

# GEORGIA

# Adopt-A-Stream

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*Michele Droszcz and Harold Harbert, Editors*



## Wetland Monitoring

Is there a wetland you walk through to watch birds, monitor water quality, or that you use to teach environmental education? If you are working on a wetland or if there is a wetland in your neighborhood that you would like to monitor or protect, we encourage you to join the Adopt-A-Wetland program.

The purpose of the Adopt-A-Wetland program is to heighten awareness of wetlands and their values. If you are new to wetlands, contact the Georgia Adopt-A-Stream program and ask for a **Wetland Monitoring** Manual. This manual will introduce you to the functions and values of wetlands and to the basics of understanding the plants, soils and hydrology in wetlands. If you have been working with a wetland, we encourage you to register your wetland. By registering your wetland, you are letting others in the State know about your efforts to protect, monitor or study wetlands. The registration form is located in the **Getting To Know Your Watershed** Manual, or you can download it from our website at [www.riversalive.org/aas.htm](http://www.riversalive.org/aas.htm), and click on New Manuals and New Data Forms.

The first 25 groups to register a wetland will receive a wetland monitoring kit. This kit contains a hand lense, a compass and plant identification field guides.

## Outdoor Classroom Grant Applications Now Available

An outdoor classroom is an area on the school campus that has been enhanced by the creation of plant and wildlife habitats to provide a place where students, their teachers, and their families can engage in hands-on learning experiences about the natural environment. Features of an outdoor classroom can include, but are not limited to, schoolyard wildlife habitats, nature trails, gardens, wetland study areas, composting and recycling projects and arboretums. Outdoor Classroom Grants will be awarded to support planned projects or to enhance existing projects. Only one \$750 grant per school will be awarded! All schools (public or private, all grade levels) are encouraged to apply. For a full application, go to [www.ealliance.org](http://www.ealliance.org).



*Adopt-A-Stream trainers collect macroinvertebrates in North Georgia stream.*

# Get Involved In Estuary Monitoring!

*Estuaries are semi or partially enclosed bodies of water where seawater and freshwater mix. They may be locally called bays, sounds or river mouths. Along the Georgia coast, our estuarine habitats include the coastal rivers, salt marshes and tidal marsh creeks.*

Seawater from the ocean and freshwater, draining from land, mix together in estuaries. It is to be expected to find a range of salt concentrations throughout an estuary. The salinity of the water affects the organisms living in it, and some species are more tolerant to a wider range of salinity than are others. Other species, however, have narrower tolerance limits and are usually found in only certain portions of an estuary.

**Salinity** refers to the concentration of dissolved salts in seawater. It is expressed in units of g/kg or parts of dissolved salt per thousand parts of seawater solution (ppt). The salinity of average ocean water is 35 ppt, although along Georgia beaches the salinity is usually closer to 30 ppt, due to the input of fresh water from our rivers. As you move from the ocean into an estuary, the salinity generally decreases. Because saltier water is denser than fresher water, it is not unusual to find slightly saltier water near the bottom with less salty water near the surface. In fact, this saltier, denser water actually moves upstream along the bottom of an estuary. In Savannah, right now, there is controversy regarding the planned deepening of the Savannah River harbor and channel because it is predicted that deepening would allow more salt water to flow further upriver.

Along with the general trend of decreasing salinity as you move upstream in an estuary, variations in salinity occur due to tidal action moving seawater further inshore during rising tide, and fresher water moving further seaward during falling tide. Attached or sessile organisms must be able to cope with this ever-changing salinity regime. Increased freshwater outflow due to rain within the watershed adds another variable.

As you can see, the chemical conditions of any one spot in an estuary can be quite variable due to normal, natural phenomena. Coastal Adopt-A-Stream groups monitoring physical and chemical water conditions typically see variations not only in salinity, but also in water flow (speed and even direction), dissolved oxygen, settleable solids, and Secchi disk depth that are due to tidal action alone.

Biological monitoring in a Georgia estuary is not feasible using the standard stream sampling techniques (kick seine or D-frame net). The bottom of shallow tidal creeks is very soft mud, and even if it could be sampled, the bottom dwelling biota is mostly polychaete worms and small crustaceans. The Coastal Region Training Center for Georgia Adopt-A-Stream, located at Savannah State University, is planning to experiment with alternate biological sampling techniques that would be feasible for volunteers to use. Any ideas are welcome.

Through a grant from the Georgia Department of Natural Resources Coastal Zone Management Program and the National Oceanic and Atmospheric Administration (NOAA), the Coastal RTC is presently training AAS groups in visual and chemical monitoring. Adaptations to the standard AAS chemical monitoring protocol for the coastal region include adding salinity as one of the basic tests, and adding Secchi disk readings as a means to quantify water clarity.

Estuary monitoring in coastal Georgia presents its own set of challenges, and increasingly more and more people and groups are being trained to meet those challenges. We might not get to deal with riffles and runs, but we might get to see dolphins from time to time.

*Dr. Joe Richardson is a professor of Marine Science at Savannah State University and the Director of the Coastal Georgia Regional Training Center for Georgia Adopt-A-Stream. For contact information, see page 3 of the newsletter.*



## Adopt-A –Stream Calendar of Events

The following workshops, taught by certified AAS trainers, provide training in visual, biological and chemical monitoring of streams and wetlands. Please call to register.

| <b>What</b>              | <b>Who</b>               | <b>When</b> | <b>Where</b>          | <b>To Register</b> |
|--------------------------|--------------------------|-------------|-----------------------|--------------------|
| Getting Started w/AAS    | Coastal RTC              | Nov 9       | Savannah State Univ.  | 912-356-2809       |
| Getting Started/Chemical | Chattooga/Floyd/Polk AAS | Nov 11      | Rome                  | 706-802-5322       |
| Getting Started/Chemical | Valdosta RTC             | Nov 11      | Valdosta State Univ.  | 912-333-5611       |
| Chemical                 | Coastal RTC              | Nov 14&16   | Savannah State Univ.  | 912-356-2809       |
| Biological               | Fulton Co. AAS           | Nov 18      | South Fulton County   | 404-730-8006       |
| Biological               | Roswell AAS              | Nov 21      | Roswell               | 770-641-3715       |
| Biological               | Georgia AAS              | Dec 10      | Fernbank Science Ctr. | 404-675-1639       |
| Biological               | UOWN – Athens            | Dec 10      | Sandy Crk Nature Ctr  | 706-613-3615       |
| Chemical                 | Fulton Co. AAS           | January 27  | Chattahoochee NC      | 404-730-8006       |

**NOTE: Workshop times vary. Please call to get exact times and locations.**

There's more! AAS workshops are conducted throughout the State. Call one of these numbers to learn about upcoming workshops in your region of the State.

| <b>Where</b> | <b>Who</b>          | <b>To Register</b> | <b>E-mail</b>                      |
|--------------|---------------------|--------------------|------------------------------------|
| Coastal GA   | Dr. Joe Richardson  | 912-356-2809       | richards@tigerpaw.ssu.peachnet.edu |
| West GA      | Dr. Becky Champion  | 706-687-4090       | champion_becky@colstate.edu        |
| Central GA   | Sylbie Yon          | 706-485-9243       | sayon@peachnet.campuscwix.net      |
| South GA     | Dr. David Hedgepeth | 912-333-5611       | dhedgepe@valdosta.edu              |

## Do You Need A Permit To Monitor?

When choosing a place to monitor a stream, estuary, wetland or lake, you should always find a location that is safe and legal to access. Obvious access points are public parks. Most, if not all, county and city parks can be used as monitoring sites without obtaining special permission. When monitoring in a State or Federal park, we suggest that you notify the park.

If you have been or intend to monitor within the boundaries of the Chattahoochee National Recreation Area, you will need a Research/Collection Application and Permit. This is a simple application process that allows the park managers to keep track of the monitoring and research being done in the park. They are interested in the data you are collecting and would like to have copies of your data.

To obtain a copy of the Research/Collection Application and Permit, contact David Ek at 770-399-8074 x 230.

### Upper Suwannee River Water Summit

The Upper Suwannee River Watershed Initiative invites you to attend the Upper Suwannee River Water Summit on December 14 from 8 a.m. to 4 p.m. at the Rural Development Center in Tifton. This summit is an opportunity for you, a watershed resident, to learn about current and future water issues in your region. For more information, call the Seven Rivers RC&D Council at 912-367-7679.

### Community Watershed Workshop, December 5

The last Community Watershed Workshop of the year will be held on December 5 at Georgia Tech from 6:00 to 8:00. The topic will be about Federal and State legislation that citizens should know about when working in the water quality and watershed arena. For more information, call Kim Zimmerman at 770-918-6799.

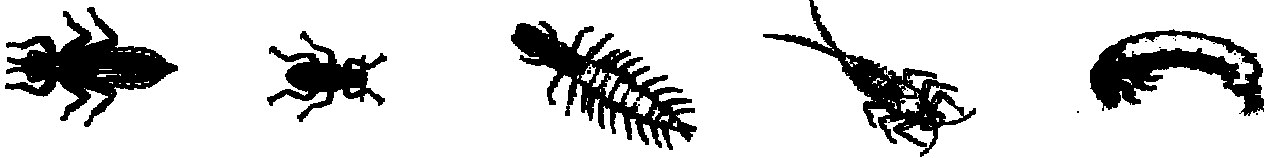
## Update Your Monitoring Information for Our New Database

Georgia Adopt-A-Stream is developing a new database. In order to enter your data into the database, we will need to know some specific information about **each** of your monitoring sites. The best way to present this information to us is by filling out a new Registration Form for each monitoring site. These forms are located in the ***Getting To Know Your Watershed*** Manual or can be downloaded from our website at [www.riversalive.org/aas.htm](http://www.riversalive.org/aas.htm). The new forms and manuals for visual, biological and chemical monitoring can also be found on the website. To order a hardcopy of these manuals, call 404-675-1636.

Your monitoring sites will be located by latitude and longitude. In order for us to determine the exact location of your site, you must include a copy of your topographic map with an X marking the exact spot of each of your sites. On your Registration Form, include the name of the topographic quadrangle, your county and the name of your waterbody. Please do this for each site that you are monitoring.

## Volunteers Make Database Possible for Georgia Adopt-A-Stream

Georgia Adopt-A-Stream has been very lucky to find three wonderful people to volunteer their time to develop a new database. We want to give special thanks to Eric Van De Genachte with the Wildlife Resources Division, Natural Heritage Program, Bruce Taylor with Clayton County Water Authority and Dawn Abercrombe with CH2MHill.



The Georgia Adopt-A-Stream Newsletter is published six times per year. For More information about the Georgia Adopt-A-Stream program or to contribute to the newsletter, call or write to:

**Georgia Adopt-A-Stream**  
**Environmental Protection Division**  
**4220 International Parkway, Suite 101**  
**Atlanta, GA 30354**  
**(404) 675-1639**  
[www.riversalive.org/aas.htm](http://www.riversalive.org/aas.htm)

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