



REGIONAL RESOURCE

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THE WAR OVER WATER

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Background

Only 3 percent of the world's water is fresh, with 2 percent locked up in glaciers and polar ice caps. The remaining 1 percent that is available for human and animal uses has in the past seemed like an inexhaustible, if vital, resource. In much of the United States, water has been the key in determining historic settlement patterns and development opportunities. Almost every major U.S. city is located near a major river or body of water. Abundant water for drinking, sanitation, industry, irrigation, transportation and recreation has been a hallmark of much of the South in particular. Conflicts over water in the region have been few historically and have long been considered the realm of the arid lands in the West. Development pressure, changes in precipitation patterns and shifting priorities and consumption levels have caused a shift in this situation, however, and intra- and interstate water conflicts are becoming a prominent issue for the South.

The term "water war" is used liberally when discussing disputes over water. It is significant that, according to Oregon State University historian Aaron Wolf, there is only one recorded incident of an actual war over water. Since that clash between two city-states in the Tigris and Euphrates Valley 4,500 years ago, water disputes have been settled, if not amicably, at least without resorting to armed conflict.¹ This long history of negotiated settlements over water use—and Wolf has catalogued more than 3,600 water treaties—is indicative of how high the stakes are with water. The essential nature of water and its cultural and economic importance have led to cooperation and negotiation between often bitter rivals.

Surface and ground water flows without regard to political boundaries. This simple fact makes water rights issues complicated and fractious. Disputes over water that crosses state boundaries have been prominent in other regions, with occasional disputes over water arising in the South as well. In most cases, states are able to work out through negotiation, or at least without litigation, arrangements for the use of water from shared resources. When the parties cannot come to an agreement, the U.S. Supreme Court has

original jurisdiction in cases to which a state is a party, although the cost, complexity, and length of judicial procedures and the possibility of an unsatisfactory resolution most often lead parties to reconcile their differences through an administrative mechanism.² Such mechanisms generally are created by Congress with the approval of all parties. Administrative resolutions have the force of a judicial decree and cannot be altered by the courts unless there has been a deviation from law or an abuse of the authorities discretion.

The War at Home—Alabama, Florida and Georgia

The states of Alabama, Florida and Georgia have been in dispute over the shared Apalachicola-Chattahoochee-Flint (ACF) river basin for a decade. Snaking from the mountains of northern Georgia at the foot of the Appalachian Trail, the Chattahoochee begins its journey to the Gulf of Mexico wandering through Lake Lanier, around the city of Atlanta and south-westward until it forms the Georgia-Alabama border north of Columbus, Georgia. The Flint River originates just south of Atlanta's Hartsfield International Airport and travels south through the agricultural heart of the state, joining the Chattahoochee River

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at Lake Seminole, in the far southwest corner of the state. Water flowing out of Lake Seminole forms the Apalachicola River, which discharges into the Gulf of Mexico at Apalachicola Bay in the Florida panhandle. Alabama and Georgia are similarly entangled over the Alabama-Coosa-Tallapoosa (ACT) river system. The Coosa and Tallapoosa Rivers both flow from northwest Georgia into Alabama, meeting north of Montgomery to form the Alabama River, which drains into the Gulf as well. Both river systems have their headwaters in or near high-growth areas around Atlanta and supply water to growing metropolitan areas with significant industrial and commercial activities, as well as rural communities with municipal and agricultural needs. The river systems also are remarkably biologically important—both the ACF and ATC river systems rank among the most diverse in the world—and are under tremendous ecological stress.³ As the rivers wind their way through Georgia on the way to downstream communities, the multiple users and demands compound the water quantity and quality conflicts.

In many ways, these disputes serve as case studies for what the future may hold for common water resources in the South. The disputes over both river basins date back several years and essentially rest on who has what rights to the water flowing in these two systems. During a drought in the 1980s, low flow rates in the river systems raised concerns over use patterns and the equitable nature of water resource allocation between the involved states. In 1989, as the Atlanta metropolitan area boomed, the state of Georgia entered into a contract with the U.S. Army Corps of Engineers, which is responsible for management of the river system, to double Atlanta's withdrawal from the Chattahoochee.⁴ Alabama, and later Florida, brought suit against the Corps in order to stop the implementation of the higher withdrawal because of the impacts it would have on downstream users.

In January 1992, the governors of Alabama, Florida and Georgia and the Army Corps of Engineers signed an agreement committing the parties to a "live and let live" policy with respect to water management in the two river basins and to conduct a study on the management of the systems.⁵ This allowed all parties to avoid litigation for a time. The

memorandum of agreement committed all four parties to jointly conduct the water resources study and initiated the process for the establishment of an administrative mechanism to resolve the dispute.

In early 1997, following ratification of compact language by the three state legislatures and authorization by the governors, the states submitted to Congress for approval plans establishing the ACF and ACT Compacts to establish a regional planning authority to settle disputes over the rivers. By fall of that year, Congress had approved and President Clinton signed, the two compacts and the states were able to enter into formal negotiations for resolving the dispute and establishing ground rules for future plans for the rivers. The Compacts came only months before the agreement between the states and the Corps was set to expire. It is significant as well that what began as a dispute over the issuance of a single, albeit very large, withdrawal permit by the Corps of Engineers developed into a process for equitably allocating water from two shared river systems. This shift from isolated use review to total system planning is the hallmark of contemporary water dispute resolution.

A commission established by the Compacts consists of one voting member appointed by the governor from each state and a non-voting representative appointed by President Clinton. The Compact also informally involves a dozen interested federal entities, including the Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Forest Service, and the U.S. Department of Justice.⁶ All decisions of the commission must be unanimous.⁷ Initially, the Compacts were set to dissolve before the end of 1998, but the parties have agreed to several extensions, with December 2000 set as the current deadline for reaching consensus.

The complexity of allocating use between the legion stakeholders in the two systems has many observers concerned that the Commission will be unable to reach a consensus agreement and the matter will be remanded to the courts, a step none in the process welcome. The Chattahoochee River is the smallest river basin providing the most water supply for any metropolitan area in the United States.⁸ There are a multitude of users of the river systems, with different and sometimes conflicting objectives.

The city of Atlanta and its booming suburbs need water for drinking, sanitation, and irrigating lawns and landscaping. Recreational users want to ensure that the river maintains adequate flow for canoeing, kayaking and fishing. Power generation has critical water needs, needs that become more urgent during peak demand periods, exactly the times when the river's flow is at its lowest. Other industrial and municipal users want to lay claim on the river's water, as do those involved with navigation and agriculture. Homeowners with river or lake front property do not want to see their property values decline nor their enjoyment of their property lessened by muddy banks, reduced flow, or contaminated water. The rivers also are home to a remarkable diversity of plant and animal life that need water to survive. Where the rivers empty into the Gulf of Mexico, they create important habitat for fish and wildlife, and, in the case of Florida, support the economically important but ecologically sensitive oysterbeds in the Bay.

The Compacts and the decisions that come from them, will be historic in several ways. This is the first major interstate water dispute in the South, a historically water-rich region, and the resolution at which the Compacts arrive will be seen as a model for other, future conflicts. Furthermore, the allocation of water impacts economic development opportunities and the costs of doing business. For example, if the Compact were to reduce the flow of water leaving Georgia and entering Alabama, pollution will not be as diluted, water quality will be diminished, and regulators in Alabama will require tighter pollution controls on industrial and sewage treatment plants. The costs of these controls will inevitably be passed on to the consumer along with the higher costs of treating drinking water drawn from these surface sources.⁹ Indeed, one of Florida's principal concerns is over the rate and nature of the water flowing into the Apalachicola River because of the impact an overall decrease in flow coupled with increased pollution would have on Apalachicola Bay.¹⁰

The water quality issue is a cloud hanging over Georgia in particular. Atlanta is both a major user of water from the river systems and a major source of waste. Atlanta's growth has so dramatically outstripped the city's capacity to process its sewage that for a period in 1999 direct

discharges of both sewage and storm water runoff (which is often laden with petroleum products, heavy metals, and chemicals) into the Chattahoochee were almost routine.¹¹ Compounding this is the addition of another 85 gallons of sewage generated each day by every new resident to the city.¹² Given projections that metropolitan Atlanta will grow to 3.7 million residents by 2010, the volume of water used and sewage created discourages others dependent on the watershed.

Discussions on the Compact occurred during the most severe drought in recent memory in the Southeast, with Georgia being especially hard hit. With already reduced flows due to the lack of precipitation throughout the watershed, the stress on the ACT and ACF river basins became even more apparent. Georgia furthermore has the complication of balancing competing interests within the state, with urbanizing north Georgia clamoring for an ever increasing share of the state's allocation even as farmers seek irrigation water, barge owners call for continued support for traffic on the lower third of the river, and downstream municipalities demand adequate water to ensure proper sewage treatment.

Who Owns the Water?

While the West has had fairly extensive experience with resolving water disputes and, therefore, has extensive legal and extralegal precedence to draw upon, the South does not. Furthermore, there are some significant differences between the eastern and western United States in terms of presumptions about water rights. In states west of the Mississippi River, the prevailing doctrine guiding water rights is one of "prior appropriation." Prior appropriation means that rights to a particular amount of water are assumed by individuals once they put the water to a beneficial use. Simply put, rights to water are first come, first served. This principal was applied in the West as it developed rapidly, treating water as a shared, public resource to be put to public good.¹³ Because water is a more limited resource in the West, however, once water is applied to a beneficial use, the water essentially becomes the property of the appropriator. In times of drought, should there be five users with rights to a given body of water, the oldest water right takes

precedence over more junior rights, and can take the full amount, regardless if that leaves more junior users with little or no water.¹⁴

East of the Mississippi, water is allocated according to “riparian rights,” which hold that a landowner can make reasonable use of water, but downstream users have the right to have water remain clean and have sufficient flow for their needs.¹⁵ In this sense, water is a publicly held resource with private access, but not ownership. Riparian rights evolved out of English Common Law and reflect the relative abundance of water in the East. Because scarcity was an unlikely event, riparian rights ensure that all users have equal access to the resource. In the event of shortages, all users are expected to limit their use for the common benefit.

Under this doctrine, Alabama and Florida, as well as downstream communities in Georgia, have persuasive arguments against the increased take by metropolitan Atlanta. The current situation, particularly with the Chattahoochee River, poses an interesting contrast between the two doctrines. While the location of the dispute should indicate a riparian, equitable allocation approach, Georgia’s arguments in this case indicate that the state is taking a prior appropriation stance. Since the headwaters of both river systems are near Atlanta, Georgia’s claims of prior beneficial use could result in “shutting off the tap” downstream. Historical precedence and Georgia’s participation in the Compacts indicate that the state is not abandoning entirely the principals of equitable allocation implicit in a riparian approach.¹⁶

As more and varied users make claims on water systems, the line between the two doctrines is becoming blurred on both sides of the Mississippi. States are trying to strike a balance in both the East and West in satisfying existing demands while providing for new uses and protecting the ecology of the river system. The ACF and ACT dispute provides an excellent example of how complex these disputes have become and how undefined the new model for apportionment still is. The compromise that Alabama, Florida, and Georgia reach will be historic for many reasons. Perhaps most significantly, whether the states are able to resolve the issue without judicial involvement or have

an apportionment plan devised by the Court, the resolution will set the tone for a number of other water disputes that currently are on the horizon.¹⁷

The Options

Alabama, Florida, and Georgia have three settlement options available to them. They have until the end of this year to resolve the conflict by consensus through the Compact unless they opt to extend the discussions yet again. Should discussions fail to produce a solution, the apportionment plan could be decided by the U.S. Supreme Court, as has been mentioned. In rare cases, Congress can step in and apportion water rights. For a number of reasons, resolving the dispute through the Compact is preferable to all parties. In addition to the avoidance of legal costs, the likelihood of delay and the uncertainty of the decision, a judicial apportionment and, to a considerable extent, a Congressional apportionment, would be completed absent significant public or stakeholder comment.

The Compact Process

Compacts have been a central part of resolving interstate disputes for almost the entire history of the United States. Conflicts over borders, navigation, fishing and hunting rights, among others, were settled very early on by interstate compacts authorized by Congress. In 1922, the Colorado River Compact, involving the states of Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming, was the first use of an interstate compact to resolve a water dispute.¹⁸ Subsequently, most interstate water disputes in the West have been resolved with compacts, and every state in the region has been party to at least one. East of the Mississippi River, there is only one other interstate water compact dealing with allocation issues in place, the Susquehanna River Basin Compact, involving the states of Maryland, Pennsylvania, and New York. In order to settle the current dispute over the ACT and ACF river systems, the states involved entered into a compact, authorized by Congress and signed by the president, in September of 1997. The compact established a commission composed of the governors of the involved states and two non-voting federal commissioners. In order for the compact to be authorized by Congress the state legislatures had to pass, and governors had to sign, essentially identical authorizing legislation, something that all three states did with almost unanimous support.

Early compacts were relatively straightforward in dealing with little more than allocations of the resource. As understanding of hydrology expanded, compacts developed more management-based approaches with independent agencies assigned to monitor and plan the compact. The ACF and ACT Compacts reflect this management approach. Some compacts have extended the management authority to include construction projects on the river, water withdrawals, and the allocation of water rights.¹⁹ The ACT and ACF Compacts allow for a non-voting federal representative to sit on the Commission, who reviews the Compacts' agreements for concurrence and compliance with federal law. Federal concurrence is required for implementation of the Compacts' allocation formula. Should the federal representative, Georgia Chamber of Commerce CEO (and former Congressman) Lindsey Thomas, not concur—an outcome likely only precipitated by a violation of federal law—the parties then have an opportunity to bring the formula back into compliance.²⁰

The Judicial Approach

The compact process is preferred largely because it allows the states involved to maintain control of the resource, but it is well within the realm of possibility that the parties will not be able to come to a consensus agreement. Should this be the case, they can turn the case over to the U.S. Supreme Court for resolution. This is a high-stakes solution for the states and involves negotiations between lawyers for the three parties and the federal government. Procedurally, in such cases, the Supreme Court serves as a trial court, taking evidence and drawing conclusions of fact and law. States plead their cases before the Court, which then adjudicates according to its findings in the case.²¹

The Court first exercised this authority in 1907, apportioning the use of the Arkansas River between Colorado and Kansas. In that case, the Court held that Colorado's withdrawal of water from the river, to which Kansas objected, was reasonable given Colorado's more rapid development, an application of the prior apportionment doctrine.²² This precedent might bode ill for Alabama and Florida in the current dispute, since Atlanta's phenomenal growth has

not been matched in the other parts of the river basins.

In reaching its 1907 decision, the Court indicated its intention to settle future interstate water disputes by sharing the resource. In place of traditional riparian or prior apportionment rights, the Court has adopted a policy of "equitable apportionment" between states. It is because the Court has considerable discretion in deciding what constitutes an "equitable" apportionment that the judicial route is so risky for the states. An example of how this apportionment scheme is put into practice is found in the Court's 1931 resolution of a dispute between New York and New Jersey over the waters of the Delaware River. Essentially, the Court held that while New York had the capacity to cut off all water flowing to its downstream neighbor, the exercise of this power would be intolerable. Likewise, downstream states could not demand that New York forgo all withdrawals to the exclusive benefit of those downstream. Thus, the Court allowed New York to continue, but not increase, its diversion of water from the river for New York City, and stipulated water quality guidelines for water returning to the river.²³

Furthermore, the current Court has little experience dealing with these issues, nor does it have the time or resources immediately at hand to, in the words of one commentator, "cope with the complicated hydrologic, economic, and sociological questions involved."²⁴ The Court has had some history with interstate water disputes, including cases over the waters of the Laramie, North Platte, Connecticut, Delaware, and Colorado Rivers, among others.²⁵ Because water disputes are so complicated and specific, it is very hard to draw precedent from the Supreme Court's previous actions to predict how it might react to the facts of the ACT or ACF disputes.

The Court is genuinely hesitant to exercise its jurisdictional authority to resolve cases involving the relative rights of states over water. The Court is cautious because states approach it as quasi-sovereigns, placing the body in a more diplomatic and less judicial position. Furthermore, the Court recognizes the complex and sensitive nature of such conflicts and is aware that what is required is more an active and skilled

administration of the resource than a judicial decree mandating allocations and approved uses. The administrative headaches associated with converting the machinery of the high court into a trial court are prohibitive as well, including the appointment of a master for the introduction and consideration of evidence and the sorting out of objections to the Court's findings on the law, which can drag on for a considerable amount of time.²⁶

A Congressional Option

Because the Supreme Court is reluctant to take up the issues of water rights and interstate conflicts, it has encouraged Congress to develop legislative solutions. The Court has acknowledged that Congressional prerogative in this area has numerous advantages over judicial resolutions, although Congress has intervened only twice in interstate water disputes.²⁷ Congressional authority can take several forms. The most likely is by direct allocation of the water, which was done in the lower Colorado River Basin, after Congress recognized that the parties were unable to arrange a solution to the conflict themselves (as the Upper Colorado River Compact was able to do). Congress' action in this instance was the first assertion of a legislative authority to apportion water and was affirmed by the Supreme Court, which held that Congress had operated within its authority to regulate commerce, if somewhat obliquely.²⁸ Another option Congress can pursue is the establishment of an administrative authority for the allocation of water rights or the delegation of such power to an executive official, such as the Secretary of the Interior. For the most part, however, Congress has long perceived the advantages involved stakeholders have in managing and appropriating water rights and have deferred to interstate compacts over federal controls.

Congress also is very hesitant to exercise its authority to allocate water rights, in large part because of the highly political and localized nature of these disputes. For legislators from states removed from the dispute, the perils of reaching decisions based on party affiliation rather than the merits of the case are great. In the case of the ACT and ACF water disputes, Congress has indicated a strong interest in having the states resolve the issue among themselves without Congressional meddling. As Speaker of

the House, former Representative Newt Gingrich could have hammered through a Congressional allocation plan that was advantageous to his home state and perhaps only barely palatable to Alabama and Florida. His reluctance to do so indicates both an interest in keeping the disputes as local as possible and a hesitance to pit members of the mostly Republican delegations from the various states against one another.²⁹

What Next?

The Compact was originally set to expire in December 1998 and has been extended numerous times, most recently until the end of December 2000. In summer 2000, the governors of the involved states began to become more directly involved in the process, giving the talks aimed at ending the dispute a much higher profile. In fall 2000, Alabama and Georgia are expected to come together with allocation plans that will serve as starting points for meaningful negotiations, and a resolution to at least one, if not both, disputes seems likely. There is still the possibility that the parties could extend the deadline once again, which requires 60 days advance notice for public comment. Should the states not be able to reach any agreement or declare themselves at an impasse, a judicial or Congressional review would begin, further delaying the settlement of allocation rights in the water basins.

The Deluge and the Flood

Long a staple of interstate relations in the West, disputes over water rights are moving south with population and economic growth. While there have been several interstate disputes over water quality, the relative abundance of water in the South, particularly in the Southeast, and the historically rural settlement pattern of the region has made water a seemingly inexhaustible resource. Now, however, with tremendous growth in Southern urban areas, water quantity and quality are emerging as major barriers to interstate comity.

An example of this can be found in a recent dispute over the Potomac River. Maryland and Virginia share the Potomac as a border as well as a source of municipal water for their burgeoning suburbs in the Washington, D.C., area. Maryland, however, was granted ownership of the entire Potomac by a 1632 land grant.

Virginia has used the Potomac's waters for more than a century and, in a situation similar to that over the Chattahoochee River, which is "owned" by Georgia but borders Alabama, the state has a right to use the water from the river regardless of where the border lies. Virginia also has the right to draw water from the Potomac without permit through a 1958 compact and other agreements dating back to 1785.³⁰ The dispute arose over a drinking-water intake pipe that Fairfax County, Virginia, wished to extend into the middle of the river. The county maintains that its current intake pipe is too close to the shore to avoid sediment and other pollutants, costing the county millions in treatment costs. In order to extend the pipe, Virginia applied to Maryland for a permit in 1996. To date, Maryland has refused to issue the permit over environmental concerns, and Virginia is now disputing Maryland's right to demand a permit at all. While Maryland has portrayed the case as a dispute between the state and one of Virginia's political subdivisions, Virginia decided to petition the U.S. Supreme Court to hear the case even while the dispute wound its way through Maryland's state courts.³¹ Behind the scenes in this debate is a concern in Maryland that a new intake pipe in the middle of the river would allow Virginia to draw more water, fueling more growth in Virginia.³²

Georgia also is being threatened with a suit by the state of South Carolina over Georgia's withdrawals from the Floridan aquifer in the Savannah area. Fresh water removal from the aquifer has exceeded recharge, South Carolina claims, leading to saltwater intrusion into the periphery of the aquifer. This has resulted in saltwater contamination in wells that provide water to Hilton Head, South Carolina, in addition to the Georgia city of Brunswick. Inland wells drawing out too much freshwater from the aquifer "upstream" from coastal communities, creates a situation which allows saltwater to flow into the aquifer in place of freshwater recharge.³³

An interesting, and thornier, water dispute has arisen between the state of Texas and Mexico over water from the Rio Grande. The area near the United States/Mexico border has become highly developed on both sides, with industry and population migrating to the area in great numbers. Much of this development has meant that water normally reserved for agriculture

has been diverted to other uses.³⁴ Groundwater use in the area has been on the rise for years, and many aquifers are suffering after years of limited recharge in a part of the country where it may rain less than eight inches annually.³⁵ To add to this, Texas claims that for the past eight years Mexico has not delivered the amount of water to the Rio Grande from the river's Mexican tributaries required by international treaty, building up a 1.4 million acre-feet water debt. Mexico has been using almost all of the water in those tributaries for industrial, agricultural and municipal purposes in the four Mexican states bordering Texas. The losses to Texas water users amount to roughly \$400 million annually.³⁶ The water debt has been an international point of conflict for several years, with little sign of resolution in sight. Mexico's continued failure to meet its treaty commitment also is complicating Texas' efforts to plan for water use in the Rio Grande Valley.³⁷

Beyond Conflict

Water disputes arise out of a variety of factors, including high growth in urban areas, shifting agricultural and industrial needs, increasing water consumption per capita and increasing demands for ecological and recreational benefits.³⁸ Experience in the West and elsewhere has given rise to a growing conviction that early planning involving multiple stakeholders—including representatives of rural, agricultural, industrial, municipal, and recreational water users as well as state scientists and planners—can effectively head off water allocation conflicts before they become intractable. Such efforts need to be focused on a water basin basis in order to be most effective, a condition that makes these planning activities more complicated and possibly more contentious, but necessary in order to thoroughly address the rights of use issues involved.

An example of planning on a large scale can be found in Texas, where the state's 16 water regions are each developing water usage plans for the next 50 years. Texas has experienced accelerated and sustained growth in a number of urban areas in the past few decades, putting increased pressure on the state's existing surface and ground water supplies. According to the Texas Water Development Board, almost every part of Texas will be short of water in the next 50 years unless the state takes action.³⁹

In 1929, Texas created the Brazos River Authority, the first state agency in the United States created specifically for the purpose of developing and managing the water resources of an entire river basin. Texas has since created numerous water authorities, serving everything from small municipalities and rural communities to giant urban centers and massive reservoirs. About 43 percent of the water used in Texas comes from surface water, a figure that is expected to climb to 70 percent by 2050 as groundwater sources are being depleted faster than they can be recharged in many parts of the state.⁴⁰ This surface water is largely contained in Texas' 5,700 major reservoirs, 74 of which are massive impoundments of water holding 98 percent of the state's surface water supply.⁴¹ In 1997, the Texas Legislature passed Senate Bill 1, which decentralized a water-planning process that had been conducted by engineers and Water Development Board staff since the 1950s.⁴²

The 16 regional water planning groups are required to submit draft copies of their water plans by the beginning of 2001. To begin the process of preparing a plan, the Texas Water Development Board which has had the authority for statewide water planning, appointed an initial coordinating group that included at least one representative of various stakeholder groups, including local governments, utilities, agricultural interests, environmental groups, and industry. Through a participatory process guided by current uses and anticipated future needs, these regional planning groups are charged with allocating resources, considering the development of new resources (e.g., the construction of new reservoirs, water reuse and transfers), and planning for water conservation activities. Plans need to include reallocation of existing supplies, conservation, reuse, demand reduction and drought management approaches.⁴³ Draft plans were officially due to the Texas Water Development Board by October 1, 2000 for agency review and comment. Final plans must be submitted by January 5, 2001. Texas is currently in the midst of one of the worst droughts on record, a fact that is compounding the difficulties inherent in such a major planning effort. Agricultural users, especially, have expressed frustrations in several regions, complaining that municipal and industrial users are taking away water that is vital to maintaining their livelihoods and a major portion of the region's historical economic base.⁴⁴

The regional planning process in which Texas is engaged is a step toward watershed planning that allocates resources and responsibilities for conservation and stewardship among interested parties. While more difficult to administer on an interstate basis, the principal of regional planning is well-established for water resource issues, and will likely continue to be the model for determining allocation.

Sharing the Wealth

Water conflicts driven by shortages in the South are bound to be somewhat localized by the nature of growth and development in the region. While the South as a region has experienced growth overall in the past few decades, the growth has been concentrated in particular states and, thus, in particular water basins. The watersheds that provide water to metropolitan Atlanta, Houston or Raleigh-Durham-Chapel Hill may become overtaxed by urban and industrial growth, but nearby watersheds without the same growth may have abundant water to share.

Interbasin water transfers involve moving water between watersheds. Perhaps the most well-known interbasin transfer is the shipment of water from Parker Dam on the Colorado River to provide water to Lake Matthews, outside Los Angeles, through the Colorado River Aqueduct. Shipping water from one waterbasin to another is not technically complicated, although distance, geography and geology all can play a role in making such transfers economically inefficient. Interbasin transfers can have numerous benefits for both the water supplier and recipient. For the water-rich area, interbasin transfers can provide much needed revenue in often underdeveloped areas. For high-growth areas, the transfers allow for growth beyond the natural limitations of the environment. These arrangements are not without some risks, however. Should the water system supplying water experience growth of its own during the course of the transfer agreement, conflict is bound to arise over the future of the water resource. For the receiving community, loss of the additional water could lead to serious water shortages. The difficulty in recovering water rights after an interbasin transfer also is a factor in limiting the use of these mechanisms.

If the resolution to the ACT and ACF water dispute does not satisfy metro Atlanta's need for water, the area may try to meet its water needs by tapping water from the Tennessee River Basin or from the Savannah River. While both are relatively distant sources that would require significant infrastructure investments to succeed, the technology and perhaps the necessity exist to conduct such interbasin transfers of water. Because of this possibility, residents and civic leaders in Chattanooga, Knoxville and Augusta are paying careful attention to the outcome of the tri-state water dispute.

Another option available on a smaller scale is the marketing of water. Large permit holders may find that in times of drought it is more profitable to sell their water than to use the water they have. This may be particularly true for farmers holding irrigation permits to irrigate a crop. Unregulated water marketing is not universally allowed in the region, however, with some states prohibiting sales of water rights or limiting such transfers to other users within the same water basin. Interstate sales of water also have been criticized, and in some cases prohibited or made subject to multistate review, because of incidents where the transfers were designed to circumvent state water use regulations.

An innovative application of the marketing of irrigation rights was passed by the Georgia General Assembly during its 2000 session and signed into law by Governor Roy Barnes. The Flint River Drought Protection Act establishes a drought protection program for the Flint River Basin by conducting an irrigation reduction auction in the case of a declared drought. Irrigation permit holders in the Flint River Basin would be given an opportunity to sell their irrigation permits to the state for an agreed upon sum per acre in exchange for an agreement not to irrigate that sum of land for the remainder of the calendar year. In the event that the state Environmental Protection Division determines that not enough irrigation permits will be auctioned to the state to protect the in-flow to the Flint, the state can "condemn" permits, compensating the holders at the average rate of payment for those bought at auction.

Conclusion

In the months ahead, parties close to the negotiations between Alabama, Florida and Georgia over the waters they share could reach a resolution. The closer involvement of the governors in the discussions and the presentation of state plans for allocation and use should provide impetus for a settlement that is the product of the compact process. Perhaps more importantly, if the states are able to amicably resolve this dispute without resorting to the Supreme Court, other states facing similar difficulties may find valuable lessons in the outcome. The ACT and ACF Compacts represent milestones in contemporary resource allocation. The abundance of stakeholders on the system, the economic and ecological impact of the two river systems, and the complicated scientific and sociological issues related to the use of water in the watersheds makes these discussions a proving ground for what is likely to prove to be an increasingly familiar scenario in the 21st century. 

Endnotes

- ¹Smith, David. "History of water disputes is cooperation, not conflict," Oregon State University, Corvallis, Oregon, October 28, 1998.
- ²"Resolving Interstate Water Disputes," Susquehanna River Basin Commission, from the Internet site www.srbc.net/docs/waterdis.htm, accessed on September 14, 2000.
- ³Katherine Bouma. "Water sale to Georgia attacked," *The Birmingham News*, Birmingham, Alabama, July 2, 2000. An indicator of the level of stress these river systems are under is the fact that almost half of all documented extinctions in the United States have occurred in Alabama's rivers.
- ⁴Beaverstock, Jeffery Uhlman. "Learning to Get Along: Alabama, Georgia, Florida and the Chattahoochee River Compact," *Alabama Law Review*, Volume 49, No. 3, Spring 1998. It should be noted that in addition to increasing its consumptive use of water, Atlanta at this time was being criticized for degrading the water it returned to the Chattahoochee. Atlanta's growth, and the concomitant erosion, sedimentation, polluted runoff, and treated (and, all too often untreated) sewage recharge to the river, have made the city the target of considerable ire from downstream communities which view themselves as the victims of the Atlanta's prosperity.
- ⁵Kerr, G. Robert. Testimony to the House Subcommittee on Commercial and Administrative Law, October 23, 1997, Washington, D.C. Mr. Kerr was the Director of Pollution Prevention Assistance Division of the Georgia Department of Natural Resources and the state's designated negotiator for the water compacts.
- ⁶Conroy, Pete. "ACT/ACF Tri-state Water Basin Compacts: Background," from the Internet site www.jsu.edu/depart/epic/ACT.htm, Jacksonville State University, Jacksonville, Alabama, accessed on September 12, 2000.
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- ⁹Conroy.
- ¹⁰Epstein, Gladys. "Apalachicola Water Subject of Three State Tiff," *Tampa Tribune*, Tampa, Florida September 12, 1996.
- ¹¹Seabrook, Charles. "City Faces Another Sewage Spill Fine," *Atlanta Journal-Constitution*, Atlanta, Georgia February 1, 1997.
- ¹²Ibid.
- ¹³Beaverstock.
- ¹⁴Schiller, Erin and Elizabeth Fowler. "Ending California's Water Crisis," Pacific Research Institute, San Francisco, California, July 1999.
- ¹⁵Ibid.
- ¹⁶Alcorn, John D. "Compacts Could Part the Waters," *Montgomery Advertiser*, Montgomery, Alabama, February 27, 1997.
- ¹⁷Conroy.
- ¹⁸Gelt, Joe. "Sharing Colorado River Water: History, Public Policy and the Colorado River Compact," *Arroyo*, Water Resources Research Center, College of Agriculture, The University of Arizona, August 1997. Interestingly, while the 1922 Colorado River Compact recognized the water rights of the seven participating states, it was not until 1945 that a treaty with Mexico was signed recognizing that country's rights to water from the river. In that treaty, however, Mexico's rights to about 10 percent of the river's flow became the senior priority under the compact. See also Coronado, "Water Conflict in the Borderlands."
- ¹⁹Susquehanna River Basin Commission.
- ²⁰Conroy, Pete. Editorial in the *Anniston Star*, Anniston, Alabama, November 7, 1999. Conroy is the alternate federal commissioner to the Compacts.
- ²¹Cairo, Richard A. "Dealing with Interstate Water Issues: The Federal Interstate Compact Experience," chapter in *Conflict and Cooperation on Trans-Boundary Water Resources*, Richard E. Just and Sinaia Netanyahu, eds., Kluwer Academic Publishers, Boston, 1997.

²²Beaverstock.

²³Ibid. In some ways this case is illustrative for the current ACF and ACT disputes, in that Georgia's position is very similar to New York's. Alabama filed suit against the Corps initially to head off the possibility of Georgia drawing water for Atlanta ex-judicially, creating a vested right to the water by Atlantans that the Court would be unlikely to displace.

²⁴Pellis, Eddie. "Tri-State Water Pacts Signed, Negotiators Get 10 Months to Resolve River Rights Battle," *Florida Times Union*, Jacksonville, Florida, February 19, 1998.

²⁵Cairo.

²⁶Ibid.

²⁷Beaverstock. Congress has become involved in the tangled dispute over the waters of the lower Colorado River, after Arizona, California and Nevada failed to come to a resolution and in a separate case involving California, Nevada and several Native American tribes.

²⁸From the opinion of the Supreme Court in *Arizona v. California*, 373 U.S. 546 (1963), as quoted in Beaverstock.

²⁹"Gingrich Helps Move Water War Closer to Truce," *Montgomery Advertiser*, Montgomery, Alabama, January 15, 1997.

³⁰Condlin, Andrew M. "Interstate Water Dispute," from *Land Use Lines*, volume 2, number 2, Spring 2000, Williams, Mullen, Clark & Dobbins. From the Internet site: www.wmcd.com/articles/real_estate/landuse5.html, accessed September 25, 2000.

³¹Associated Press. "Court to Referee Potomac Dispute," *USA Today*, May 30, 2000.

³²Dinian, Stephen. "Virginia Takes River Plea to Justices," *The Washington Times*, May 3, 2000.

³³Pendergrast, Craig K. "Water and Groundwater Withdrawal Rights," *Proceedings of the 1997 Georgia Water Resources Conference*, University of Georgia, Athens, Georgia, March 20, 1997.

³⁴Coronado, Irasema. "Water Conflict in the Borderlands," *Borderlines*, volume 7, number 6, July 1999.

³⁵Walther, Ann. "Texas at a Watershed: Planning Now for Future Needs," House Research Organization, Texas House of Representatives, April 15, 1997.

³⁶Robinson, John, Lonnie Jones, Mickey Wright and Daniel Hardin. "Economic Analysis Value of Applied Irrigation Water and Its Impact on the Rio Grande Water Planning Region," Special Report published by the Texas A&M University Research and Extension Center, Weslaco, Texas, March 2000.

³⁷Associated Press. "Water Worries Plague Rio Grand," *Progressive Farmer*, Birmingham, Alabama, September 13, 2000.

³⁸Smith, George F. "Water quality and quantity issues for the South," Southern Rural Development Center, Mississippi State, Mississippi, May 2000.

³⁹Walther.

⁴⁰Ibid.

⁴¹Kaiser, Ronald A., Bruce J. Lesikar, C. Scott Shafer and Jan R. Gerston. *Water Management Strategies: Ranking the Options*, Texas A&M University, College Station, Texas, January, 2000.

⁴²Ibid.

⁴³Ibid.

⁴⁴Associated Press. "Water Worries Plague Rio Grand," *Progressive Farmer*, Birmingham, Alabama, September 13, 2000.

This *Regional Resource* was prepared for the Southern Legislative Conference's (SLC) Energy and Environment Committee by Jonathan Watts Hull, SLC Regional Representative. The SLC is a non-partisan, non-profit organization serving Southern state legislators and their staffs. First organized in 1947, the SLC is a regional component of The Council of State Governments (CSG), a national organization which has represented state governments for more than 60 years. The SLC is headquartered in Atlanta, Georgia.