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# **Evolving Eastern Water Allocation Policies: The Conflict Between Public Interest and Market Mechanisms Relating to Water Allocation in Georgia**

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With population growth and increasing demands for water, states in the eastern U.S. are faced with tightening their water allocation mechanisms. For more than a decade, water allocation issues have smoldered in Georgia and, as in other states, have pitted protection of public interest in water against the use of market mechanisms to allocate water. To better understand this increasing focus on water rights, it is necessary to understand the physical setting that has caused the major water challenges in Georgia.

## **The Setting**

Georgia is one of the “wettest” states in the nation receiving on average about 50 inches of precipitation each year. Paradoxically, water challenges, both quantity and quality, are evident throughout the state. This is the result, in part, of both increasing water demands fueled by population and economic growth and uneven distribution of water users and water resources.

**Figure 1**  
**Georgia Map Showing River Basins, Ground Water Regions**  
**and Metropolitan Statistical Areas**

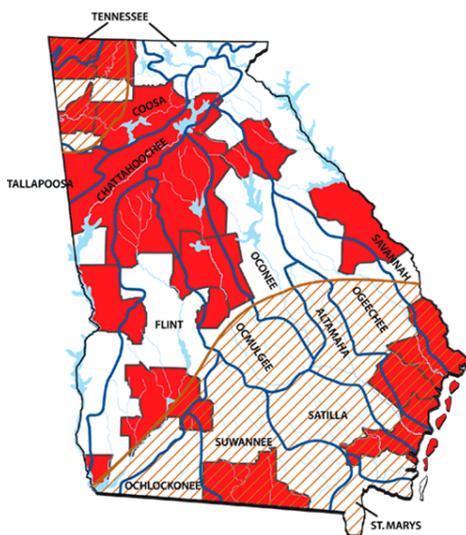


Figure 1 illustrates why, based on water resources, Georgia can be divided into two regions: North Georgia, characterized by greater dependence on surface water, and South Georgia, where larger users depend principally on ground water. North Georgia is confronted by water challenges due to the following four factors:

- The area harbors the major urban/industrial region of the state, thus creating a high water demand. Currently, approximately half of the state's 8.2 million people live in **the** metropolitan Atlanta area.
- Limited ground water is available because of the hard, compact, crystalline rock that underlies much of the area.
- Limited surface water is available because small streams and rivers that support the region are formed in the region. Streams and rivers originate within or along the state's boundaries, primarily in North Georgia, and flow southward.
- Natural storage of surface water is also limited in North Georgia because the area is geologically old and the natural barriers that would impede the flow of water have been eroded away. Consequently there are no natural lakes in North Georgia. The lakes that do exist in the region are reservoirs that have been constructed there.

In sum, these four factors create a situation where there is little natural storage of surface or ground water in the high water-demand region of North Georgia. Increasing demands by the metropolitan Atlanta region for water from two major surface water systems, the Alabama-Coosa-Tallapoosa (ACT) River Basin which Georgia shares with Alabama and the Apalachicola-Chattahoochee-Flint (ACF) River Basin shared by Georgia, Alabama and Florida, led to the 1990 lawsuit that started the "water wars" over the apportionment of water from these river systems.

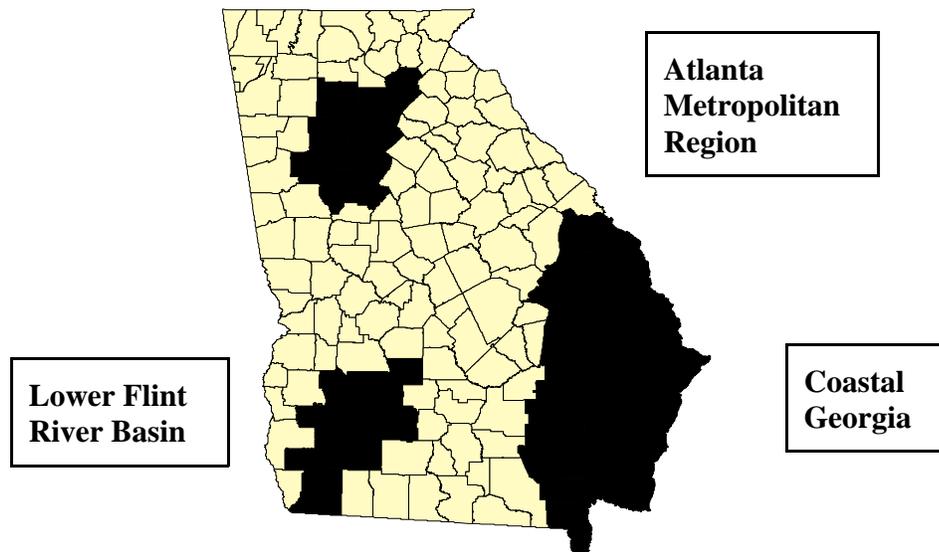
Much of the water-related concern both within Georgia and with neighboring states is the result of the Atlanta metropolitan region's location in the water-short Piedmont physiographic province. Unfortunately, Atlanta may be simply an omen for eastern states of what is to come. The major growth region in the Southeastern United States is along the I-85 and I-20 corridors that run through the Piedmont province from Virginia to Alabama. All of these states share the same general water distribution patterns as Georgia and may experience similar challenges as water demands in the region increase (Kundell, 2001).

South Georgia, by contrast to North Georgia, has larger rivers and highly productive aquifers. Although Atlanta has received more attention, there are two other areas, both in South Georgia, that are experiencing water problems. As shown in Figure 2, one of these is the Lower Flint River Basin in Southwest Georgia, which is a major agricultural irrigation region, and the other is along the coast where industrial and municipal withdrawals have resulted in saltwater intrusions in the Upper Floridan Aquifer, the major aquifer in South Georgia (Kundell and Tetens, 1998).

### **Water Management Efforts**

Efforts to effectively address water challenges in the Atlanta metropolitan area have increased in

**Figure 2**  
**“Capacity Use” Areas in Georgia**



recent years. The first attempt to look at regional water management options in Atlanta occurred in 1999, when a committee composed primarily of water and wastewater utility managers convened by the Atlanta Regional Commission proposed a regional approach to better address water concerns (Kundell and DeMeo, 1999). The “Clean Water Initiative,” sponsored by the Atlanta Chamber of Commerce and the Regional Business Coalition, built upon this effort and recommended creating a water planning district for the region (Clean Water Initiative, 2000). The Georgia General Assembly responded in 2001, by passing Senate Bill 130, which created the Metropolitan North Georgia Water Planning District composed of 16 counties. The district has produced plans for water supply and conservation, wastewater, and stormwater. These plans are available on the district’s website ([www.northgeorgiawater.org](http://www.northgeorgiawater.org)). Local governments in the district are now starting the process of implementing the plans.

To address the saltwater intrusion concerns in the Upper Floridan Aquifer along the coast, in 1997 the Georgia General Assembly passed House Resolution 326 creating the Coastal Groundwater Resources Joint Study Committee and the Upper Floridan Aquifer Technical Advisory Committee. HR 326 charged the study committee with “...studying the needs, issues, and problems associated with the continued use of the Upper Floridan Aquifer in southeast Georgia as a primary water supply source, and [to] develop recommended actions or legislation as appropriate to address these needs, issues, and problems.” The outgrowth of this study committee’s work was the adoption of an Interim Strategy for the 24 coastal county region in 1997 and institution of the Sound Science Study of the Upper Floridan Aquifer salt water intrusion. The study will conclude in 2005, and a long-term strategy for dealing with the saltwater intrusion problem will be adopted.

In Southwest Georgia, high irrigation water use in this karst area of the Lower Flint River Basin has raised concerns, particularly relating to stream flow during the drought that affected the state from May 1998 to September 2002. As a result of this concern, the General Assembly enacted the Flint

River Drought Protection Act in 2000. The bill established a lottery system to pay farmers to not irrigate land in the Lower Flint River Basin (Warner and Norton, 2003). The Georgia Environmental Protection Division (EPD) implemented a lottery system in both 2001 and 2002. According to the EPD, in 2001, approximately 33,000 acres were taken out of irrigation in the basin at an average bid price of \$135.00 per acre and in 2002, 40,352 acres were idled at an average cost of \$127.97 per acre. All of the land included in the two lotteries would have been irrigated from surface water sources. In response to concerns over the potential legal precedent relating to property rights in water set by the Flint River Drought Protection Act, the General Assembly included language in the bill that states, “nor shall it be considered an acknowledgment by the State of Georgia of a property right in any permit issued by the director.”

### **Eastern Water Law**

Georgia, like other eastern states, derived its water law from English common law. Traditionally, Georgia common law has adhered to the riparian rights doctrine for surface waters and arguably the absolute ownership doctrine for ground water. Because Georgia is a wet state, water-related case law is limited and focused primarily on surface water conflicts. Since case law involving ground water disputes is not definitive, legal experts have suggested that application of the reasonable use doctrine for ground water would be more appropriate (Bomar, 2002). For both ground water and surface water, despite the adoption of different doctrines, the right to use a water resource was based on ownership of land abutting, adjacent to, or overlying the water source (Foran et al, 1995).

Georgia became one of the first eastern states to move toward a regulated riparian doctrine approach (Dellapenna, 1997) when the Georgia General Assembly enacted the Ground Water Use Act in 1972. This law, the result of concerns over industrial and municipal water withdrawals from the Upper Floridan Aquifer along the coast, required permits for those withdrawing in excess of 100,000 gallons of water per day from ground water sources. A similar approach was adopted in 1977 with amendments to the Georgia Water Quality Control Act that set permit requirements for withdrawals in excess of 100,000 gallons per day of surface water (Kundell, 1978).

A significant problem with Georgia’s water allocation laws has been the exemption of agricultural water uses from permit and reporting requirements. Irrigation did not become a major water user in the state until the late 1970’s. Consequently, at the time the laws were passed, exempting irrigation water uses was not viewed as problematic. With the rapid growth of irrigation water use in the 1980’s, however, concern over these exemptions increased. In 1988, General Assembly adopted legislation that required permits (without maximum volumetric limits as required for other users) for irrigation water users. The new law grand fathered existing irrigation users, if they applied for a permit by a certain date, and allowed permit transfers with a change in land ownership, if the use did not change. The legislation did not require reporting of irrigation water usage. The lack of reporting requirements and the unquantified nature of the permitted use both undermine the value of this legislation.

## **Comprehensive Water Planning**

At the beginning of the 21<sup>st</sup> century, with increasing demands for water and a prolonged drought affecting the state, the need for comprehensive water planning became apparent. A survey of all 50 states' water planning efforts was conducted and the comprehensive water management plans in eight states were examined to provide insights into how Georgia might approach development of a comprehensive water management plan (Kundell et al, 2000). In response to both water rights concerns and the recognition of the need for comprehensive water management planning, the Georgia General Assembly passed House Resolution 142 during the 2001 legislative session creating the 23 member Joint Comprehensive Water Plan Study Committee and the 50 member Water Plan Advisory Committee. HR 142 charged the committees to recommend a framework and process for development of a comprehensive water management plan and to provide policy guidance on other water-related issues.

The committees labored for 15 months. Four working groups composed of members from both the study committee and advisory committee conducted much of the work. In August 2002, the study committee adopted the *Final Report of the Joint Comprehensive Water Plan Study Committee: A Report to the Governor and General Assembly*. The study committee process was open and served as an effective forum for examining the issues. Information, including reports, meeting minutes, and white papers submitted for the committees to review, is available at [www.cviog.uga.edu/water](http://www.cviog.uga.edu/water). Before discussing legislation introduced as a result of the study committee process, consideration must be given to the evolution of the water rights debate in Georgia.

## **Water Rights Conflicts**

Unlike the western prior appropriation states that have used market mechanisms to allocate water for a considerable period of time, eastern states have shied away from this approach. When saltwater intrusion in the Upper Floridan Aquifer appeared northeast of Savannah on Hilton Head Island, South Carolina, and in Brunswick, Georgia, various options were considered for addressing the intrusions. In 1996, EPD held numerous meetings with stakeholders in the coastal region and released a draft strategy that called for reductions in water uses from the Upper Floridan Aquifer and restrictions on new water withdrawals from the aquifer in the 24 county coastal area. The response to this draft strategy was intense with over 400 written and verbal comments received. EPD reassessed the options and released a proposal based on a Rational Use model (Cummings et al, 1996). The proposal called for institution of a user fee, the money from which would be placed in a fund that could be used to construct water treatment facilities so users could switch to surface water sources when their wells became salty. Again, the response was intense. As noted by one EPD employee, the proposal "was not well received" by stakeholders (Frachette, 1997) and "lasted less than 24 hours" (Frachette, personal communication, March 30, 2004). As a result, EPD discarded the idea of using this approach and adopted an interim strategy which restricted new uses in a portion of the region and required water supply plans be developed by the 24 counties (EPD, 1997).

During the 1996 legislative session, the General Assembly enacted HB 1589 which established a tax incentive program to encourage large industrial ground water users to reduce demands on the

aquifer (Seerley, 2003). This was the first use of financial incentives to conserve water usage by the state. It also became apparent in 1996, that the major way to wean users off the Upper Floridan Aquifer was to have them switch to surface water sources. In June of that year, a private company, The Savannah Group Water Services (TSG), submitted applications to EPD to withdraw large amounts of water from three rivers in coastal Georgia: 36 MGD from the Ogeechee River, 50 MGD from the Altamaha River, and 45 MGD from the Savannah River. Their intent was to treat the water and sell it to community and industrial customers.

The initial permit requests raised considerable public outcry, however, because the large amounts of water requested would have presumably tied up most of the available surface water in the coastal region. The public perceived TSG as attempting to monopolize all the unallocated surface water in the three river basins, thus leading to potential for price/rate gouging in the future (Kundell, 2000). After review by EPD, TSG amended their permit applications to a significantly reduced amount; but the damage was done. The perceived “water grab” was a public relations nightmare for TSG (Seerley, 2003). EPD subsequently granted letters of concurrence for proposed withdrawals from two of the rivers (i.e., Savannah for 3.1 MGD and Altamaha for 8.5 MGD) but not for the 3.45 MGD requested from the Ogeechee River because of insufficient summertime flows. In response, TSG submitted a permit application to EPD to use aquifer storage and recovery (ASR) for the Ogeechee River, withdrawing water from the river during high flow periods, treating it and injecting it into the Upper Floridan Aquifer for withdrawal and use when river flow was insufficient to meet their needs. Public reaction to this proposal was also intensely negative. In response, coastal legislators held a public hearing and more than 100 people attended. As noted (Krueger, 1998):

...legislators have heard—and seen—just how much coastal Georgians dislike the concept and the people proposing it. The walkway leading to the auditorium was lined with anti-TSG, anti-ASR and anti-Harold Reheis (Director of EPD) signs...Inside the hall, more than a dozen people sported matching T-shirts that read, ‘Save our river, save our aquifer, water is a public resource.’ Many more signed a list to take turns commenting on all three of TSG’s withdrawal applications and on ASR. No one spoke in favor of TSG’s plans. The criticism aimed at TSG, ASR and Reheis...was not new. For more than a year—at meetings from Savannah to Brunswick—people have questioned the wisdom of letting TSG become one of the biggest private, for-profit water utilities in the state, complained about Reheis’s handling of the permit application and called for the creation of a unified water management policy for the state.

Legislation was subsequently introduced, debated and passed by the Georgia General Assembly that put a two year moratorium on the use of ASR in the coastal region. Although there were legitimate technical concerns with the use of ASR in the Upper Floridan Aquifer in coastal Georgia, it would not likely have generated the intense response had it not been proposed by TSG (Seerley, 2003).

The water rights issues on the coast morphed into statewide water issues in 1999. An outgrowth of coastal concerns, the “water wars” issues, drought, and increasing water demands brought a coalition of environmental organizations together to put forth the “Georgia Water Bill of Rights,” the first of which stated that water is a public resource ([www.georgiawaterrights.net](http://www.georgiawaterrights.net)):

The surface and ground waters of the State of Georgia are public resources—vital areas held by the State as a trustee charged with the duty to manage these waters in the best interests of the public.

Although there were nine rights identified by the environmental coalition, it was this one that became the most contentious. The coalition argued that the state has a public trust responsibility relating to water. This is true for navigable waters under the federal public trust doctrine and for tidal waters and coastal marshes under the Georgia public trust doctrine but neither applies the public trust doctrine to ground water. The wording of the first right in the Georgia Bill of Rights, if enacted into law, would have extended the public trust to cover ground water in Georgia. In the 1999 and 2000 sessions of the General Assembly, the water bill of rights legislation (SR 85) was debated but, in the end, the legislation failed.

The debate over water rights and the continuation of the drought and increasing demands underscored the importance of the state looking comprehensively at how to manage water resources. In the 2001 legislative session, SR 142 was passed creating the Joint Comprehensive Water Plan Study Committee and Water Plan Advisory Committee as previously discussed. The study committee then became the forum for debating water rights and public interest in water. One of the recommendations that emerged from the Water Rights Structure Working Group stated (Water Rights Structure Working Group, 2002):

The waters of the State are a public resource managed by the State in the public interest and subject to the State's sovereign power to plan, regulate, and control the withdrawal and use of those waters, under law, in order to protect the public health, safety, and welfare. Georgia manages water resources in a sustainable manner to support the State's economy, to protect natural systems by maintaining a safe yield and to enhance the quality of life for all citizens.

The Water Rights Structure Working Group also put forth a recommendation that would allow EPD to authorize voluntary permit transfers. This recommendation states (Water Rights Structure Working Group, 2002):

Where the water source is fully allocated, add to EPD's authority an option to issue a permit to an otherwise qualified new user, when and only when existing users provide their written consent to revocation of their permits, in whole or in part, in sufficient amounts. Condition the new permit on no reduction in the water available to users downstream or down gradient. Provide for other requirements as may be needed to prevent unreasonably adverse effects on third parties, the public interest, and considerations of safe yield. A new ground water withdrawal permit issued under this option shall be forfeited if not used for the stated purpose within a given period of time.

The last three meetings of the study committee, where these two recommendations were debated and voted upon, became politically charged. Although environmental interests supported defining water as a public resource and were opposed to the voluntary permit transfer provisions, the agricultural and business communities felt just the opposite. Local governments did not take a strong stand on the issues at this time.

The study committee adopted all of the recommendations made by the working groups except for the one that would have defined water as a public resource (Comprehensive Water Plan Study Committee, 2002).

In 2003, some study committee members sponsored House Bill 237 which was ostensibly designed to implement the recommendations. The bill addressed the following four major issues:

- the development of a comprehensive state water management plan;
- metering and reporting of agricultural water uses;
- restrictions on long-distance (both interbasin and intrabasin) transfers of water; and
- voluntary permit transfers.

During the session, the focus was predominantly on the voluntary permit transfer provisions. The debate was intense, but the bill passed the House. The environmental community was extremely vocal and active in their opposition to the permit transfer provisions. The Senate Natural Resources and Environment Committee adopted several amendments to the bill. Before Senate floor consideration, the Association County Commissioners of Georgia and the Attorney General raised concerns with the permit transfer provisions. The Senate deleted the permit transfer provisions before passing the bill. The bill then went to conference committee. The conference committee met approximately a dozen times in the last few days of the session to work out differences. At about 11:30 pm on the last day of the session, however, the House voted down the conference committee report.

Since the 2003 session was the first year of the two-year legislative term, the bill remained alive and the conference committee remained in place. Over the interim, ~~however~~, people had the opportunity to consider and discuss the merits and problems with HB 237 and a consensus seemed to be reached that, with the permit transfer provisions in the bill, it would not pass. Various interests, including the Georgia Municipal Association which originally supported the bill, changed their position. In October 2003, Governor Perdue issued an executive order creating the Georgia Water Resources Council composed of the heads of agencies that had water-related responsibilities, one of the recommendations of the study committee. The governor charged the council with recommending the contents and scope of a comprehensive water resources management plan. The Council endorsed the work of the study committee and recommended legislation supporting development of a comprehensive water management plan.

What emerged from the Water Resources Council and various interest groups was consensus that the language in HB 237 should be stripped out completely and new language that supported the development of a comprehensive state water management plan should be substituted. The language regarding voluntary permit transfers and interbasin/intrabasin transfers was removed at the beginning of the 2004 session. Subsequently, a disagreement between the House and Senate emerged on whether the final plan must be approved by the General Assembly. HB 237 was enacted at the end of the 2004 legislative session providing for legislative oversight of the plan. EPD must

complete a draft plan by July 2007, for consideration by the General Assembly during the 2008 legislative session.<sup>1</sup>

## Conclusions

Efforts to tighten the water allocation mechanisms and better define water rights in Georgia have been difficult and time consuming. Although the legislative debate was heated and intense, the level of discourse has improved considerably. People are more aware of the advantages and disadvantages of water allocation options and steps necessary to ensure that policies adopted do not result in unforeseen negative consequences. Open discussion of water rights coupled with firm support for developing a comprehensive water management plan, have positioned the state well to better address the water management challenges that face Georgia.

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<sup>1</sup> To better ensure that the irrigation water metering and reporting provisions of HB 237 would become law, HB 579, which contained identical language to that portion of HB 237, was passed during the 2003 legislative session. HB 1615 was introduced in the 2004 session to address interbasin/intrabasin transfers, but was not enacted.

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