



Ephemeral Reach



Intermittent Origin



Perennial Reach

**Stream Identification Training Course
October 4-7, 2011**

Conducted by: Dr. James D. Gregory

**Watershed Hydrology Consultants LLC
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**Location: Marriott Courtyard Macon Hotel, 3990 Sheraton Drive, Macon, GA 31210
Registration Fee: \$800.00**

Introduction: Watershed Hydrology Consultants (WatHydro) will conduct a 4-day course on the North Carolina methodology for identifying intermittent and perennial streams and their origins during October 4-7, 2011 in Macon, GA. The course will focus on the widely used and applicable North Carolina Division of Water Quality (NCDWQ) stream identification methodology plus training on sampling, preserving, and identifying benthic macroinvertebrates. Environmental consultants, federal and state agency personnel, and local government staff members who deal with regulatory programs related to streams will benefit from the course. Locating the course in Macon, GA will facilitate field trips to both piedmont and coastal plain streams. More information on the stream identification methodology is available at: (<http://portal.ncdenr.org/web/wq/swp/ws/401/waterresources/streamdeterminations>).

Instructors:

James D. Gregory, Ph.D., CPSS, PWS; Professor Emeritus, Department of Forestry and Environmental Resources, North Carolina State University, Raleigh, NC; Principal and Senior Scientist, WatHydro. With 35 years experience in teaching, research, and consulting about forestry, soils, and watershed hydrology, Dr. Gregory is an expert on headwaters streams. He has worked with the NCDWQ for over 10 years in the development of the NCDWQ stream identification methodology and applying and teaching about the methodology across the southeast.

Larry Eaton, MS; Aquatic Biologist, NCDWQ. As part of his 25 years of taxonomic experience, Mr. Eaton conducted the research to develop the NCDWQ list of benthic macroinvertebrate perennial indicators. He also has extensive experience in teaching, testing, and applying the NCDWQ stream identification methodology throughout the southeast.

Additional experienced instructors will be provided if required by high course enrollment.

Logistics: Home base for the course is the Marriott Courtyard Macon Hotel, 3990 Sheraton Drive, Macon, GA 31210; Phone: 478-477-8899 or 888-391-8725: <http://www.marriott.com/hotels/hotel-information/travel/mcnga-courtyard-macon/>. The classroom portion of the course will be held in the hotel conference room and field trips will start from the hotel. Course attendees are responsible for making their own lodging arrangements as needed. A block of rooms will be held for course attendees at the Marriott Courtyard Macon Hotel until September 13, 2011 at the rate of \$77.00/night. **To reserve your room at the rate negotiated for course attendees, call the Marriott Reservations Department at 1-800-321-2211 and ask for the "Stream ID Course Room Block" at the Marriott Courtyard Macon.**

The course registration fee will include instruction, a notebook of handout materials, coffee breaks and catered lunch on Tuesday, bottled water on field trips, and binocular microscope for each attendee's use on Wednesday afternoon for practice in identification of benthic macroinvertebrates. Lunches on Wednesday, Thursday and Friday will be on your own. During the field trips, we will stop at fast food restaurants for lunch. Soil augers, soil color books, and macroinvertebrate sampling gear will be provided for the field trips. However, attendees are welcome to bring and use personal equipment. The field trips will be conducted regardless of weather conditions. Bring waders if you have them for the benthic macroinvertebrate sampling. Knee boots or hiking boots will be adequate for the other field trips.

Registration: A minimum of 20 registrants is required to meet the course budget and a maximum of 35 registrants will be accepted. Please register as soon as possible by sending an email request to James Gregory at wathydro@gmail.com. Include: name, position, employer, business address, office phone

and cell phone numbers, and email address. The registration fee of \$800.00 (check or money order only) should be mailed to the WatHydro address above. The deadline for receipt of the registration fee by WatHydro to reserve your space in the course is Tuesday, September 13, 2011. Cancellations prior to September 13 will receive a full refund of the registration fee. Cancellations after September 13 will receive a refund of the registration fee less a \$100 administrative fee. Paid registrations may be transferred to another individual.

Tentative Course Agenda

Tuesday, October 4, Marriott Courtyard Macon Conference Room – Background Science and Application of the NCDWQ Stream Identification Methodology

8:00 am – 8:30 am Registration Check In

8:30am – 12:00 pm Classroom Instruction

Introductions and Course Overview

Stream Networks and Hydrologic Functions of Streams

Types of Headwater Streams: Physiographic Variation and Anthropogenic Impacts

Riparian Zones: Definitions and Functions

Geomorphology and the NC Stream Identification Method

Stream Maps: Interpretation and Accuracy of Stream Networks

1:00 pm – 5:00 pm Classroom and Field Trip

Soil-Based Evidence of a Seasonal High Water Table

Stream Biology: Role of Aquatic Animals in Stream Identification

The NC Methods for Identification of Intermittent and Perennial Streams and Their Origins

Field trip – instruction in application of the NCDWQ stream identification methodology

Wednesday, October 5, Marriott Courtyard Macon Conference Room – Sampling and Identification of Benthic Macroinvertebrates

8:00 am – 10:00 am Classroom Instruction

Benthic Macroinvertebrates – Characteristics and Identification

10:00 am – 5:00 pm

Field trip: instruction and practice in sampling, collecting, and preserving benthic macroinvertebrates.

Classroom: instruction and practice in identification of benthic macroinvertebrates. Binocular microscopes provided.

Thursday, October 6 – Instruction and practice in application of the NC Division of Water Quality stream identification methodology

8:00 am – 5:00 pm

Field trip to Piedmont streams

Friday, October 7 – Instruction and practice in application of the NC Division of Water Quality stream identification methodology

8:00 am – 3:00 pm

Field trip to Coastal Plain streams

Call or email me with any questions about the Stream Identification Training Course. I look forward to seeing you in Macon, GA.

Regards, Jim Gregory