

# CONFLUENCE 2018 AGENDA & SESSION DESCRIPTIONS

## Friday, March 23<sup>rd</sup>

5:00 - 9:00	Check-in and Social
	Dinner, Water Science Poster Session
	Adopt-A-Stream Water Quiz Bowl

## Saturday, March 24<sup>th</sup>

8:00-9:00	Registration-Exhibit Area Open							
9:00-9:10	Welcome-Opening Remarks							
9:10-9:45	Keynote: Carol Couch, Executive Director of Phinizy Center for Water Sciences							
10:00-10:10	Break: Disperse to First Session							
Session 1	Lab <i>(25 participants)</i>	Room 36 <i>(25 participants)</i>	Room 23 <i>(30 participants)</i>	Blue Planet Room: Green Infrastructure	Room 32: Water Policy, Protection & Planning <i>(30 participants)</i>	Room 31 <i>(25 participants)</i>	Room 33 <i>(25 participants)</i>	
10:10-10:40	Advanced Macroinvertebrate Identification	Native Fishes of Georgia	Monitoring Georgia's Amphibians	Sustainable Stormwater Management in Your Community	Legislative Updates in GA	Remote Water Monitoring Sensors	Beavers	
10:40-11:10				Protecting GA's Waters				
11:10-12:10				Gwinnett Environmental & Heritage Center Tour	Tips for Grants and Funding			
12:10-1:10	Lunch, Basin Breakout Meet & Greet, Poster Viewing, Free Time							
1:10-2:10	AAS Year in Review & AAS Awards							
2:10-2:20	Break: Disperse to Second Session							
Session 2	Lab	Room 36 <i>(25 participants)</i>	Room 23 <i>(30 participants)</i>	Field Trip *Meet in Dining Room <i>(40 participants)</i>	Room 32 <i>(30 participants)</i>	Room 31: Watershed Tools in Action <i>(25 participants)</i>	Room 33 <i>(40 participants)</i>	Field Trip *Meet at Center front doors <i>(15 participants)</i>
2:20-3:20	no session	Native Fishes of Georgia	Turtles of Georgia	Tour of F. Wayne Hill Center	Geology of Georgia	Mapping Your Watershed Online	Streambank Restoration	Wetland Monitoring and Delineation
3:20-4:20						Water Trails		
4:20-5:00	Announce Silent Auction and Door Prize Winners, Closing Remarks							
			WORKSHOP	PRESENTATION	FIELD SESSION	<i>Participant Capacity in Italics</i>		

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~~~~ Friday, March 23<sup>rd</sup> ~~~~

## **Water Science Poster Session (Classroom)**

This session during the Friday evening social provides a platform for students and volunteers to share water science research or monitoring projects, receive recognition throughout the water quality monitoring community, and interact with peers and professionals in the field. View previous participants' abstracts and posters on the [Water Science Poster Presenters & Winners](#) page on the AAS website.

## **Adopt-A-Stream Water-Themed Quiz Bowl!**

Join the Friday evening Social for networking, dinner and Adopt-A-Stream Water-Themed Quiz Bowl! Quiz bowl is a fast-paced buzzer competition in which teams of volunteers, veteran trainers, students, and those new to AAS will combine efforts to test their knowledge on water related trivia questions for chances to win great prizes! There will be several rounds with differing levels of difficulty and multiple opportunities to win a prize for your group. Questions span topics from Adopt-A-Stream monitoring protocol to pop culture. All attendees are welcome and anyone can win!

~~~~ Saturday, March 24<sup>th</sup> ~~~~



## **Keynote Speaker: Dr. Carol Couch**

**Phinizy Center for Water Sciences**

*Executive Director*

[Dr. Carol Couch, Phinizy Center for Water Sciences Profile](#)

[Dr. Carol Couch](#) has thirteen years of experience as a leader and manager of integrated environmental research, including ten years with the United States Geological Survey (USGS), and three years leading Australia's national water research program. She is a former Director of the Georgia Environmental Protection Division (EPD) and a member of the faculty of the University of Georgia where she taught ecology and environmental studies.

## **Keynote Address**

9:10 am – 9:45 am

### **What role do stormwater and headwater streams play in creating resilience to climate change?**

Current stormwater management practices do not consider how climate change will alter the hydrologic cycle. Our practices of landscape development disrupt watersheds by, for example, turning first order streams into stormwater conveyances. Innovative urban design and new city development are using natural hydrological principles to help mitigate temperature and precipitation changes expected under climate change.

# Session 1

10:10 am – 12:10 pm

## **Advanced Macroinvertebrate Identification (Lab)** *(limited to 25 participants)*

Interested in strengthening your identification skills and getting more experience with benthic macroinvertebrate identification? Come join experts Damon Mullis, Research Scientist at the Phinizy Center for Water Sciences; Byron Collins, Environmental Compliance Specialist at Georgia Department of Natural Resources; and Julien Buchbinder, Graduate Student at Georgia Southern University, as they provide tips and guidance as well as life history about this amazing aquatic community. Feel free to bring photos or specimens from your own site to get confirmation for identification.

## **Native Fishes of Georgia (Classroom & Field)** *(limited to 25 participants)*

Join Amos Tuck, consultant, Michael Wolfe of the North American Native Fishes Association and Camm Swift, Emeritus ichthyologist at Natural History Museum of Los Angeles County, for an experience exploring Ivy Creek and observing native fishes. They will demonstrate and discuss sampling and viewing techniques and there will be opportunities to get firsthand experience with the diversity of native fishes that are right here in our streams.

**What to bring/wear:** boots for wading in a stream and wear appropriate clothing for being outdoors.

## **Monitoring Georgia's Amphibians (Classroom)** *(limited to 30 participants)*

Join Mark Mandica of the Amphibian Foundation as he shares life history, identification techniques, and conservation efforts of amphibians found in our local ecosystems. In this session you will learn about recognizing frogs and salamanders by adult, larvae and egg stages, as well as frogs by call. Also discussed is the reliance of amphibians on clean water systems, the importance of monitoring them, and what you can do to get involved. This session will include a hands-on component for identifying a collection of native frogs and salamanders.

## **Green Infrastructure (Classroom)**

- **Green Infrastructure at the Local Level: Sustainable Stormwater Management in Your Community**  
Green infrastructure is an approach to water management that incorporates both the natural environment and engineered systems to provide clean water, conserve ecosystem values and functions, and provide a wide array of benefits to people and wildlife. Green infrastructure solutions can be applied on different scales, from the house or building level or to the broader landscape level. On the local level, green infrastructure practices include rain gardens, permeable pavements, green roofs, infiltration planters, trees and tree boxes, and rainwater harvesting systems. Join us for this two part session exploring innovations in green infrastructure practices. In the first hour, a panel of experts will discuss current green infrastructure projects in Metro Atlanta communities. Panelist speakers include [Steve Sanchez of HGOR](#) and Lindsey Sita Mann of [Sustenance Design, LLC](#).
- **Gwinnett Environmental and Heritage Center Building Tour**  
Discover the unique features of an environmentally built museum. Explore current technology and engineering concepts affecting our world today as you get an up close look at Gwinnett's first LEED certified building. This is an indoor and outdoor tour.

## **Water Policy, Protection & Planning (Classroom)** *(limited to 70 participants)*

- **Legislative Updates in Georgia**  
Join Dr. Chris Manganiello, Water Policy Director at Chattahoochee Riverkeeper, to learn about legislative updates that affect water quality protection in Georgia.

➤ **Protecting Georgia's Waters**

In this session, Ania Truszczynski, NonPoint Source Program Manager in the Environmental Protection Division's Watershed Protection Branch, will provide an overview of EPD's efforts to protect Georgia's waters through existing regulatory and non-regulatory programs, and updates regarding rulemaking changes that address water quality, water efficiency, and drought protection in Georgia.

➤ **Tips for Grants and Funding**

❖ **Funding Opportunities**

In this session, participants will learn about available resources to fund a variety of AAS efforts for small community groups to regional programs. Hear from experts about funding opportunities through the 319(h) Grant Program.

❖ **Fund Your Monitoring! Get Grants to Fund Your Adopt A Stream Work**

Are you a staff member, board member, volunteer or intern that would like to get grants to fund your monitoring and water protection work, but you're not sure where to start? This workshop will demystify the grant-seeking, grant-writing, and grant-getting process and teach you what you need to know to get grants to fund your work. The truth is that there are no special tricks or talents required to get a grant, but there are a few important steps to follow. We'll learn what those steps are, how to navigate them, and how to get grants to fund your projects and programs. *About the instructor:* April Ingle is an 18-year veteran of environmental nonprofits and has sought, written, and received many grants. You can learn more about April here <http://www.ingleconsulting.com/about-april.html>.

**Remote Water Monitoring Sensors (Classroom)** *(limited to 30 participants)*

Join Nathan Barlet, Environmental Engineer at the USEPA's Science and Ecosystem Support Division for a crash course in the design of continuous water quality sensors utilizing open source technology. Open source technologies such as Arduino-based microcontrollers combined with inexpensive water quality probes can provide citizen scientists and watershed monitoring organizations with low-cost alternatives for collecting continuous environmental data. Participants of this workshop will gain insight on the topic of continuous and remote water quality monitoring, as well as an overview of how to build a low-cost water quality sensor for measuring key parameters with data logging and cellular telemetry capabilities using open source technology.

**Beavers (Classroom & Field)** *(limited to 25 participants)*

Beavers are "ecosystem engineers" native to Georgia, but they were hunted nearly to extinction, and we got used to a world without them. Now they are making a comeback throughout the state, bringing ecological benefits to stream organisms adapted to the habitats they create and potential threats to our property and infrastructure. Join Dr. Elizabeth Sudduth, Associate Professor of Biology at Georgia Gwinnett College, to discuss beaver ecology, common misconceptions about beavers, and how we can learn to co-exist with them. We will also go for a walk to visit a beaver dam to observe in nature how they alter stream ecosystems and discuss how that can be beneficial for streams impacted by human activity.

**What to bring/wear:** boots for hiking in the woods and/or wading in a stream and wear appropriate clothing for being outdoors.

## Session 2

2:20 pm – 4:20 pm

### **Native Fishes of Georgia (Classroom & Field)** *(limited to 25 participants)*

Join Amos Tuck, consultant, Michael Wolfe of the North American Native Fishes Association and Camm Swift, Emeritus ichthyologist at Natural History Museum of Los Angeles County, for an experience exploring Ivy Creek and observing native fishes. They will demonstrate and discuss sampling and viewing techniques and there will be opportunities to get firsthand experience with the diversity of native fishes that are right here in our streams.

**What to bring/wear:** boots for wading in a stream and wear appropriate clothing for being outdoors.

### **Turtles of Georgia (Classroom)** *(limited to 30 participants)*

Join Amanda Sargent of the Amphibian Foundation as she shares life history, identification techniques, and conservation efforts of turtles found in our local fresh-water ecosystems. In this session you will learn about identifying turtles by group. Also discussed is the reliance of turtles on clean water systems, the importance of monitoring them, and what you can do to help and get involved. This session will include a hands-on component for identifying live native turtles.

### **Tour of F. Wayne Hill Water Resources Center (Field trip)** *(limited to 40 participants)*

On this Wastewater Adventure, you will follow the steps of wastewater treatment and see it all, from the grimy, gritty beginnings of the influent to the crystal clear effluent water that is returned to the environment. Discover how the wastewater treatment process can provide us with fuel and fertilizer nutrients, and learn how reclaimed water is used around the county and right here at the GEHC. This tour takes two hours to complete. Please wear closed-toe shoes and bring a reusable water bottle. This guided tour requires stairs and time outside. Tour is led by Sandy Aceto, Science Program Supervisor with the Gwinnett Environmental and Heritage Center. Please meet in the Dining Room of the GEHC (where we will each pick up our safety items (hard hat, safety glasses and vest) and we will carpool over to the Facility together.

### **Geology of Georgia (Classroom)** *(limited to 30 participants)*

The geology of your adopted watershed helps determine its sediment load, the conductivity and pH of its waters, and of course, the kinds of rocks and minerals you will encounter while monitoring. Bill Witherspoon, co-author of the popular guide, *Roadside Geology of Georgia*, introduces the geologic regions of Georgia and their influences on streams. Learn to recognize your local rocks using Kids Rock!<sup>TM</sup> games. The games and *Roadside Geology of Georgia* will be available for purchase.

### **Watershed Tools in Action (Classroom)** *(limited to 25 participants)*

#### ➤ **Mapping Your Watershed Online**

Join Dr. Christopher Kodani, Associate Professor of Biology at Clayton State University, to learn what a watershed is, and how it can be easily and quickly mapped using ArcGIS Online. Participants can bring a web-enabled device, such as a laptop or a tablet to create a basic map showing their sampling site, and then we can combine these maps into a large, interactive watershed map that will contain everybody's watershed.

#### ➤ **Celebrate the River in your Community: Build a Water Trail!**

Georgia River Network's Water Trails Program supports a statewide network of water trails and provides technical assistance and resources to communities who want to build water trails. In this workshop you will learn about Georgia's established and developing water trails, useful tools available

to help build a successful trail, and the many ways in which water trails can benefit your community and serve as a resource to enjoy and celebrate!

**Streambank Restoration (Field)** *(limited to 40 participants)*

Jack White, Andrew Walter with City of Atlanta, and David Bell of Jacobs will lead this session, focusing on three crucial aspects of stream protection: stormwater impacts at the source, the slope and the banks of the stream. This session will provide an overview and demonstration of basic principles of streambank restoration, reviewing previous year's efforts while engaging new participants in the project. Join us and learn some simple actions that every homeowner can learn and implement to protect urban streams and see how this project has developed on site over the years!

**What to bring/wear:** boots for working in a stream, field clothes for working in the dirt and a change of clothes for afterwards.

**Wetland Monitoring and Delineation (Field trip)** *(limited to 15 participants)*

Stream-associated wetlands are vital habitats for a wide diversity of plant and animal life. Jurisdictional wetlands are protected by law. Come to this workshop and learn from experts about the basics of how to recognize ecological and jurisdictional wetlands as defined by vegetation, soils and hydrology in the field.

**Note:** Please meet at the front doors of the GEHC and we will carpool over to the field site together.

## More Events

**Basin Breakout Meet & Greet:** Want to meet other AAS volunteers, trainers, and coordinators in your watershed? Come to meet, share ideas, and see who is doing what in your watershed. A leader who works in the watershed will guide each basin breakout session. Exchange of contact information will be facilitated to encourage post-conference partnerships.

**Awards Ceremony:** AAS volunteers, watershed groups, and trainers will be honored for their efforts at our annual awards ceremony, which will be held in the Blue Planet room during the lunch break.