

Instructors

Dr. James D. Gregory is a Professor of Forestry at NC State University and Principal of Watershed Hydrology Consultants LLC. He has 32 years experience in teaching and research in watershed and wetlands hydrology. A co-chairman of the NC Stream Technical Advisory Committee with John Dorney, Dr. Gregory has assisted in the development of the stream definitions, riparian buffer rules, and the methods for classifying and identifying stream origins in NC and has conducted several perennial stream identification classes in Virginia.

John Dorney has for 15 years served as the Supervisor of the Planning and Programs section of the Wetlands and Stormwater Branch in NCDWQ where he has staff responsibility for managing the NC riparian buffer rules program and all the stream classification and identification issues related to those rules. As co-chairman of the NC Stream Technical Advisory Committee established in 1998, John has led the efforts by NCDWQ to develop consistent, science-based methods to define and identify stream origins for buffer rule applications.

Other Instructors: This course is a collaborative effort between NC State University and the NC Division of Water Quality. Principal instructors from those two organizations, Dr. James Gregory and John Dorney will be assisted by professionals from NCDWQ and other agencies who have much experience in the stream and riparian buffer programs.

Registration and Fees

Registration is required by **the deadline of September 26**. The workshop fee is \$695 and includes course materials, lunches, refreshment breaks, and field tip transportation. Enrollment in the workshop is limited so early registration is strongly encouraged.

Cancellation Policy

Cancellations made before the registration deadline qualify for a full refund less a \$50 service charge. Refunds cannot be made for cancellations after the registration deadline. In this case it is recommended you send a substitute.

Location and Lodging

Lodging is not included in the registration fee, and you must make your own reservations. The workshop will be held at the Hampton Inn Raleigh-Cary in Raleigh, NC and the Hampton Inn in New Bern, NC. For the nights of October 6, 7, and 8 a block of rooms is being held at the Hampton Inn – RBC Center under “NCSU-Streams”; **Call Hampton Inn Cary, NC before September 15, 2008 at 919-233-1798 for reservations.** For the night of October 9 a block of rooms is reserved at the Hampton Inn in New Bern, NC. **Call Hampton Inn New Bern before September 15, 2008 at 252-637-2111 to make your room reservations.** For travel from Raleigh to New Bern, you will have the option of vanpooling to and from New Bern.

Workshop Tentative Agenda *(subject to change)*

Tuesday, October 7, 2008: Hampton Inn-RBC Center, Raleigh

- 7:30 am - Registration
- 8:00 am - 12:00 pm Classroom Session
 - NC riparian buffer rule development and administration
 - Stream networks, maps, and hydrologic functions of streams
 - Stream biology - Role of aquatic animals in stream identification
 - Role of freshwater algae in stream identification
- 12:00 - 1:00 pm - Lunch (included in registration fee)
- 1:00 - 3:30 pm - Classroom Session
 - NCDWQ intermittent and perennial stream id methodology
 - US Army Corps of Engineers methods for determination of relatively permanent waters and stream quality evaluation
 - Implementing the Carabell/Rapanos guidance in North Carolina: recent work by the NC Division of Water Quality
- 3:30 - 5:00 pm - Field trip. Piedmont rural streams (van provided)
- 7:00 pm - Procedures for field id of macrobenthos and algae

Wed., October 8, 2008: Hampton Inn-RBC Center, Raleigh

- 8:00 - 12:00 am - Classroom Session
 - Types of first order streams: effects of physiography and land use
 - Overview of NC riparian buffer rules
 - Urban stream issues
 - Stormwater management and riparian buffer protection rules
 - Intermittent and perennial stream mapping update
- 12:00 - 1:00 - Lunch (included in registration fee)
- 1:00 - 5:00 pm - Field Trip: Field Identification of Piedmont rural streams (van provided)

Thursday., October 9, 2008: Hampton Inn-RBC Center, Raleigh

- 7:30 am - 3:30 pm - Field trip: Id of Piedmont rural and urban streams
- 3:30 pm Travel to New Bern, NC (van provided)
- 8:00 pm Classroom session: Comfort Suites Riverfront Park, New Bern, NC
 - Question and answer session
 - Exam review

Friday, October 10, 2008: New Bern, NC

- 8:00 - 9:00 am Written exam
- 9:00 am - 3:30 pm Field trip: Coastal Plain rural streams, modified streams, and ditches. (van provided)

*Now accepting pre-registration for the May 2009
Delineation of Piedmont and Coastal Plain
Jurisdictional Wetlands
www.ncsu.edu/feop/programs.html*

**Intermittent and Perennial Stream Identification
for Regulatory Applications**

Register using form below, or
on-line with Mastercard or Visa at:
www.ncsu-feop.org

Deadline: September 22, 2008

Name _____

Organization _____

Address _____

City _____ State _____ Zip _____

Daytime Phone _____

Fax _____

E-Mail _____

Vegetarian Meals: Yes No

Continuing Education Credits desired:

Foresters Engineers

Landscape Architects Other: _____

Registration fee: \$695

~~~~~Payment Methods~~~~~

Check payable to NC State University.

Credit Card (MasterCard or Visa ONLY)

Card #: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Expiration Date: \_\_\_\_\_

Name of Cardholder: \_\_\_\_\_

**NC State University  
Forestry and Environmental Outreach Program  
Campus Box 8008  
Raleigh, NC 27695-8008  
Phone: 919-515-9563, Fax: 919-515-6883**

## Intermittent and Perennial Stream Identification for Regulatory Applications



*A Training Course for Environmental and  
Engineering Consultants, Foresters,  
and Landscape Architects*

**October 7-10, 2008  
Cary and New Bern, NC**

**Sponsored by**

Forestry and Environmental Outreach Program  
Department of Forestry and Environmental Resources,  
North Carolina State University  
and  
Wetlands and Stormwater Branch  
North Carolina Division of Water Quality

### **About the Course**

This training course will equip natural resource professionals with the knowledge and field skills necessary to identify intermittent and perennial stream origins for correct application of various regulatory programs that affect headwaters streams. Successful completion of this course is required in order to perform stream identification assessments in Chatham County, NC. Topics include: (1) stream networks, stream maps, and hydrologic functions of streams and riparian zones, (2) applications of stream ecology in stream identification, (3) the NC Division of Water Quality stream identification methodologies, (4) USACE jurisdictional stream identification and applications of the Rapanos/Carabell Guidance, (5) NC riparian buffer rules, and (6) stream identification methods approved by VA DCR Chesapeake Bay Local Assistance for determinations of water bodies with perennial flow. Extensive field training will focus on streams in the Piedmont and Coastal Plain regions of North Carolina. A rigorous written exam will be administered and a certificate of training will be issued by the NCSU Department of Forestry and Environmental Resources for all participants who successfully pass the exam. The course is very similar to the certification course provided for state agency regulatory personnel and is endorsed by the NC Division of Water Quality, Wetlands and Stormwater Branch.

### **Who Should Attend?**

The course will be valuable to environmental and forestry consultants, engineering consultants, landscape architects, and regulatory professionals whose work involves stream assessments for riparian zone rules, 404/401 regulations, and other stream regulatory programs in North Carolina and the Chesapeake Bay Preservation Act, Resource Protection Area program in Virginia. Though the field trips are specific to North Carolina conditions, this course will also be useful for professionals whose work is focused in other nearby states where headwaters streams are quite similar to those in NC.