

Examining Southeastern Basins

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The Importance of Water Planning and Management in Southeastern Basins

The Southeastern water basins are under siege – from themselves.

The current clamor for more water from a myriad of organizations for an increasingly wider variety of reasons is causing a greater awakening of that fact. There are generally three primary areas that rise to the surface when water issues in any state are discussed – comprehensive water plans, basin allocation studies, and regional basin management councils.

Water resource laws and rules of the Southeastern states have been based on the “riparian doctrine,” which, simply defined, requires water sources to be shared by all users based on reasonable use. When there is plenty of available water this is a logical approach. More recently, however, this “logical” process is under greater pressure for change. The “available water” amount is being challenged on a number of fronts.

There are a number of factors contributing to the sustainability of the water supply in the Southeast. Among them are long-term droughts, increased water use due to residential and business growth, saltwater intrusion up the rivers and into wells, and charges of unreasonable use of water by states sharing the resource with neighboring states. Others include pollutant assimilation levels, hydropower contracts, the Federal Energy Regulatory Commission (FERC) licensing rules, periodic low oxygen levels, dredging issues, and many different fish and wildlife issues.

In order to sustain an adequate water supply for the future, most states have come to the realization that

current water plans are outdated and new, comprehensive water plans should be developed and implemented. The comprehensive plan requires the states to identify and study all their water issues – current and future – simultaneously. The new plan would result in an integrated solution to a myriad of issues and may also propose revisions to a number of management processes.

Allocating the Supply

Water sharing between Southeast states has been an issue without clear resolution. It is one of the major planning and management issues each state deals with. It would be most advantageous for the states to decide on their own how to divide up or allocate the water resources in a basin. This has not always happened and one state may use more water than neighboring states feel is “reasonable.” When this occurs, lawsuits between states are often initiated and take years to resolve – to say nothing of the millions in legal fees that are borne by taxpayers.

Georgia has been negotiating with Florida and Alabama for about 15 years on the fate of the water in the Chattahoochee River. The Chattahoochee flows from northeast Georgia through Lake Lanier which is the primary water source for Atlanta. The river continues west to the Alabama border and flows south to the Florida border. It then becomes the Apalachicola River and continues through Florida to the gulf.

Georgia planned to use the water from Lake Lanier to quench Atlanta’s thirst until 2022 when its current permitted supply, established in 2006, would reach its limit. The plan was to then

apply for increased withdrawal permits. Alabama and Florida balked and filed a federal lawsuit. They argued that Georgia, due to its sprawling growth, was using water beyond its reasonable use by taking too much water from the supply without adequately considering the other states needs.

U.S. District Judge Paul Magnuson agreed. In fact, it is even worse for Georgia than expected. Magnuson ruled in July 2009 that the lake wasn’t built to supply water and that the Army Corps of Engineers should have gotten congressional permission in 1958 before diverting so much drinking water to metro Atlanta.

The judge ruled that the Atlanta communities must give up the large withdrawals – taking them down to the level of the mid-1970s (a reduction of 250 million gallons/day – 34 percent) in three years unless Georgia can get Congress to act. This is a significant blow to Georgia. Governor Perdue has formed a Water Contingency Task Force to review the complete water planning process and submit recommendations for action before the 2012 ruling goes into affect.

North Carolina has also been accused of unreasonable use of water by transferring water from the Catawba River into another North Carolina river basin and reducing the available flow into the lakes and rivers of South Carolina. State officials filed a federal lawsuit in 2007, attempting to block North Carolina’s cities and counties from taking water from the Catawba River watershed for another basin. South Carolina wants the U.S. Supreme Court to decide how much water each state can use to ensure there’s an equitable distribution of the resource. The case is pending.

The Importance of Comprehensive Water Planning

The State of South Carolina itself, however, has to accept partial blame for the North Carolina-Catawba River problem. While the South Carolina Department of Natural Resources issued a water plan in January 2004, it has been slow to analyze and implement the many excellent recommendations it contains. One of the South Carolina Water plan recommendations states: "Formal mechanisms such as interstate compacts, memoranda of agreement, or protocols should be developed with Georgia and North Carolina to provide equitable water apportionment." When North Carolina began to withdraw water, however, there were no clear rules or agreements in South Carolina to prevent it and the issue "suddenly" became a crisis.

It has been speculated that if the recommendations cited six years ago in the South Carolina water plan had been implemented, the current situation with the Catawba may have been averted. The South Carolina Attorney General, Henry McMaster, in an October 4, 2009 interview regarding the Catawba transfer basically agreed with the need for a new integrated water plan when he stated, "It's a complex question that will be based on a comprehensive analysis of the past, present and future needs of the State of North Carolina and the State of South Carolina."

Unfortunately, the Catawba River case is now in the hands of the courts to resolve while legislators attempt to prevent it from happening in the future. As is the case with many similar situations with no clearly stated agreements or process to define the interdependencies of related issues, they are handled primarily as they arise – on a case-by-case basis. This is frequently through legislative means, as with the North Carolina case, and final resolution is generally less than optimal.

Georgia, however, when challenged by Florida and Alabama for use of the Chattahoochee waters, took steps to reduce future problems with a four-year program initiated in January 2004. The charge was to analyze its current and future water needs as well as its laws and management processes, to produce a new water plan to prevent these issues from

occurring in the future. The objective was to provide a planning and management process to plan for the protection and use of Georgia's water into the future. Sustainability was a primary factor, as was the ability to assimilate pollutants without damage to the resource. The result is the new Georgia Comprehensive State-Wide Water Plan approved in January 2008. Unlike South Carolina, Georgia's water plan includes the establishment of permitting requirements for withdrawals from lakes, rivers, and streams. South Carolina will need to find a comparable answer if they are to negotiate with Georgia on water sharing options.

Individual Basin Management

Basin Advisory Councils (BACs) are a relatively recent and welcome innovation to water management in many of the southeast states. Water basins have historically been managed by state headquarters water departments based on a fairly generic set of statewide rules. It has recently been formally recognized that characteristics of water resources, needs, and water users vary widely for each basin within a state. To assist in basin planning with more focus on the specific needs of each basin, BACs have been or are being established. The councils consist of stakeholders with various interests and skills within each basin. They are being asked to assist in water planning and conservation plans within the framework of the primary water management plan of each state and are provided guidance from representatives of state water agencies. The concept allows regional stakeholders to have a say in the planning and use of water in their basin and expectations are positive for this new process.

Issues with a Federally Managed Basin

From the federal standpoint, especially on U.S. Army Corps of Engineers (USACE) managed lakes and rivers, hydropower production, navigation needs, drought management processes, environmental, and ecological laws are but a few additional factors why water needs are under analysis and debate.

While the Corps is responsible for trying to follow the basin or lake management rules they are given by Congress when federal dams and lakes

were approved, other organizations also have a say in the process – and there is a pecking order. What is it? Who is responsible for managing the water? It depends on the situation. At any one time it is the USACE, the National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (FWS), Congress, the state governments, and possibly several others. They each have rules to manage specific situations.

For instance, the endangered "shortnose sturgeon" has recently played a major role in requiring more water releases from a dam along the lower Savannah River Basin during a drought. Under guidance from the NMFS, water releases by the USACE were increased from the Thurmond Dam to the downstream river spawning grounds of the sturgeon even though a 2007 report of their habits indicates there are reasons they may not be able to swim upriver "even at ideal water temperatures and flow conditions" (Wrona et al. 2007). The study also stated the sturgeon population is "One of the few remaining relatively robust populations remaining on the Atlantic coast." Yet other studies "show populations in Maine, New York, and Connecticut are apparently increasing slowly, to the point where they may become down listed to 'Threatened' at some point in the future (Hill 2006). The USACE decision to "err on the side of the sturgeon" as lake levels dropped was a cause of heated debate in the region. More sturgeon study is underway, but the case demonstrates the many issues to be considered.

Noticeably absent from most considerations of the significance of USACE-managed lakes to a region is data supporting the impact to the economy when USACE decisions to lower lake levels are made. The economy was usually not part of the approval process for many of the original lake purposes for federally approved and funded dams and lakes. More recently, lake residents and business owners are saying it should be. Many areas along the river basins, primarily those where lakes were established, have attracted thousands to build homes and businesses on the lake shores. The lakes have become the economic engine for many municipalities and have a major impact on

their operations and future in both income and jobs. A recent study by the USACE and Michigan State University (Lee et al. 2008) concentrating on the value of visits to private docks on Hartwell Lake (Table 1) clearly demonstrates the value of the lakes to the areas. It must also be noted that low water levels have a dramatic negative affect on the number of visits (Lake Hartwell Association 2003) and therefore the economic impact.

Many municipalities and lake associations are arguing that lowering the lake water levels and disrupting the financial basis of a large area should not be undertaken unless such federally approved purposes as hydropower and navigation are balanced against the impact to the economy. Unfortunately, unless Congress directs the USACE to revise its management practices to include the economy impacts in its decisions, the practice will not be changed. Steps are being considered to make this happen.

Conclusion

A state comprehensive water plan with a process to manage all water activities and resolve all issues in an integrated manner is essential to maintain clean, sustainable water in the future. An equitable method to measure usage and allocate water for all users, including neighboring states, is an essential part of that plan. Basin Advisory Councils would assure stakeholders have a voice in how the water in their basin is managed and create cooperation within and between each basin. Implementing these actions provides the opportunity to resolve many water issues and prevent future problems from occurring.

Table 1. Annual Income and Jobs Generated by Private Dock Visits on Hartwell Lake (Dollars are 2004 in Millions).		
Category	Direct Sales	Direct Sales and Secondary Spending
Local Sales	\$69.5	\$88.0
Personal Income	\$20.0	\$38.7
Value Added Sales	\$27.9	\$48.0
Total Income	\$117.4	\$174.7
Jobs Created	819	1,177



Figure 1. A cove in Hartwell Lake in November 2008 when the water was lowered 22 feet. This has a devastating effect on the economy of the region along the 900-mile shoreline with over 10,000 docks and many businesses.



Figure 2. The same cove in November 2009 with the lake at full pool.

References

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