

CF Natural Resources Stewardship Committee News

Keeping Wildlife Wild, Protecting Water Quality, and Protecting Native Habitats

Lake Management Planning- Clemson Research Project

Our community contracted with Clemson University in March to conduct a scientific study of Connestee Falls' high-elevation reservoirs (aka. lakes) as a first step in the development of a Lake Management Plan, one part of Connestee's larger *Natural Resources Stewardship Plan (NRSP)*.

Specific objectives were established and then discussed with Clemson University by the NRSC's Lake Management Sub-Committee, resulting in a very focused study proposal. The study, which began in May, is designed to reveal needed information about our lakes' current environments, including water quality, fisheries, and habitats. (Readers may recall [earlier NRSC articles](#), as well as several emails that were sent out to the community by Jim Whitmore regarding this study.)

"This research aims to provide sustainable management strategies for the unique high-elevation reservoirs at Connestee Falls, ensuring their ecological and recreational benefits are preserved,"

*Principal Investigator Dr. Troy M. Farmer, Associate Professor of Fishery Studies,
Clemson University Department of Forestry and Environmental Conservation.*



Lake Ticoa Photo Compliments of Roger Witmer



Clemson Team Photo courtesy of Roger Witmer

Lake Study in Progress

While the study is in its early stages of the two-and-a-half year project, Dr. Farmer reports that the June sampling work "went very well." Initial water quality profiles were taken and the summer's seasonal fish populations sampling was successfully completed on each of our four lakes.

In September, the study included locating water quality buoys on each lake to record pH, dissolved oxygen and other data. Fish diet and tagging studies will continue. Initial aquatic plant and habitat surveys will begin.

For the purpose of the study, Clemson personnel have been given full access to our lakes. Their use of a gas-powered motor boat has been approved by Jim Whitmore. Notices are being sent out to let the community know when research activities are in progress. The NRSC and Administration will continue to keep community members informed as the lake management study moves forward.

(Continued on the next page)

NRSC News Continued

Lake Management Study Overview

There are four anticipated outcomes. For Connestee the outcomes are 1) a comprehensive survey of fishery, habitat, and water quality; and 2) recommendations on sustainable management strategies for Connestee's four lakes, ensuring their ecological and recreational benefits are preserved.

The anticipated outcomes for Clemson are 3) training for graduate and undergraduate students in fisheries science and 4) publications and presentations on high-elevation reservoir management.

Objectives & Methods

1. **Habitat Surveys**–Assess water quality, aquatic habitats, and watershed features affecting reservoir hydrology and water quality by monitoring seasonal water quality, analysis of watershed runoff, and assessments of submerged habitat using snorkel surveys and sonar.
2. **Fishery Surveys**–Conduct seasonal surveys to analyze fish community composition, size structure, condition, diet, and population dynamics, including tagging largemouth bass for population estimates and bioenergetics modeling. Using non-lethal methods (i.e. electrofishing, nets) the Clemson researchers will study fish populations, which will include tagging largemouth bass and analyzing predator-prey dynamics. Using bioenergetics modeling, an estimate of largemouth bass consumptive demand will be made to inform stocking rates for prey species.
3. **Lake Management Plan**–Develop strategies for watershed, reservoir, and fishery practices based on the above surveys for the following
 - I. **Watershed Management:** Reduce sediment/nutrient runoff, improve water infiltration, and address concerns about wildlife (e.g., beavers, geese).
 - II. **Reservoir Management:** Monitor water quality, manage invasive plants, optimize fish habitats, and ensure safe recreational use.
 - III. **Fishery Management:** Develop stocking and harvesting strategies to maintain healthy predator-prey balance and provide guidance on fish consumption safety.

The NRSC thanks the members of the Lake Management Subcommittee Joe McMurray, Dave Maeda, Mitch McCullers, and NRSC member Roger Witmer for the time that they served on the subcommittee conducting initial water testing and organizing the Clemson Lake Management Study.

The Natural Resources Stewardship Committee (NRSC) is charged with developing, updating, communicating and implementing a Natural Resources Stewardship Plan for Connestee Falls. The intention of the stewardship plan is to be a living document that is incorporated into long-range planning by the Board of Directors, our management, committees, clubs, and organizations as the basis for decision making that ensures the long-term sustainability of our natural resources. The committee is founded upon the CFPOA mission statement "Preserve our Natural Environment" and the Board Operating Principle "taking care of what we own."

More information about the CF NRSC Natural Resources Stewardship Plan, initiatives, activities, partnerships, and resources can be found at <https://www.connesteefallsnrs.com/> and on the Connestee Falls website at <https://connesteefalls.com/group/pages/nrsc>.

WHAT BEARS DO IN OCTOBER

From the NRSC and BearWise.org

SOME BEARS DON'T DEN

In areas where bears have found dependable year-round supplies of human-provided foods, some bears no longer den at all. Many studies are underway to help us better understand how failing to hibernate affects bears' health and lifespan.

WHAT MAKES A GOOD DEN?

Despite folklore, most bears don't den in big caves; bear dens need to be small enough to keep the bear nice and cozy all winter long. Cubs born this year will den with their moms, so she needs a den with room for the family.

The types of dens bears choose varies widely and are based both on availability and the needs of the individual bear. Some bears make their dens in hollow trees or logs, in a "nest" high up in a tree or under the root mass, or even in a nice brush pile or ground nest. Sometimes bears industriously excavate their own dens; often they simply take advantage of whatever natural or man-made spaces are available and fit their needs. Bear dens are often lined with grass, leaves or needles and usually have small, camouflaged openings.

MOMS-TO-BE NEED A GOOD NURSERY DEN

Bears that mated in the summer and will hopefully give birth next winter work extra-hard to make sure they choose a den site that will keep their helpless newborn cubs snug, dry and safe from predators. If there's a tall sanctuary tree young cubs will be able to climb if they're in danger, all the better. In Pennsylvania, laurel thickets fit the bill; more than half of their pregnant females make their nests on the ground in dense thickets of laurel.

DO BEARS RETURN TO DENS?

There are some reports of individual bears using a particular den site more than once, but as a rule bears don't return each year to the same den. However, female bears often remain in the same general vicinity.



Bear biologist Rich Beausoleil preparing to do a den check on a bear that's part of a long-term research study. (Washington Dept. of Fish & Wildlife)



A culvert under a heavily-used road at a military training site made a cozy home for this enterprising bear family. (Minnesota Dept. of Natural Resources)

NRSC News Continued

It's A Dangerous Month For Vehicle Collisions

October is one of the top months for vehicle collisions with animals, including bears. The days are getting shorter, and people are driving more at dusk, dawn and in the dark. Bears are typically active at dawn and dusk and because they are still in hyperphagia, their constant search for food takes them across roads more often. More than half of all vehicle collisions with animals involve deer, but hitting a bear is scary and dangerous – for people, vehicles and bears.

WILDLIFE WATCH

If you're driving with someone, put them on wildlife watch. Always drive at a reasonable speed and scan the sides of the road for tell-tale eyeshine. Bears prefer to cross from cover to cover, so pay extra attention in areas where bushes and trees are close to the road. Most insurance companies advise that if you see an animal in the road, lay on your horn, flash your high beams and try to avoid it if you can do so safely. If you can't, don't swerve into another lane or slam on your brakes unless you know you can do so safely. Sadly, the safest thing to do is to hit the animal. Who wants to do that? So slow down and pay attention.

"State Farm estimates there were 13,687 claims for bear collisions between 2020 and 2021; they processed 2,350 claims for their policyholders. And that's not counting the people whose insurance didn't cover bear damage. The top five states for collisions with bears were California, Virginia, Pennsylvania, Minnesota and North Carolina. People can get their vehicles repaired but bears seldom walk away from high-speed collisions."

Thanks for being BearWise and helping keep bears wild.

[BearWise](#)®. Created by bear biologists. Supported by State Wildlife Agencies.

Dedicated to helping people live responsibly with black bears.

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You can help to prevent problems for the hard-working bears in your area.

- Review the [BearWise Basics for Home](#) and [Outdoor Basics](#) at bearwise.org.
- Make sure anything that might attract a bear is safely out of sight, smell and reach. (That includes bird feeders, bird food, garbage, pet food, grills, and picnic supplies.)
- Be extra alert when driving or walking at night. Always watch for animal eyes.
- Check the yard before letting out your pets and listen for unusual sounds.
- Know [what to do if you encounter a bear](#).
- Share what you know with neighbors and others in your community.