

GEORGIA Adopt-A-Stream

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Adopt-A-Stream Staff, Editors



Five Years of Fall Float on the Flint: A Comparison of Nitrate Data



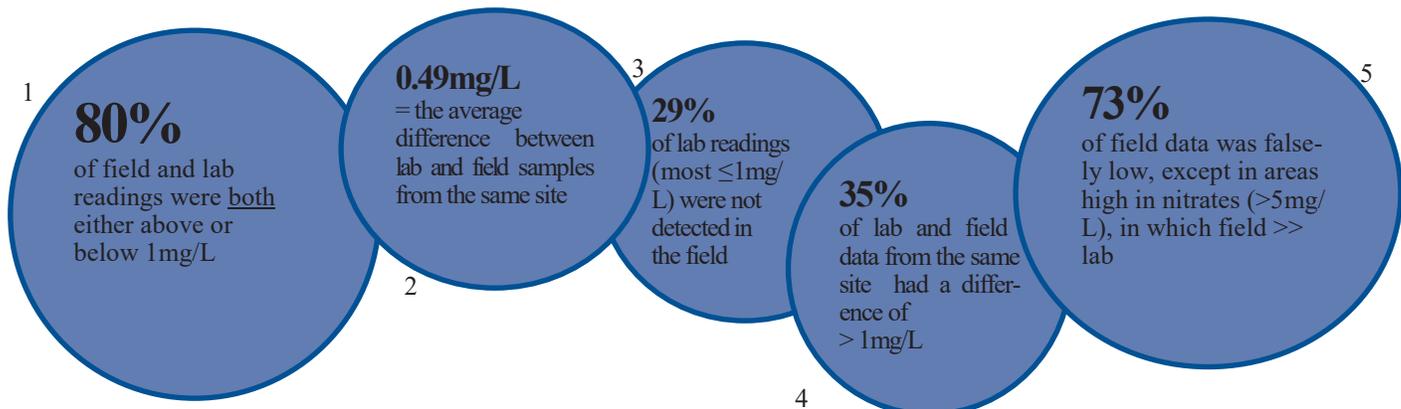
Did you know that there is no state standard for nitrate concentrations in streams? Similar to conductivity, the geology of an area and the source of the stream's water can cause nitrate levels to vary greatly. For example, springs like the "Blue Holes" of the Flint have higher nitrate levels due to the fact that they are fed by nitrate-rich groundwater; however, the mainstem Flint usually has much lower levels, as its main source is surface water.

In addition to natural variation, human activity can also have a large impact on nitrate concentrations in streams. Sewage leaks, agricultural runoff and pet waste can all cause spikes in nitrate levels. If they reach high enough levels, the stream can become **eutrophic**, or oversaturated with nutrients. Algal blooms often form in these conditions. When they die, bacteria break the algae down, depleting the dissolved oxygen in the process and making it very hard for organisms like macroinvertebrates and fish to survive.



Nitrate Color
Comparator

Many volunteers wonder why nitrates are not one of the Adopt-A-Stream core parameters if they can have such a huge impact on the health of a stream. To determine the validity of field nitrate testing, we utilized data collected during our 5 years of participation in Georgia River Network's Fall Float on the Flint. We compared results from field techniques, specifically those collected using the [LaMotte® Nitrate Nitrogen \(high range, 0-15 mg/L\) Tablet Test Kit](#), to data from samples sent to the UGA and Jones Center Labs to determine the accuracy of such methods. It is important to note that, although there is no state standard, the naturally occurring background levels of nitrates in most streams is 0.1mg/L or lower; **nitrate levels higher than 1mg/L may indicate that human activity is having an impact on the stream.** Here are our findings:



Because our field test kits only have a sensitivity of 0, 1, 2, 4, 6, 8, 10 and 15 mg/L, they often failed to detect nitrate levels $\leq 1\text{mg/L}$ (3) and gave false high readings in samples from high nitrate areas, like springs (5). However, they were usually able to accurately detect if a concentration was generally greater than 1mg/L (1), indicating a possible issue. We do not recommend that most people incorporate nitrate sampling into their monthly monitoring sessions, as the majority of streams will not have levels above 1mg/L; however, if you notice that your stream has algal blooms, low DO or poor macro scores, taking a nitrate test may help to supplement your other data and determine the root of the issue.

Complete results from Fall Float, as well as 10+ years of data from major Georgia rivers are available from the AAS State Office.

How to Download Data from the AAS Website

Are you a trainer looking for a way to display data collected by Adopt-A-Stream volunteers in your area? A researcher looking to utilize citizen science data from multiple different regions for a study? Or maybe just a curious citizen that wants to know more about what is happening in the waterbodies in your backyard? Whatever your reason, it is quick and easy to access all of the Adopt-A-Stream data through our website, AdoptAStream.Georgia.gov. Simply go to the “Data Views” tab and click on the “View Data by Region” in the dropdown. Then, you can sort the data based on city, county, watershed, coastal, and water plan region. Once sorted, you can select the year you would like to view (or even “all years” if you wish to view all of the data for that region) and then click “Save to Excel” to download.

If you have questions or concerns about accessing your data, please contact the AAS State Office at AAS@gaepd.org.

The image shows two screenshots of the Adopt-A-Stream website. The left screenshot shows the 'Data Views' menu with 'View Data by Region' highlighted by a red arrow. The right screenshot shows the 'View Data by Region' page for Atlanta in 2019. The 'Save to Excel' button is circled in red. Below the screenshots is a table of monitoring sites for Atlanta in 2019.

#	Group	ID	#Events	Site Name
1	Chattahoochee Riverkeeper	S-2096	1	Proctor Creek at Joseph E. Boone Blvd
2	Chattahoochee Riverkeeper	S-2103	1	Clear Creek at Piedmont Road
3	Chattahoochee Riverkeeper	S-2775	1	Chattahoochee River at Veterans Memorial Br.
4	Chattahoochee Riverkeeper	S-2816	1	Clear Creek at Daylight Tunnel
5	Chattahoochee Riverkeeper	S-2975	1	Proctor Creek at Grove Park
6	Chattahoochee Riverkeeper	S-4244	1	Utoy North @ Ben E Mays
7	Chattahoochee Riverkeeper	S-4246	1	Woodall Creek @ Chattahoochee Ave
8	Chattahoochee Riverkeeper	S-4849	1	Utoy Creek South at Dodson

Georgia River Network

by Dana Skelton, Director of Advocacy and Operations

Rise and shine at 6am, grab a sack lunch, jump on a bus headed for the river, launch a canoe, take water samples all day and then process those samples at night. This is a day in the life of the Adopt-A-Stream staff when they team up with Georgia River Network (GRN) on our Paddle Georgia, Spring on the Satilla, and Fall Float trips. GRN has been a partner of AAS for many years, co-hosting conferences, conducting trainings and joining forces for events. For over 15 years, AAS staff have trained GRN paddle trip participants, including our underserved youth group, in monitoring techniques while they paddle the river. These participants are then able to take this knowledge back to their hometowns to start their own monitoring program or join up with existing groups.



Photo by Joe Cook

Founded in 1998, Georgia River Network is a statewide organization working to protect Georgia’s rivers. Georgia has many watershed groups, water trail groups and monitoring groups all working on different aspects of river protection. Our primary role over the years has been to network these groups and help people enjoy, connect with and advocate for clean-flowing and economically viable rivers. We lead the statewide water trail network and serve as a member of the leadership team on the Georgia Water Coalition to support advocacy for clean water across the state. Recently, many of our watershed and water trail groups participated in the state triennial review process, bringing important information about Georgia’s waterways to the attention of EPD. This aided in the development of up-to-date designated uses for our waterways, thereby establishing the water quality criteria by which these waterways must abide.

There are a number of ways that you can get involved in GRN. Attend one of our trips to explore and learn about Georgia rivers, use our online directory to locate your local watershed group or contact us to learn about how you can establish a water trail on your river! We are also excited to announce our up-and-coming water trail river guide mobile app that will allow users to access monitoring data to learn more about the water quality of the rivers on which they paddle.



We want to extend a big thank you to all of you that are out in the field doing visual surveys, testing water quality and turning over rocks to look for bugs. Your work on the ground in your local waterways is important. It takes us working together from the ground up and the top down to ensure cleaner water in our rivers.

Learn more about GRN at www.garivers.org.

Community Partnership Highlight: Flint Riverkeeper

Flint Riverkeeper's Work, Goals and Call to Arms

by R.J. Gipaya, Watershed Specialist for Flint Riverkeeper



Since 2008, the Flint Riverkeeper (FRk) organization has been watching over the Flint River watershed, which stretches from Metro Atlanta all the way to Lake Seminole on the Florida-Georgia border, and has tirelessly worked toward establishing and maintaining a resource with enough clean water to support the surrounding communities and ecosystems. One of FRk's goals this year is to help Adopt-A-Stream establish a large and reliable group of volunteers throughout the Flint River watershed. Hopefully this short term goal will turn into a long term success, ensuring the health of the river and its watershed for years to come. We have been working with local communities to help draw interest to the Adopt-A-Stream program by hosting training events, finding funding for kits and helping people identify areas around them to do their own testing.

About two years ago, FRk joined Finding the Flint, a group of organizations and private stakeholders who have an interest in the Flint River headwaters, which flow through and out of the southwest Metro Atlanta area. The group has many goals, ranging from wetland and creek-meander restorations to posting signage showing the routes of the river and its tributaries. It has been an encouraging sight to see so many organizations come together to work toward a common goal. In joining Finding the Flint, FRk aims to ramp up the water quality side of the project. The Finding the Flint group has been a great asset for FRk, helping us engage, encourage, and recruit the public in the hopes of developing a water quality group throughout the southwest Metro area. With our office being based in the Albany area, Finding the Flint has really made the difficult task of engaging the citizens of the Atlanta area into a very achievable goal.

Water quality throughout a watershed is completely dependent on the citizens. They are the watch dogs, the volunteers and the engine that drives organizations like ours. If you are passionate about the outdoors and enjoy days on or next to the water, jump into an issue in your area. Something as little as picking up a small bag of trash while you are walking along the water banks can make that area a much more enjoyable experience for those coming after you. Also, join a local organization like the waterkeepers/riverkeepers. Help us protect the waters and lands that we all love and enjoy. If you are interested in monitoring waters in your area, you can contact the Flint Riverkeeper through [Facebook](#), [website](#) or [email](#). Even if you do not live in the Flint River watershed, we would be glad to help you find the right contact to get involved in your area.

Send Us Your Adopt-A-Stream Award Nominations!

Confluence 2020 is just around the corner, and one of our favorite parts of our annual conference is the Adopt-A-Stream Awards Ceremony. These awards are our chance to celebrate YOU, and all of the amazing work you do! Nominate an outstanding volunteer, trainer or watershed group (or yourself!) for one of these awards:

Volunteer Awards

Volunteer of the Year
Extraordinary Watershed Monitoring Effort
Red Flag Award
Outstanding Outreach and Partnership
Innovation in Adopt-A-Stream
Excellence in Data Collection
Nymph Award
Excellence in Education
Beyond Borders

Trainer Awards

Trainer of the Year
New Trainer of the Year

Watershed Awards

Nonprofit Organization
Government Organization



Dr. Chris Kodani winning the "Innovation in AAS" Award

For full descriptions or to submit a nomination, go to the [AAS Award Nominations page](#) at [AdoptAStream.Georgia.gov](#). Please include a short narrative with your nomination, as this is critical to the judges' decision. Email any supporting documents (photos, flyers, etc.) as well as any Trainer and Watershed award nomination forms to AAS@gaepd.org.

The deadline to submit nominations is January 13, 2020.

Community Partnership Highlight: Chattahoochee Riverkeeper

Working Together to Keep Watch Over All Our Waters

by Mike Meyer, Program Director of Neighborhood Water Watch

Chattahoochee Riverkeeper (CRK) firmly believes partnerships play an essential role in its mission to advocate for and secure the protection and stewardship of the Chattahoochee River and its tributaries for the people and wildlife that depend on them. In fact, CRK has been partnering with Georgia Adopt-A-Stream, local watershed groups and community partners to monitor creeks and waterways through Neighborhood Water Watch (NWW) since 2012. With NWW, creek-side communities and groups up and down the Chattahoochee Watershed participate in weekly water sampling, delivering collected samples to trained CRK staff. These staff members then utilize up-to-date Environmental Protection Agency (EPA) approved procedures to test for *E.coli* and other indicators to assess and address waterway health and potential sources of contamination. Results from over 190 active monitoring locations are assessed and uploaded weekly to our [website](#) and the Georgia Adopt-A-Stream databases for public viewing. The impact of NWW's work has been huge and far-reaching, bringing different communities together through testing, technology and good old fashioned environmental stewardship. This has resulted in newly connected communities with measurably cleaner waterways, upstream and down. It is incredibly important that everyone contributes to maintaining the health of our rivers, as waterways, both big and small, as they run through our neighborhoods and connect us all, providing drinking water, wildlife habitat and so much more. As author Barry López wrote, "To put your hands in a river is to feel the chords that bind the earth together."



West Atlanta resident Bryan Jenkins has seen the impact of the large sampling network firsthand. While with NWW he's helped identify and stop three sewer spills from contaminating Sandy Creek. "If it wasn't for us out here doing this," states Jenkins, "we wouldn't know half of what's going on in our river and waterways." Working with community members like Bryan Jenkins to find and address contamination through rigorous testing and remediation is one of the key components that makes the program so effective. Neighborhood Water Watch is more than a monitoring program; it has achieved great improvements in water quality by bridging a gap and linking communities in need with available local, state and federal resources. CRK encourages participation at any level, whether it be at one of their annual events like the River Rendezvous water sampling day, the

river-wide Sweep the Hooch trash clean up or by volunteering for weekly monitoring with NWW. With so many innovations and advancements in water monitoring, it's never been easier to get involved in assessing and addressing our waterways - together we're keeping watch!

For more information, go to www.chattahoochee.org.



REMEMBER TO SUBMIT 2019 DATA!

We are so proud of all the work our Adopt-A-Stream volunteers do, and we want to make sure your data doesn't just sit around collecting dust! With 2020 now upon us, it is time to finish submitting any unentered data from this past year so that we can ensure that our annual analysis is as accurate and inclusive as possible. You can submit your data through our website at AdoptAStream.Georgia.gov. While you're there, you can also check out the graphs to see seasonal and long-term changes and trends at your site!

Please send any questions or concerns about the data submission process to AAS@gaeprd.org.

We will work as quickly as possible to respond to your issues and questions. Thank you so much for all of your hard work in 2019!

Board Member Highlight: Jessica Sterling, Chattahoochee Riverkeeper



Provided by Jessica Sterling

Jessica (Jess) Sterling joined the Georgia Adopt-A-Stream (AAS) board in 2018, but was first trained as an AAS volunteer in 2004 with the Upper Oconee Watershed Network in Athens. Jess had just moved to Athens from her native state of Ohio, where she developed a love of water during summers spent with her family on the Great Lakes. She was feeling landlocked in Athens as a University of Georgia genetics research lab technician, so getting involved with AAS was the ideal way for her to get in the water and do science outside of the lab.

Soon after getting her AAS certifications, Jess joined the board of the Upper Oconee Watershed Network (UOWN). She became active with the group's science and monitoring committee and continued sampling streams in the Athens area. She became the organization's President in 2005 and served as the volunteer leader of UOWN until 2008, working on sewer issues, promoting stream buffers and water conservation with local government, and organizing the group's annual River Rendezvous. She also met some new friends, started paddling and fell in love with Georgia's diverse rivers.

In 2008, Jess decided that she wanted a career working in rivers and streams, so she entered into the M.S. program in Ecology at the University of Georgia. For her thesis she continued her work on Athens' urban streams, studying the effects of urban runoff on stream ecosystems. Jess earned her M.S. from the Odum School of Ecology at the University Georgia in 2012 and moved to Atlanta, where she started an internship at Chattahoochee Riverkeeper (CRK).

Shortly after becoming an intern with the organization, Jess transitioned into a full-time position. She now has her dream job as the Technical Programs Director at CRK. She manages several of CRK's water monitoring and enforcement programs, in which she reviews wastewater and stormwater permit compliance, builds and codes real-time water monitoring devices, collects river samples and teaches people of all ages about stormwater pollution, water monitoring and the Chattahoochee River.

Jess lives in Atlanta's Kirkwood neighborhood with her husband, Ben, and their three young children. She hopes that her kids love lakes and rivers as much as she does when they grow up.

Thank You and Good Luck, Seira!

Seirisse (Seira) Baker has contributed a lot to the water quality community in Georgia and it has been an honor having her on our team. If you were looking for the textbook Adopt-A-Stream workshop, you need look no further than Seira; she was always organized and prepared, her attention to quality assurance impeccable. And her communication and writing skills were downright legendary. In fact, we've saved many of her correspondences for use by future coordinators!

"I have so appreciated learning from and working with all of you over the last five years. I owe a lot of professional as well as personal growth to my experience with AAS... Georgia is a beautiful state and I am thankful that I have had the chance to experience the geographic and ecological diversity it offers. However, my favorite part of working with AAS has been the incredible community of people that make this program as powerful as it has grown to be today... Thanks for all you've taught me and for the passion and dedication you give to protecting our waterways. I'm so thankful and proud that Georgia has these programs to engage and support our citizens, and I am grateful to have been a part of them."

-Seira Baker



Behind her serious and professional demeanor was a genuine sense of humor and an ability to make light of even the most challenging situations, like spending 16-hour days paddling and monitoring Georgia rivers, sitting through mind-numbing IT database meetings and responding to tricky inquiries from oh-so-passionate volunteers! We wish Seira the best as she embarks on a new life in her hometown of Asheville, pursuing graduate school and new career opportunities. Adopt-A-Stream will certainly miss you!

- Harold Harbert, Adopt-A-Stream Manager

The preparation of the Georgia Adopt-A-Stream quarterly newsletter is financed in part through a grant from the US Environmental Protection Agency under provisions of Section 319(h) of the Federal Clean Water Act of 1987, as amended. For more information about the Georgia Adopt-A-Stream program or to contribute to the newsletter, contact:

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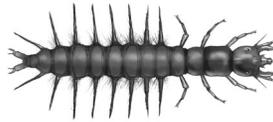
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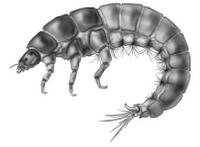
Riffle Beetle



Dobsonfly



Stonefly



Net Spinning Caddisfly

Confluence 2020: March 27-29 *Adopt-A-Stream Annual Conference*

Keynote Speaker:
Joe Cook

*"Malcolm X, Eugene Talmadge and Naked Yankees in Georgia Rivers:
Tall tales from the shoals, sandbars and sloughs of our state."*

Friday evening: Water Science Poster Session and Social
Saturday: Water Quality Workshops, Exhibits and Awards Ceremony
Sunday: Water Quality Workshops & Special Activities

Unicoi State Park & Lodge in Helen, GA

For more information, visit the Confluence page at AdoptAStream.Georgia.gov

Registration will open in 2020, but room reservations are available now!
Please book as soon as possible to ensure you get a room.

Stay Connected!

Like us on Facebook and follow us on Instagram to stay up-to-date on the latest Adopt-A-Stream news! Use #gaadoptastream or tag us when you post photos of yourself monitoring. We love to see all the good work you do!



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