 13 counties in northwest North Carolina. Regional winners advance to the state level.

Contest information packets will be sent to schools in January, so be on the lookout. Contests will be held Thursday, February 9, 2023. Entries will be due to the Soil & Water office by Friday, February 3, 2023.

Soil & Water staff are available to present contest information to your classes along with materials that will help with the topic. Contact Janice Pack at 336-593-2490 or at [jpack@stokesswcd.net](mailto:jpack@stokesswcd.net) for more information. ♦

## Southern Sustainable Agriculture Research & Education 2023 Producer Grant Call for Proposals

- Amount Funded: Individual Farmers, \$15,000; Farmer Groups, \$20,000  
Grant funds are paid by reimbursement of allowable project expenses.
- For a two-year project, the Proposal submission deadline: is November 11, 2022 at 12 p.m. (NOON) EST.
- Online submission link: <https://projects.sare.org/proposals/create/#/form/903888>

Southern SARE recognizes the value and importance of on-farm, producer experiences in developing solutions to agricultural production problems. Producer Grants give farmers and ranchers the opportunity to conduct their own research projects to develop sustainable production and marketing practices.

The goal of the Producer Grant Program is simple: Allow farmers to test, on a small scale, an idea, practice or technology to a production or marketing problem (either as an individual or as a group), evaluate whether the results sustainably address the problem, and share how those efforts can benefit other farmers. Successful projects can then be applied by the farmer applicant or by others on a larger scale.

Producer Grants are research grants. Grant funds cannot be used to pay a farmer to farm, fund operating expenses, or conduct any other kind of farm business. ♦

## REGISTRATION NOW OPEN FOR THE ANNUAL NORTHWEST ENVIROTHON COMPETITION

The Stokes Soil & Water Conservation District is accepting team registrations for the annual NW Envirothon competition being held in Wilkes County on March 21, 2023 (for middle school teams) and March 22, 2023 (for high school teams). The Envirothon is an exciting natural resource education program designed to challenge students in an interactive, outdoor competition where middle and high school teams (consisting of 3-5 students) are tested in areas of Wildlife, Forestry, Aquatic Ecology, Soils and Land Use, and Current Environmental Issues. **This is a great opportunity for Environmental Clubs and also a great way to meet science curriculum objectives.** Teams are led by a volunteer advisor and usually meet from late autumn until spring to study provided material. If you're interested in forming a team, please call or email Janice Pack at [jpack@stokesswcd.net](mailto:jpack@stokesswcd.net) today for more information. Registration deadline is February 1, 2023. ♦

**WANT TO BE ADDED TO OUR EMAIL LIST?** You can get newsletters and Stokes SWCD information by email or mail. Please let us know if you prefer email or if you know of someone who would like to be added to our list. ♦