

PLU Prior Approval Form

Georgia Adopt-A-Stream is the State's Volunteer Water Quality Monitoring Program. The goals of Georgia Adopt-A-Stream are to (1) increase public awareness of the State's nonpoint source pollution and water quality issues, (2) provide citizens with the tools and training to evaluate and protect their local waterways, (3) encourage partnerships between citizens and their local government, and (4) to collect quality baseline water quality data. These goals are achieved through educational workshops on the following topics:

Getting Started with Georgia Adopt-A-Stream	4 hours
Chemical Monitoring Workshop for Quality Assurance	4 hours
Macroinvertebrate Monitoring Workshop for Quality Assurance	5 hours
Amphibian Monitoring Workshop	3 hours
Wetland Monitoring Workshop	3 hours
Educator's Guide Workshop	5 hours

Participant's Name: _____

Home Address: _____

School System: _____

Date of Birth: _____ Social Security #: _____

Name of Course: _____

Location of the Course: _____ Dates of Course: _____

Course Facilitator(s): _____

Facilitator(s)' Organization: _____

Program Participant

Date Signed

I hereby approve this person's participation in the above named Professional Learning Unit Credit Program. I further certify that the goals and objectives of this course are consistent with the goals and improvement objectives of this schools system.

System Superintendent or
Staff Development Coordinator/Specialist

Date of Approval

Please bring this completed and signed this form with you to your training or mail it to:

Georgia Adopt-A-Stream Program, EPD, 2 MLK Jr. Drive Suite 1462 East, Atlanta, GA 30334

Staff Development Syllabus

Georgia Adopt-A-Stream Training Workshop

1. Course Title: Georgia Adopt-A-Stream for Teachers

2. Course Information:

- Number of PLU's: 1
- Location: Various, as scheduled by Adopt-A-Stream trainers.
- Dates: To be arranged. Format is minimum of 2 days.

3. Goals to be addressed by the PLU course

- To understand the purpose of water quality monitoring programs
- To learn sampling, identification and interpretation techniques for water quality monitoring

4. Improvement Practice to be Implemented:

- Engage students in water quality monitoring activities
- Utilize water quality monitoring as a way to address state curriculum standards

5. Competencies to be developed with associated performance indicators identified

An understanding how to:

- Use maps to identify a watershed.
- Conduct a watershed walk in a segment of that watershed and interpret the results, using Georgia Adopt-A-Stream forms.
- Identify a watershed protection activity suitable for the location and age of students involved.
- Compile a list of local watershed protection and problem solving resources.
- Demonstrate appropriate sampling techniques, as specified by the Georgia Adopt-A-Stream (AAS) program.
- Use appropriate sampling, interpretation and safety procedures as specified by the AAS

Performance Indicators for Competencies:

- Quality Assured Quality Controlled water quality macroinvertebrate parameters test.
- Quality Assured Quality Controlled water quality chemical parameters test.
- Quality Assured Quality Controlled water quality bacterial parameters test.

GEORGIA ADOPT-A-STREAM TRAINING WORKSHOPS

Getting Started with Georgia Adopt-A-Stream

Conducting Watershed Survey, Map Assessment and Visual Stream Survey - 4 hours

This workshop is based on the manual *Getting To Know Your Watershed*. Volunteers learn about the process of registering the stream, wetland or lake that they will monitor. Then volunteers learn how to use maps to delineate and assess their watershed. Land use and impervious surface is discussed as it pertains to the watershed survey data forms. The second half of the workshop is spent at a stream conducting the visual stream survey and learning how to do a stream cross-section and calculate flow. This workshop is not required but is highly recommended.

Chemical Monitoring Workshop for Quality Assurance

Chemical Monitoring – 2.5 hours (plus a 1.5 hour introduction to the program)

The Chemical Monitoring workshop is designed to teach volunteers about basic stream water chemistry and how to conduct the chemical tests using hand-held field equipment. The basic set of tests that volunteers are asked to conduct includes dissolved oxygen, conductivity, pH, and temperature. Advanced tests may include alkalinity, phosphate and nitrate-nitrogen. Volunteers are given a field test and written test to assess their ability to collect accurate and precise data. Volunteers who collect data within 10% accuracy and pass the written test with a score of 80% or better will be considered a QA/QC volunteer for one year.

Macroinvertebrate Monitoring Workshop for Quality Assurance

Biological Monitoring – 5 hours

Learn how to sample the biological aspects of a stream. The macroinvertebrates (insects, mollusks, & crustaceans) found in a stream are excellent indicators of the condition of both water quality and habitat. This workshop will focus on collection techniques for either rocky or muddy bottom streams and macroinvertebrate identification. A quality assurance test is available at the end of the workshop for those who wish to test their skills. Volunteers who identify the macroinvertebrates with 90% accuracy and pass the written test with a score of 80% or better will be considered a QA/QC volunteer for one year.

Bacterial Monitoring Workshop for Quality Assurance

Bacterial Monitoring – 2.5 hours (plus a 1.5 hour introduction to the program)

The Bacterial Monitoring Workshop will teach volunteers how to monitor *E. coli* levels in their streams. *E. coli* is an indicator organism that is often used to assess the water quality. Monitoring levels of *E. coli* can help identify possible sources of pollution. This workshop will focus on proper collection of a water sample; transfer of sample onto plates that will be incubated and proper interpretation of results. Volunteers who successfully perform the bacterial monitoring and pass the written test with a score of 90% or better will be considered a QA/QC volunteer for one year.

Amphibian Monitoring Workshop

Amphibian Monitoring – 3 hours

Learn how to monitor for amphibians (frogs and salamanders), through passive methods. Amphibians are found in a variety of upland and aquatic habitats including streams, wetlands, and lakes. This workshop will focus on the instruction of monitoring techniques including treefrog refugia, coverboards, and frog calls. Volunteers will also be instructed on general life history, site setup, safe handling procedures of amphibians and the need to gather life history information critical for conservation planning. Volunteers who attend will be considered an amphibian monitoring volunteer.

Wetland Monitoring

3 hours

Adopt-A-Stream's Wetland Monitoring Program immerses participants into the amazing world of wetlands. During this workshop, participants will learn about Georgia's wetland types and how to classify wetlands based on their soils, hydrology and vegetation. The workshop will also introduce them to challenges facing wetlands and provide the tools necessary to participate in their protection. Volunteers who attend will be considered a freshwater wetland monitoring volunteer.

Educator's Guide Workshop

5 hours

Adopt-A-Stream Educator's Guide is designed to introduce the Adopt-A-Stream monitoring program to students across Georgia. These activities will bring water quality education to your classroom and spark your students' interest in protecting our precious water resources. During this workshop, educators will participate in several of these activities and learn how to use them in the classroom. Teachers will then be asked to submit a detailed report on how they use the Adopt-A-Stream Educator's Guide as an educational tool. This workshop is suitable for formal and non-formal teachers

*** One SDU credit available to teachers for participation in any 3 of the above workshops.**

****Most AAS workshops combine Getting Started and Chemical workshops. The Introduction is then shortened to 1.5 hour.**