

# **FROM RIVERS TO SOUNDS IN THE BERTIE WATER CRESCENT**

## **AN EARTH & ENVIRONMENTAL SCIENCE PROGRAM THAT FOLLOWS THE WATER**

**WORKSHOP 4: FEBRUARY 28 and March 1, 2019  
Cashie River Center: 8:00 am to 3:00 pm**

**NORTH CAROLINA LAND OF WATER (NC LOW) & A TIME FOR SCIENCE (ATFS)**

**[www.nclandofwater.org](http://www.nclandofwater.org) & [www.atimeforscience.org](http://www.atimeforscience.org)**

### **AGENDA:**

8:00-8:30: Review of previous workshops with a K-W-L chart.

Your Place in North Carolina, Coastal Plain, and Bertie County--dots where we have been

Lidar maps of “Bertie Water Crescent” and “Bertie Peninsula”

The Water Cycle: Water, water everywhere and its drainage systems

From “Rivers to Sounds”: Bertie County’s “5 Water Hubs”

The Rock Cycle: Elements, minerals, rocks & soils and NC Geology

8:30-9:00: Human Time and Earth Time

Directional Time: a straight line with a beginning to an end (birth to death)

Animals, plants; earth, sun, & universe

Cyclical Time: endlessly repetitive and predictable

Night-day: caused by rotation of earth on its axis

Seasons: caused by rotation of earth around sun

Astronomical tides: caused by rotation of moon around earth

Calendars: years (365 ¼ days/yr = leap year),

Equinoxes (sun over equator = day-night; Mar 21/Sep 21)

Solstices (winter = sun farthest S; summer = sun farthest N; Dec 21/June 21)

9:00-10:00: Time exercises and climate change

Tree calendars: time from years to centuries

Ice calendars: time from years to a million years

10:00-10:10: Break

10:10-11:30: Geologic time: from today backwards for 4.6 billion years

Formation of NC Appalachian, Piedmont, and Atlantic Ocean

Erosion of Appalachian Mountains, river transport, deposition of Coastal Plain-Continental  
Margin provinces

Thinking Diagram for climate change and Bertie County

11:30-12:00: Lunch Break (supplied) and Description of Field Trip

12:00-2:30: Meet at the van with warm clothes and hiking shoes/boots

Feb 28: Do field trip of Cashie River drainage system.

March 1: Travel to Bertie County’s “Tall Glass of Water”

2:30-3:00: Return to the Cashie River Center and wrap up