

Georgia's Statewide Water Management Plan: Recommendations to Maximize Returns to the Basin of Origin

Submitted by the Georgia Water Coalition
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As Georgia's population grows, our state's water resources are being stretched further and further towards their limits. Pressure is mounting to create manmade solutions to the water supply challenge through the use of interbasin transfers and the construction of new reservoirs. Both options can bring high economic and ecological costs to our river systems and downstream communities. This paper will focus on interbasin transfers and recommended policies for addressing them effectively in Georgia. The paper will also briefly address the use of septic systems, which can also result in potential water loss from the basin of origin. The Georgia Water Coalition continues to emphasize that there is no one-size-fits-all policy or solution that represents the best option to maximize returns to every river basin in Georgia. Because of this, the Coalition believes that sub-state and watershed planning is a crucial next step once broader statewide policies have been established.

Interbasin Transfers

Introduction

Interbasin transfers occur when water is withdrawn from one river basin (such as the Chattahoochee) and discharged into a different river basin (such as the Ocmulgee/Altamaha). In this example, water originally destined to flow into the Gulf of Mexico has instead been diverted through water supply systems to flow into the Atlantic Ocean, resulting in a gain to the Altamaha system and a loss to the Chattahoochee system. Transfers occur on numerous scales; even within the same river basin, water may be transferred from one creek or tributary to another, with more localized yet equally significant results. Finally, water may be transferred among river basins that are distinct upstream but yet related downstream, such as transfers from the Chattahoochee to the Flint. In that case, water will still reach the same place eventually (the Apalachicola River and the Gulf of Mexico), but may travel on a new course for several hundred miles before doing so. Each of these scenarios can bring significant impacts, both to the river and stream ecosystems and to downstream communities and other water users who rely on a certain amount of water for municipal, agricultural, or industrial uses. Both the basin of the interbasin transfer's origin and the basin that receives the transfer are impacted, with systemically lower and higher flows in each respective basin.

Metropolitan Atlanta is already the site of significant interbasin transfers among the Chattahoochee, Etowah, and Ocmulgee River systems, and also of interbasin transfers involving the Flint and Oconee Basins. Because of the city's location in the narrow headwater regions of each of these watersheds, interbasin transfers have already brought significant change to the natural hydrograph of Georgia's waterways, and future transfers will only exacerbate these effects. Aside from their significant effects on downstream

communities and aquatic habitat, these transfers could also have major implications for the ongoing Tri-State water wars, since any transfers out of the disputed interstate river basins can mean less water for Alabama and Florida (in addition to downstream Georgians). Therefore, interbasin transfers should be much more closely monitored by the Environmental Protection Division (EPD) than they are currently. The four recommendations included here address the need for expanded review of proposed interbasin transfers, for thorough documentation of interbasin transfers, for more public involvement, and the need to revisit the Metropolitan North Georgia Water Planning District's interbasin transfer projections.

Recommendation: Expanded Review of Proposed Interbasin Transfers

The Georgia Water Coalition has several recommendations to strengthen Georgia's law regarding interbasin transfers. The existing water management law only requires the Director of the Georgia EPD to give "due consideration" to existing competing water uses and applications for withdrawal permits that would involve interbasin transfers. The Director must then send out a press release to areas that will be affected by the transfer, at least seven days before any permit authorizing an interbasin transfer is issued. O.C.G.A. § 12-5-31(n). We recommend a new permitting system, or an expansion of the existing water withdrawal permitting system, that would require that any person seeking to make an interbasin transfer of more than 100,000 gallons of water per day must apply to EPD for a permit for that transfer. When feasible, the nonconsumptive portion of the interbasin transfer should be returned to the basin of origin, and this requirement should be explicitly added as an enforceable condition to the permit. Water users receiving water as the result of the proposed interbasin transfer must aggressively implement water conservation procedures and must demonstrate that there are no cost-effective alternatives to the interbasin transfer.

As an initial matter, EPD should operate under the assumption that new interbasin transfers should be allowed only in rare or narrowly-defined situations. Furthermore, EPD should consider a list of criteria to use in evaluating the need for, and the permitting of, any proposed new interbasin transfer, or any proposed expansion of an existing interbasin transfer. These criteria include the following:

- (1) The quantity of the proposed withdrawal and the stream flow of the basin of origin, with special concern for low flow conditions;
- (2) Protection of the present uses, and consideration of projected stream uses of the basin of origin, with special concern for low flow conditions and attention to the stream ecology;
- (3) Protection of the water quality in the basin of origin, with special concern for low flow conditions;
- (4) The economic feasibility, cost effectiveness, and environmental impacts of the proposed permit in relation to alternative sources of water supply, including the cumulative impacts of current and proposed interbasin transfers in the basin;
- (5) The overall current water demand and the reasonably foreseeable future water needs of the basin of origin;

- (6) The supply of water presently available to the receiving basin, as well as the overall current water demand and the reasonably foreseeable demonstrable future water needs of the receiving basin, including methods of water use, conservation, and efficiency of use;
- (7) The beneficial impact of any proposed transfer, and the demonstrated capability of the applicant to implement effectively its responsibilities under the requested permit;
- (8) The nature of the applicant's use of the water, to determine whether the use is reasonable;
- (9) Whether the applicant has implemented all reasonable efforts to promote conservation;
- (10) Whether the proposed project requiring the interbasin transfer shall promote conservation of water;
- (11) The requirements of other state and federal agencies with authority relating to water resources;
- (12) The availability of water to respond to emergencies, including drought in the basin of origin and in the receiving basin;
- (13) Whether the project shall have any beneficial or detrimental impact on navigation, hydropower or other power generation, fish and wildlife habitats, aesthetics, or recreation;
- (14) The quantity, quality, location, and timing (diurnal, seasonal, annual) of water returned to the basin of origin, receiving basin, or any downstream basin;
- (15) Climatic conditions;
- (16) Any offsetting increases in flow in the basin of origin that may be arranged through permit conditions;
- (17) The number of downstream river miles from which water will be diverted as a result of the transfer;
- (18) Consultations with local governments affected by the proposed transfer and use;
- (19) The correlation between surface water and ground water in the basin of origin, and whether the proposed use will be harmful to the supply of either or both;
- (20) Impact on interstate water use;
- (21) The cumulative effect on the basin of origin and the receiving basin of any water transfer or consumptive water use that is authorized or projected; and
- (22) Any other relevant factors.

Recommendation: Thorough Documentation of Interbasin Transfers

Permits authorizing interbasin transfers should be valid for no more than 20 years and reviewable every 10 years on the initiative of the EPD or a designated representative from the affected basins. This will allow the transfers' effects on the water supply to be thoroughly monitored and modified if necessary, while being of a sufficient duration to bring certainty to water users who rely on them. Permits authorizing interbasin transfers should contain the following information:

- (1) The location of the withdrawal;
- (2) The authorized amount of the withdrawal and the level of consumptive use, if any, and required conservation measures, if any;

- (3) The dates during which water is to be withdrawn, including any seasonal or shorter variations in the authorized withdrawals or level of consumptive use or volumes conserved;
- (4) The uses for which the water is authorized to be withdrawn;
- (5) The transfer of water shall be governed by any applicable in-stream flow protection requirements of the division;
- (6) The amount of return flow required, if any, and the required place of discharge, if any;
- (7) Any special provisions necessary to promote an adequate water supply for the state or to mitigate any future adverse conditions resulting from the transfer;
- (8) The installation, maintenance, and use of stream flow monitoring equipment;
- (9) Any requirements for metering, surveillance, and reporting the director determines to be necessary to ensure compliance with other conditions, limitations, or restrictions of the permit, including consent to inspections or investigations;
- (10) The establishment and regular periodic reporting of transfer activities by the permittee;
- (11) The time within which all necessary construction authorized by the permit must be completed or within which the withdrawal or use of water must begin to be made, with the delay not to exceed five years from the date of issuance of the permit, subject to extension by order of the director upon showing that all due efforts and diligence toward the completion of the work have been made;
- (12) Any extraordinary withdrawals of the waters of the state necessary for the construction of any facilities necessary to withdraw or use water;
- (13) Any obligation to restore any land or waters of the state to their condition prior to the issuance of the permit;
- (14) The date on which the permit expires; and
- (15) Any other conditions, limitations, and restrictions the director determines to be necessary to protect the public interest, the environment and ecosystems, and the public health, safety, and welfare, and to ensure the conservation, proper management, and aesthetic enhancement of the waters of the state.

Recommendation: More Public Involvement

The public notice provisions regarding new or expanded interbasin transfers need to be strengthened. After receipt of a completed application for an interbasin transfer permit and at least 30 days prior to acting on the application, EPD should notify city and county governments and public utilities in each county located entirely or partially within the river basin that is the source of the proposed transfer and those in the receiving basin, place notice on EPD's website, and mail notice to all persons who have filed a written request with EPD that their names be placed on a mailing list for receipt of such notice. EPD should publish a notice of the proposed interbasin transfer which should include a nontechnical description of the applicant's request and a conspicuous statement in bold type as to the effects of the water transfer on the basin of origin and receiving basin to be published in the legal organ and/or a newspaper of general circulation in each potentially affected community in the basin of origin and the receiving basin. Whenever there

appears to be sufficient public interest, the director may call a public hearing and should give at least 30 days' notice prior to holding any hearing.

Recommendation: Revisit the Metropolitan North Georgia Water Planning District's Interbasin Transfer Projections.

The Metropolitan North Georgia Water Planning District (MNGWPD or the Metro District) projects that, by 2030, there will be significant increases in interbasin transfers affecting every river basin within the 16-county metropolitan area, particularly the Etowah and Chattahoochee River Basins, each of which will lose (in the case of the Etowah) or continue to lose (in the case of the Chattahoochee) millions of gallons of water per day.¹ Because of the diversity and number of downstream users of these basins, both within Georgia and in neighboring states, the Georgia Water Council should revisit these interbasin transfer projections and work with the Metro District and the Council's advisory committees to find supply solutions that do not require such drastic changes to the natural hydrograph of these watersheds and that reflect consensus from diverse stakeholders located throughout the watershed.

Septic Tanks

Georgia has roughly 1.5-2 million septic systems statewide, with around 40,000-50,000 new systems permitted each year.² This translates to an average of almost 40% of buildings in Georgia on septic systems, compared to a national average of 25%.³ A study done on 15 major cities in the United States found that on average, 9.9% of households in these cities are on septic systems. In Atlanta, the percentage is more than double that average with 26.1% of households on septic systems.⁴ Both the Atlanta's and the State's dependence on septic tanks raises water quality and water quantity concerns. Specifically, the concern here is the amount and the timing of the return flows to the basin of origin, particularly during dry periods.

Septic tanks must be properly maintained and cleaned regularly in order to remain functional. Otherwise, water and waste from the tanks will leak and seep underground, resulting in a potential contamination of surface and ground water. Even if the tanks are properly maintained, water may only return to its original basin long after it would flow there naturally, and this temporal displacement can have significant consequences for aquatic species and downstream users.

¹ See CH2MHill, "*Final Water Supply and Water Conservation Management Plan*," prepared for the Metropolitan North Georgia Water Planning District, adopted September 25, 2003, at ES-15.

² Larry West, University of Georgia Department of Crop and Soil Sciences, personal communication, November 11, 2005. See also L.T. West and D.E. Radcliffe, comment letter "*Fate of Wastewater Discharged by Onsite Systems*," University of Georgia, November 22, 2005.

³ *Id.*

⁴ Metro Atlanta Chamber of Commerce, Quality Growth Task Force presentation, slide 9, source: American Housing Survey, February 6, 2004.

Recommendations on Septic Tanks

In general, the Water Council should recommend more aggressive educational programs concerning proper tank upkeep, more aggressive mapping of critical areas of concern, and it should recommend the use of sewer lines for more densely settled areas of the state, particularly within the Metro District. Septic systems in densely settled areas should be regulated more stringently than those in more rural areas, and such regulation should include minimum pumpout schedules and plans for progressive elimination of systems which overburden natural systems. Additionally, the Water Council should encourage cooperation statewide among the Georgia Environmental Protection Division, the Department of Human Resources, and local jurisdictions so as to facilitate the conversion of current development on septic systems to sewer if sewer service becomes available and to facilitate the development of strategies and timelines to reduce the rate of new development on septic systems and to expand current sewer service areas. Finally, the Water Council should recommend funding be allocated to research on the timing and amount of return flow from septic systems to surface water, particularly in the Metro District region.

Conclusion

The Georgia Water Coalition supports strict regulation of both new and existing interbasin transfers of water, with more information available to the public and a thorough agency accounting and evaluation before new or expanded transfers are allowed. The Water Council should pay close attention to the Metropolitan North Georgia Water Planning District, as its proposals will have drastic effects on our state's watersheds. The Council should insist that the Metro District's proposed interbasin transfers be decreased and replaced with less degrading water supply options like water conservation and efficiency⁵. The Council should also more closely monitor septic tank installations and recommend the use of sewer lines in areas with sufficient population density. Finally, the Council should strive to implement substate and regional planning to find the most appropriate ways to maximize returns to each of the state's river basins.

⁵ See the Georgia Water Coalition's paper entitled "*Georgia's Statewide Water Management Plan: The Need for Strategic Water Conservation and Reuse Mechanisms and Measures*", December 8, 2005.