

CONFLUENCE 2019 AGENDA & SESSION DESCRIPTIONS



Friday, March 22nd

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

Saturday, March 23rd

7:30-8:30	Registration-Exhibit Area Open						
Session 1	Master Hall 4	Master Hall 3	Master Hall 2	Master Hall 1		Dogwood Room	
8:30 - 9:30	James Brown and Naked Yankees in Georgia's Rivers	Stormwater	Mapping Your Watershed Online	Turtles of Georgia		Adopt-A-Stream Junior - Let's Get WET! (classroom and field)	
	EPD Regulatory Monitoring						
9:30 - 9:45	Break						
9:45	Welcome-Opening Remarks						
10:00	Keynote: Dr. Anna George, Tennessee Aquarium						
10:45	Break and disperse to Session 2						
Session 2	Master Hall 4	Master Hall 3	Master Hall 2	Master Hall 1			
11:00-12:00	Waters of the United States	Floodplain Management: What You Need to Know	Citizen Science Tools for Identifying and Reporting Backyard Diversity	Snakes Alive!			
	Protecting Georgia's Waters						
12:00	Lunch, Basin Breakout Meet & Greet, Poster Viewing, Free Time						
12:45	AAS Year in Review & AAS Awards						
1:50	Break: Disperse to Session 3						

	WORKSHOP	PRESENTATION	FIELD SESSION	<i>Participant Capacity in Italics</i>
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Session 3	Master Hall 4	Master Hall 3	Master Hall 2	Master Hall 1	Meet in Board Room	Meet by Upstairs Fireplace	Dogwood Room
2:00-4:00	Aquatic Habitat Connectivity (classroom and field)	Geology of GA Streams (classroom, potential field)	Beavers (classroom and field)	Amphibians of Georgia (classroom and field)	Wetland Monitoring and Delineation	Stream Restoration	Adopt-A-Stream Junior - Let's Get WET! (classroom and field)
4:30 – 5:30	Announce Silent Auction and Door Prize Winners, Closing Remarks						
6:00	Optional Networking Dinner						
8:00	Optional night hike to Anna Ruby Falls						

Sunday, March 24th

Session 4	Chattahoochee River	Smith Creek at Unicoi	Driving Tour	
9:00- 12:00	Headwaters Hike	Fly-casting 101 at Smith Creek	Stream Restoration Tour	

	WORKSHOP	PRESENTATION	FIELD SESSION	<i>Participant Capacity in Italics</i>
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~~~~ Friday, March 22<sup>nd</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 Trivia!**

Join the Friday evening Social for networking, dinner and Adopt-A-Stream Water-Themed Trivia! Test your water knowledge of all kinds with teams of volunteers, veteran trainers, students, and those new to AAS for chances to win great prizes! There will be several rounds of water related trivia questions 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 23<sup>rd</sup> ~~~~



Keynote Speaker: Dr. Anna George

Tennessee Aquarium

[Vice President of Conservation Science and Education](#)

Dr. Anna George, Vice President of Conservation Science and Education at the Tennessee Aquarium, discovered early in life that being a biologist provided a good excuse to be outside. During her undergraduate and graduate coursework in biology at the University of Virginia and Saint Louis University, she worked in both freshwater and marine systems to study the conservation, ecology, and evolution of fishes. Since joining the Aquarium in 2006, she has led research initiatives in freshwater habitat restoration, species reintroduction, and population genetics in the southeastern United States. Anna has also taught at Franklin & Marshall College, Mountain Lake Biological Station, the University of the South, and the University of Tennessee at Chattanooga. Whether for work or fun, she can be found snorkeling, paddleboarding, and otherwise enjoying the company of fish.

Keynote Address

10:00 am – 10:30 am

Protecting an Underwater Rainforest: How to Help the Diverse Rivers and Critters of the Southeastern United States

If you look beneath the surface of streams and rivers in the southeastern United States, you'll find an underwater rainforest teeming with life. More than half of our nation's salamanders, turtles, fish and frogs make the waters of the Southeast their home. These same rivers also support our rich quality of life, from economic development to recreation and relaxation. Unfortunately, freshwater ecosystems are facing unprecedented challenges, especially here in the Southeast. Our diverse, clean waters are at threat from urbanization and stormwater runoff, overuse of water, and changing weather patterns. To keep the life in our rivers vibrant, colorful, and healthy, we must take action and demand more from ourselves and our community. Whether you are an engineer or a biologist, an artist or writer, the choices we make each day have the greatest impact on our backyard.

Session 1

8:30 am – 9:30 pm

Water Policy, Protection & Planning (Classroom)

➤ **James Brown and Naked Yankees in Georgia's Rivers (Classroom)**

Journey with Georgia River Network River User's Guides author Joe Cook as he takes you on a trip through history and down Georgia's rivers where you'll learn, among other things, how the Godfather of Soul got his start along the North Fork of the Broad River and how a band of brave, naked Union soldiers helped turn the tide of Civil War with a daring raid across the Chattahoochee River. You'll leave with more useless facts than you ever thought you needed to know...and an appreciation of how Georgia's rivers tell the story of Georgia's people.

➤ **EPD Regulatory Monitoring (Classroom)**

Cody Jones, Environmental Specialist with the GA Environmental Protection Division's Watershed Protection Branch will give an overview of goals and projects of the GA EPD's regulatory water quality monitoring program.

Stormwater (Classroom)

Join Javier Sayago, Environmental Compliance Specialist at the Henry County Stormwater Management Department, to learn about the importance of Stormwater in our local communities and its effects on our water resources. Included will be short snaps of history, what the Clean Water Act asks us to do, brief technical aspects and our involvement as authorities, educators, and citizens in general to protect the waters around us.

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.

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.

Adopt-A-Stream Junior - Let's Get WET! (Classroom and Field)

New this year! K-5th grade children of Confluence attendees are invited to participate in a special session designed just for them! This session will feature Project WET activities, guest speakers, live animals, crafts, and a nature hike. For a \$10 registration fee, students can sign up for the morning session (8:30-12), afternoon session (2:00-4:00) or both and the cost of lunch is included (students will meet with their parents for lunch and free time from 12:00-2:00). Participants should dress according to the weather as activities will be held both inside and out. Join us for a fun day of learning about our water world!

Session 2

11:00 am – 12:00 pm

Water Policy, Protection & Planning (Classroom)

➤ **Waters of the United States**

April Lipscomb, Staff Attorney with the Southern Environmental Law Center, will provide a brief overview of the federal Clean Water Act and the types of water bodies that are protected under federal law. In this session, you will also learn which water bodies may lose protection or gain protection under the Clean Water Act, based on efforts by the EPA to change the definition of "waters of the United States." Participants will also learn the difference between state waters, which are protected by Georgia law, and waters of the United States.

➤ **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.

Floodplain Management: What You Need to Know (Classroom) *(limited to 30 participants)*

Join Carl Thomas, Stormwater Utility Manager with Lowe Engineers and the City of Dunwoody, as he provides an introductory course on the fundamentals of floodplain management, a brief history of the National Flood Insurance Program, various ways in which flooding can impact a community, and debunking common flood myths.

Citizen Science Tools for Identifying and Reporting Backyard Diversity (Classroom)

An incredible number of animals live in southeastern rivers and streams. While that leads to very fun moments in the field, it can also make it difficult to figure out exactly what just turned up in your kick net. Join Anna George, Sammi Eubanks, Sarah Sweat, and Hayley Wise from the Tennessee Aquarium as they review new citizen science tools that shed more light on the freshwater animals of the Southeast. We will work through key characteristics of major groups of freshwater animals, as well as how to use dichotomous keys, to identify these animals. We will also cover online resources including the Fishes of Georgia, Freshwater Information Network, iNaturalist, and USGS's watershed tools.

What to bring: a laptop that can connect to the internet.

Snakes Alive! (Classroom)

Join Department of Natural Resource's Wildlife Resource Division staff and gain a new respect for these often-misunderstood creatures. Both models and live specimens allow participants to learn about the anatomy, morphology and lifestyle of Georgia's snakes.

Adopt-A-Stream Junior - Let's Get WET! (Classroom and Field)

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Session 3

2:00 pm – 4:00 pm

Aquatic Habitat Connectivity (Classroom & Field) *(limited to 25 participants)*

Every time you cross a stream on a road or trail, there is a structure in place to enable that crossing – many of these structures are poorly designed or have become degraded over time so they cut off the ability of aquatic organisms to move between habitats, and they can be unstable/prone to failure during storm events. Join Sara Gottlieb and Alex Lamle of The Nature Conservancy to learn why aquatic habitat connectivity is so important to fishes, amphibians, mussels, and other species and how to assess the level of barrier presented by culverts under road crossings. We will spend a short time in the classroom going over the basics of aquatic connectivity and the methods used for measuring barriers. Then, we will visit several structures to apply what you learned, and how you can incorporate culvert assessment in your data collection workstream.

What to bring/wear: boots for wading in a stream and wear appropriate clothing for being outdoors. If you have a clipboard, bring it; we will provide as many as we can.

Geology of Georgia's Streams (Classroom & Potential Field) (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!™ games. The games and *Roadside Geology of Georgia* will be available for purchase. If there is interest, the latter part of this workshop can include a caravan to Anna Ruby Falls Visitor Center, about 15 minutes from the meeting, to enjoy the geology along lovely Smith Creek.

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.

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

Join Marjan Ghadrhan and Sami Netherton of the Amphibian Foundation for 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.

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 Unicoi Lodge and we will carpool over to the field site together.

Streambank Restoration (Field) (limited to 40 participants)

This session will focus 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 that volunteers can apply to their property or community project. Join us and learn some simple actions that every homeowner can learn and implement to protect urban streams!

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

Adopt-A-Stream Junior - Let's Get WET! (Classroom and Field)

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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 during the lunch break.

~~~~ **Sunday, March 24<sup>th</sup>** ~~~~

### **Session 4**

9:00 am – 12:00 pm

#### **Chattahoochee River Headwaters Hike (Field) *(limited to 30 participants)***

Join a local expert for a two to three hour hike along the headwaters of the Chattahoochee River.

**What to bring/wear:** boots for hiking, appropriate clothes for being outside in the weather.

#### **Fly-casting 101 at Smith Creek (Field): 9am - 11am, ages 10 and above**

*(limited up to 10 persons without their own fly rods + up to 5 additional people with their own fly rods)*

Join the Upper Chattahoochee Chapter of Trout Unlimited for fly casting lessons for new casters and for those who want to hone their casting skills. Two Certified Casting Instructors will lead the activity with assistance from Trout Unlimited volunteers. Participants will meet at the field adjacent to Smith Creek parking lot (called "the bottoms" by Unicoi office). State park pass required for parking, \$5 at Lodge front desk if you don't have one.

**What to bring/wear:** appropriate clothes for being outside in the weather, fly rods if you have them, eye glasses or sun glasses for safety.

#### **Streambank Restoration Tour with Hiwassee River Watershed Coalition (Field) *(minimum of 20 participants)***

This two to three hour driving tour will showcase examples of streambank restoration in the Hiwassee River Watershed and Helen area.