

### What is a Watershed?

A watershed is the area of land where all of the water that is under it or drains off of it goes into the same place. John Wesley Powell, scientist geographer, said that a watershed is: "that area of land, a bounded hydrologic system, within which all living things are inextricably linked by their common water course and where, as humans settled, simple logic demanded that they become part of a community."

(<http://water.epa.gov/type/watersheds/whatis.cfm>)



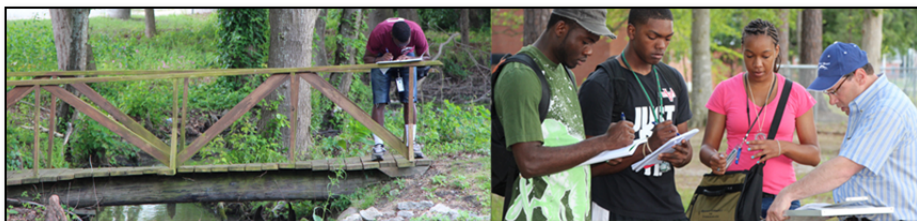
### Watershed Watch

The underlying premise of Watershed Watch is that much of the best learning is derived from doing; that science, like art, is most inspiring when experienced.

The University of New Hampshire (UNH), The College of the Albemarle (COA), and Elizabeth City State University (ECSU), developed Watershed Watch (WW) as an exciting, inquiry-based experience that makes science more accessible, authentic, and socially-relevant for undergraduates.

In particular, Watershed Watch was designed to engage students in hands-on use of geospatial technologies (GST) in an integrated, multidisciplinary study of two very different watersheds: the Merrimack in NH and the Pasquotank in NC.

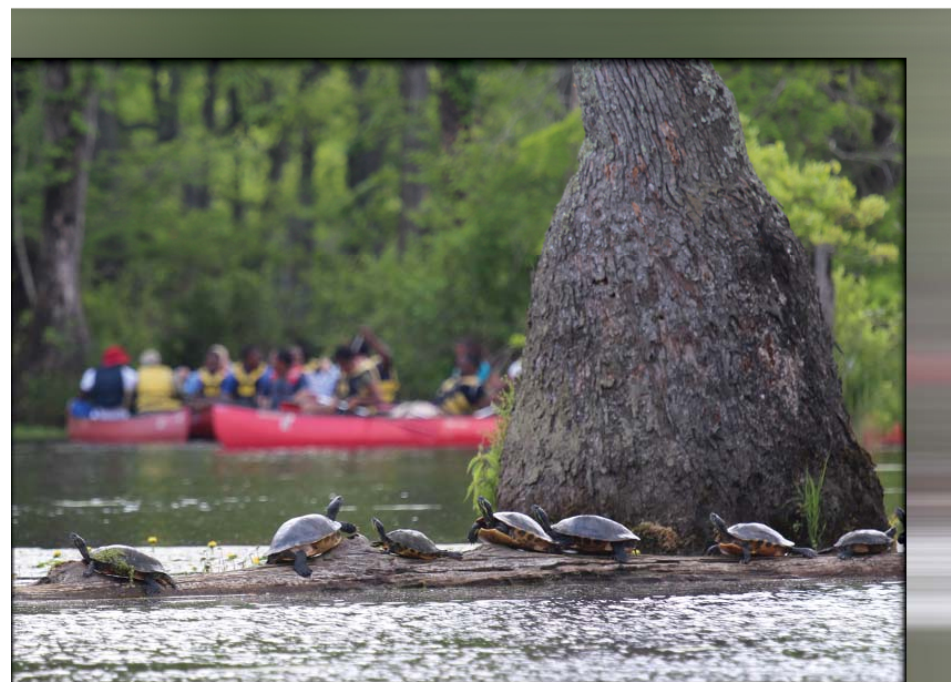
This partnership between UNH and ECSU, based on a unique combination of expertise, mentoring skills, and faculty research, has formed the basis for development of an effective model to increase STEM majors.



# WATERSHED WATCH

## Summer Closing Program

May 31, 2013



**ECSU**  
ELIZABETH CITY STATE UNIVERSITY

UNIVERSITY OF NEW HAMPSHIRE :: ELIZABETH CITY STATE UNIVERSITY

<http://nia.ecsu.edu/www/www.html>

NSF STEM Project Grant # H98230-06-1-0173 led by Dr. Barry Rock, University of New Hampshire

# 2013 WATERSHED WATCH PROGRAM TEAMS

Abstracts and Posters can be viewed at: [http://nia.ecsu.edu/ww/summer13/summer13\\_essays.htm](http://nia.ecsu.edu/ww/summer13/summer13_essays.htm)



## **Analyzing Factors that Influence Loblolly Pine (*Pinus taeda*) at Elizabeth City State University**

Kalyx McDonald, Courtney Farmer, Jazette Johnson, Malcolm McConner, Alicia Reynolds  
Mentor: Barry Rock

## **The Watermark Project: Human Actions Impacting the Quality of Water**

Michael Cobb, Kelechi Onyiriuka, Robin Brice, Anthony Lynn, Dorothy Brice  
Mentor: Jeff Schloss

## **How Campus Development Affects Forest Growth**

Ricky Dixon, Jessica Hathaway  
Mentor: Annette Schloss

## **Determination of an Empirical Model Relating Canopy Cover to NDVI Values in the Pasquotank Watershed, NC**

Michael Chamberlain, Jimil Perkins, Emma Reeves, Rashad Williamson  
Mentor: Stephen Hale

## **University of New Hampshire Mentors**



### **Dr. Barry Rock**

Professor Emeritus  
Forestry/Botany/Remote Sensing  
Institute for the Study of Earth,  
Oceans, and Space  
PI-Watershed Watch



### **Dr. Stephen Hale**

Research Associate  
Joan and James Leitzel  
Center for Mathematics,  
Science, and Engineering  
Education



### **Dr. Annette Schloss**

Research Scientist  
Earth Systems Research Center  
Institute for the Study of Earth,  
Oceans and Space



### **Mr. Jeff Schloss**

Professor, Biological  
Sciences  
UNH Freshwater Biology  
Center for Water Resources  
Specialist with UNH  
Cooperative Extension

## **Elizabeth City State University**



### **Dr. Linda Hayden**

Director, Center of Excellence in Remote Sensing Education and Research  
Co-PI Watershed Watch

# SCHEDULE OF ACTIVITIES

• May 31, 2013 •

## **9 – 9:45am Placement of Tree Plaques :: Outdoor Classroom**

The History of the *Outdoor Classroom* (Alicia Reynolds)  
Who was Dorothy Thomas? (Dorothy Brice)  
What is a Loblolly Pine? (Emma Reeves)  
Placement of Tree Plaques  
Closing Remarks by ECSU Chancellor Willie Gilchrist

## **10 – 11:15am Watershed Watch Poster Session :: Jenkins Science Center Lobby**

Welcome by Dr. Harry Bass, Dean, School of Math, Science and Technology  
Watershed Watch Poster Session (teams listed to the left)

## **11:30-1:00pm Luncheon at Golden Corral Restaurant**

## **Program Reflections**

### **Travel Reports from Merchants Mill Pond, Virginia Beach, Manteo**

Michael Chamberlain, Malcolm McConner, Robin Brice, Kalyx McDonald

### **Research Techniques Learned: Data Collecting, Data Analysis, Reporting**

Kelechi Onyiriuka, Jessica Hathaway, Ricky Dixon, Rashad Williamson

### **Journaling**

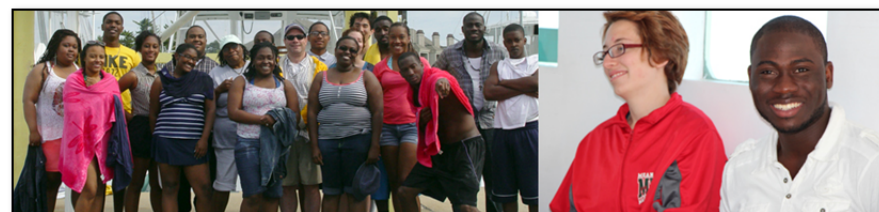
Jimil Perkins, Anthony Lynn, Michael Cobb, Jazette Johnson

## **Lunch**

## **Remarks from the Program Faculty: What we learned about this NC Watershed**

Dr. Annette Schloss, Dr. Stephen Hale, Mr. Jeff Schloss, Dr. Linda Hayden

## **Presentation of Certificates and Stipend Checks**



## **Upcoming Events**

Globe Training, ECSU ~ June 7-8, 2013

CRISIS Middle School Program, ECSU ~ June 17-28, 2013

IGARSS 2013 - Melbourne, Australia ~ July 21-26, 2013

NASA NICE Workshop for MSI Faculty, UNH ~ July 29 - August 2, 2013

Science Gateway Workshop, ECSU ~ August 6-8, 2013

STC Directors Meeting, Portland, OR ~ August 22-23, 2013

IGS Symposium, University of Kansas ~ September 9-13, 2013