



From your Flint Riverkeeper®

There certainly are some days spent on the hard marble floors of the Capitol, and in front of the computer managing a storm of emails to try and influence what is happening under the Gold Dome, when I long to be on one of our creeks, on the Flint, or in the woods near either. Now, spring is finally here, the 2014 legislative session is in the books, and I have no excuses. Opportunities for field work (sewer spills, erosion issues, pollution permit renewals) abound, as do opportunities for fun. I pledge to you to spend as much time working for and enjoying the Flint as possible. Will you do the same?

In this issue you will read about

what has happened over the last four months or so, but you will also read about ways to support and enjoy your river and your organization. For even more information check out our website (www.flintriverkeeper.org) and our FaceBook page. Dive in! And, stay in touch. Jayme, the Board, and I always enjoy hearing from you about what you think about the river, the political situation, reports on pollution, our work, or just what wound up on the stringer on any given day.

Sincerely, for the Flint,

The Outcome of Senate Bill 213:

Flint River Drought Protection Act Revision

SB 213 was linked in a very concrete way to a large water swap to benefit Metro North GA:

The proponents of SB 213 fielded a bill and a project that would have vastly diminished private riparian water use rights in favor of a legally ambiguous state ownership stake in an unspecified volume of water to be used to supply water to Florida. The proponents were: the Deal Administration via the Environmental Protection Division (EPD) and the Soil and Water Conservation Commission; the GA Chamber of Commerce and the Metro Chamber of Commerce; the Atlanta Regional Commission; the GA Agribusiness Council; and, late in 2013, the GA Farm Bureau.

SB 213 would have fundamentally changed GA water law, which currently provides for state stewardship for all: This would have been unprecedented in GA and is foreign to most if not all of the United States: government ownership of water volume. SB 213's model for "flow augmentation" and giving EPD power to arbitrarily turn off taps is vastly different from government

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The mission of the Flint Riverkeeper® (FRK) is to restore and preserve the habitat, water quality, and flow of the Flint River for the benefit of current and future generations and dependent wildlife. FRK is a fully-licensed member of the Waterkeeper Alliance, an EarthShare of Georgia member group and participates in the Georgia Water Coalition.



If you notice problems on the river, contact DNR's Wildlife Resources Division-Fisheries at: **800-241-4113**

Passage of Alabama shad at Jim Woodruff Lock and Dam

Contributed by Travis Ingram and Rob Weller, Georgia Wildlife Resources, Fisheries Management

The Alabama shad (*Alosa alabamae*) is an anadromous species found in Gulf of Mexico drainages. Alabama shad spawn in freshwater but live as adults in the ocean. Alabama shad are similar in appearance to their sister species on the Atlantic slope, the American shad. However, they obtain smaller sizes than American



Female Alabama shad captured below JWLD

shad; only reaching 20 inches in length and 4 pounds in weight. They were once common throughout Gulf Coast rivers, but have declined due to a number of factors and are now listed as a species of concern. The largest remaining population is thought to be in the Apalachicola-Chattahoochee-Flint river (ACF) system. The main cause for the decline of Alabama shad in the ACF basin is thought to be the blockage of spawning migration routes by dams, such as Jim Woodruff Lock and Dam (JWLD) that forms Lake Seminole. JWLD represents the first migration barrier to anadromous fishes returning from the Gulf of Mexico including the Gulf sturgeon, Gulf striped bass, Alabama shad, and others. In 2005 a pilot project was initiated to test the feasibility of utilizing the lock at JWLD to allow shad to pass upstream. Collaborators on the project included the Georgia Department of Natural Resources, the Florida Fish and Wildlife Conservation Commission, the United States Army Corps of Engineers, the Fish and Wildlife Service, The Nature Conservancy, and the National Oceanic and Atmospheric Administration.

Navigation locks were used primarily for commerce in the early twentieth century. Barges full of trade goods would arrive at the lock and the water level within the lock would be either raised or lowered to the height of the water level the barge was in. The gate would open and the barge would move into the lock, the gate would close, and the water level adjusted to match the upstream or downstream side depending on travel direction of the barge. Biologists proposed that if the lock was used to



JWLD from the Apalachicola River

pass barges and boats then why not shad? The question was how to attract shad to the lock and be able to detect if they passed upstream. The attractant part of the equation was handled through the use of a pump to move water from Lake Seminole and plunge it off the lock wall to create noise and flow that would in theory attract migrating shad to the lock opening so they could enter and pass upstream. The lower lock gates would be opened to allow shad to swim into the lock and then the upper gates would open and allow shad to swim into the lake. The next step was how to detect shad that may be passing upstream. The solution was to implant shad captured below the dam with hydroacoustic transmitters. Transmitters were orally inserted into the stomachs of shad and emitted a unique code or "ping" every 60 seconds or so. Hydrophones were placed in and above the lock to detect any telemetered shad that passed through the lock into the lake. *Cont'd page 3*

Now the big question, did it work? From a fisheries standpoint let's say we hit a home run. From 2005 until present we have averaged approximately 35% up-



stream passage since the inception of passage at JWLD in 2005, numbers appear to be on the rise with the highest spawning population occurring in 2012, with approximately 120,000 spawning adults.

Alabama shad from the Apalachicola River. What does all of this mean for the ACF? Remember Alabama shad are anadromous, therefore they return from the ocean to spawn and in this case die soon after which means all energy and nutrients brought with them from marine environments is deposited in the river system. Not only is this good for Alabama shad juveniles, but also a host of other

organisms. Alabama shad juveniles may spend greater than 9 months in the river system in which they provide an increase in forage for sport fish including bluegill, largemouth bass, and Gulf striped bass. This extra forage base has the potential to increase health and growth for those sport fish populations. Due to the long migrations of Alabama shad, there is now evidence that suggests they may serve as hosts for certain threatened and endangered mussel species throughout the river system.

reaching JWLD are able to migrate into the Flint and Chattahoochee rivers all while using existing personnel and structures.

One concern about passing shad through JWLD was if juvenile shad would be able to pass downstream through the facility and join the adult population. This type of information has in the past been very difficult and labor intensive to collect.. New technology known as microchemistry analysis is providing biologists with answers to these questions. The microchemistry process utilizes otoliths (ear bones) of Alabama shad to determine where those individuals were spawned. Otoliths are comprised of calcium and other minerals absorbed from the water in which the fish inhabits. Different water systems (i.e. rivers) have unique mineral signatures therefore allowing biologists to determine where the fish was spawned. Using this analysis, it was determined that 90% of the adult Alabama shad collected below JWLD on their spawning run in 2011, had been spawned above JWLD in the Flint River. That means that the Flint River is now accounting for 90% of the population of Alabama shad in the ACF.

Research on this species will continue this year. New propagation techniques to increase the population by stocking above upstream barriers will continue at the Georgia Educational Center in Perry. Shad will also be trapped and transported, a procedure where adult shad are collected before spawning and moved around upstream barriers where they are allowed to spawn naturally. This will allow for imprinting of juvenile shad on the Chattahoochee River and hopefully develop a population of spawning shad in that river system.

For further information on Alabama shad in the lower Flint River, contact Travis Ingram at the Georgia Wildlife Resources Division, Albany Fisheries Office: (229) 432-5630

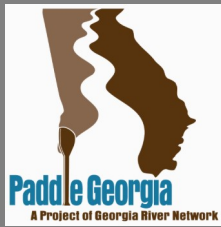
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PADDLE GEORGIA'S *Journey's End Celebration Dinner*



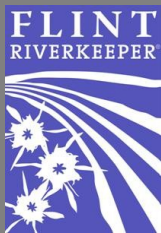
Friday, June 27th: 6pm
Heard County Riverfront Park in Franklin, GA

\$15 per ticket:

Fish & all the fixins!

Fish, Cheese Grits, Fresh Boiled Sweet Corn, Coleslaw, Hushpuppies, Tea and Lemonade

FISH FRY



Advance tickets available at:

www.eventbrite.com/e/paddle-georgia-2014-journeys-end-celebration-fish-fry-tickets-11622207335

Or buy your tickets at the event (cash, check or card)

For more information, visit www.flintriverkeeper.org

Ticket Sales Benefit Flint Riverkeeper

Become a Member to Protect YOUR Flint River!

Can you give a generous tax-deductible donation today, to make certain one of Georgia's most treasured waterways can be saved for current and future generations? To make a donation, visit www.flintriverkeeper.org OR make checks payable to Flint Riverkeeper® and mail this form to 211 N. Jefferson Street, Ste. 8, Albany, GA 31701, or return this form with your credit card information for a secure transaction. Flint Riverkeeper® is a 501c3 charitable organization. **THANK YOU for your support!**

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Flint RIVERKEEPER®

**211 N. Jefferson Street
Suite 8**

Phone: 229.435.2241

www.flintriverkeeper.org

Flint Riverkeeper was established in 2008 to address the various issues that are threatening the Flint River and its tributaries. We are working to restore and protect the quality and flow of this immensely valuable resource.

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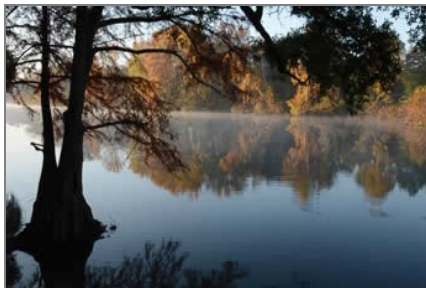
Your Flint Riverkeeper *Points* is designed and edited by Jayme Smith, with contributions from Gordon Rogers and guest submissions as noted. If you have an issue, article or pictures to share, please contact

jayme@flintriverkeeper.org

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FLINT RIVERKEEPER!**

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**DON'T MISS YOUR CHANCE TO JOIN GEORGIA RIVER
NETWORK & FLINT RIVERKEEPER FOR THE *FIRST EVER* FALL
FLOAT ON THE FLINT.**



Fall Float on the Flint, set for Oct. 10-13, will take in about 70 miles of this beautiful southwest Georgia river as it winds from Albany to Bainbridge. The four-day trip is everything that our annual summer Paddle Georgia adventures are, just shorter!

We'll spend two nights camped at Chehaw Park in Albany and then move on to Rocky Bend Flint River Retreat in Newton for two nights of riverside camping.

For additional information, a visual tour of the route and registration, visit: www.garivers.org/paddle_georgia/fallfloat.html

Registration fees are \$200 for adults, and \$155 for children 8-17. Children under 7 paddle for \$15. Registration will close when all spaces are filled and a wait list will be started.

REGISTER TODAY!

Sponsorship opportunities available for local businesses; contact Jayme at 229.220.9796 or jayme@flintriverkeeper.org