

# WATER SUPPLY RESERVOIRS IN GEORGIA: AN UPDATE ON HENRY COUNTY'S PROPOSED TUSSAHAW CREEK RESERVOIR AND THE IMPORTANCE OF THOROUGH ENVIRONMENTAL IMPACTS ANALYSES

Ellen J. Sutherland

---

*AUTHOR:* Executive Director, Georgia River Network, 1090 South Milledge Avenue, Athens, GA 30605.

*REFERENCE:* *Proceedings of the 2003 Georgia Water Resources Conference*, held April 23-24, 2003, at the University of Georgia. Kathryn J. Hatcher, editor, Institute of Ecology, The University of Georgia, Athens, Georgia.

---

**Abstract.** Due to potential and perceived water shortages from the combination of explosive population growth, drought, and the desire for extensive future economic development, many local governments in northern Georgia want to build large water supply reservoirs by damming rivers, flooding wetlands, and often pumping water from nearby larger rivers. The piecemeal approach to permitting these reservoirs to date has resulted in no comprehensive environmental study of the direct, secondary, and cumulative impacts of this activity. However, the U.S. Army Corps of Engineers recently recognized their responsibility under the National Environmental Policy Act and the Clean Water Act to perform this analysis and suspended the permit that they issued to the Henry County Water & Sewerage Authority for the proposed Tussahaw Creek Reservoir. This action hopefully introduces a shift in permitting behavior to comply with national environmental laws and to better protect the public interest.

## INTRODUCTION

With 18 reservoirs currently proposed or in planning stages in North Georgia, the proliferation of water supply reservoirs serves as a major threat to the health of Georgia's river ecosystems. Ranked third in the nation in aquatic biodiversity, Georgia has a lot to lose. The state has listed 34 native fish (almost 13% of native fish diversity), in addition to 16 species of freshwater mussels, as threatened or endangered due in part to changes in riverine ecosystems resulting from current impoundments (Cowie et al., 2002). Indeed, the negative impacts of continued reservoir development can be massive. The purpose of this paper is to bring Georgia's citizens, watershed organizations, downstream local governments, and water resource planners up-to-date on current developments and potential policy shifts resulting from recent litigation brought by the Georgia River Network, Southern

Environmental Law Center, Turner Environmental Law Clinic, and Altamaha Riverkeeper against the U.S. Army Corps of Engineers.

## BACKGROUND AND RELATED WORK

### Direct Impacts

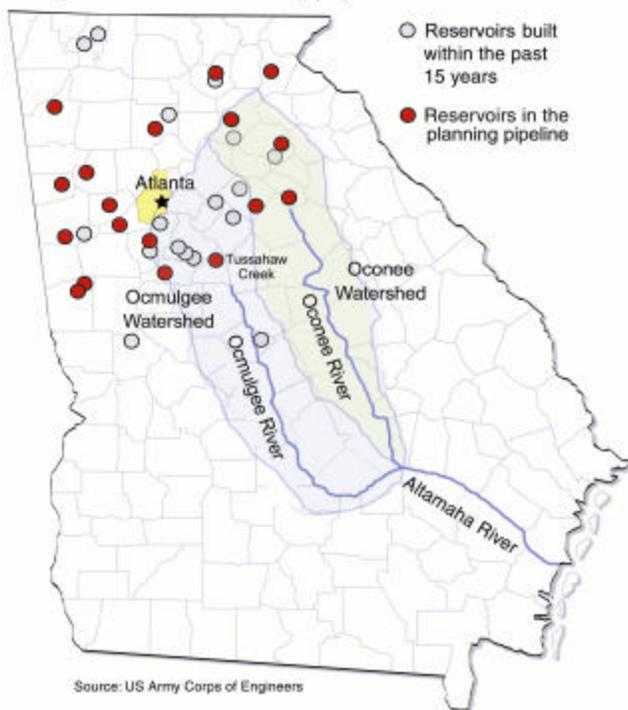
Reservoirs can have extremely detrimental impacts on river ecosystems. These impacts include increased water loss due to evaporation, disrupted flows of sediment (resulting in habitat degradation, increasing erosion, and loss of property downstream), decreased waste assimilation capacity, unfavorable habitat for fishes, impeded movement for migratory species and for recolonization after disturbance events, alterations to highly productive flood-plain forests, and loss of wetlands. The University of Georgia River Basin Science & Policy Center published an extensive paper in May, 2002, examining the impacts of reservoirs and detailing alternative methods for water supply planning that minimize these impacts.

### Secondary and Cumulative Impacts

In addition to the types of direct impacts resulting from reservoir construction listed above, the permitting and construction of reservoirs have major secondary and cumulative impacts on entire river basins. For example, reservoirs spur growth and economic development. One example of a secondary environmental impact from this development is increased impervious surface area, which results in faster flows of run-off during storm events. These faster flows can cause severe flash flooding problems, decreased water quality from non-point source pollution, increased water temperatures, and other stormwater management issues.

The growth and secondary impacts mentioned above also will result in greater volumes of wastewater that must be treated before being discharged into the river. Because communities rarely appreciate treated

## Proposed Water Supply Reservoirs



**Figure 1. Proposed Water Supply Reservoirs.**

wastewater discharges directly into or just upstream of drinking water supply reservoirs, these discharges often occur slightly downstream of the newly built reservoir. However, because Georgia has the highest density of dams in the Southeast, according to EPA's National Inventory of Dams (US EPA, 1998), there is a high probability of another reservoir or impoundment slightly downstream. Because lentic ecosystems have very different characteristics than lotic ecosystems, increased nutrient inputs resulting from, for example, increased volumes of treated wastewater or fertilizer use in suburban developments, can lead to eutrophication in downstream lakes. This eutrophication can cause blooms of algae and other nuisance aquatic plants, which can decrease recreation opportunities in existing lakes. Finally, when these plants die and begin to decompose, the bacteria involved in the decomposition process can cause portions of the lake to become anoxic, further degrading water quality and negatively impacting fish habitat.

When considering these potential direct and secondary impacts on a river basin scale, the cumulative impacts of several proposed new reservoirs can be staggering to contemplate, especially in conjunction with existing impoundments, water

withdrawals, permitted point-source pollution discharges, non-point source pollution, and other existing or proposed land uses. In the past, certain upstream water authorities sanctioned by their county government have argued that their current need for water is so pressing that these impacts should not be evaluated. Some government agencies have cited a lack of data or budgetary constraints as reasons to permit reservoirs without looking at cumulative impacts. However, the impacts occur, whether or not we choose to examine them.

### **The Purpose of the National Environmental Laws**

One of the major principles of the National Environmental Policy Act of 1969 (NEPA) is that decisionmakers and the public should have adequate information about environmental impacts of proposed actions and their alternatives before making decisions that can have a major impact on the environment. NEPA specifically requires consideration of the direct, secondary, and cumulative impacts related to a permitting decision. In addition, Section 404 of the Clean Water Act specifically requires the permitting of the least environmentally damaging practicable alternative for the types of permit issued under the Act for reservoir construction and wetland degradation.

### **Relevant History of the Tussahaw Creek Reservoir**

The U.S. Army Corps of Engineers issued a permit to the Henry County Water & Sewer Authority on October 23, 2002, for the construction of a water supply reservoir on Tussahaw Creek in Henry and Butts Counties, Georgia. Tussahaw Creek flows into Lake Jackson, which flows into the Ocmulgee River. The Ocmulgee River is a tributary to the Altamaha River, which flows into the Atlantic Ocean. The Altamaha River was named the 7<sup>th</sup> Most Endangered River in America in 2002 by American Rivers due to water loss from proposed reservoirs and power plants in its upstream tributaries.

On January 22, 2003, the Southern Environmental Law Center and Turner Environmental Law Clinic filed suit on behalf of Georgia River Network and the Altamaha Riverkeeper against the U.S. Army Corps of Engineers in the U.S. District Court for the Northern District of Georgia, Atlanta Division. The action sought declaratory and injunctive relief for violations of federal law by the Corps in issuing the permit to fill wetlands and dam Tussahaw Creek for the construction of the reservoir.

On March 7, 2003, the U.S. Army Corps of Engineers issued a letter to the Henry County Water &

Sewerage Authority suspending the Tussahaw Creek permit pending further environmental review. The letter cited that the Environmental Assessment and Finding of No Significant Impact, on which the permit issuance was based, omitted specific information regarding impacts of previously permitted reservoirs and existing dams in the watershed. The Corps further found that it was in the public interest to fully review the information in order to address cumulative impacts and to comply with NEPA.

### DISCUSSION

The Tussahaw Creek reservoir will certainly be an on-going case study to determine how the U.S. Army Corps of Engineers and the Federal Court System will interpret national environmental laws, specifically provisions of NEPA and the Clean Water Act. Certainly, I hope that the Corps takes its responsibility to the public very seriously and conducts a thorough programmatic environmental impact statement to examine their reservoir permitting behavior in a more comprehensive manner. The policy implications of any lesser alternative could have dire impacts on the future of Georgia's river ecosystems.

An interesting side note to this update on the case and its importance to Georgia's citizens deals with the role of public participation versus litigation. Georgia River Network filed comments during the public comment period in early 2001 seeking the same type of analysis that the Corps now admits is necessary under NEPA. Our comments specifically pointed out the relevant sections of NEPA, yet it was only upon preparation in response to our litigation that the Corps determined that their process was not adequate. Certainly one positive policy outcome from this case could be more attention to public comment letters and relevant environmental laws from the outset, such that more government resources could be committed to environmental analysis rather than being used to respond to necessary litigation from concerned citizens and organizations.

### ACKNOWLEDGEMENTS

Special thanks to David Farren and Gil Rogers with the Southern Environmental Law Center and Julie Mayfield and Larry Sanders with the Turner Environmental Law Clinic for their excellent work on this case. Georgia River Network became involved in this issue several years ago now at the request of many affected citizens who shall remain nameless here.

Thanks for your sacrifices and for your continued, amazing support. Thank you to all of the contributors who have helped fund our work on this important issue – the conclusion of which will determine the health of our river ecosystems and communities for the foreseeable future. Finally, thanks to the brilliant scientists and policy experts at the University of Georgia for their important work.

### LITERATURE CITED

- Cowie, G. (editor), M. Davis, S. Holmbeck-Pelham, B. Freeman, M. Freeman, K. Hatcher, R. Jackson, A. Miller Keyes, M. Merrill, J. Meyer, E. Sutherland, and S. Wenger, 2002. Reservoirs in Georgia: Meeting Water Supply Needs While Minimizing Impacts. University of Georgia River Basin Science & Policy Center, Athens, Georgia. (available at <http://www.rivercenter.uga.edu>).
- U.S. Environmental Protection Agency. 1998. National Inventory of Dams in BASINS, Version 2.0. Region 4 software for calculation of Total Maximum Daily Loads. EPA-823-C-98-006.