



Proctor Creek River Rendezvous by Na'Taki Osborne Jelks, Chair, West Atlanta Watershed Alliance



On Saturday, November 22, the West Atlanta Watershed Alliance (WAWA) and Chattahoochee Riverkeeper (CRK) joined forces with the Georgia Adopt-A-Stream Program and members of the Proctor Creek Stewardship Council to host the first annual River Rendezvous at Proctor Creek. On this crisp, fall day, over 70 citizen science volunteers, including Proctor Creek residents and student residents from the Atlanta University Center, other local college students, and interested volunteers collected water samples at 40+ sites along Proctor Creek and its tributaries to gain a snapshot of the state of water quality for the watershed during a moment in time.



Trained team leaders from WAWA, CRK, GA Adopt-A-Stream, and the City of Atlanta Department of Watershed Management led teams of volunteers in field data collection and sampling while CRK staff and other trained laboratory scientists received and processed samples at the "community lab."

Not only does this citizen science effort raise awareness about water quality and the challenges facing local waterways, it puts science into the hands of everyday citizens and helps to inspire future engagement in water quality monitoring activities and specific actions to improve local conditions.



Field teams identified illicit discharges both on the day of the River Rendezvous and after reviewing *E.coli* bacteria data resulting in event partners locating, tracking, and stopping a sewer spill. In the next couple of months a community forum will be held to share the data with Proctor Creek Watershed residents and other volunteers.

Often dubbed "one of the most impaired streams in Metro Atlanta," Proctor Creek is plagued by a number of challenges including sewage pollution, illegal dumping, sedimentation and erosion along its banks, and a variety of illicit discharges. In 2013, the watershed was placed on the Environmental Protection Agency's list of 18 Urban Waters Federal Partnership sites. The River Rendezvous at Proctor Creek was supported, in part, through an EPA Urban Waters Small Grant.

More information can be found at <http://wawa-online.org>.

Residents monitoring chemical and bacterial levels in Proctor Creek

Photos by Charles M. Brown

Excerpts from Georgia River Network's Fall Float on the Flint

"Last spring, Paddle Georgia coordinator Joe Cook invited us to participate in their mini Paddle Georgia Fall Float on the Flint. In Joe's own words he wanted a mini Adopt-A-Stream component to complement the mini version of their weeklong summer events. Considering how overwhelming the summer paddle can be, with long hours on the water and in the lab and running shuttle, we welcomed the idea of a "lighter" version. Since, we had just paddled and sampled on the Flint in the summer of 2013, we weren't sure what new things we would discover. However, AAS board member and geology professor Tom Weiland had a hunch there was more we could learn, specifically in regards to nutrient levels in the springs that line the river. What we discovered surprised us and reminded us that river systems can look pretty different between sampling events, even over a relatively short period of time." —Harold Harbert



Harold enjoying the cool, clear waters of a spring

Fall Float on the Flint Continued...

“The Flint is not a typical South Georgia sandy bottom river with lots of back waters and tannic streams. Instead, it flows through karst and is bordered in a crust of honeycombed limestone that often jets out over the water or rises in rocky bluffs. The rock at the water’s edge is often various shades of blue and green from the algae and mosses that grow in the rock and above that it is usually the color of bone and draped in ferns. Often there are cypress with their roots interwoven into the rock looking almost like huge snakes crawling into their limestone holes. Because of the way limestone weathers it is often sculpted into grotesque and fantastic shapes. Instead of sand bars there are frequent shoals of limestone boulders and one can easily imagine rapids before the river was channeled for commerce. In the karst many streams flow underground through tunnels in the limestone and arise near or in the main stem of the river as blue springs. The water welling up in these springs is crystal clear with a slight blue tint that gives it an iridescent quality when illuminated by sunlight. The water is so clear that it is difficult to judge distances and swimming off the edge of a deep spring feels a bit like stepping off a cliff and gives the sensation of having an aerial view. Many of the springs have interesting names like: The Shaft, Crystal Cave, Hog Parlor and Radium Springs. The Shaft with its steep sides and deep water was one of the most spectacular. Each spring is unique and they are all worth checking out. People once believed the waters possessed special healing powers and when you see crystal azure water welling up from underground it is easy to understand why.” — Bob Bourne



Bob Bourne
AAS Board Member since 2004
Cobb County Water Quality
Laboratory



Photo by Gwyneth Moody

Steve Blackburn and daughter, Cate
AAS Board Member since 2001
EPA Wetlands, Coastal & Oceans Branch

“This year I participated on the Flint Fall Float with my six year old daughter Cate. Cate’s introduction to kayaking was this summer on the Chattahoochee River for a couple of days and she was ready for more. I suggested the Flint trip to my wife who impressively delivered her fears - too young, sunburn, meltdowns, boat flipping, dehydration, food, showers, bugs, alligators and missing school. Couldn’t argue since I secretly shared a few of the same concerns, so I only addressed the last item... “But it’s Adopt-A-Stream!” Yes, the education trump card. Permission granted. Cate and I paddled, well I paddled, the 72 mile trip without a hitch and no meltdowns... OK, maybe I got a little testy on the 22 mile day. Cate was a real trooper enjoying every minute of it. Traveling with a kid makes you see things you no longer see or you now take for granted. Recently I asked her what she liked about the trip and she told me, “swimming in blue holes that are really blue and really cold; paddling from campsite to campsite; seeing armadillos, gopher tortoises, red ear sliders, screech owls, herons, kingfishers, and

egrets; helping Burt after his boat flipped; taking water samples and working in the lab; seeing a copperhead on a cypress tree; looking for arrowheads on sandbars; stargazing; board member Steve Golladay showing the Flint river mussels; swimming; s’mores; hula hoops; and running to catch the bus.” Couple of weeks ago I received a notice from her elementary school stating that Cate had missed too many school days in her first two months of 1st grade and that I will need to come in to explain her absences. Hopefully, the education card will work once again.” — Steve Blackburn

“The 2014 Fall Float provided an opportunity to better understand the source and amount of elevated nitrates in the Lower Flint River Basin. To accomplish this an additional sampling project was implemented to collect nutrient data from springs and tributaries. This study was part of an undergraduate research project by Tyler Tomberlin, a geology student from Georgia Southwestern State University. Field measurements were collected for phosphate, alkalinity, ammonia-nitrogen and nitrate-N at selected spring, tributary, NPDES and mains ten sites. Samples were also submitted to the University of Georgia’s Soil, Plant and Water Laboratory to check the field measurements and to obtain more detailed water quality data. There is a need to better understand the relationship between land use and nutrient loading in the Upper Floridan aquifer that feeds the springs and rivers of the Lower Flint River Basin. The Georgia Southwestern project is currently using available land use data to better understand the source of the nitrates and cause of the downstream increase in nitrate levels.” —Dr. Tom Weiland



Dr. Tom Weiland (right) with his wife and grad student, Tyler
AAS Board Member since 2009
Georgia Southwestern State University



Photo by Gwyneth Moody

Bob, Anne and Seira
working hard at the lab

“As a new member of the AAS staff, I feel so fortunate to include a trip on the beautiful Flint River in my introduction to AAS monitoring programs and the dedicated volunteers who bring them to life. After paddling and collecting water samples, steadfast sampling team members returned to a central “lab” space in the campground each evening to process samples. Fellow paddlers were always welcome in the lab and often dropped by to observe and learn about the day’s findings. What an amazing opportunity to engage with a large group of people who greatly care about protecting, improving and appreciating our waterways! From responses to our nightly monitoring updates at dinner to talking with folks out on the water, it was very rewarding for me to meet and learn from everyone coming together to share the importance of our rivers!” —Seira Baker

Fall Float on the Flint Continued...



AAS workshop participants on the Fall Float with State Coordinators Seira and Anne

“Adopt-A-Stream gets the opportunity to host, in my opinion, the ideal type of monitoring workshop: one that includes paddling on a river at the same time! Participants have the opportunity to learn more about the program and become certified as an Adopt-A-Stream water quality volunteer. As a State Coordinator who gets requests to offer single day workshops all over the state, this is a special opportunity that we get to spend more than a day with participants. We are grateful for them and the time they spend with us on the river! This workshop group shown in the picture (taken by the sweep!) stayed up with us really late the night before to learn about the program, but you would never notice with the energy and enthusiasm they showed during the field portion the very next day! Often times we learn just as much from their experiences and what it means to protect our rivers.”

—Anne Stahley

A beautifully written account of the Fall Float from one of our Adopt-A-Stream workshop participants, Jean Swann, is on our [website’s scrolling announcements](#).

“Being able to call the Flint River and its banks our office for four days was incredible! Six teams of dedicated AAS volunteers, board members, and staff collected an impressive fifty water quality samples while paddling down a stretch of the Flint. Each day on our seventy mile journey, we were the ones with the extra bags of gear rushing to jump on the shuttle to the put-in, the ones constantly checking our GPSs on the water to be sure we hadn’t missed our sampling sites, and the ones working late hours back in the campsite lab running that day’s samples. Four days of sampling created a unique log of the health of the Flint and its tributaries by capturing chemical, bacteria and nutrient levels. Field sampling during these paddle trips is one of my favorite parts of AAS because we get to connect with other river-lovers and collect meaningful data while being rejuvenated by the strength and beauty of Georgia’s great rivers.” —Chelsea Hopkins

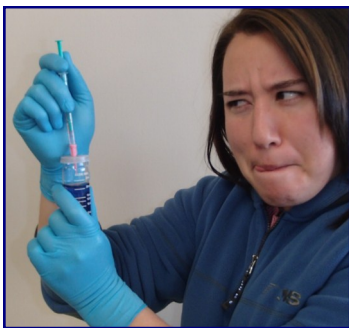
The data collected during the Fall Float on the Flint will be posted on our website soon.

Thank you [Georgia River Network](#) for coordinating another successful paddling event!



Chelsea and monitoring partner, Alejandro, paddling on the Flint

Dissolved Oxygen and Colder Temperatures



When it’s cold, watch your hold on your dissolved oxygen titrator! When you are monitoring for DO levels, if you are close to emptying the Sodium Thiosulfate from your titrator, be careful not to push too much out at one time—the green “plunger” of the titrator becomes easier to push as you are closer to the 10mg/L mark. One technique to try is to grip and slide the plunger barrel slowly between your thumb and index finger instead of pushing from the top of the plunger.

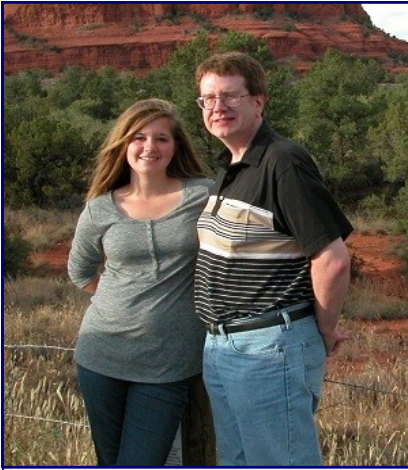
While winter brings colder temperatures, it can also bring higher dissolved oxygen levels in our streams, often exceeding the 10mg/L. If this is the case, remember that you should refill the titrator with Sodium Thiosulfate and continue titrating until the solution turns clear. Then, you add the second DO reading to the original 10mg/L reading to find your final DO level.

A note on dissolved oxygen levels from Cody Jones, EPD Ambient Monitoring team:

The amount of oxygen that can be dissolved in water is dependent upon the water’s temperature as well as the current atmospheric pressure. Colder water can hold a higher concentration of dissolved gasses than warmer water. The higher the atmospheric pressure the more pressure the atmosphere exerts upon the water’s surface, resulting in more gasses being “pushed” into solution in the water. Also, areas of disturbance cause “recharge” of dissolved gasses in the water, such as at waterfalls, riffles or even fairly strong winds disturbing the surface of a lake or river.

Sometimes, in areas where the water is vigorously disturbed, such as riffles or waterfalls, this can cause the water to be “overcharged” with dissolved gasses. This is called super saturation and it is where the water holds more dissolved gasses than it would normally hold at a specific temperature and pressure. It is reflected as having a percent saturation over 100%. This situation is only temporary if the water flows downstream and does not continue to be disturbed or agitated as the dissolved gasses over 100% saturation will escape the water back into the atmosphere. However, colder water will hold on to those gas atoms or molecules longer because the colder water is denser, the water molecules are more tightly packed. For example, if a sample of water under normal conditions can hold 13 mg/L of dissolved oxygen and then falls over a waterfall, the sample can become supersaturated and could hold over 16mg/L of dissolved oxygen.

Volunteer David Fountain—Monitoring 20 Years and Counting!



David Fountain and his daughter

For the last two decades, Adopt-A-Stream volunteer David Fountain has dedicated the first Sunday afternoon of every month to monitoring Long Island Creek in Sandy Springs. Growing up in Atlanta, David played in and along the banks of South Peachtree Creek. In 1994, after moving to a house on Long Island Creek, David heard a radio ad about Fulton County's Stream Monitoring program, a precursor of the Georgia Adopt-A-Stream program. Citizens monitoring their local waterways provide a colossal benefit to water quality in our state when you take into account that Georgia has over 70,000 miles of streams and that state and local governments just do not have the capacity to monitor each of these streams. This understanding motivated David to start monitoring for chemical parameters in November of 1994. In the 20 years since his first event, he has monitored Long Island Creek 204 times! Now he continues to gain inspiration for monitoring through wanting his daughter to grow up enjoying a healthy creek as he did as a child.

After just a few months of monitoring, you can start to see the baseline dissolved oxygen, pH, and conductivity levels of a stream and be able to notice extreme changes.

After a couple years, you can begin to see trends such as seasonal differences or gradual increases or decreases. But, twenty years of monitoring provides an excellent biography of the health, fluctuations, and history of a stream. David has monitored the effects of salting roads during a snowstorm, discovered a sewage spill while regularly monitoring with his daughter, and seen the effects of droughts on Long Island Creek. He and his daughter now know when the seasonal population of sunfish come and go during the year. The chemistry of the stream has remained generally stable over the years. However, David understands the importance of regular monitoring in determining baseline levels of the creek and to discover unusual inputs, such as the unexpected sewage spill. Over the years, David has noticed that urban development has taken its usual toll on Long Island Creek as it has many other streams around Atlanta. He has seen and removed all kinds of trash from the creek including a shopping cart, tires, a mattress, and other neighborhood trash that has washed in off the streets after a rainstorm.

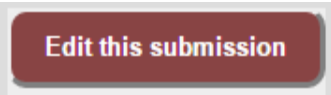
We at Georgia Adopt-A-Stream are always inspired by the stories of our new and long-term volunteers. Monitoring month after month and year after year instills a sense of pride for our incredible, life-supporting waterways which encourages our environmental stewardship to shine through to other parts of our lives. In November this year, David Fountain celebrated his 20-year anniversary as a volunteer monitor. David's efforts to be a good steward of clean water and his desire to inspire future generations to do the same embodies the greatest thing we could ask of our volunteers and we hope that others are motivated by his story. We thank David for his enthusiasm and dedication to the Adopt-A-Stream program. David and his daughter enjoy their time together while monitoring and they have no plans to stop!

Upcoming Dates

- January 6:** Chemical QA/QC workshop, Brunswick
- January 10:** Chemical & Bacterial QA/QC workshop, Reed Bingham State Park, Adel
- January 12:** 2014 AAS Award Nominations deadline
- February 1:** Confluence Student Poster Abstract deadline
- March 13-14:** Confluence, Gwinnett Environmental & Heritage Center, Buford
- March 20-21:** Environmental Education Alliance Annual Conference, Rock Eagle 4-H Center, Eatonton

Visit our online calendar for more details!

Did you know? You can now edit your data on the AAS database. If you find an error after you submit your data, locate the event on your group, site or people page, and click on the event number or "form." This will reopen your data in the data submission format. At the top right look for this "Edit this submission" button.



Edit this submission

It will ask for a brief reason that you are editing and then you may fix a mistake and resubmit your data. Thank you for your efforts in collecting and submitting quality data!



Do you have any data sheets laying around the house? Just a friendly reminder to input any data that has not yet been entered into the Adopt-A-Stream database! As the end of 2014 approaches, this data helps us to keep accurate records of our statewide contributions and document the effectiveness of the Georgia Adopt-A-Stream program. We encourage you to enter your data as soon as possible after you monitor! Contact us with any questions.

Deer Carcasses Near Streams

by Charlie Killmaster, WRD State Deer Biologist

In some areas of Georgia, reports of deer carcasses disposed of in waterways have surfaced. Initially, it's important to distinguish between unlawful dumping and other potential reasons why deer carcasses may be found in or near water. Dead wildlife, or parts thereof, improperly disposed of are considered litter from a legal standpoint and are not subject to typical animal disposal laws for domestic species. Examples of improper disposal would be dumping carcass remnants after processing on roadsides or waterways, particularly if found in trash bags. Deer carcasses found in waterways that are fully intact or partially intact as a result of scavenging are typically suggestive of some other means of demise and reason for being present in or near water. Epizootic hemorrhagic disease (EHD), a viral disease specific to deer, is a commonly occurring disease in Georgia and causes deer to seek water due to internal bleeding. Incidence of EHD peaks in late summer to early fall and discovery of carcasses in or near water during this time period are highly suggestive of this disease. The Georgia Department of Natural Resources encourages citizens to report such cases to their local Game Management regional office, as we closely monitor this disease. Similarly, internal bleeding as a result of deer-vehicle collisions (DVCs) or wounds resulting from bucks fighting and hunting can cause deer to seek water shortly before death. These circumstances will also be most prevalent during fall as both the peak in deer breeding activity, causing a peak in DVCs, and hunting season coincide. Unlawful dumping, once distinguished from other causes, may be reported to state law enforcement.



Charlie with an anesthetized buck during an ongoing research project in Harris County

While there are no specific laws or regulations governing disposal of wildlife taken by hunters, other than the aforementioned littering, here are a few tips for hunters that will minimize issues. It's best to leave the entrails from field dressed deer at the site of harvest and avoid creating a single dumping site for continued use. If the location of harvest is in a low-lying area near streams, it's better to relocate the waste parts to an upland location. If burial is a preferred option, consider contacting Georgia Department of Agriculture for their recommendations typically used for livestock. Another option would be to take the unusable parts to a landfill approved for animal carcasses or contact a commercial deer processor who already has an animal carcass disposal process in place. For hunting information, check out www.georgiawildlife.org.



CONFLUENCE 2015

Friday & Saturday, March 13 & 14, 2015

Friday evening: Student Poster Competition and Adopt-A-Stream Social

Saturday: Water Quality Workshops, Exhibits and Awards Ceremony

2015 Theme: Public Health and Water Quality

Gwinnett Environmental and Heritage Center in Buford, GA

*Announcing
Keynote Speaker:*

Dr. Bernard Sweeney, Stroud Water Research Center

Director, President, Senior Research Scientist

For more information, visit the [Confluence page](http://www.GeorgiaAdoptAStream.org) at www.GeorgiaAdoptAStream.org or contact 404-463-1511.

Nominate an Outstanding Volunteer, Trainer or Watershed Group

We need your eyes and ears around the state to help us find this year's Adopt-A-Stream award winners. If you know of an active Adopt-A-Stream trainer, volunteer or watershed group that exemplifies the five goals of our program, let us know! **Nominations can now be submitted through our website www.GeorgiaAdoptAStream.org—look along the scrolling announcements.**

Deadline for Nominations: January 12th, 2015

VOLUNTEER AWARD CATEGORIES

Volunteer of the Year ■ Extraordinary Watershed Monitoring Effort ■ Adopt-A-Stream in Action
Outstanding Outreach and Partnership ■ Adopt-A-Stream Multimedia Award ■ Nymph Award
Excellence in Data Collection ■ Beyond Borders

The Georgia Adopt-A-Stream Newsletter is published quarterly.
For more information about the program or to contribute to the newsletter,
contact:

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AAS Staff

*Harold Harbert, Anne Stahley,
Chelsea Hopkins, and Seira Baker*

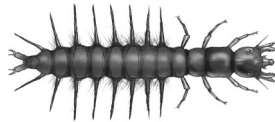
**GO BLUE in 2014 and sign up
for our e-newsletter by emailing
us at aas@gaepd.org!**



Dragonfly



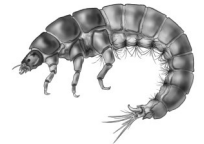
Riffle Beetle



Dobsonfly



Stonefly



Net Spinning Caddisfly

Student Water Science Poster Competition—Call for Abstracts!

This competition provides a platform for students to share water science research projects, receive recognition throughout the water quality monitoring community, interact with peers and professionals in the field and publish their work in the AAS newsletter and website. Selected entries will present at Confluence, the AAS volunteer monitoring conference, on March 13-14, 2015 in Buford, GA. *Travel stipends are available for eligible participants.*



Submit abstracts via email by February 1, 2015 to:
Seirisse.Baker@gaepd.org

Visit www.GeorgiaAdoptAStream.org to access:

Student Abstract Submission Form

Poster Competition Guidelines

For questions, contact 404-651-8512 or email above.

Cash prizes awarded in three levels:

Graduate College

Undergraduate College

High School (9th-12th Grade)

*Please visit our online calendar at www.GeorgiaAdoptAStream.org
for upcoming monitoring workshops and Adopt-A-Stream events.*