

**A NATURAL RESOURCE & CULTURAL HISTORY BASED
“RIVERS TO SOUNDS FIELD EDUCATION CENTER”
BERTIE COUNTY, NC**

**NORTH CAROLINA LAND OF WATER (NC LOW)
BERTIE COUNTY
TOWN OF WINDSOR**

NC LOW TEAM

**Dr. Betsy Bennett, Mr. Tom Earnhardt, Dr. Stanley Riggs,
Ms. Ann Simpson, and Mr. Bland Simpson**



FIGURE 1. A Google Earth satellite image shows the recreational and educational components of the “Rivers to Sounds” integrated program between Bertie County’s Recreation Center and the NC Dept. of Natural and Cultural Resources Field Education Center at Salmon Creek Natural Area.

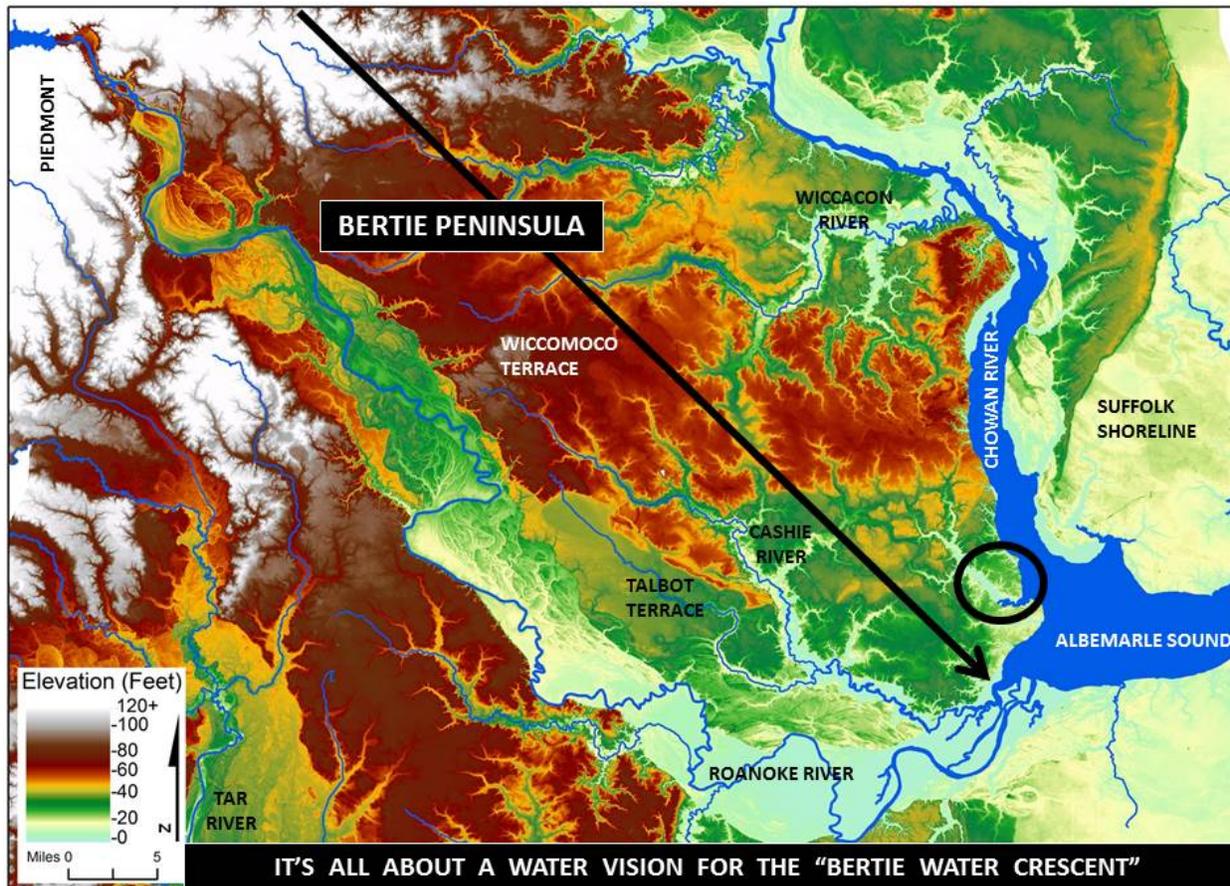


FIGURE 2. A color topography map shows the Bertie Peninsula and surrounding Roanoke River (SW side), Chowan River and Estuary (E side), and Albemarle Sound (SE corner). The Salmon Creek Natural Area and Bertie County Recreational Center are within the black circle.

MEETING: October 21, 2019 at the UNC-CH Botanical Garden in Chapel Hill NC.

PARTICIPANTS:

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GOAL:

The nonprofit foundation (North Carolina Land of Water) has been working closely with the leadership in Bertie Co., the Town of Windsor, and the Bertie Co. Public School System for

the past 3 years. We have been working primarily with them on catastrophic flooding issues, helping to upgrade the science teachers with a "What's in your Backyard" program, and developing a sustainable eco-tourism program based on the regions awesome water resources (the "Bertie Water Crescent" in Figure 2). As part of this, NC LOW has worked with NC Coastal Land Trust (NC CLT) concerning the Salmon Creek Natural Area properties (995 and 300 acres), Hoggards Mill Run on the Upper Cashie River, and Cow Island Swamp and Wicomoco Bluffs along the Chowan River shoreline in the Colerain area.

NC CLT is now finalizing the purchase of a 300 acre parcel located between the "Salmon Creek Natural Area" (SCNA 995 acres) with Bertie Counties (147 acre) "Tall Glass of Water" property. These three land parcels now constitute 1,442 acres of public land along the shoreline at the western end of Albemarle Sound (Figure 1). Bertie County is working rapidly to develop their 147 acres as a total recreational area for the region and have recently sent out a request for design bids. The new 300 acre property will be turned over to NC State Parks when NC CLT has completed the paper work. Since the state property is NOT a state park, its additional uses beyond preservation as a "natural area" are restricted to education and primitive activities.

Consequently, NC LOW is trying to make sure that Bertie Co. will be at the table and working with State Parks with respect to developing an educational program based on the natural resource and cultural history framework for the surrounding group of under-served counties. The first of three NC LOW Reports for Bertie County ("From Rivers to Sounds" Dec. 2018) was a "water-based vision for sustainable eco-tourism and environmental education". This report defined five Water Hubs including the Salmon Creek Water Hub (pages 35 to 46). A program titled "Rivers to Sounds" was designed as a natural resource and cultural history field educational program located on the SCNA property and to be integrated with a major Recreational Center on the Bertie County property at the TGOW. The long-term goal is to ensure that the Bertie region has a strong field education component that deals with the rich natural resources (ecology, hydrology, geology, archeology, etc.) and the long cultural history (early Native Americans, Europeans, African Americans, Asian Americans etc.). The material in two of Tom Earnhardt's new "Exploring NC" programs (to be aired by UNC-TV on Nov 7 and 14, 2019) help set the stage for this educational vision.

The purpose of the October 21 meeting in Chapel Hill was to help upgrade the skeleton proposal (outlined in the first NC LOW report). This proposal provides a plan for Bertie Co. to participate in development of a world-class, field oriented educational program to service the Bertie region in partnership with the NC Department of Natural and Cultural Resources (Division of State Parks). The NC LOW proposal has full support of the Bertie Co Board of Commissioners, the Town of Windsor Board of Directors, Superintendent of Bertie Co. Schools, and the public that has been engaged so far. In addition, it has support of the director and staff of A Time For Science (a 501 c 3 nonprofit science education program) that has been partnering with the NC LOW science teachers workshops in Bertie County. ATFS runs a 400 acre science day camp for K-12 students and teachers in Grifton, as well as an educational facility in Greenville. Also, the Kenan KIETS group, one of NC LOW's major supporters over the years, is solidly behind NC LOW's educational goals and the science outreach projects.

MEETING SUMMARY:

1. The “Rivers to Sounds” regional education program should focus on Bertie Co. and the tier one counties that directly surround it and include, but not limited to:
 - a. Hertford, Gates, Chowan, Washington, Martin, and Northhampton counties
 - b. The program could have several possible levels of public focus: school grades from K-12, regional community colleges and universities, youth groups such as 4-H, Boy and Girl Scouts, and general public, etc.
 - c. Utilization of the “Rivers to Sounds” by these different groups can help pay for the maintenance and operation of the facility.

2. The “Rivers to Sounds Field Education Center” should be located within the NC Dept. of Natural and Cultural Resources (Mr. Reid Wilson, Chief Deputy Secretary) which houses the Division of State Parks. The program should have Partnerships with the Bertie County Board of Commissioners, the Town of Windsor Board of Directors, and Bertie County School Board.

3. The Salmon Creek educational program must integrate and partner with the recreational program being developed on the adjacent Bertie Co. “Tall Glass of Water” property.

4. The “Rivers to Sounds Field Education Center” should also partner with some or all of the following relevant organizations:
 - a. NC Natural Science Museum, Raleigh
 - b. NC History Museum, Raleigh
 - c. NC Partnership for the Sounds
 - d. Albemarle-Pamlico National Estuarine Program (APNEP)
 - e. Kenan Institute of Engineering, Technology, and Science (KIETS)
 - f. First Colony Foundation
 - g. The Nature Conservancy
 - h. NC Coastal Federation, Newport, NC
 - i. Counties surrounding Bertie (Hertford, Chowan, Gates, Washington, Martin, Northhampton, etc.)
 - j. Roanoke River National Wildlife Refuge, Windsor
 - k. Community Colleges and Universities (ECU, NCSU, CU, CCC, ECSU, etc.)
 - l. A Time For Science, Greenville
 - m. NC Coastal Land Trust, Wilmington
 - n. Pocosin Arts, Columbia

5. Existing NC programs that can be used as models for development of the “Rivers to Sounds” program include the following.
 - a. Muddy Sneakers, Brevard and New Bern, NC (<https://muddysneakers.org>)
 - b. Natural Science Museum’s “Prairie Ridge” program in Wake County
 - c. The NCSU 4-H Camp in Columbia, NC
 - d. Pocosin Arts in Columbia, NC
 - e. Sounds to Sea Program, Trinity Center, Pine Knoll Shores, NC
 - f. Carolina Public Humanities/K-12 (UNC-CH)
 - g. North Carolina Society’s William Friday “Teachers Retreat” program

6. Critical Input Personnel:

Liz Baird (NC Aquariums), Mike Dunn (UNC Botanical Gardens), Alvin Braswell (NC Natural Sciences Museum), Jim Blaine (former CEO NC State Credit Union), Dorothy Redford (Retired), Tim Sweeny, Jack Spruill, Ann Goodnight, Feather Phillips (retired).

7. Restoration of the clear-cut, 300 acre Bal Gra connector property located between the original 995 acre SCNA property (NC State Parks) and the Bertie Co. 147 acre recreation site.

- a. The forested land adjacent to the waterfront, bluff, and associated beach all have been designated as a “Significant Natural Area”, a requirement of the NC Clean Water Trust Fund.
- b. UNC-CH Botanical Gardens (Damon Waitt, Director) to plan wild native vegetation and carry out plantings for the clear-cut area including long-leaf pine, etc.
- c. A dirt road connector needs to be maintained for hiking, biking, and go-cart movement between the Bertie County Recreation Center and the Rivers to Sounds Field Education Center.

8. Educational subjects at Salmon Creek’s “Rivers to Sounds” program should focus on the following regional topics (see Figures 3-7):

- a. Natural Resources: Environmental Issues, Ecology, Geology, Hydrology, Archeology, Maritime History, Astronomy, Energy, Water Quality, Climate Change and Storms, Eco-System Services, etc.
- b. Cultural History: Native Americans, Europeans, Africans, Asians and Latins.
- c. Historic Features in the Roanoke-Albemarle region: Colonial Explorations, Native American Reservations, Plantations, Colonial Capitals, Navigation by water, road, and rail, etc.
- d. Regional Industries: Agriculture, Silviculture, Herring Fisheries, Hunting, Eco-Tourism, etc.

9. Facilities on the SCNA property necessary for field trips into the many different landscapes of the northeastern NC Coastal Plain (Bertie, Dismal, and Albemarle Peninsulas) and associated world-class water bodies of the “Bertie Water Crescent” (Roanoke River and Albemarle Sound drainage system).

- a. Bus, van, and go-cart trolleys for regional to local, land-based field trips within the regions varied landscape.
- b. Launch area for stream kayaks; small boat launch for day trips; and the large dock (needs repairing) for multi-day excursions throughout northeastern NC (e.g., The 2018 history tour of the Albemarle sponsored by the NC Division of Archives and History).
- c. Primitive trails through each of the different landscape features and ecosystems within the SCNA property.

10. Phased Plans for Moving Forward

Phase I: Develop the Preliminary Plan for the “Rivers to Sounds” Field Education Center

Phase II: Secure Partnership Support from NC Dept. of Natural and Cultural Resources, Division of State Parks, Bertie County Board of Commissioners, Bertie County School Board, and the Town of Windsor Board of Directors.

Phase III: Obtain critical funding to get project off the ground

Phase IV: Obtain a Project Manager and develop key support groups

Construct physical structures and facilities, and begin implementing the educational field programs in the following possible sequence (see Figures 8-10).

Phase V:

- a. Create the initial “Rivers to Sounds Field Education Center” with construction of the initial outdoor-open, but covered classroom facility and kayak boat ramp. Need tables, benches, toilets, and a small enclosed room at the end for small groups and materials.
- b. Initiate field programs for small local half-day trippers.

Phase VI:

- a. Construction of an Indoor Classroom (Figure 3) and associated laboratory rooms, offices, storage rooms, and toilets.
- b. Initiate all day-tripper programs.

Phase VII:

- a. Construct a kitchen and adjacent eating room, common room, student cabins or bunkhouse with toilets and showers & short term faculty lodge (Figure 4).
- b. Initiate multiple day natural resource & cultural history “Rivers to Sounds” Field Education Program.



FIGURE 3. Teacher Training: What's in Your Backyard? The diverse water bodies and associated shorelines with eroding uplands are prime outdoor laboratories and essential for understanding the dynamics and flow of energy through natural ecosystems.



FIGURE 4. Uncovering Human History: The extensive archeological history of the Salmon Creek Natural Area will be a major part of both the natural resources and the cultural history of the "Rivers to Sounds Field Education Center.

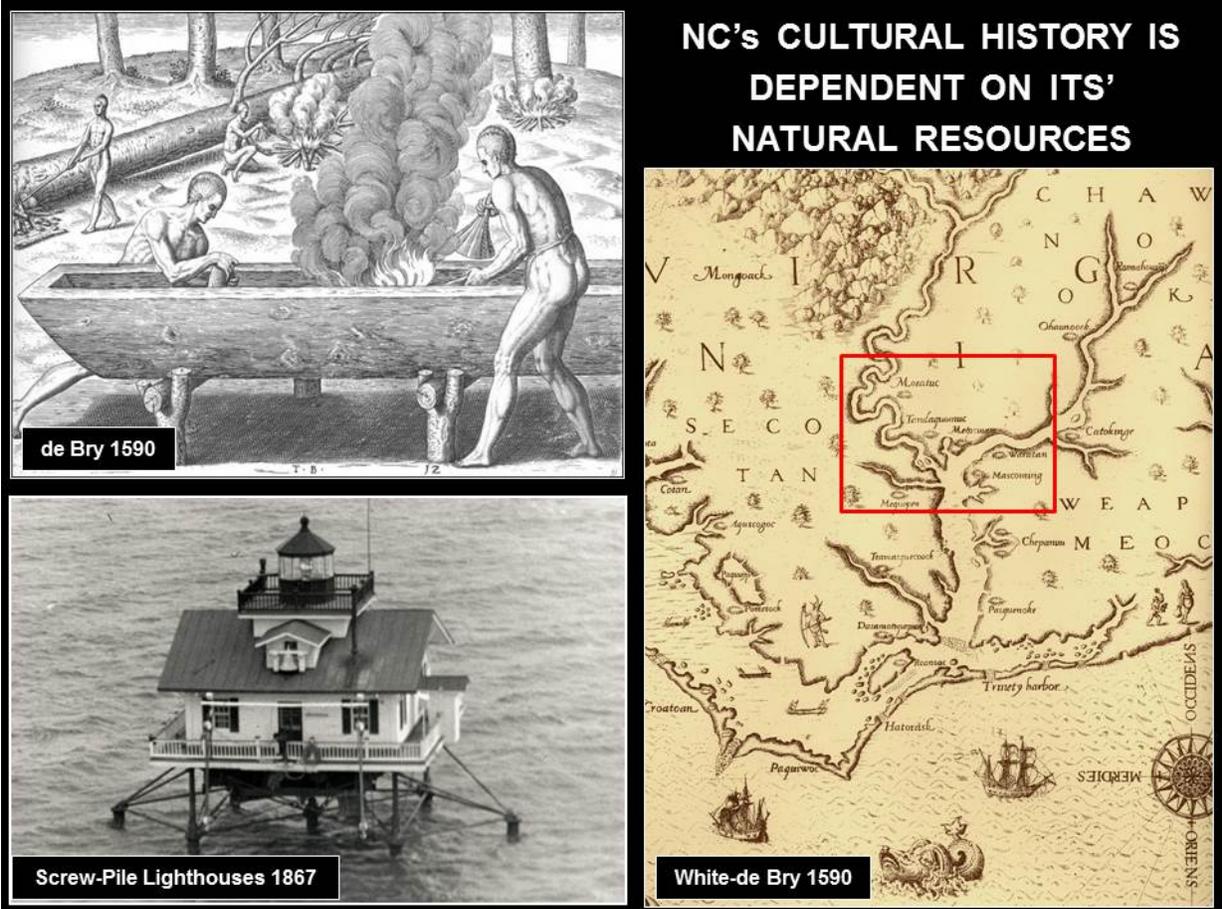


FIGURE 5. Discovering Your Past: exploring the many paths of human history in the surrounding regional landscape and waterscape is an exciting educational path with many avenues, doors, and mysteries.



SCIENCE OF FLOODING: INSTALLING WATER-LEVEL RECORDERS IN BERTIE WATER CRESCENT



FIGURE 6. Science Education and Research: Using a classroom that already exists in “your backyard” to understand the hydrology of the Bertie Water Crescent is critical and exciting hands-on education.



FIGURE 7. Experiencing the History of Place: Using the many and varied waterscapes as classrooms to explore the water-bound industries of previous generations.



FIGURE 8. Example of a potential outdoor classroom.



FIGURE 9. Example of a potential indoor classroom-laboratory building.



FIGURE 10. Example of a potential visiting teacher/student lodge with four bunk bedrooms, two baths, a small kitchen, and common space.