Fisheries Research Fact Sheet

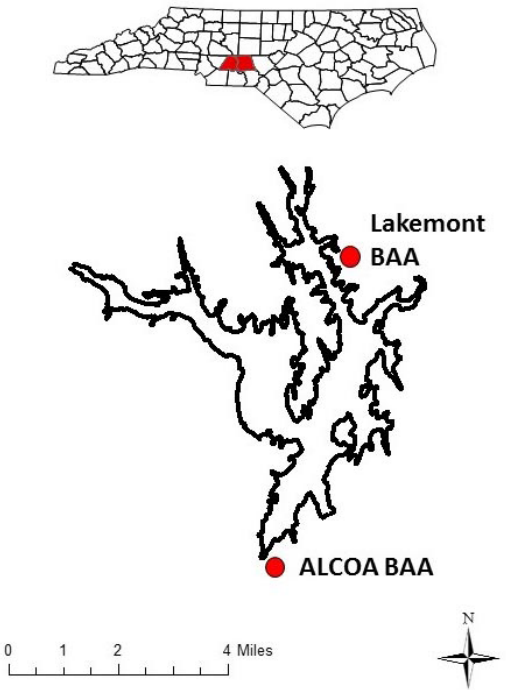
Evaluation of Multiple Stocking Sites for Striped Bass Fingerlings on Badin Lake Using Genetic Tagging

April 2017

Hatchery truck for stocking Striped Bass fingerlings (Photo by Lawrence Dorsey)

The N.C. Wildlife Resources Commission (NCWRC) is conducting a study on the use of multiple stocking sites for Striped Bass fingerlings on Badin Lake. Badin Lake, located in Stanly and Montgomery counties, is part of the Yadkin-Pee Dee chain of reservoirs where Striped Bass have historically been stocked although stocking locations have never been evaluated. Most reservoirs are only stocked via a single access point. If adverse water quality conditions or increased predator densities occur at these stocking sites, the potential reduction in surviving Striped Bass fingerlings could impact the number of fish recruiting into the fishery.

In order to evaluate this on Badin Lake, biologists are stocking two genetically unique batches of 32,000 1–3-inch Striped Bass fingerlings at two different boating access areas (BAA) on the reservoir: ALCOA BAA and Lakemont BAA. ALCOA BAA is in the lower region of the lake approximately 2 miles from the dam while Lakemont BAA is in the upstream region of the lake almost 5 miles from the dam. Striped Bass have also been found to move from the lake they were originally stocked into downstream reservoirs. To determine the percentage of Striped Bass in Badin Lake that were originally stocked in upstream reservoirs; genetically unique batches were utilized when stocking upstream reservoirs. Using these methods should provide valuable information on the population level effects of using multiple stocking sites.



Lakemont and ALCOA Boating access areas and stocking locations for Striped Bass in Badin Lake.

Project Objectives:

- To determine the percent contribution of 1.5 to 2-year-old Striped Bass from each stocking location.
- To determine whether Striped Bass from upstream populations are contributing to the fishery in Badin Lake.

District 6 Assistant Fisheries Biologist Troy Thompson holding a Striped Bass collected via electrofishing on Badin Lake. (photo by Lawrence Dorsey)

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Methods:

- Striped Bass fingerlings are stocked at one of two locations each summer in genetically unique batches. These sites were selected because they are separated by large distances and represent different conditions for Striped Bass fingerlings immediately post-stocking.
- Gill nets and electrofishing are used to collect Striped Bass when they are 1.5 to 2 years old (15–22 inches long).
- Along with length and weight measurements, a fin clip is taken from Striped Bass collected and analyzed to determine which genetically unique batch of stocked fish it came from.

NCWRC Fisheries Biologist Chris Nelson with a Striped Bass collected via gillnetting. (Photo by Lawrence Dorsey)

Results:

- First year results indicate a measurable difference in contribution to the adult population between stocking sites. After one year of evaluation, 52% of the Striped Bass we collected came from Lakemont BAA and 36% came from ALCOA BAA.
- Also, approximately 10% of the Striped Bass that biologists collected in Badin Lake were from the next reservoir upstream, Tuckertown Lake.

What's next?:

- Biologists have completed two additional years of surveys and are currently awaiting the results of the genetic analysis.
- Biologists hope to incorporate their results in their stocking and management of Striped Bass in reservoirs along the Yadkin-Pee Dee chain.

For more information, please contact:

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How You Can Help

Your purchase of fishing tackle, fishing licenses and motorboat fuel helps support fisheries work conducted by N.C. Wildlife Resources Commission fisheries biologists through the Sport Fish Restoration Program, which is administered by the U.S. Fish and Wildlife Service.