

# CONFLUENCE 2022

GEORGIA ADOPT-A-STREAM'S  
VOLUNTEER WATER QUALITY  
MONITORING CONFERENCE



**FRIDAY, SATURDAY & SUNDAY  
MARCH 18-20, 2022**

Unicoi State Park and Lodge  
Helen, GA

**PRESENTED BY GEORGIA ADOPT-A-STREAM**

# CONFLUENCE 2022 SPONSORS

*Thank you for helping support our annual conference!*

## CONFLUENCE LEVEL



**EMORY**  
UNIVERSITY

**Department of  
Environmental Sciences**  
Emory College of Arts and Sciences



**stormwatersystems**

## WATERSHED LEVEL



**Georgia Power**



**earthbath**  
premium pet care™



**FULTON  
COUNTY**

## HEADWATERS LEVEL



**TETRA TECH**



**PLANTS  
ON  
WALLS**



**Jacobs**

## TRIBUTARY LEVEL

Alexa Robinson  
Atlanta Botanical Garden  
Atlanta History Center  
Bottle Benders  
Brittany Harper  
Bruno Giri

Callie & Philip Moore  
CCWSA  
Center for Puppetry Arts  
Gorilla Sacks  
Georgia Aquarium  
Gwinnett Strippers

Illuminarium Atlanta  
Joshua Warren  
LaMotte Company  
Lynn Cobb  
Michael C. Carlos Museum  
Peach or Plum

Pearce & Bailey Sauls  
Stone Mountain Park  
Stroud Water Research  
Center  
UOWN  
Zoo Atlanta

# CONFLUENCE 2022

## SCHEDULE OF EVENTS

**FRIDAY, MARCH 18TH**

*Beach House at  
Unicoi State Park*

5:00 PM-9:00 PM

Adopt-A-Stream Social

Registration, Dinner, Water Science  
Poster Session, Water-Themed Trivia

**SATURDAY, MARCH 19TH**

*Lodge at Unicoi State Park*

7:30 AM-8:30 AM

Registration and Breakfast

*Master Hall Lobby*

AAS Recertifications

*Board Room*

8:30 AM-9:30 AM

Opening Remarks and  
Keynote Address

*Master Hall*

9:45 AM-10:45 AM

Session One

*Various Locations*

11:00 AM-12:00 PM

Session Two

*Various Locations*

12:00 PM-12:30 PM

Lunch

*Master Hall*

# CONFLUENCE 2022

## SCHEDULE OF EVENTS

**SATURDAY, MARCH 19TH**

*Lodge at Unicoi State Park*

12:30 PM-1:45 PM

Adopt-A-Stream Year in Review  
and Awards Ceremony

*Master Hall*

2:00 PM-4:00 PM

Session Three

*Various Locations*

4:30 PM

Closing Remarks

*Master Hall*

Announce Silent Auction and  
Raffle Winners

*Master Hall*

**SUNDAY, MARCH 20TH**

*Lodge at Unicoi State Park*

9:00 AM-12:00 PM

Session Four

*Various Locations*



# KEYNOTE ADDRESS

8:30 AM-9:30 AM

*Saturday, March 18*



## GORDON ROGERS

**RIVERKEEPER AND EXECUTIVE DIRECTOR, FLINT RIVERKEEPER**

ADOPT-A-STREAM AND RIVERKEEPING: HOW CITIZENS AND ENVIRONMENTAL PROFESSIONALS WORK TOGETHER EFFECTIVELY TO PROTECT PUBLIC WATERWAYS AND PRIVATE PROPERTY IN GEORGIA

Gordon will explore his journey working directly with water-quality sampling volunteers to protect the waters of the Satilla and the Flint. Pointers on how to effectively recruit volunteers, and how volunteers can effectively work with professional river advocates will be included. Questions are encouraged.

# CONFLUENCE 2022

## SESSION ONE

9:45 AM-10:45 AM

Saturday, March 18

### GEORGIA'S FAUNAL TREASURES

Master Hall 2 - 4



#### GEORGIA'S BIRDS

*Gabe Andrle, Georgia Audubon*

Join Gabe Andrle, Habitat Restoration Program Manager at Georgia Audubon, to hear about some of the incredible avian species that rely on our waterways in more ways than one. From mountain streams to the coast, birds interact with and benefit from water in a wide variety of ways across the state. Learn to be a better birder and what you can do to help birds, even from your own home.



#### MUSSELS: GEORGIA'S HIDDEN AQUATIC TREASURES

*Keith Ray, Biology Professor at Reinhardt University*

Join Keith on a journey to explore the lives of the mussels of Georgia, with a focus on the diversity of these amazing organisms, why we have so much diversity, and filter through their uncertain future.

### GEORGIA LANDSCAPES

Fireside A & B



#### THE GEORGIA GREEN LANDSCAPE STEWARDS PROGRAM

*Jessica Warren, County Extension Coordinator, University of Georgia*

The Georgia Green Landscape Stewards certification program provides educational resources that teach Georgians about protecting natural resources, increasing plant and animal biodiversity, conserving soil and water, providing wildlife and pollinator habitat, and improving public and environmental health. After learning about sustainable land management practices, participants can measure their own activities with the program metric scorecard and earn certification status for their landscape.



# CONFLUENCE 2022

## SESSION ONE

9:45 AM-10:45 AM

*Saturday, March 18*

### GEORGIA'S NATIVE WILDLIFE

*Master Hall 1*



### AMAZING ANIMAL ADAPTATIONS

*Kathy Church, Wildlife Interpretive Specialist, Georgia DNR*

Join Kathy in a discovery of amazing mammal adaptations for survival. Pelts, skulls, tracks, and scat will be used to demonstrate how Georgia's wildlife has been able to thrive in Georgia's various ecosystems. These adaptations can help you identify the wildlife signs you may see on your outdoor adventures.

### HABITAT ASSESSMENT SURVEY

*Unicoi State Park*



### HABITAT ASSESSMENT SURVEY FIELD SESSION

*Harold Harbert, Robert Bourne, Michael Kahle, Cody Jones, and Chris Kodani*

Come learn how to complete the Stream Habitat Survey with experienced trainers on a beautiful stream in one of North Georgia's most scenic state parks! Your voluntary participation in this 2-hour workshop is greatly appreciated, as the data collected will help in an Adopt-A-Stream research study on how accurate our volunteers are in scoring stream habitats. By interacting with experienced volunteer trainers, you can expect to be a more accurate and precise stream habitat assessor.

**Note:** This is a 2-hour workshop that spans the length of both morning sessions. Please dress for the weather, as March high temperatures at Unicoi can range from 42°F to 65°F, and rain is a possibility. *Limited to 40 participants.*

# CONFLUENCE 2022

## SESSION ONE

*Saturday, March 18*

9:45 AM-10:45 AM

### ADOPT-A-STREAM JR.

*Fireside C*



### AAS JR. - LET'S GET WET!

*Monica Kilpatrick, Georgia Project WET*

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 sessions (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).

**What to bring/wear:** 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!

## CONFERENCE REMINDERS

### SILENT AUCTION

Thanks to the 2022 Fundraising Committee, AAS has numerous handmade items, tickets, weekend getaways, and more available in our silent auction.

The auction will open Saturday morning and close at 4:15pm on the same day. Be sure to get those bids in so you don't miss out on these special opportunities that support Confluence!

### COVID GUIDELINES

AAS staff are so looking forward to joining back together for an in person Confluence this year!

AAS has limited the number of registrations for our first in person conference since 2019. AAS plans to have spaced seating and masks available for those that forget their own.

### VOLUNTEER

This conference wouldn't be possible without our volunteers!

Your assistance throughout the conference would be much appreciated. To learn more about how you can help out, you can talk to a conference volunteer, AAS staff member, or get additional information at the registration table. Thank you!



# CONFLUENCE 2022

## SESSION TWO

11:00 AM-12:00 PM

Saturday, March 18

### PLASTIC AND POLLUTION

Master Hall 1



KENNESAW STATE  
UNIVERSITY

#### MICROPLASTICS

*Dr. Amy Gruss, Kennesaw State University*

Microplastic contamination has been detected in our wastewater, drinking water, and drinking water sources in recent years. With California currently implementing monitoring regulations for microplastics in drinking water, more research is needed to develop methodologies for sampling, extraction, and characterization of microplastics. This research compares extraction methodologies used at treatment plants, such as pretreatment using wet peroxide oxidation, minimum size cut-off ranges, and analytical equipment used for characterization of microplastics.



#### LITTER AND OUR WATERWAYS

*Meagan Whitehead, Keep Georgia Beautiful Foundation*

We all know the negative effects of litter on our waterways. How has the state of litter changed over the last decade and what does that mean for the future of water quality? Join Meagan Whitehead, program and affiliate support manager with the Keep Georgia Beautiful Foundation, for a look at the 2020 National Litter Study from Keep America Beautiful and its findings.

## CONFLUENCE SUSTAINABILITY

***Change starts with us and the simple choices we make each day. If we want healthier ecosystems and cleaner water, the choices we make now matter.***

*-Jessica Warren, AAS Board, Green Team Committee, Confluence Speaker*

Be sure to bring your own mug, reusable water bottle and straws, as well as any other tools and ideas to make Confluence the most sustainable it can be!

**Check out the Green Team table for raffle tickets and special sustainable prizes for contributing to Confluence's green efforts!**

# CONFLUENCE 2022

## SESSION TWO

11:00 AM-12:00 PM

Saturday, March 18

### WATER POLICY, PROTECTION, AND PLANNING

*Fireside A & B*



#### LEGISLATIVE UPDATES

*April Lipscomb, Southern Environmental Law Center*

Join April Lipscomb, Senior Attorney at Southern Environmental Law Center, to learn about recently passed or currently proposed legislative updates that affect water quality protection in Georgia.



#### PROTECTING GEORGIA'S WATERS

*Ania Truszczyński, Georgia Environmental Protection Division*

In the second half of this session, Ania Truszczyński, Branch Chief of 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.

### GEORGIA'S NATIVE WILDLIFE

*Master Hall 2 - 4*



#### MONITORING GEORGIA'S AMPHIBIANS

*Mark Mandica, Amphibian Foundation*

Join 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.

# CONFLUENCE 2022

## SESSION TWO

11:00 AM-12:00 PM

*Saturday, March 18*

### HABITAT ASSESSMENT SURVEY

Unicoi State Park



#### HABITAT ASSESSMENT SURVEY FIELD SESSION

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### ADOPT-A-STREAM JR.

*Fireside C*



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*Monica Kilpatrick, Georgia Project WET*

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# CONFLUENCE 2022

## SESSION THREE

2:00 PM-4:00 PM

Saturday, March 18

### COASTAL TOPICS PANEL

Master Hall



#### PHYTOPLANTON MONITORING NETWORK

*Katie Hlggins, University of Georgia*

#### BACTERIAL LEVELS IN SEDIMENT & SCIENCE COMMUNICATION

*Samantha Alvey, Georgia Southern University*

#### SUCCESSSES AND FAILURES OF TEACHING WATER QUALITY

*Joy Davis, Tybee Island Marine Science Center*

#### STUDENTS AND ADOPT-A-WETLAND

*Katie Holliday, Tybee Island Maritime Academy*

#### WATER AND HEALTH NEXUS IN A CHANGING ENVIRONMENT

*Dr. Asli Aslan, Georgia Southern University*

#### DISPARITIES IN WATER INFRASTRUCTURE ACCESS

*Courtney Balling, University of Georgia*

### AQUATIC MACROINVERTEBRATES

Location TBD



#### AQUATIC MACROINVERTEBRATE ECOLOGY AND LIFE HISTORY

*Dr. Checo Colon-Gaud, Georgia Southern University and Damon Mullis, Ogeechee Riverkeeper*

Interested in strengthening your identification skills and getting more experience with benthic macroinvertebrate identification? Come join experts Damon Mullis, Ogeechee Riverkeeper, and Dr. Checo Colon-Gaud, Georgia Southern University, as they provide tips and guidance as well as information on the life history and ecology of this amazing aquatic community. *Limit: 25 participants.*

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

# CONFLUENCE 2022

## SESSION THREE

2:00 PM-4:00 PM

Saturday, March 18

### NATIVE FISHES

*Dukes Creek*



### NATIVE FISHES OF GEORGIA

*Ani Escobar, Michael Wolfe, and Keith Ray*

Join Ani Escobar, GA DNR Fish Biologist, Michael Wolfe of the North American Native Fishes Association and Keith Ray, biology professor at Reinhardt University, for an experience exploring a headwater stream and observing its native fishes. During this session, they will demonstrate and discuss sampling and viewing techniques. There will also be opportunities to get firsthand experience with the diversity of native fishes that are right here in our streams.

*Limit: 25 participants.*

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

### STREAMBANK RESTORATION

*Unicoi State Park*



### STREAMBANK RESTORATION

*Jack White*

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! *Limit: 40 participants.*

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

# CONFLUENCE 2022

## SESSION THREE

2:00 PM-4:00 PM

*Saturday, March 18*

### ADOPT-A-STREAM JR.

*Fireside C*



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## CONFERENCE REMINDERS

### T-SHIRTS

Don't forget to stop by the registration table to pick up your Confluence 2022 t-shirt (must register before March 2).

### MEALS

Remember, you are responsible for your own meals on Saturday evening and Sunday morning.

Confluence registration only includes Saturday breakfast and lunch.

### MERCH

AAS will also have limited quantities of custom hats available for purchase at the registration table. Be sure to check these out and support future conferences with your purchases.



# CONFLUENCE 2022

## SESSION FOUR

9:00 AM-12:00 PM

Sunday, March 19

### EXPERIENCES IN NATURE

*Various Locations*



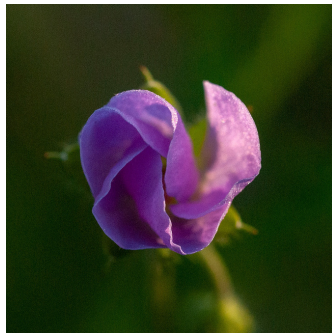
#### FOREST COMMUNITIES WALK

*Ruth Mead, Phinizy Swamp and George Reeves*

Each forest community is unique. Join naturalists Ruth Mead and George Reeves for a look at some of the incredible forests Unicoi has to offer. We will identify as many woody stems as time allows and look at the role each of them has in the community, including where to find them, strategies for reproduction, and helpful hints on identification. This is more than a dendrology hike.

*Limit: 20 participants.*

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



#### NATURE PHOTOGRAPHY

*Anne Ledbetter*

Whether you want to better document your stream for the Adopt-A-Stream data collection or create some images to hang on the wall, this workshop is for you. Join local photographer Anne Ledbetter, and Adopt-A-Stream volunteer, to learn some photo theory of lighting and shadows and then put them into practice in this hands-on nature photography workshop. This session is good for all photography levels, whether you use your cellphone or cameras with interchangeable lenses.

In the workshop we will discuss:

- What makes light and shadows translate differently in your pictures then in your eye
- Using light and shadow as design features
- Making the best use of available lighting conditions
- Adjusting your position to dramatically improve your photos

**What to bring/wear:** shoes for being near and in a stream and wear appropriate clothing for being outdoors. Bring your camera/device.

# CONFLUENCE 2022

## SESSION FOUR

*Sunday, March 19*

9:00 AM-12:00 PM

### EXPERIENCES IN NATURE

*Various Locations*



#### HEADWATERS HIKE

*AAS staff*

Join fellow Adopt-A-Streamers for a beautiful hike along the headwaters of the Chattahoochee River at Duke's Creek Falls.

Note: Please be aware of the parking fee (cash only) and the location. Carpool is encouraged as parking is limited.

*Limit: 35 participants.*

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

## ***THANK YOU!***

This conference wouldn't be possible without the support from our sponsors and silent auction donors, our expert speakers, the guidance from the Adopt-A-Stream Advisory Board and Confluence Conference Committee, and the commitment of all AAS volunteers.

Thank you for your dedication and support.

#### Special Thanks to the Confluence 2022 Conference Committee Members:

Bob Bourne  
Jean Brown  
R Michael Carter  
Jackie Encinas  
Will England  
Lori Forrester

Harold Harbert  
Mike Kahle  
Monica Kilpatrick  
Chris Kodani  
Erin Lincoln  
Cecilia Nachtmann  
Luke Roberson

Alexa Robinson  
Bailey Sauls  
Javier Sayago  
Jess Sterling  
Jessica Warren  
Jack White

# CONFLUENCE 2022

## POSTER SESSION PRESENTERS

### ADOPT-A-STREAM VOLUNTEER

Fire Leads to Chemical Spill: A Case Study in Understanding Water Quality

Julia Schmitz and  
Debra Dooley

*Upper Oconee Watershed Network*

Comparison of Measurements using LaMotte Dissolved Oxygen Test Kits to Vernier Optical Dissolved Oxygen Probes

Kevin Spingler

*Whitefield Academy*

### GRADUATE SCHOOL

Tracking the Source of *Helicobacter pylori* in Watersheds of San Juan, Puerto Rico

Mary Elizabeth Sailors

*Georgia College and State University*

Aeromonas Prevalence in the Upper Oconee Watershed

Megan Robertson

*University of Georgia*

### UNDERGRADUATE

Tracking the Sources of *Leptospira* and Nutrient Flows in Two Urban Watersheds of Puerto Rico

Wesley DeMontigny

*Georgia College and State University*

Macroinvertebrate Biodiversity Presence and Stream Health Within Riffle and Pool Microhabitats at Tobler Creek, Georgia

Eden Grasa, Alana Stevens, & Cyaira Vest

*Georgia College and State University*

# CONFLUENCE 2022

## POSTER SESSION PRESENTERS

### UNDERGRADUATE

Aqueous Ion Concentrations in  
Groundwater from a Wetland Environment

Imani Vincent  
*Piedmont University*

.....

The Effects of Beaver Dams on *E. coli* in  
the Water

Katie Wilhelm  
*Piedmont University*

### HIGH SCHOOL

Limited Geotechnical Environmental  
Survey of Wetland Soil Composition  
Classification, Texture, and Nutrient Load  
Compared to Educational Partnerships  
Locally and Trans-Atlantic

Claudia Castle  
*South Paulding High School*

.....

Identification of Members of a Freshwater  
Plankton Community in Cobb County

Jaden Jones  
*Whitefield Academy*





THANK YOU FOR JOINING  
**CONFLUENCE 2022**



**SEE YOU NEXT YEAR!**

Please send any feedback, questions, ideas, etc. to  
[AAS@dnr.ga.gov](mailto:AAS@dnr.ga.gov). We value your input!

