GEORGIA FLOW INCENTIVE TRUST

Incentives Auction Project Summary

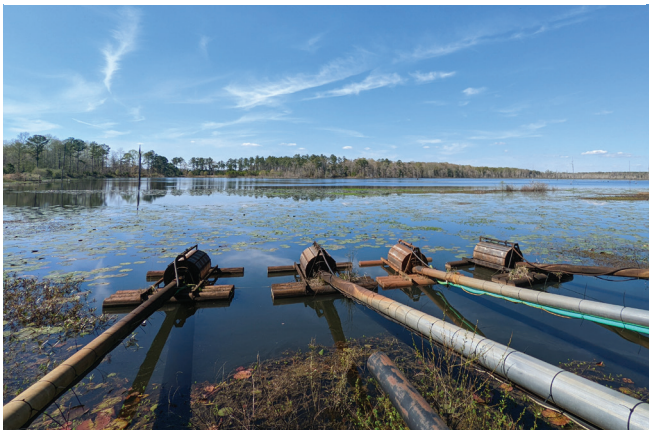
Severe droughts in the Lower Flint River Basin (LFRB) cause periodic water scarcity that threaten aquatic ecosystems and agricultural water security. With better drought response tools, we can attain benefits for endangered species and water users when water is most scarce – and most needed. This report summarizes the efforts, accomplishments, and findings of a recent project that sought to improve drought management tools in the LFRB.

This report is focused on the implementation and outcomes of the first project completed through the Georgia Flow Incentive Trust (GA-FIT). Funded by the Robert W. Woodruff Foundation, this project designed and tested novel incentive approaches for voluntary irrigation suspension in the LFRB. It was implemented from 2020 to 2023, and it established GA-FIT, which has since become a much larger program encompassing several initiatives to improve drought management in the LFRB, support farmers who rely on the LFRB for water, and protect the habitat of rare aquatic species.

PROJECT ACTIVITIES

The central project focus was two years of field trials in which incentive contracts were offered in an auction to farmers in the Ichawaynochaway Creek sub-basin of the LFRB. Project activities included:

- Field Trial Design and Testing
- Auction Portal Development
- Farmer Recruitment
- Auction Implementation
- Incentive Contract Execution
- Auction Data Analysis
- Stakeholder Engagement
- Focus Group with Auction Participants



A surface water withdrawal in the Ichawaynochaway subbasin

PROJECT ACCOMPLISHMENTS

- Established the Georgia Flow Incentive Trust and catalyzed its growth, which has since attracted over $55 million in additional funding to improve LFRB drought resilience
- Implemented successful field trials of new incentive approaches to voluntary irrigation suspension with farmers
- Recruited over 55% of eligible farmers in the project area to participate in an incentive auction
- Generated “willingness to accept” data for voluntary irrigation suspension incentives by contract type, water source, and crop type
- Developed an online incentive auction portal that provided a seamless and positive experience for farmers and can be used as a template for future incentive auctions
- Successfully executed seventeen irrigation suspension contracts on 1,840 acres
- Provided a proof of concept for new voluntary irrigation suspension incentives as a management measure for the LFRB Habitat Conservation Plan for federally protected freshwater mussels
- Communicated progress and outcomes through the GA-FIT website (ga-fit.org), more than 25 presentations to audiences of water resource managers and academic researchers, and two research manuscripts for academic journals
- Supported robust stakeholder engagement through the GA-FIT Advisory Board, which continues to provide leadership in the LFRB

APPLYING THE FINDINGS

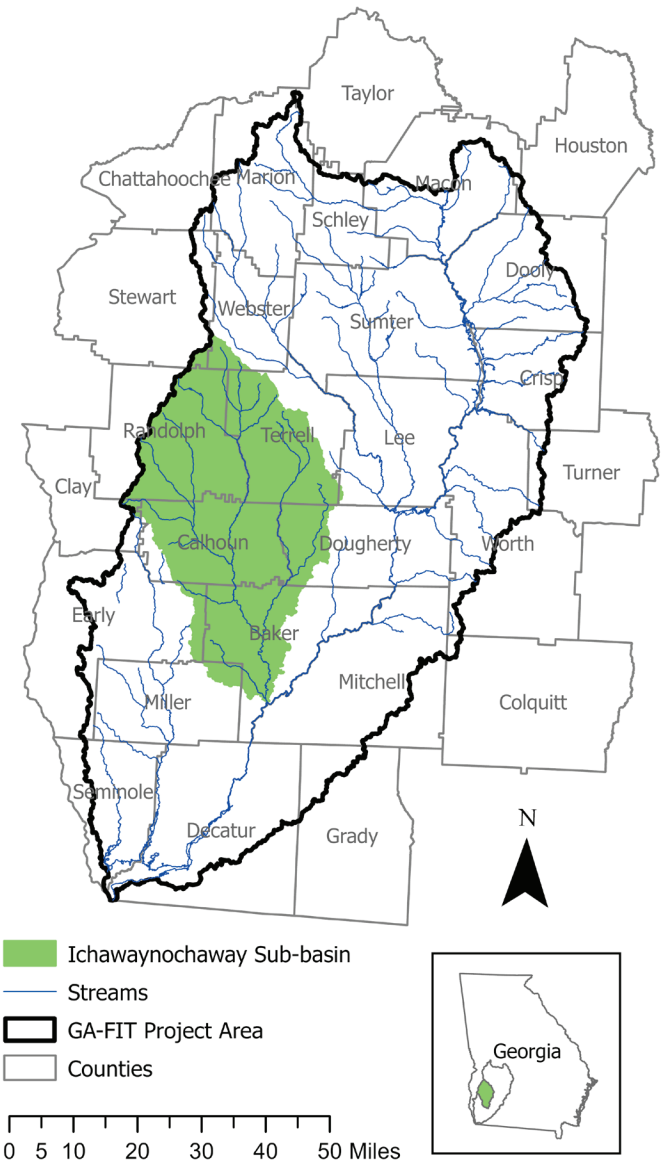
This project sought to improve existing policy implemented through the Flint River Drought Protection Act, which was adopted by the Georgia Legislature in 2020 and provides for voluntary irrigation suspension incentive contracts during drought in the basin (O.C.G.A. §12-5-40 et. seq.; Ga. Comp. R. & Regs. 391-3-28). Auctions were conducted only in 2001 and 2002. The policy's initial effectiveness was hindered by a lack of field verified irrigated acreage (now available) along with regulatory constraints that limited the ability to respond to drought in a timely and targeted manner.

This project confirmed that farmers are interested in new approaches, and targeted designs can improve incentive effectiveness. Moreover, targeted approaches can be more responsive to real-world conditions, including "flash droughts" that develop in the middle of a growing season.

Project field trials demonstrated the interest in and feasibility of two new incentive options for voluntary irrigation suspension: volumetric suspension and contingent suspension. These options offer advantages over the current full-season suspension approach in terms of flexibility, timing, and targeting. Feedback from farmers has indicated that development of a hybrid approach of these two options may be desirable and effective.

The data from the field trials were used to generate willingness to accept estimates by contract type, water source, and crop. These data can be used to support decisions about incentive contract pricing, to assess costs and benefits, and to target cost-effectiveness. Project findings will be used to inform the types of incentives included in the LFRB Habitat Conservation Plan currently under development (see box below).

GA-FIT PROJECT AREA



A HABITAT CONSERVATION PLAN FOR THE LOWER FLINT RIVER BASIN

A Habitat Conservation Plan (HCP) is a tool provided by the U.S. Endangered Species Act (ESA) to accommodate economic activity to the greatest extent possible without compromising the protection of federally endangered and threatened species. GA-FIT is working with partners and stakeholders to develop an HCP to address the habitat needs of endangered and threatened freshwater mussels while also providing for the water needs of farmers in the LFRB.

The HCP will provide regulatory assurances to water managers, farmers, and other stakeholders that ESA requirements are being met and reduce uncertainty over potential compliance actions which could threaten agricultural water use. The HCP will include management measures that maintain stream flows during drought, including incentives for voluntary irrigation suspension. The results of this project will guide how voluntary irrigation suspension is specified to effectively and cost-efficiently address HCP goals.

LESSONS LEARNED

This project generated observations and findings from field trials, survey questions, focus group discussions, and advisory board meetings. The lessons learned from the project include:

- Farmers are very interested in incentives for voluntary irrigation suspension. Innovating the design of these incentives can provide an attractive option for farmers to participate in drought management.
- Farmers would prefer to bid on incentive contracts for voluntary irrigation suspension several months before the growing season begins, but resource managers cannot know if they need drought management tools until a drought develops, often well into the growing season. The new contract options tested in this project provide flexibility to address this timing mismatch.
- A hybrid approach that combines the volumetric and contingent aspects of the options tested in this project may be a preferred approach to apply in the HCP.
- Some farmers think that multi-year incentive contracts would be attractive because they would allow farmers to adjust their plans and minimize risk in a manner that single-year contracts cannot.
- Voluntary irrigation suspension incentives would be attractive to farmers when administered by a nongovernmental organization. Familiarity and trust are key to farmers feeling comfortable with this type of program.
- Personal outreach and participation incentives are important to successful recruitment.
- The field trial data provide willingness to accept estimates that can be used to set pricing for incentive contracts and target this management measure toward greatest cost-effectiveness.

STAKEHOLDER ENGAGEMENT

To guide implementation of this project, we sought stakeholder involvement through a project Advisory Board. At regular Board meetings, we gathered input on project design, implementation, key findings, and recommendations. The Advisory Board was established in 2021 and expanded in 2022 to support the expanded scope of GA-FIT described above.

Advisory Board members offer real-world expertise that guides GA-FIT toward meaningful outcomes. In this project, they supported GA-FIT in recruiting participants, interpreting results, and building awareness about the project. With the expansion of GA-FIT, the Advisory Board is providing stakeholder guidance in the development of the Habitat Conservation Plan described above. The Advisory Board is central to project implementation and success.

Advisory Board meetings are open meetings, and the Board provides time for public comment at its meetings. In addition to the Advisory Board, a technical resource support team engages representatives from federal and state agencies, research institutions, and nongovernmental organizations. They attend Advisory Board meetings and provide information and guidance to the Advisory Board and project team.

GA-FIT ADVISORY BOARD

Richard Royal, Board Chair
Lower Flint-Ochlockonee Water Council

Murray Campbell
Lower Flint-Ochlockonee Water Council and farmer

Donald Chase
Upper Flint Water Council and farmer

David Dixon
Miller Brewing (retired) and Lower Flint-Ochlockonee Water Council

Tommy Dollar
Dollar Farm Products and farmer

Adam Graft
Upper Flint Water Council and farmer

Connie Hobbs
Baker County Commission and Lower Flint-Ochlockonee Water Council

Tom McCall
Georgia Farm Bureau

Marty McLendon
Flint River Soil and Water Conservation District and farmer

T.E. Moye
Georgia Federal-State Inspection Service and farmer

Andy Payne
Lower Chattahoochee Soil and Water Conservation District and farmer

Gordon Rogers
Flint Riverkeeper & Upper Flint Water Council

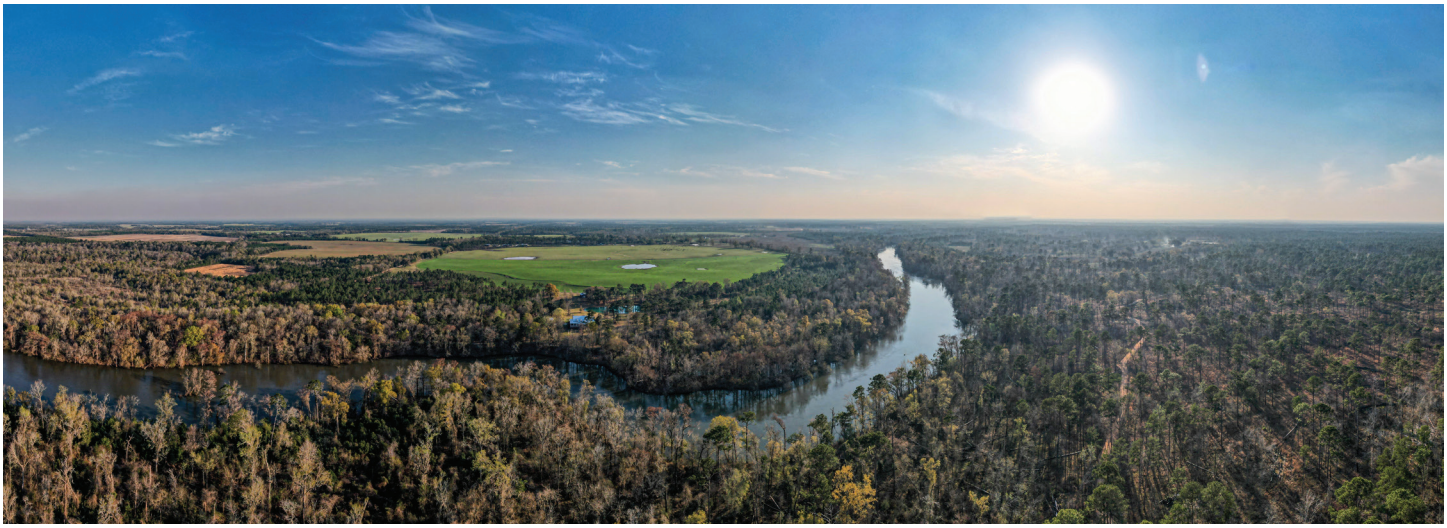
Jayme Smith
City of Colquitt, Economic Development

Jimmy Webb
Lower Flint-Ochlockonee Water Council and farmer

EXTENDING THE IMPACT

The incentives auction was a success with farmers and attracted a high level of interest among resource managers and stakeholders. The project also created recognition for GA-FIT as an established program that can protect aquatic resources while also protecting the economic well-being of farmers. Early implementation success provided a foundation for translating this work into actionable policy reforms and expansion of the project with new partners and additional funding sources.

While the activities of this project are complete, its impact will be realized and amplified through the growth of GA-FIT into a larger program for drought resilience. In early 2022, GA-FIT was expanded through a $50 million grant from the Governor's Office of Planning and Budget via allocations established from the American Recovery Plan Act for infrastructure development. With this funding and additional grants and partnerships, GA-FIT is developing new drought response infrastructure in the form of deep aquifer wells that will provide alternatives to surface water use during low flow periods. The new funding also supports GA-FIT in significantly increasing monitoring and research on the region's aquifers and developing a Habitat Conservation Plan.



WHAT FARMERS ARE SAYING

Overall this is a great idea for our industry and I am excited to see how it works out.

This is a tool in the toolbox to make sure farmers can continue being good stewards and stay in business.

Connect with GA-FIT
https://ga-fit.org/

PROJECT TEAM

This project was implemented by a partnership between The Nature Conservancy and the Georgia Water Planning and Policy Center at Albany State University with support from faculty at the University of Delaware and the University of Georgia.

GEORGIA Water
PLANNING & POLICY CENTER
ALBANY STATE UNIVERSITY

The Nature Conservancy