

NEGOTIATIONS VERSUS LITIGATION IN WATER RESOURCE MANAGEMENT: A  
SCALE-SENSITIVE ANALYSIS OF THE TRI-STATE WATER WAR

by

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(Under the Direction of AMY ROSS)

ABSTRACT

The thesis explores a freshwater resource conflict in a non-arid area at the heart of a developed country. Thus the focus is on power struggles and human demand rather than quantitative scarcity. The focus of the research project is to examine how and why litigation was chosen to resolve the water war following the 2003 collapse of the Interstate Compacts despite the apprehension of litigation by stakeholders on scales of power smaller than the state governments. Also of interest is how the local-scale stakeholders may provide different alternatives by which still to resolve the dispute, some of these alternatives possibly being more democratic and less cost-intensive compared to the ongoing litigation. The research was conducted using interviews of stakeholders in the water war and will be interpreted through the perspective of political ecology. Other findings of interest include the participants' beliefs that the negotiation process needs to be democratized further to include actors operating locally, that more local capacity- building needs to be done to ensure better water management, and that further research is needed that applies the perspective of political ecology in developed countries.

INDEX WORDS: Scale, Water Resources, Water Policy, Water Conflict, Tri-State Water War, Resource Management, Political Ecology

WATER RESOURCE MANAGEMENT & SCALE: THE TRI-STATE WATER WAR

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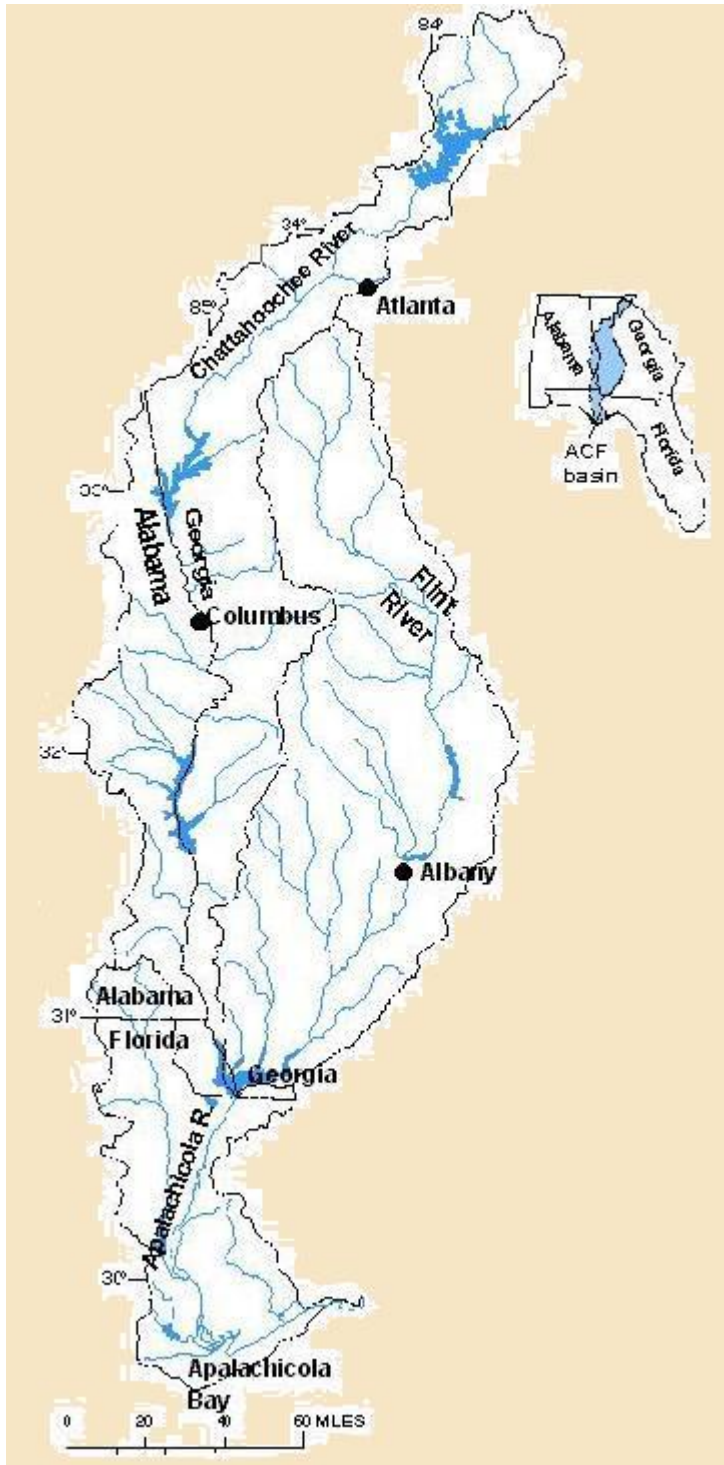


Figure 1: Map of the Apalachicola, Chattahoochee, and Flint River Watershed

<http://www.hydrology.uga.edu/acf/>

# NEGOTIATION VERSUS LITIGATION IN WATER RESOURCE MANAGEMENT: A SCALE-SENSITIVE ANALYSIS OF THE TRI-STATE WATER WAR

## CHAPTER 1: INTRODUCTION

Water conflicts frequently occur where water supply is limited in relation to the needs or demands of human society and ecosystems. Examples include the Jordan - Galilee and Tigris - Euphrates watersheds in the Middle East and the Rio Grande and Colorado watersheds in southwestern North America. Water-rich areas also experience water conflicts, particularly where there is high demand. Examples include New York and New Jersey feuding over the Delaware watershed and recent disagreements between Maryland and Virginia over the Potomac River.

The Southeastern United States, a water-rich region of North America, is similarly engaged in a conflict over water supply and quality. The eastern end of the Deep South could be said to be a “water resources paradox” in which human demand and power struggles predominate over quantitative scarcity as a cause of freshwater resource conflict (Kundell & Tetens, 1998). The Apalachicola – Chattahoochee - Flint (ACF) watershed receives an average of 1,200 millimeters of rain a year and has a humid warm-temperate climate (Kundell & Tetens, 1998). Due to the humid climate, verdant landscape, and abundant rainfall, the Deep South is not a place one would expect to suffer from such conflict. Yet a bitter conflict known as the Tri-State Water War is being waged by stakeholders over fresh water from the ACF and the neighboring Alabama – Coosa - Tallapoosa (ACT) Basin. The focus of the research project is to examine why litigation was chosen to resolve the water war following the 2003 collapse of negotiations in the Interstate Compacts (hereafter referred to as the ACF Compacts), despite the apprehension of litigation by stakeholders on scales of power smaller than that of the state governments. Also of interest is how the local and regionally based stakeholders may provide different alternatives by which to still resolve the dispute, some of these alternatives possibly being more democratic and less cost-intensive than the ongoing litigation. Investigating this question will require a look at the roles and positioning of the decision-making actors and institutions involved in the water conflict, with a focus on political and economic scales of power. The research project will also require an analysis of the roles and input from stakeholders, researchers, and decision makers involved in the

Tri-State Water War and how their positions relate to natural-resource management theory from the perspective of political ecology.

Political ecology is an “approach that combines the concerns of ecology and political economy to represent an ever-changing dynamic tension between ecological and human change, and between diverse groups within society at scales from the local individual to the Earth as a whole” (Peterson, 2000: 324). Political ecology asserts that there is more to environmental problems and resource conflicts than issues of ecology and resource supply. Political ecology seeks to address the role of politics, economics, and human social behavior within an environmental or resource issue. Firmly at the heart of political ecology is the idea that struggles over resources are also struggles over meanings and that environmental problems necessarily are social problems as well.

The immediate cause of the water war stems from disputes over dam and reservoir construction proposals from the late 1980s. The conflict remains mired in litigation in the 11<sup>th</sup> Circuit of the Federal Court of Appeals following the inability of the ACF Interstate Compacts, authorized by Congress, to end the conflict. Nonetheless, in addition to supporting extensive forests and agriculture, which are keystones of the regional rural economy, stresses on water supply and quality are affected by poor groundwater retention as well as very rapid population growth and economic development (Kundell & Tetens, 1998; Seabrook, 2003).

The position of the stakeholders and governments engaged in the water conflict will be considered through two different sources. The first source involved the use of academic documents and legal briefs filed by the legal representation of the stakeholders to analyze the positions and interests of those stakeholders. The second source involved several interviews of the stakeholders involved in the water war.

The participants are chosen from all three states and from local, regional, and national scales within the conflict. The interviews involved the same questions for each participant. Both documents and interview questionnaires are used to obtain the data which built the case history of the water conflict. This research uses the perspective of political ecology and seeks to weave together the complex ecological, economical, social, political, and geographical aspects of the water war as a way to understand the dynamics of spatial scale in the conflict.

The position of the researcher is that stakeholder input is necessary in resolving resource management disputes, and sub-regional-scale decision-making institutions must be taken down in scale to give local stakeholders sufficient capability and incentives to manage water resources if the Tri-State Water War is to be resolved sustainably. Likewise, some authority and guidance must remain up at the state and national level to hold localities and regions accountable and properly outfitted for management tasks. Ideally, such decision-making institutions will be inclusive, transparent, and representative, and these attributes will lead to better resource management. Although centralized-regional and national-scale decision-making authority is needed to construct an impartial forum on resource management issues, state and local decision-making institutions must find a resolution to the water war to be satisfactory to their interests if there is to be sustainable management of fresh water in the ACF and neighboring watersheds.

The researcher's interest in the Tri-State Water War arose from the relationship between resources and political conflict, geopolitics, human conflict, natural disasters, and social movements for access to social and natural resources. A primary reason for studying the Tri-State Water War is based in its location, for the water war represented an opportunity to study a topic within those wider interests, but at the same time learn new areas of literature, theory, and applications right in the researcher's own region.

A deeper investigation into the Tri-State Water War originated from searching newspaper articles, as well as ecological and geographic journals. The idea of investigating the scale of decision-making from the view of political ecology took root following an interest in both scale and political ecology gleaned through human-environment interaction journals and seminars. The Tri-State Water War was chosen among several water conflicts due to its impact in a region whose economic growth and political power will play a key role in shaping the future of the United States.

The water dispute between the three states is having a significant impact on the understanding of water management in the eastern United States by researchers, government, and private citizens. For researchers, the conflict represents a chance to investigate a resource struggle from the perspective of political ecology occurring entirely within a water-rich area of the United States, located within a complex human-

environment context within a developed country that has a strong democratic civil society and regulated free-market economy. This presents a significantly different geographical context from that illustrated by water struggles in developing countries, characterized by emerging democracies and capitalist economies, where most political-ecological research takes place (Greenberg & Park, 1994; Bryant, 1998; Logan, 2003). Specifically, the water conflict is to be investigated from the perspective of those stakeholders who make and are affected by water management decisions to examine how the scales of political and economic power were used by stakeholders to make and dispute claims over water. The project will conclude with a short illumination of some strategies which the interview participants consider useful for building effective natural resource management institutions across several different political and economic levels. Similar research has been done on other watersheds and their water conflicts, but the Southeast differs in two ways (Kartin, 2000; Mustafa, 2001; Feitelson, 2002; Fischhendler & Feitelson, 2003). The first is the water-rich climate which suggests that the water struggle is largely based on economic and power struggles, versus the more acute water scarcity common in arid and semi-arid areas such as the Colorado, Rio-Grande, or the Jordan-Galilee-Dead Sea Basins. The abundance of water brings up the concept of scarcity within the context of political and economic demands rather than the amount of water available for consumption. The Tri-State Water War could also set major precedents in how future water conflicts will be dealt with inside the United States. These differences in management could take several forms, including the emergence of privatization and water markets, changes in regional water authorities that would involve constant cooperation by government at several levels, and changes in the status of water resources under Eastern Riparian Water Law.

A key finding of this research project is the trend among stakeholders in the eastern United States towards regional water management, which would be more adaptive to changing situations within the watershed and would allow for greater interaction between different levels of power, different stakeholders, and with greater transparency than current management schemes (McLain, 2005 - interview). Many of the stakeholders are weary of the litigation following the failure of the ACF Compact and are worried about the costs to their states and the effects of future federal court rulings.

Furthermore, most of the stakeholders are also very suspicious and worried about the prospect of privatization and did not want to change the legal status of water as a public resource. Most stakeholders interviewed felt that there were many lost opportunities for the states to resolve the conflict more efficiently and with less acrimony. Their regret of this failure to achieve a logical and fair allocation formula using the ACF Compacts is best captured by a former Federal Commissioner, who oversaw eleven different federal agencies, when he said “In 20-20 hindsight, will [the stakeholders] realize a better decision could have been realized than what the courts could have yielded” (Thomas, 2005 - interview).

There are several reasons for the collapse of the ACF Compacts. Some of these reasons have no clear culprit and involve errors by parties involved in the writing of the Compact language. Another reason is the failure of the states to implement the National Environmental Policy Act. Furthermore, administration of the ACF Compact did not adequately represent stakeholders at different levels of government power. Other problems can more clearly be blamed on specific states, including the recalcitrance of the states to undergo the public hearings specified in the ACF Compact or Georgia’s filing lawsuits in bad faith. Yet other proposals, such as privatization or starting a new round of negotiations, suffer from not addressing previous mistakes and not having a strong framework couched in scale, place, and ecosystem dynamics from which to implement management schemes.

With the failure of the ACF Compact and the problems with litigation, many stakeholders are seeking methods by which a new water-management paradigm could be created. The stakeholders have articulated possible local, state, and federal roles in creating water allocation and quality protocols and how these roles would help stakeholder organizations build management capacity, distribute incentives, encourage long-term management commitments on a scale of decades, and provide numerous avenues by which to monitor and adapt to change. This project will finally explore a new paradigm through which geographic and ecological theory can empower stakeholders whose livelihoods are dependent upon water supplies to manage ACF water.

## CHAPTER 2: PLACING THE CONFLICT

### How the Conflict Started

The start of the Tri-State Water War goes back to the 1989 decision of the U.S. Army Corp of Engineers (USACE) to reallocate 20% of the water used for hydroelectricity to human consumption needs in the rapidly growing Atlanta Metropolitan Area (Seabrook, 2003). Such a decision was made in light of the severe droughts of the 1980s which resulted in billions of dollars in losses to the states and citizens affected, severe water restrictions, and National Guard intervention to deliver water to drought-stricken cities in Eastern Alabama. Another factor was the projected growth of North Georgia's population through 2010, a growth which will necessitate the construction of a new reservoir on the Tallapoosa River (Seabrook, 2003). Furthermore, Georgia had also asked the USACE for a permit to build a 4,200 acre reservoir only five miles from the Alabama/Georgia border on the Tallapoosa River, which is part of the ACT watershed already in dispute between Alabama and Georgia (Seabrook, 2003). Alabama sued the USACE in Federal Court when Georgia went ahead with the plan to build the reservoir despite objections from Alabama. Alabama's reasoning in the suit was that Georgia would have disproportionate control over water resources and the USACE would be forced to adopt regulations stipulated by a state and not the federal government due to Georgia's demands in managing the reservoirs and dams, which are federal property (Seabrook, 2003). With the viability of the Apalachicola Bay seafood industry in Northern Florida under threat from reduced freshwater from the ACF watershed, Florida proceeded to join the suit on the side of Alabama (Seabrook, 2003).

The water war exposed the diverse human and ecological geography of Georgia as well. Stakeholders, including municipal governments and large industries, in South and West Georgia joined the suit on the side of the downstream interests in Alabama and Florida later during the conflict (Associated Press, 2004; Nix, 2004). These areas of Georgia are downstream from, and have vastly different needs than, the Atlanta Metropolitan Area. Over the course of the conflict the stakeholders in Southwest Georgia felt that the state government of Georgia was not sufficiently defending their needs in comparison to the urbanized areas in North Georgia.



### Stakeholder Interests by State and Region

Crucially important to the discussion of the history of the Tri-State Water War are the interests of the major stakeholders and states. Florida's main interest in the conflict is the necessity to secure adequate freshwater flows from the ACF watershed to ensure the viability of the seafood industry, including the largest oyster beds in the Gulf of Mexico (Hull, 2000; Seabrook, 2003). The seafood industry is the linchpin of the local economy of Apalachicola, FL, a local port from which barges can navigate upstream provided sufficient depth.

South and West Georgia have similar interests to those of Alabama in the water conflict. The main economic underpinning of these areas is agriculture, which relies on irrigation during dry summers (Hull, 2000). Also important is the water supply needs for the industrial and urban centers of Columbus, Albany, La Grange, Eufaula, and Bainbridge (Nix, 2004). Further interests include environmental advocacy groups, homeowners' groups (homes having waterfront property), and the port facilities in Columbus, which require a deep-enough water level to maintain barge traffic (Hull, 2000; Seabrook, 2003; Nix, 2004).

The Atlanta Metropolitan Area, one of the most rapidly growing urban areas in the United States, is the region for which the government of Georgia has been very aggressive in attempting to secure water. Atlanta needs water for just about every aspect of its growth, including population increase, industrial use, and the further construction of new residential and commercial subdivisions which bring with them higher-intensity uses of water such as car washing, lawn watering, country clubs, and retail centers (Hull, 2000; Seabrook, 2003). North Georgia has the largest population and greatest concentration of economic activity of all the regions and has the most powerful concentration of political power within the watershed. Thus North Georgia/Atlanta is viewed as a bully by the politically weaker and less-wealthy regions downstream. The downstream regions also blame the Atlanta Metropolitan Area for starting the conflict by asking for an increased allotment of water (Adams, 2005 - interview; Sides, 2005 - interview).

These regions are represented by loosely allied water users and do not represent the full range of cooperation and conflict possible over water resource management

issues. An example is the unlikely alliance of industrial and environmental groups in South Georgia and Alabama against North Georgia on issues of water allocation, groups which would otherwise be at odds on issues of pollution controls. Another example of these unlikely instances of cooperation and conflict are the national-level environmental interests defended by the Environmental Protection Agency. This agency, through the Federal Commissioner, reserves the right to override the Interstate Compacts should the Compacts infringe upon national regulations regarding wildlife protection.

#### 1992-2003: The Interstate Compacts and Negotiations

On January 3, 1992, the governors of Georgia, Alabama, and Florida signed an agreement that moved the water conflict out of Federal Court and into negotiations (Stephenson, 2000). The stipulations of this agreement are multifold. They: 1) froze water usage levels, 2) suspended legal action, 3) called on the states to share information, and 4) forced the three states to commit to a fifteen million dollar U.S. Army Corps of Engineers comprehensive study of current and future water usage needs and impacts by the states (Stephenson, 2000). During the 1996/1997 legislative session, each of the three states drafted Interstate Compacts that were approved by early 1997 by the states, Congress, and President Clinton to create an allocation agreement and a future protocol for water management (Hull, 2000; Stephenson, 2000). The compacts created a committee composed of one negotiator from each state appointed by the governor plus one federal representative appointed by President Clinton to allocate water resources to each state according to the Army Corps of Engineers study (Stephenson, 2000). The Interstate Compacts went into effect with negotiations starting in January of 1998 (Shelton, 2004).

The main strengths of the Compact Process start with the direct input from the general public (including private stakeholders, NGO's, and coalitions) that is part of the drafting process of the Interstate Compacts and approved by the state legislatures and governors. The Compacts, to be valid, must then be approved by Congress (Hull, 2000). Following approval, each state governor then appoints a negotiator and a backup negotiator, along with two non-voting Federal Commissioners who are appointed by the U.S. President (Hull, 2000). The role of the Federal Commissioners is to make sure that

the settlement negotiated by the states is completely within the bounds of federal law and regulation (Hull, 2000). The Interstate Compacts required to start negotiations were nearly identical in all three states and passed the state legislatures with near unanimity (Hull, 2000).

The Interstate Compacts provide a forum for which negotiations can be conducted at a lower monetary cost to the feuding parties than the judicial process. The negotiated compacts also come up for public review 60 days before final approval by the negotiators and Federal Commissioners for compliance with federal law and state governors (Hull, 2000). Should the Compacts violate federal law, Congress would then send the Compacts back to the states for revision (Hull, 2000).

Many issues have been influential on the negotiations. The first is the lack of large aquifers or natural lakes under or near Atlanta, thus necessitating that Atlanta's water demands need to be satisfied by sources beyond the borders of the Atlanta Metropolitan Area. North Georgia lies atop non-porous granitic igneous rocks which provide no space for aquifers, making Atlanta depend upon riverine sources of water (Seabrook, 2003). Thus, the growth of the Atlanta Metropolitan Area requires increased withdrawals of water from the ACT and ACF watershed short of major adjustments in the patterns of urbanization and economic activity in North Georgia.

Another issue is which state controls the Chattahoochee portion of the ACF, claimed in full by Georgia due to a nineteenth century border agreement making the western shore of the Chattahoochee the border with Alabama versus the thalweg (deepest part) of the river as is usually so when fixing political boundaries (Seabrook, 2003). Georgia has been very belligerent in defending its claims to withdraw water, threatening to revoke the permits of companies based in Alabama from withdrawing water (Seabrook, 2003). In turn, Alabama has charged that Georgia has been using over-inflated growth figures to calculate water needs. Florida eyes both states with suspicion, particularly Georgia, and refuses any settlement which results in lower than historical flows out of the Chattahoochee (Seabrook, 2003). Georgia's main approach has been to keep water in the reservoirs in Georgia in the event of drought while Alabama and Florida want less water in reservoirs so downstream interests can maintain sufficient water supply for their economic and social livelihoods (Seabrook, 2003). Furthering the

divisive conflict was the discovery by some Florida officials and researchers at Georgia State University that Georgia's proposal had no independent monitoring board set up to ensure accountability in water withdrawals (Seabrook, 2003).

The negotiations associated with Interstate Compacts have lapsed many times, but the states have chosen to keep renewing them with the possibility that the negotiations would lead to a comparatively inexpensive out-of-court settlement. These renewals did not suffice to overcome the lack of preparatory work and government intransigence and foundered in early September of 2003, ending five years of talks (Darnell, 2003). With the failure of the Compacts, all states and the stakeholder coalitions involved have been seeking legal counsel and preparing arguments for the Federal Courts, including the possibility of appeal to the Supreme Court of the United States (Shelton, 2004). The states and stakeholders are still very reluctant to hand the conflict over to the courts for arbitration, fearing a very long and expensive struggle which could hurt the regional economy. As a result of the expense involved, the states have still not abandoned all hope for negotiation, and steps toward an allocation agreement over the Coosa portion of the ACT watershed has led Alabama and Georgia to consider the initiation of a new round of Interstate Compacts (Shelton, 2004). The continuing stalling of the Compact process, combined with the states wanting to avoid a court settlement, has led to sporadic attempts at negotiations, even when the prospect of a resolution is slim.

#### 2003-Present: Litigation & Other Federal Venues for Resolution

Should the states party to the Interstate Compacts fail to reach a compromise, the states can then choose to resolve the Tri-State Water War either in the Supreme Court or Congress. The jurisdiction and role of the Supreme Court is as follows:

“The judicial power shall extend to all cases, in law and equity, arising under this Constitution, the laws of the United States, and treaties made, or which shall be made, under their authority;--to all cases affecting ambassadors, other public ministers and consuls;--to all cases of admiralty and maritime jurisdiction;--to controversies to which the United States shall be a party;--to *controversies between two or more states*;--between a state and citizens of another state;--between citizens of different states;--

between citizens of the same state claiming lands under grants of different states, and between a state, or the citizens thereof, and foreign states, citizens or subjects.

In all cases affecting ambassadors, other public ministers and consuls, and those in which a state shall be party, the Supreme Court shall have original jurisdiction. In all other cases before mentioned, the Supreme Court shall have appellate jurisdiction, both as to law and fact, with such exceptions, and under such regulations as the Congress shall make.” (Article III, Section 2, United States Constitution, italics by the author to indicate which specific clause pertains to interstate conflicts).

In the case of the water war, the Supreme Court would function as a trial court, taking in evidence and drawing conclusions based upon fact and law set by precedents (Hull, 2000). The states would then have their opportunities to present their cases before the court, which would then rule according to its findings in the case (Hull, 2000).

Based on a 1907 ruling between Colorado and Kansas, as well as a 1933 ruling between New York and New Jersey, the Supreme Court would most likely side with the needs of North Georgia as set by precedents supporting the wealthier and more heavily populated area of users (Hull, 2000). The Supreme Court would still set aside numerous protections for the downstream users, many of which could be more generous than those North Georgia would be willing to concede in negotiations (Hull, 2000).

Aside from the fact that all the parties taking the case to the Supreme Court may not receive the settlement desired, there are several other reasons why the Supreme Court is very hesitant to take up interstate disputes. The first is that the Supreme Court views the individual states as semi-sovereign, thus positioning the Supreme Court in a more diplomatic rather than judicial stance (Hull, 2000). Second, the Supreme Court is also very cognizant of the numerous factors and interests involved in the sensitive nature of the water war and remains very hesitant to levy judicial rulings (Hull, 2000). The Supreme Court is also very wary of the high costs to turn an appeals court into a trial court, costs which stem from the need to appoint a special master and the master’s office to hear the arguments and draft a long-term management plan. Finally, the states are just as reluctant to bear the high costs of an arbitrary ruling which may not be beneficial to

the stakeholders in the states (Hull, 2000). In sum, the Supreme Court prefers to let the states resolve interstate disputes among themselves, allowing the Supreme Court to respect the semi-sovereign aspects of the states, as well as allow for greater stakeholder input and satisfaction.

Should the case go to the Supreme Court, the high court can take the step of imploring Congress to resolve the dispute. Alternatively, Congress can also take up the dispute without the permission of the Supreme Court, but is unlikely to do so. While Congress is in a better position to deal with interstate disputes, as it is partially comprised of lawmakers from the feuding states, Congress is still very reluctant to resolve interstate disputes (Hull, 2000). Congress has three options to consider should it take up the water war. The first can be to draft legislation affecting direct allocation, use, and management of the water resources in question (Hull, 2000). The second can be to require an executive office (Department of the Interior or Environmental Protection Agency, for example) to resolve the dispute (Hull, 2000). The final can be, similar to that of the Supreme Court, to defer to Interstate Compacts to make the states negotiate for the best settlement (Hull, 2000). Congress preferentially chooses the Interstate Compacts, generally for most of the same reasons why the feuding states and the Supreme Court prefer them, but also because members of Congress do not like to upset partisan loyalty or advantage over contentious interstate disputes (Hull, 2000). The arguments of Hull are further corroborated by the views of the interview participants, including former Federal Commissioner Lindsay Thomas (Hull 2000; Thomas, 2005)

In sum, the water conflict first started in the courts but moved to the Interstate Compacts on behalf of all parties involved due to apprehensions over the costs of judicial arbitration. Newt Gingrich, ex-Speaker of the U.S. House of Representatives, had an opportunity to resolve the water war in Congress in 1994 but avoided intra-partisan fights by deferring to the states. Newt Gingrich instead encouraged the states to establish the Interstate Compacts (Hull, 2000). The Compacts went into effect in early 1998 and were regularly renewed until early September, 2003 (Darnell). Although the parties in the water war are preparing for a costly court case, possibly before the Supreme Court, Georgia and Alabama may be tentatively considering initiating another round of Interstate Compacts (Shelton, 2004).

## CHAPTER 3: DEFINING SCALE IN THE TRI-STATE WATER WAR

### The Definition of Scale

Scale can only be defined within the social context in which it appears. Scale is defined within that context as the spatial relationships between the different objects, people, or places being discussed or researched. It is very difficult if not impossible to conceive of objective relationships as all conceptualization of spatial relationships is a human process which can only be understood through the context of those relations as well as the relationship between what is being discussed and those discussing it.

Scale being defined within context seems obvious when discussing political or economic matters as the spatial relationships between different governments, firms, stakeholders, and different levels thereof are human creations. The creation of those spatial relationships is deliberate, and is a manifestation of the intentions and ideologies of the humans which created those governments, firms, and stakeholders. As a result, the spatial relationships between human actors are fluid, and can change just as easily as claims are made and those claims affect change on existing spatial relationships.

In understanding the placing of scale, the first conceptualization of scale is that of understanding scale as being composed of different levels. Some of these levels are very discrete and easily defined while others are not. The different levels of government in the US Federal System of government are very discrete and have different functions. These different scale levels are very linear or are Euclidian in their sense of scale (Latham, 2002).

A feature of the Euclidian sense of scale is that different levels of scale can act as foils for one another. This is expressed in a global versus local binary in a lot of research (Gibson-Graham, 2002). The global level of scale is typically associated with the ability to wield power, strength, dominance and action while the local is often typified by a lack of power, or attributes of weakness, acquiescence, or passivity (Gibson-Graham, 2002). This model is very over-simplified and does not take into full account the full range of possibilities involving interaction between different levels of scale in a conflict between stakeholders (Gibson-Graham, 2002).

In the water war this binary relationship can be expressed as an isosceles triangle. At one point is the state level of scale, at which power is chiefly exercised via the ACF

Compacts. The national and the local, though not the same and thus not on the same point, are not as powerful as the states and are thus a binary foil for the power expressed at the state level. Litigation, which takes place at the federal level, will change this triangular arrangement, with the states becoming less powerful in influence compared to the federal level of scale while the local areas will be very far removed from the exercise of power.

The other sense of scale is non-Euclidian, that is of different levels of scale which are not linear and not as easily defined. This sense of scale is much more fibrous, thread-like, or capillary-like (Latham, 2002). This sense of scale finds expression in explaining in the roles of actions by stakeholders or in the definition of the different regions involved in the water war. The regions which the ACF watershed intersects may or may not be defined on the basis of their interaction with the watershed. Also these regions do not have definite borders or definite power relations in comparison to one another. Likewise, stakeholders can operate, appeal to authority, and acquire resources from different regions and different levels of political scale. Stakeholders can be nested in a scale frame within which they primarily operate, no stakeholder can be said to be part of a given scale frame.

Locally-based stakeholders are not completely weak and do exert influence. In the rhetoric of the water war, advocates of various management schemes will appeal to actors operating on the local level of scale. The decision-making and the advocates themselves act at a state or national level of scale, but regardless will make appeals to the local area to establish legitimacy for their claims. Yet the means of decision making often will not be fully democratized or devolved to the local levels of scale where the local stakeholders would have the greatest access. Instead the means of decision making rest higher up in the hierarchy of political scale levels and seek to exercise power over competing ideas and local areas more effectively via appeals to the local scale level (Bridge, 1998). Furthermore, the actors at the national and state levels, as government agencies, politicians, or multinational corporations, will often undertake the process of portraying themselves as a local stakeholder or building a local identity as a means to more effectively garner decision-making power (Hillis et al, 2002).



When competing stakeholders, governments, and corporations do conflict, they often do so while based in different political or regional levels of scale. The course and outcomes of these conflicts often influence the domain of different political and regional scales as well. Regional characteristics, political jurisdictions, and legal rights and duties change during the course of conflict. Thus a conflict over natural resources also becomes a conflict over the borders and meaning of different political bodies at the same level of scale as well as between actors situated between different levels of scale (Mains, 2002). The question during a conflict becomes one of at what level of government should a resource be managed, who at that level should manage it, and what are the different legal or territorial borders between different competitors. In the course of demarcating borders, competing interests will try to portray their body, region, or scale level as being capable, better equipped to manage, and more just compared to their competitors who are portrayed as being incapable, ill equipped, and unjust (Mains, 2002). Through this process, the debates over where and by whom resources should be managed are waged.

Scale can also define how competing interests can acquire the material and financial means to continue a conflict (McCarthy & Mayer, 1977). An example is how the large scale interests will often seek legitimacy by arguing how their scheme will benefit the local level of scale or will even go as far as to adopt a local identity (Bridge, 1998; Hillis et al, 2002). Other resources can be acquired by extending a conflict to new levels of scale as well. If a local court settlement over water resources is found to be unfavorable by one party, it can be appealed to a state court. At the state level new financial and material may become available as the conflict expands or moves up the hierarchy of scale levels. The same also applies as interstate conflicts, unresolved through interstate compacts, then enter into litigation in the federal courts. Conflicts can go up or down the hierarchy of scale. Upwards brings state and national power and a deeper well of financial and legal resources into play for competing interests. Downward movement a conflict brings different benefits, namely local legitimacy, local knowledge, and grassroots support. Thus if a resolution is not likely in a conflict, it will likely expand to other levels of scale as the competing interests search for new means by which to continue their cause.

### Scale Considerations in the ACF Basin

Given that scale is defined through discourse, competing stakeholders make claims to the spaces in which there is fresh water as well as to those spaces where water is used. The source of fresh water over which the water war is occurring lies within the ACF Rivers and watershed system, including the dams and reservoirs. The places of water use include the activities of all stakeholders who use ACF water. Such claims can be made to water through a variety of ways including public domain/state sovereignty, private ownership, and through mutually beneficial uses of water. Also important are the means by which the discourse of scale is manipulated by the stakeholders in order to gain a favorable outcome. The outcome could involve either public administration or private ownership of water resources in such a way that satisfies the political and economic needs and wants of the states and stakeholders.

Thus, we see the evolution of the water conflict between stakeholders of uneven status and power:

“On the one hand, domineering organizations attempt to control the dominated by confining the latter and their activities to a manageable scale. On the other hand, subordinated groups attempt to liberate themselves from the imposed scale constraints by harnessing powers and instrumentalities at other scales. In this process, scale is actively produced.” (Kurtz, 2002: 250; quoting Jonas, 1994)

Virtually every debate about the water war has had to refer back to the geographic place and scale of the stakeholders involved in it. The stakeholders involved create competing arguments of the same places, resources, and management institutions in an attempt to win the legal rights to water management. There are several ways in which these claims can be made. The first is to define the original material reality from which scales of both resources and power are created for control of resources (Kurtz, 2002). The second is the process that stakeholders undertake to claim, reconstruct, counter-claim, and produce new relationships of scale between stakeholder, legal, and management status over water resources (Kurtz, 2002). The third is how the dominant stakeholders use scale frames to marginalize weaker stakeholders (Kurtz, 2002). The final is how the marginalized stakeholders liberate themselves from the scale constraints

imposed by powerful stakeholders (Kurtz, 2002). These points will help to answer the research question, as well as to understand how scale relationships were altered during the litigation and negotiations. The next step will be to mark the prominent scale frames that are part of the water war.

In the water war there are five key scale frames, three of which are political and two of which are regional or physiographic. The three levels of governmental scale are local, state, and national. These levels are Euclidian and very discrete in that they have well-defined borders, separate legal right and duties under the federal system of government, and are in a clear power hierarchy from local up to national (Latham, 2002). The local levels of political power generally denote municipalities and counties, and include all cities and counties within the ACF watershed or whose water supply relies on water in the ACF watershed. The next level of political power is the state level which includes the states of Georgia, Florida, and Alabama. The next level is national, and includes the federal courts, agencies, Congress, and the Federal Commissioners in the water war.

The two levels of regional and physiographic scale are non-Euclidian compared to the political levels of scale (Latham, 2002). The first is the watershed level of scale includes the entire ACF watershed. The watershed level can also be broken down into smaller sections, which include the tributary watersheds of the Apalachicola, Chattahoochee, and Flint Rivers and their smaller tributaries. The other regional scale involves the Southeastern United States as a physiographical and cultural region. This Southeastern U.S. scale-frame is defined as such for three common factors which are 1) the smallest scale-frame that contains the entire ACF watershed, 2) the entire watershed is within the legal jurisdiction of Eastern riparian water law, and 3) the warm-temperate and humid climate that the entire region has in common. The second regional definition is used to define zones of common physical and human geography which are smaller than the states that are within the watershed. Frequently there is close correlation between the physical geography and economic activity, such as the urbanized piedmont of North Georgia versus the small cities and rural economies of Alabama and Southwest Georgia in the coastal plain. These areas are larger than individual municipalities and counties and tend to have an aggregate political and economic power that is stronger than a single

municipality, but not as strong as a state. These regions can also cross state lines as well, overlap one another, and are not always in a clear power hierarchy. An example of these smaller sub-regions could be the area of the Atlanta Regional Commission and Lake Lanier (Hall County downstream to Coweta County) in Georgia versus the Flint River watershed in Western and Southern Georgia. These different areas of the ACF watershed have very different physiographic, agricultural, urban, and economic patterns and the stakeholders rooted in these regions are covered by different riverkeeper NGO's. This scale-frame also correlates to the individual tributary watersheds of the ACF as well. The primary reason for introducing this fifth definition of scale has been to frame and subframe the water war, both at the level of the Southeastern United States for common policies of regional water management as well as to investigate the different regional interests of Georgia, where most of the ACF watershed lies. In these smaller regions, regional interests advocate different water management strategies which suit that region's economy, urban areas, local water law and regulation, and micro-and meso-climates. Since the regional level of scale is less discrete than the political level of scale, the project will define which exact region is being discussed.

The above definition of a region is important as it shows that regions are based upon human and ecological factors. Nations, states, counties, and municipalities – all of which construct the three levels of political scale being considered – are social structures which are constantly being maintained and reconstructed by their citizens and stakeholders. Even ecological regions, such as the watershed – though the physical place of the watershed would still exist without being defined – must be identified and defined by social discourse between stakeholders as any system of law or management requires a resource, place, or area to be defined for purposes of administering law or management decisions.

Since scale and regions are defined by discourse over the geographic materiality there can be competing definitions of what constitutes a region or what scale of size or political power a region could correspond to. The U.S., the three states involved, and the many counties and cities have a set of power relations, rights, and responsibilities in common to one another. Stakeholder interests, like the water the stakeholders feud over, is not easily captured in these boundaries. Thus stakeholders often create new scales of

power, particularly within the private sector and non-governmental organizations (NGO's). Yet, these stakeholders are often directly tied to certain regions or parts of the watershed such as the Chattahoochee Riverkeeper, representing private, NGO, and local governments in South and West Georgia. Most advocacy coalitions involved in the water war, in their name and mission statements, clearly show at which level of political power they seek to have influence and in what region they hope to have the most impact. Due to the fact that the Interstate Compacts take place at the state level, all stakeholders involved have to act at the state level. In the current litigation advocacy groups arose from coalitions of diverse and unlikely groups, containing environmental, municipal, homeowner, commercial, and industrial interests which are challenging one another or defending larger areas of the ACF watershed from the North Georgia/Atlanta area heavily represented by the state government of Georgia.

By appealing to higher authorities or by forming coalitions to magnify power, local and sub-regional stakeholders can exercise power on larger geographic and political scales. Also, it should be noted that the state and national power scales can appeal to local scales to justify their wielding of power in the mandated public hearing stage of the compact proposals. Most stakeholders in the water war or levels of government will generally be more active in one region or level of scale due to the activities of a stakeholder or the amount of power a stakeholder has. Generally, stakeholders have a level of political or regional scale at which they most effectively operate and will attempt to always reach a settlement that allocates management rights and responsibilities as well as try to keep the theater of conflict resolution at that scale level. Stakeholders thus make claims to resolve and enjoy a favorable settlement that preferably resides at their scale level of operations. As a result, the procedures of interstate conflict resolution over natural resources are influenced greatly by the definitions and placing of scale.

## CHAPTER 4: RESOURCE MANAGEMENT THEORY

### Water as a Resource

Water conflicts happen due to inadequacies either among quality or quantity of water resources relative to needs and demands between two or more competing interests. The Tri-State Water War is a conflict over both, but contests over the control of the water supply is the primary issue, with climate (droughts), urban consumption versus agricultural consumption, and the political dimensions of the conflict being crucial factors. Furthermore, the conflict over the water supply is exacerbated by both inaccessibility of existing sources as well as the possibility of demand exceeding supply of water available (Kartin, 2000).

Fresh water is a resource critical to human and ecological survival. Water is considered critical for several reasons. One chief definition is of a critical natural resource being a resource which performs necessary functions for humans and ecosystems and is irreplaceable (Ekins, 2003). The degree to which a natural resource is critical can also be socially constructed, depending upon how necessary a resource is for a given civilization or ecosystem (Chiesura & de Groot, 2003; Ekins, 2003). A judgment of the criticality of a resource can depend upon the differing, sometimes arbitrary, appraisals of what constitutes a critical resource or at what point a resource becomes critical (Chiesura & de Groot, 2003). The questions must be asked, then, as to what resources are critical for whom and how such criticality is defined (Chiesura & de Groot, 2003).

The criticality of fresh water is evident. The functions of any critical resource, including water, can be broken into three different categories, including ecological, social, and economic (Ekins et al, 2003). The primary consumptive uses of fresh water include household, agricultural, and industrial use, as well as the natural uses of water for habitat, food and energy transfer, and regulation of ecosystems interacting with the water (de Groot et al, 2002). Social uses of water include cultural, information, scientific, historical, recreational, transportation, and aesthetic. The economic uses include the regulation, pricing, and management of fresh water, which is necessary for all human livelihoods (de Groot et al, 2003; Ekins, 2003). The water of the ACF is critical for the three states involved, is vital to multiple social, economic, political, and ecological

systems, and cannot be replaced or substituted by any technological innovation currently feasible. The only way to resolve the conflict is to change current management practices which will support an equitable allocation of fresh water.

### How Conflicts Occur

Water conflicts between upstream and downstream users can manifest in a variety of geographies. These geographies can include either those of a river forming a boundary or that of a river crossing the areas of the competing interests (Toset et al, 2000). The latter is generally associated with a higher incidence of conflict, as in the Tri-State Water War involving the ACT and ACF watersheds (Toset et al, 2000). High water dependency by downstream users or a history of non-water related antagonisms between the different interests also can exacerbate water conflicts (Toset et al, 2000).

Also, conflicts over quantity tend to be more divisive than conflicts over quality. Conflicts over quality tend to result in incentives toward cooperation between interests, bridging them together for the purposes of quality control and maintaining a high quality resource stock (Toset et al, 2000). Conflicts over quantity tend to result in questions of how much versus how high quality and offer fewer incentives for cooperation. Conflicts thus tend to become bilateral and considerably more intense (Toset et al, 2000). In all cases, control over the geographical context of a water resource under dispute is crucial to success, regardless of up versus downstream position. Lightly populated areas, such as the Flint River Basin, tend to lack political or economic clout compared to large metropolitan areas such as Atlanta. Yet certain human or ecological niches or other unique spaces may have an important use or novelty value, such as that of the Apalachicola Bay seafood industry. Given the role of fresh water as a critical natural resource, the many diverse interests involved, multiple spatial scales, and contexts for conflict, it is necessary to look beyond the up versus downstream structure of water conflict. This claim is not made to discount the up versus downstream approach but, rather, to argue that an investigation of economic, political, and watershed-based narratives of the water war will be necessary to answer the questions put forth by the research project.

The up versus downstream model is often set in the context of the powerful and water-needy urban area versus the diverse array of interests in the hinterlands which are often water rich (Steinberg & Clark, 1999). In the Tri-State Water War, North Georgia is the powerful urbanized area versus the hinterlands, characterized by Alabama's and South Georgia's farmers and smaller cities, as well as the seafood industry of North Florida. In this model, the politically and economically powerful urban area is constructed as being upstream of the weaker downstream interests. This characterization of the conflict persists despite the dozens of miles of headwaters of the Chattahoochee River which originate and flow through the Chattahoochee National Forest towards Lake Lanier. Georgia has tried to use its upstream position and the location of Lake Lanier being entirely within Georgia as a reason to demand as many withdrawals it deems desirable. The downstream areas are quick to point to their remaining natural ecosystems, small towns, and agricultural economies as examples of what is threatened by the Atlanta Metropolitan Area, which is portrayed as the aggressive upstream bully. Atlanta is physically located upstream of Alabama, Florida, and rural South and West Georgia, but the construction of upstream and downstream are significantly affected by the positions of the parties to the water war.

The upstream versus downstream model is reductionist in its logic, reducing the myriad of conflicting and cooperating voices active in the water conflict into clearly distinguishable sides. This logic is convenient for representation in a stakeholder or legal forum. Thus, a simple model will ideally lead to less complication and uncertainty with judicial rulings, Compact negotiations, or economic models providing a solution. Such ideal solutions are also frequently based on empirical and reductionist logics. The frame of political ecology, as outlined below, may offer insight into the impasses that ended the ACF Compact, as well as novel approaches with which stakeholders hope to seek an allocation agreement in the most representative and transparent way possible.

### Political Ecology and Water

When applied in the complex geographies of litigation, compact negotiations, and public hearings involved in the Interstate Compacts, the up versus downstream model rapidly becomes increasingly complicated beyond viability. While competing interests



can be geographically located up or downstream from one another, such does not fully explore the scales of human and ecosystem interaction influencing the water conflict. Hence, water disputes involve different interests at different scales, as well as different modes of cooperation, conflict, cooptation, and resistance (Steinberg & Clark, 1999). These relationships can be seen at work in the different issues at stake in water disputes, and in the various coalitions which are united on some issues but feud bitterly over others. Thus the up versus down, or us versus them, style models fail to address crucial issues involved in conflict resolution.

Now that the up versus downstream model has been presented, a more in-depth discussion of water management is needed. The preferred forum for resolving the water conflict has been the use of the Interstate Compacts, which are the smallest spatial scale (state government level) based procedure for resolving the dispute, barring the creation of new laws or management protocols. The Compacts are also the most cost-effective method for stakeholder input and, likewise, receive the most complicated input. Political ecology is thus proposed as a perspective from which the Tri-State Water War can be thoroughly understood.

A consensus evolved regarding inadequacies in the theories regarding human-environment interaction that not enough research was being done to look at policy, politics, political economy, or concepts of power within ecological or environmental analysis regarding development of developing countries, as well as poverty alleviation (Greenberg & Park, 1994). Relative power and concepts of the scale of power relations also need to be introduced as well. Factoring in these concepts thus leads to a perspective from which the environment can be investigated over a wide range of perspectives, including cultural and political as well as natural perspectives (Greenberg & Park, 1994).

“Politics should be put first in the attempt to understand how human-environmental interaction may be linked to the spread of environmental degradation” is a definition of political ecology, a viewpoint which evolved from a nexus of radical disciplines of the 1960s and 1970s incorporating development geography and cultural ecology (Bryant, 1998: 2). More recently, the viewpoint of political ecology has been further advanced by work in geography studying the social construction of environmental problems and the inherent power relations of the actors involved (Bryant, 1998). No

determination can be made of an environmental or resource issue unless it is from a human viewpoint; thus, the study of human-environment interactions involves subjective values and ideologies. To attempt to solve environmental problems is to move beyond traditional empirical science and to make the radical claim that ideologies and values must be considered as well, given “there can be no viewpoint except from a viewpoint. In the questions raised, valuations are implied” (Soderbaum, 1999: 162, quoting Myrdal, 1978). Political ecology goes beyond the traditional political spectrum as well, frequently delving into a broader sense of “ideas about means and ends” (Soderbaum, 1999). Political ecology thus asserts that ideology and values are always prevalent when studying the human-environment dynamic.

Further strengthening political ecology are the recent additions of ecological concepts such as resilience, adaptive cycles, cross-scale interactions, and the theory that all economic throughput in the biosphere involves entropy – all concepts which use scale and geographical knowledge (M’Gonigle, 1999; Peterson, 2000). In political ecology, resources and services that manifest at different times and places will co-evolve with the social, cultural, political, and economic choices available to people; such processes are always dynamic and subject to change (Peterson, 2000). Political ecology, in sum, involves synthesis of several different areas of study which impact the human-environment dynamic and serves as an analytical tool by which to examine the role of human subjectivity in the form of ideology and value in this dynamic, taking scientific inquiry into the radical realm beyond objectivist and empiricist domains.

Political ecology as an emergent idea and discipline has greatly redefined many of the debates associated with resources and development. Sustainable development is the overarching goal of most human-environment research, yet political ecology has challenged that paradigm by asking key questions of how sustainability is defined and what is sustainable for whom. In doing so, political ecology has been breaking open the debates of sustainable resource use beyond limits of the dominant neoclassical paradigm.

When political ecology is applied to the Tri-State Water War, the underlying issues affecting the dispute become increasingly clear. The first reason is the preference of the states, due to less representation and the higher expenses of federal government-level resolution procedures, towards using the Interstate Compacts for negotiation

purposes. The second is the ability of the Interstate Compacts to place the water dispute negotiations directly within local and regional contexts, as opposed to judicial arbitration or Congressional partisanship. Furthermore, the Compacts keep the negotiations within the scale of the states involved, keep regional interests at the forefront, and keep them directly situated within the needs and aspirations of the communities and regional areas that would be affected by future water allocation and management agreements (adopted from Logan, 2003).

With another round of Interstate Compacts possible, a political ecology approach could potentially illuminate the path to resolution by situating resource management within the local and regional scale. Furthermore, maintaining a strong emphasis on the local and regional scales will hopefully lead to more flexible and just settlements that can be changed to account for future climatic and socioeconomic factors (Steinberg & Clark 1999, Hull, 2000; Peterson, 2000; Seabrook, 2003). Regional and local-scale contexts must also be defined as well, so these concepts can be successfully explored within the Interstate Compact negotiation. Key issues included are the role of stakeholders in relation to how communities and regions are defined, determining the balance of power between localities and higher scales of power (Congress and the Supreme Court) as well as balances between localities and regions/states, and minimizing local and regional losses while maximizing gains (Logan 2003).

#### Political Ecology and Natural Resource Management

To use political ecology further as a perspective to examine the Tri-State Water War, two local and regional resource management issues must be addressed. The first issue to be addressed is what characteristics are needed for successful local resource management. The second is the impact of democracy and open forums and how these better implement the desirable characteristics.

The several traits desired among communities for successful local and regional resource management are high levels of social capital, open forums for the application of a discursive ethic, sufficient knowledge of the resource management problem or crisis, capability to build management institutions, incentives to build institutions and management schemes, and commitment over a long time horizon (O'Hara, 1996; Pretty

& Ward, 2001; Larson, 2002; Becker, 2003). In general, these characteristics often co-evolve or create the setting for the others and are crucial to any attempt at participatory democratic decision-making.

Social capital is comprised of trust, reciprocity, common social norms, and connectedness and can form a base for sustainable livelihoods by maintaining networks and institutions which allow individuals to seek interests with a minimum of repetition and costly hurdles (Pretty & Ward 2001). While social capital does not automatically generate either participatory management or sustainable management praxis, it can build the long-term norms which can be put to the service of sustainable resource management. Also, social capital can be highly specialized and discriminatory to certain groups, such as in misogynistic, racist, homophobic, or totalitarian/authoritarian societies, and it is thus important to note that in these cases social capital is built by one group in society by destroying the institutional or participatory capabilities of others (Pretty & Ward 2001).

Social capital often provides a basis for capability and incentives in the building of local institutions as well as providing the social norms that serve as incentives along with economic incentives. Since social capital is not equal among all groups within a society, inequality can have an effect on the effectiveness of resource management via the distribution of capability and incentives. Inequality, depending upon social context and spatial scale, can either promote or discourage collective action at managing resources (Baland & Platteau 1999). The distribution of incentives is particularly crucial, particularly in the creation or changing of management institutions and regulatory schemes (Baland & Platteau 1999). Obviously those who are disenfranchised have less incentive to participate in the new management scheme. Thus, while inequality generates incentives and disincentives, inequality will result in greater difficulty and less efficiency in sustainable resource management if the outcome needs to be acceptable to all of the stakeholders (Baland & Platteau 1999). Thus, in socially segregated or authoritarian societies, groups routinely disenfranchised of social capital for building participatory institutions or when local and regional scales are being dictated to by larger nation-state scale institutions lack the incentive or capability to participate or abide by sustainable management of fresh water.

If resource management is to be participatory, then decentralization and devolution must be mentioned. Decentralization is defined as “bringing the state closer to the people” by the World Bank (Larson, 2002, quoting World Bank, 1997). Such a statement is highly deterministic: while decentralization may provide opportunities for local and regional power to expand on capabilities and generate incentives, some capability and incentive must be in place for decentralization to be effective (Larson, 2002). A particularly useful form of decentralization is devolution, which transfers authority to semi-independent units (Supreme Court and federal-scale in relation to individual states), but devolution does not equal democratization. For democratization and devolution to coincide, the higher units of government must remain accountable to, and respectful of, smaller decision-making institutions and that the reforms enacted by large-scale governments and economic markets may be more important than the local presence of social capital, capability, incentive, and commitment (Sundar, 2001). Also crucial is that devolution empower all local groups to be included as participants instead of trading large-scale authoritarian management for local-scale versions of the same (Sundar, 2001). Hence the larger-scale political power must be careful not to suffocate or co-opt local resource management institutions, while the local participants must critically examine the local distribution of capability and incentive and why they are distributed as such (Pretty & Ward, 2001; Sundar, 2001).

Lastly, the discursive ethic, a “process of uncoerced and undistorted communicative interaction between individuals in open discourse” fostering “mutual recognition and acceptance” between “response-able subjects” serves as a vehicle for conflict resolution (O’Hara, 1996). The discursive ethic has numerous strengths for incorporating risk, uncertainty, the indeterminate effects of actions, and a process for deconstructing valuation paradigms and identifying conditions for critical reconstruction (O’Hara 1996). The chief importance of the discursive ethic is that it is the theoretical ethic represented in the Interstate Compacts and negotiations between the states involving stakeholders. Also, the ACF Compact allowed for free input from the general public, whereas litigation or resolution by a federal agency is inaccessible to much of the general public and is very expensive and difficult for NGOs to be represented at these levels. A future management protocol will need to be very considerate of more local spatial scales

and the local stakeholders and public at these levels in order to foster a discursive ethic which could hold out great promise for future equity in water allocation.

## CHAPTER 5: METHODOLOGY

### Data Gathering Procedure

Two different types of sources were used to compile information concerning the Tri-State Water War. The sources included interviews of stakeholders involved in the resolution process of the water war, legal briefs filed during litigation, judicial rulings from those court cases, and proposal and research documents examining potential ways to settle the water conflict. The documents serve as a backdrop to interpret and expand the information obtained from the interviews. The documents were generally aimed at finding out how the stakeholders were constructing scale and the role of different levels of scale in the water war.

The interviews are crucial because the basis of knowledge and discourse about scale in the water conflict is socially constructed. Also, as mentioned in the above discussion regarding scale, scale frames are formed and reconstructed through a process of human social interaction involving differences in the manifestation of power by the stakeholders (Kurtz, 2002). Most interview questions are two-fold. The first part of the question is a “yes” versus “no” type of question and the second part is open-ended and asks the participants to explain their answer in detail.

Interview participants were identified from newspaper, website, and journal sources. These sources also provided some basic information on the role of potential participants as well as which region or set of interests they represented. As interviews progressed, participants were also asked for any documents relevant to the research as well as any people who could serve potential participants. This method of asking participants to name other potential participants is known as the “snowball method” and has a strength of identifying stakeholders and researcher who may be deeply involved with the water conflict but are not prominently featured in news or journal sources. The interview medium was chosen by the interview subject, and interview questions were tailored as necessary to the participant, but all questions were used consistently in all interviews if allowed by time constraints.

Participants were chosen on the basis of their role in the conflict as well as which region or set of interests they represented. Obtaining a balance of perspectives was also a factor in choosing participants. 18 people, riverkeeper groups, government offices, or

law firms were contacted across the three states and different regions of the watershed. Of those 18, 8 research participants returned interview questionnaires, spanning each of the three states involved and every area of the ACF watershed. Obtaining interviews from several different parts of the watershed provided diverse views on the water war. Unfortunately, the law firms and state government offices, involved in litigation, refused to be interviewed on the basis of the confidentiality of information related to the water war.

Once interviews and documents were obtained, a qualitative data analysis method was utilized to analyze the results from interview questions and positions stated in the court briefs and the Compact proposals. Interview responses were compared and contrasted to each other, to the theoretical concepts and settlement process on which the interview questions were based, to the research questions, and to the hypotheses as well. The compare-and-contrast model was developed by sorting data based upon how the participants responded to interview questions. The responses are then compared to the body of data including the legal briefs, academic documents, and journal articles on participatory research management. The data on why the compact negotiations failed and what the participants would have done differently was then built into a narrative which is couched in the history of the water war and resource management theory. From that narrative, conclusions were drawn reflecting the role of spatial scale in decision-making as applied to the necessity of stakeholder input and local/regional scales of participatory resource management in the Tri-State Water War.

#### Theoretical Discussion of Issues Related to Interviews

There were several theoretical issues concerning the interviews, most importantly the issues which arise when interviewing elites. Five interviews took place using email and three interviews took place using the telephone. Thus, for email interviews, time and context were not a matter the researcher could analyze since the participant could have completed the questionnaire at any time or place before being emailed back to the researcher. Of the three interviews that took place by phone, one of the participants was on cell phone at an indeterminate location and the other two were in their offices. Each telephone interview lasted approximately forty minutes, with email being used to set a



convenient date and time for the call. All interviews were conducted in a format and time chosen by the participant. These means of communications greatly deflated or obscured concerns of interview location and also minimized gender as a concern. Gender issues would generally be more of a significant factor in face-to-face interviews in which spatial setting (office, home, café, etc) could greatly impact the decision of where to conduct the interview, as well as how comfortable the participant would be during the interview. Gender and spatial context issues paled in comparison to the issues which arose when interviewing elites.

Elites have several common characteristics relevant to the interviews. First, they were very busy and hard to access. Second, most interviews took place at a distance, making setting a negligible issue of which the researcher had little information. Third, the setting for most interviews was either an office or a place with an internet terminal (for accessing interview questionnaires). Fourth, many interviews were not obtainable, because the research participant could not make time or because of the need to maintain confidentiality regarding sensitive information. Of the eighteen potential participants solicited for an interview, only eight sets of interview results were obtained. Fifth, all of the research participants were professionals in their fields and occupations, and all correspondence reflected this fact. Characteristic six involved the researcher's experience of contacting and corresponding with elites. The researcher was acutely sensitive about the potential outcome of research and took care to conduct correspondence when the researcher was the most capable of dealing with correspondence from those whose willingness to be interviewed would affect the outcome of the research project. Correspondence was done in a business-casual tone, not being overly rigid, but at the same time retaining formality and politeness.

The consideration of confidentiality during the interview process requires extra mention. During the time of research, an appeal of a court case involving Georgia water providers attempting to force the USACE to permit them to withdraw extra water from Lake Lanier was decided (February of 2005). As a result of this litigation, as well as other cases becoming active after the collapse of negotiations in September of 2003, many of the stakeholders were leery of being interviewed due to ongoing and impending litigation. This was the context in the period between November 2004 and April 2005

when the research was being performed. As a result, many of the potential participants were either too busy, or were recommended by legal counsel to maintain confidentiality. This became a major issue during research. Thus the legal briefs and water proposal studies took on extra significance within the research project.

The legal briefs and judicial rulings are very important sources of information, particularly in cases where state and legal officials declined interview. Even though certain stakeholders could or would not be interviewed, certain key legal briefs were made available by their offices. The legal briefs contain the positions of those stakeholders and clearly outline some of the arguments regarding how water be allocated and managed. In light of the relative scarcity of interviews, the briefs provide an important source for piecing together the narrative of conflict in the water war.

#### Document Overview

The documents analyzed consist of three policy papers from the Carl Vinson Institute of Government (CVIG) at the University of Georgia and four legal briefs filed in federal courts following resumption of litigation after the 2003 collapse of the ACF Compacts. The documents will be presented in a loose chronological order with the adversarial tone of the legal briefs serving as a foil to the more cooperative approaches covered in the documents. Resource management themes of capacity-building, incentive, social capital, and commitment will be addressed as well.

A chief point addressed in 1998 by the CVIG was that of differences in management capacity between the states (Kundell & Tetens, 1998). Georgia and Florida have greater capacity in water management than Alabama due to Alabama's smaller decentralized agencies, as compared to centralized and powerful agencies in Florida and Georgia (Kundell & Tetens, 1998). Capacity-building will need to be realized in Alabama if the watershed-level management approach advocated by the 1998 and 1999 documents are to be realized.

Both the 1998 and 1999 water policy documents tend towards a watershed level management which would integrate all local, state, and federal agencies involved (Kundell & Tetens, 1998; Kundell & DeMeo, 1999). Reasons for the adaptation of this approach by Kudell and Tetens in 1998 include the Georgia Implementation of the 1996

Amendments to the Safe Drinking Water Act and Reauthorization of the Clean Water Act, the increased need to handle non-point pollution sources, and the long and narrow topography of the water basins in the state of Georgia (Kundell & Tetens, 1998). Georgia has increased the capacity of the State's Environmental Protection Division in order to meet these goals, including the authority to conduct inter-basin water transfers (Kundell & Tetens, 1998). Such transfers would only likely involve intrastate watersheds because other states, being equal under the law to Georgia, could sue to stop a water transfer in an interstate watershed.

Kundell and DeMeo (1999) gives further vision to multi-scale regional approaches. The forward to their policy paper outlines the main reason for this approach, stating

“providing water supply, wastewater treatment, and stormwater management programs is beyond the ability and jurisdiction of any one local government. For this reason alone, multijurisdictional or regional cooperation may be the best way, if not the only way, for individual cities and counties to continue to grow and prosper (Kundell & DeMeo, 1999: iii).

Although the document clearly centers its focus on Georgia's water needs, it focuses on a larger area than the ACF Basin. Also, there is a clear realization that cooperation with areas outside of Georgia and cooperation within the state are vital to securing current and future water needs. A key part of exploring regional water management is an examination of the different models available. The chief models include those of informal agreements, service contracts, joint agreements, regional councils, water authorities and districts, and publicly-and privately-owned utility corporations (Kundell & DeMeo, 1999). All of these diverse models require certain attributes to work, and how present these attributes are largely determines the advantages and disadvantages of each model. The ideal regional water management model would contain all of the attributes, which include recognition of mutual interdependence relating to water, shared water management visions, stakeholder involvement, political support, leadership, legal support, institution of procedural measures, control and authority, and measures to reduce uncertainty (Kundell & DeMeo, 1999). All of these attributes share a few common

characteristics of all resource management, including capacity-building, incentives, commitment, and empowerment. These are the same characteristics observed in the political ecology and resource management literature as well (Baland & Platteau, 1999; Pretty & Ward, 2001; Sundar, 2001, Larson, 2002; Becker, 2003). Capacity-building was observed in Kundell & Tetens (1998) to be a key factor and could contain the attributes of political and legal support, institution of procedural measures, and leadership listed in Kundell & DeMeo (1999). Likewise the provision of these attributes by federal authorities could serve as crucial incentives to get the states and local areas to commit to being more cooperative and monitoring of watershed areas could provide data which would greatly reduce uncertainty and expand the capacity of the managers.

At the time of publication of Kundell and DeMeo (1999), the political ecology literature on resource management was still in the research phase and many of the ideas of regional watershed models were still on hold as the states and stakeholders were still committed to the ACF Compacts. As the Compacts collapsed in 2003 and litigation resumed, the turn towards regional approaches became more pronounced and more resource management theory addressing cooperative approaches had been developed. This trend towards a more democratized, cooperative, and regional watershed approach is particularly visible in the interview results, but it is also apparent in a later CVIOG document as well. This document, Kundell et al. (2004), also shows an increased focus on the methods and traits of a cooperative regional approach that could be applied on a watershed level. The ideas advocated in this document are well contrasted with the points of conflict within the legal briefs and mark a springboard by which many of the legal issues could potentially be resolved.

Kundell et al. (2004) is set in scale at the entire Southeastern United States and factors in stakeholders and circumstances well outside the ACF watershed. The three major water management issues considered by the document are quantity, quality, and water/wastewater infrastructure (Kundell et al., 2004). The document states that regional water resource planning strategy stems from four areas of concern. The first is it is an extension of the watershed, river basin, and groundwater management approaches. Second, it provides a cooperative alternative to water management other than lengthy and costly interstate disputes. Third, it encourages cooperation and consultation among

several levels of government and includes stakeholder input. Finally, it provides federal agencies with better understandings of how to help smaller scale-level-stakeholders and governments.

These issues are of particular importance considering the time-frame of this study undertaken throughout 2003 when the ACF Compact was collapsing. The first point makes mention of how similar watersheds and river basins near each other could produce an environment amenable to a super-regional approach involving the sub-regional authorities, perhaps situated at smaller tributary watersheds. In effect, this could create several layers of water management bodies in the same geographic space arranged in a hierarchy of tributary, watershed, and region similar to the local, state, and national ordering of government. A key common concern of the stakeholders who attended the conference included program and administrative issues. These program administration issues included better coordination and cooperation among governments, improved enforcement of management decisions, more capacity building, greater oversight, and increased stakeholder involvement (Kundell et al., 2004).

Concurrent with, or shortly after, Kundell et al, (2004), are the legal briefs filed as the ACF Compacts collapsed. In 2000, as the ACF Compacts ran into greater impasses, Georgia filed suit against the USACE to release more water from Lake Lanier for consumption. In return, the Southeastern Federal Power Customers, Inc. filed a countersuit against the USACE, alleging that decreased lake levels would hurt hydropower generation. The states of Florida and Alabama joined sides with the SFPC, Inc. alleging that the use of litigation by Georgia against the USACE to obtain water was a violation of the stay order of the January 3, 1992 agreement. To make matters worse, Georgia sided with the USACE, fully prepared to use this case in an attempt to gain a water allotment without having to satisfy the conditions of the ACF Compact. The bad faith attempt by Georgia to obtain water from Lake Lanier is shown by four legal briefs and provides excellent contrasts with Kundell et al. (2004).

A brief filed by Florida in State of Georgia v. United States Army Corps of Engineers, et al. asked that William C. O'Kelly, a judge involved in the litigation, recuse himself from the case due to conflicts of interest. Justice O'Kelly owned lakeside property on Lake Lanier, the value of which could have been affected by any decision to

raise or lower lake levels (State of Georgia v. United States Army Corps of Engineers et al.). Ideally Justice O’Kelly would have distanced himself from the case because his impartiality on the case could have been influenced by his property interests. This highlights the great degree of mistrust between the states and stakeholders, which is further heightened by the expense and inelastic nature of court settlements. Whereas Kundell et al. (2004) called for greater cooperation, the bad faith and combative actions by the states ended cooperation and coordination between different states and different parts of the states. This brief highlights the degree of mistrust that existed at the time the ACF Compacts were failing and shows that trust is absolutely essential to the more cooperative management methods suggested by Dr. Kundell. Such trust is necessary to ensure cooperation between different governments and agencies.

State of Georgia v. United States Army Corps of Engineers, et al. was the suit filed by Georgia while the ACF Compacts were still under way. The brief in question was filed by Florida to demand that Georgia’s case be dismissed for lack of jurisdiction. The case started and the brief were filed prior to Kundell et al, (2004) and the brief explains the history of Buford Dam and Lake Lanier. Of further importance is how the operation of Lake Lanier is tied to water supply for Atlanta and the reasons for the intractability of the water war.

Lake Lanier is the largest reservoir in the ACF watershed and is crucial in that it borders counties that are part of the Atlanta Regional Commission, thus making it of prime importance to Georgia’s water supply strategy. The dam was authorized in the 1945 Rivers and Harbors Act in “accordance with the report of the Chief of the Engineers, dated May 13, 1946 (State of Georgia v. United States Army Corps of Engineers, et al.)”. The primary purposes of the dam were for flood control, navigation, and hydropower. Further concerns included addressing issues of the “vast areas of land that would be subject to mosquito conditions and would need mud control” (State of Georgia v. United States Army Corps of Engineers, et al., quoting Hosch, 1949 Senate Subcommittee of the Committee of Appropriations Hearing). The reasons for the dam construction did not include the usage of water for municipal or industrial purposes. The growth of Atlanta and the surrounding counties was not foreseen or occurred until much later. Atlanta began receiving a water allotment from Lake Lanier in the 1970s, with

water withdrawals frozen at the 1989-level following the 1992 agreement between the states. Georgia has frequently attempted to legally muscle the USACE into further water withdrawals, even in violation of the 1992 agreement. It is possible that Georgia could have been dissuaded and given incentive to cooperate more closely with the 1992 agreement had the federal government proved more authoritative regarding the status of Lake Lanier and operation of Buford Dam and adopted policies which stuck to the letter of the law on the original authorization of the dam. Failing this, and given the fact that Atlanta's growth prior to the 1989 start of the water war would have required water, the federal government could have potentially averted a conflict by reviewing the legal status of Lake Lanier to include consumptive uses of water or could have provided resources to help Atlanta use and recycle water more efficiently prior to the severe droughts which occurred at the start of the conflict. Adequate enforcement of guidelines and law by higher-level authorities, provision of incentives by the same authorities, and constant coordination with local and state authorities is seen as crucial in regional water management by Kundell et al. 2004 (Kundell et al., 2004).

The federal government is not entirely at fault for these failures, and this is made clear through another legal brief. This particular instance focuses on the failure of the states to fully carry out a comprehensive study, including the requirements of the National Environmental Policy Act (NEPA). A provision of the 1992 agreement foregoing litigation committed the states to fund and execute a comprehensive scientific study of the ACF watershed and interrelated ecological and human systems. The Southern Environmental Law Center (SELC) filed a friend of the court brief on behalf of four environmental groups. These groups are the Alabama Rivers Alliance (ARA), Apalachicola Bay and Riverkeeper (ABARK), Chattahoochee Riverkeeper (CR), and the Upper Chattahoochee Riverkeeper (UCR). These organizations were formed during the compact hearings to organize public opinion to safeguard ecological and local stakeholder interests in the water war. Their interest in the ongoing litigation stemming from Georgia's attempt to have the USACE release more water from Lake Lanier reflects their mission to protect the environment and smaller stakeholders.

The main point of the SFPC, Inc. v. Caldera, et al. friend of the court brief by the SELC is to demand that the National Environmental Policy Act be performed to the full

letter of the law. The brief goes on to state “the Settlement Agreement at issue constitutes a proposal for major federal action that may significantly alter the quality of the environment within the meaning of NEPA, and an environmental impact statement should have been prepared before the parties entered into the Settlement” (SFPC, Inc. v. Caldera et al., Amicus). The specific language of NEPA requires that “a hard look” must be undertaken towards environmental action before any action is taken (SFPC, Inc. v. Caldera et al., Amicus). No such impact statement has been performed and thus “Amici Curiae’s opportunity to advocate for the natural resources in this case was nullified” (SFPC, Inc. v. Caldera et al., Amicus). The demand for an environmental impact statement was the primary point of this brief and it is also worth noting that the commissioning of such a statement could serve as an impetus for undertaking the scientific assessments which would certainly lay the groundwork for a completed ACF Compact, as well as satisfy the requirements of NEPA.

A completed study would have provided empirical scientific evidence which would have greatly increased the capacity of the water management authorities at all levels of power and could have significantly defused the mistrust existing between the states. Such a completed study also would have followed the letter of federal law and the 1992 agreement between the states. Thus, a completed impact assessment would have aided the resolution of the water war in several ways. The first would have been to provide incentives of cooperation between the states. The second would be to provide independently verifiable knowledge to aid management capacity. Third, federal and state cooperation would have been strengthened. Fourth, an impact study could have defused mistrust and would have encouraged the states to work together to avoid costly litigation. Finally, such information would have been available to local stakeholders which would have strengthened their arguments at the public hearings on the ACF Compact proposals. All of these reasons which include capacity building, incentives, cooperation, and securing public involvement are viewed by Kundell et al, (2004) as being crucial to effective regional resource management.

The final document is a ruling on SFPC, Inc. v. Caldera et al. decided in the District of Columbia Circuit Court of the United States Court of Appeals. This case was decided on March 4, 2005 and renders moot an earlier ruling of the District Court’s



dismissing the challenge by Alabama and Florida (SFPC, Inc. v. Caldera et al.). Likewise, prior decisions by the courts in this case have been abandoned for lack of jurisdiction (SFPC, Inc. v. Caldera et al.). The end result is that this ruling is in favor of the downstream interests and the Amicus Curiae. Furthermore, the stay order on water withdrawals by North Georgia-based water providers from Lake Lanier remains in place. This stay order is composed of three parts which require “1) filing the settlement agreement, 2) implementing any part of the settlement agreement, and 3) entering into any other new storage or withdrawal contracts affecting the ACF Basin without the approval of the court” (SFPC, Inc. v. Caldera et al.).

Other than benefiting the downstream interests, the other purposes of the ruling remain unclear. There is the possibility that this ruling or subsequent rulings could require studies to be completed, either by the states or under the authority of the federal courts, before future litigation is entertained. A likely result is that this ruling is merely an intermediate ruling while the various factions involved in the water war marshal the human and financial resources necessary to continue the water war. As of writing, it is unclear how future rulings may turn out.

One conclusion is immediately available from the documents. The CVIOG documents demonstrate an example of the vision process which is further mentioned by Dr. Kundell (the chief author of the CVIOG documents) and Dr. Feldman, Chair of the Department of Political Science at the University of Tennessee, in the interviews. The vision articulated is a first step in designing an interactive regional approach to water management. This approach would have built the necessary capability, provided incentives, and included actors at all levels of government in the water war. Such a method would also have a strong scientific arm tasked with monitoring and studying the effects of various proposals. Also, decision-making would include actors at all levels of the conflict and would not exclude voices at different levels of scale, unlike the ACF Compacts which stymied input at both the local and federal levels. The legal briefs also support this conclusion, but in a different manner. The legal briefs provided by the Tri-State Conservation Coalition demand the implementation of NEPA, which would have required the completion of scientific studies on which an allocation agreement could have been based. Such an impact assessment could have provided incentives for cooperation,

defused mistrust, and local stakeholders could have used the assessment to bolster their claims and have greater impact at the negotiating table. Thus the stakeholder coalitions, who have united to be effective at the federal level of litigation, are attempting the use the briefs as a platform to demand that some of their visions be addressed in any final allocation or management ruling undertaken by the judiciary.

## CHAPTER 6: INTERVIEW RESULTS

### Overview of Interview Results

The interviews provided the main set of data for the research project. While the interviews do not flesh out the scale relationships of the water war, they do provide a narrative of how the ACF Compacts failed and what alternatives the participants could envision for water management versus litigation. The first set of questions sets the stage for the rest of the interviews by seeking background information concerning the participants' history of involvement in the water war, how they have been involved, the place they represent, and their thoughts on the start and difficulty of resolving the war.

The next two sets of questions address the failure of the ACF Compacts and the subsequent questions of how the federal courts or Congress could intervene in the water war at the federal level. The participants made it clear that the ACF Compacts insufficiently courted public involvement and that the states did not do enough to secure public involvement. This neglect of public involvement was further in evidence with the exclusion of municipalities from the negotiations and the glossing over of tributary watersheds. Also crucial were the failures to complete comprehensive studies and commitment to the stay order prohibiting litigation on water allocation from the ACF Basin.

At the federal level, the participants are apprehensive about a SCOTUS ruling to the conflict or Congressional involvement. While the participants do indicate that they would support a good SCOTUS ruling versus a poor ACF Compact resolution, they do not believe that they will be adequately represented at the federal level. None of the participants supported Congressional intervention.

Despite apprehension about the federal level, most participants believed that the federal agencies and Federal Commissioner is necessary for holding states and local areas accountable, providing capacity, and incentives for successful management. Some participants also believed the Federal Commissioner should have had a vote and that the states should have accepted federal proposals for resolving impasses. At the same time, the participants also believed that municipalities and stakeholder coalitions should have been able to send representatives to the negotiations. The participants also wanted a scientific monitoring arm in water management as, one well that would be coordinated at

local, state, and federal levels. Thus the participants were aiming in the direction of a regional watershed authority that would be coordinated at the local, state, and federal levels. This authority could either take the form of a new set of compacts or an independent body, and would have received equal inputs of power and responsibility from all three levels of government.

### Interview Results

The interview data results are organized in a table format, which a short prose section prior to the table, which expands on and analyzes the data in the table. The tables vary depending on the structure of the question. Below is a small sample.

Sample Table:

Participant	Yes	No	Other or Why
P1	x		Reason yes
P2		x	Reason no
P3		x	Reason no,

Most tables are similar to the table above. Questions that the researcher was not able to ask due to lack of time during a phone interview are marked “TO”. Unanswered questions will be marked with a “UQ” and any other blank spaces will be simply marked “NA”. Any entries which require further explanation will be covered in the prose prior to the table.

Table 1: When did you become involved in the water war?

The riverkeeper organization personnel (Ms. Adams, Ms. Sides, and Mr. McLain) have mostly become involved relatively recently as their organizations have grown and become more powerful. These participants tend to give similar answers throughout, indicating a high degree of common interests between the riverkeepers. The riverkeeper organizations are also repressed by the SELC, of whom Ms. Howett is a member and research participant. The academics (Dr. Feldman, Dr. Kundell, and Dr. Appel) have

been involved the longest, suggesting long-term research interests versus direct involvement. Dr. Kundell was directly involved and is the chief author of several documents informing this project. Both Dr. Appel and Mr. Thomas have the least amount of current involvement. Dr. Appel was strictly interested in water allocation as part of legal research while Mr. Thomas's role as Federal Commissioner ended when President Bush appointed Alec Pointevint to the position.

Participant	When?
Feldman	Academic research in 1997 (as the Compacts were getting started)
Kundell	Involved since 1989
Appel	Not formally involved, examines interstate water allocation problems as part of research
Thomas	Appointed by President Clinton to be the Federal Commissioner to the Compacts, oversaw 11 federal agencies
Howett	Joined the SELC in 2002, became immediately involved
Adams	Became involved recently as the Policy Director at the UCR
Sides	2001 intern at the ARA, full time staff in 2002
McLain	Executive Director of ABARK, effective August 1, 2004.

Table 2: Which region and interests are you concerned about or representing?

The academics had a more detached interest in the water war except for Dr. Kundell. Dr. Kundell worked on behalf of Georgia by advising the state legislature of Georgia during the drafting of the ACF Compact. Dr. Appel is strictly interested the academic and legal aspects of the water war and is not directly involved. He did state that he wished to make “sure that water allocation is done on an economically principled basis, by which I mean that water is not subsidized to uneconomical uses” (Appel, 2005 - interview). Dr. Feldman lives and works outside the watershed, but is interested in the water war as a research topic. The Tennessee River Basin borders the ACF and ACT watersheds, thus future management of the watershed and precedents set by the court cases could impact the Tennessee River Basin (Feldman, 2004 - interview).

Mr. Thomas is the only research participant involved who represented the federal government. He was appointed by President Clinton to the role of Federal Commissioner

to oversee the 11 federal agencies involved in the water war. He was replaced by Alec Pointevint, a Bush appointee, in 2001.

Ms. Howett, Ms. Adams, Ms. Sides, and Mr. McLain all had similar interests. All became involved relatively recently through environmental advocacy and environmental law firms and operate on more of a regional versus a state level. Ms. Howett is part of the SELC, which was retained by the TSCC. Ms. Howett represents environmental interests within the entire watershed and the SELC also works on environmental legal issues outside the watershed. The TSCC is comprised of diverse stakeholders who are often in conflict outside of the water war. Some of its most powerful members include the riverkeeper organizations.

Ms. Adams, Ms. Sides, and Mr. McLain are participants who are involved in the riverkeeper organizations and often are united on issues of policy. More specifically, Ms. Adams is concerned with that area of the Chattahoochee which is upstream of Franklin, GA, including the area covered by the Atlanta Regional Commission. Ms. Sides is concerned with the area of the watershed inside Alabama, while Mr. McLain represents the area of the watershed in North Central Florida. This area encompasses six counties and has further “coordinated with all six counties and the State of Florida as Stakeholders in a united ACF policy” (McLain, 2005 - interview). He is further concerned with the health and productivity of the estuary which forms the underpinnings of the commercial fishing and rural economies in those counties.

Participant	Region Represented	Why & Other Information
Feldman	No region	Outside of watershed
Kundell	State of Georgia	NA
Appel	No region	Environmental Interests
Thomas	U.S. Federal Government	Oversaw 11 federal agencies
Howett	Southern States/whole basin	SELC, represented riverkeepers
Adams	Whole Watershed	Ecological health
Sides	Whole Watershed	Stream and riparian interests
McLain	Florida portion of ACF	Ecological health/productivity of estuary

Table 3: How did you become involved?

Participant	Reason for Involvement
Feldman	Awareness of dispute in 1997, applied research interests, held a regional water symposium
Kundell	Advisory role in 1997 advising GA Legislature, GA Governor Barnes' Special Advisory Committee for the ACT/ACF. Currently the Science Advisor to the Georgia General Assembly
Appel	Research in environmental and natural resource law
Thomas	Federal Commissioner during President Clinton's Term
Howett	SELC, Tri-State Conservation Coalition
Adams	Policy Director at UCR
Sides	Intern, then Staff Member at ARA
McLain	Un-affiliated stakeholder during the 1990s, became the Riverkeeper/Executive Director for ABARK in 2004

Table 4: How do you think the Tri-State Water War began and why does it remain extremely difficult to resolve?

This question was asked of all of the participants except Mr. Thomas, due to time limitations. Not all of the participants answered the second part of the question. The answers to how the water war began can be loosely divided into two categories. The first category is the naming of the start of litigation, mentioned by Dr. Appel, Ms. Adams, and Ms. Sides. The responses of Ms. Adams and Ms. Sides are nearly identical, showing the commonality between the riverkeeper organizations. The second category is that of mentioning the underlying contexts, which are the growth of metropolitan Atlanta. This second category was mentioned by Dr. Feldman, Dr. Kundell, and Ms. Howett. It is also explored by Mr. McLain and Dr. Appel. The growth of Atlanta made Georgia increasingly thirsty, as well as more politically powerful. Given previous experiences with drought-induced water shortages, this made Alabama and Florida very concerned about the watershed should Georgia ask for an increased water withdrawal. Also notable, in addition to political and economic power, is that Georgia held a favorable upstream

position, including the location of several federally-managed reservoirs inside the state and near or upstream of Atlanta.

Dr. Appel and Mr. McLain provided even further detail to their answers. Even though Dr. Appel's short answer mentions the proximate cause of the lawsuit brought by Alabama in 1989, Dr. Appel also mentioned that "changes in Atlanta as a regional economic power versus other cities that would like to grow, and those interests versus agricultural uses that are not the future of the area's economy" are the underlying causes (Appel, 2005 - interview). Dr. Appel asserted that the conflict was inevitable due to the social and political differences between different users of water. Dr. Appel does view part of the water war being a conflict between a future cosmopolitan vision of the South couched in Atlanta versus an agrarian past, as well as smaller cities competing with Atlanta. Thus the water war is partly a social and cultural clash as well, with control of resources being a key objective.

Mr. McLain provided an answer outside of the two categories. He listed several reasons for the start and long length of the water war. The first is the fundamental misunderstandings of Eastern water law and downstream water-users' rights. The second is the arrogance that is part of the accrued money and power of upstream users. Third, and tying into the reason why the water war remains unresolved, Atlanta's attempt to seek unilateral legal remedies behind the backs of the other states at the negotiating table destroyed trust and demonstrated bad faith in the negotiations. Fourth, attempts by the Federal Commissioner to resolve the impasses were rebuffed by the states. Mr. McLain shows a clear bias for downstreamers in his answers, tying together the bad faith actions by Georgia and mentioning that Georgia had policies which betrayed a possible arrogance of North Georgia with regards to competing water rights. Not helping the ACF Compact is the widespread misunderstanding of water law, which failed to help clear up the disputes between competing users. Such misunderstandings and lack of clarity would be amenable to arrogance of those with more capital and power, as well as bad faith actions. Federal offers of mediation would more likely be rebuffed as differing positions were hardened by lack of clear objective data and growing mistrust.

Dr. Feldman further argued that there was a framework lacking for an adaptive management paradigm that could be reflexive upon new data and information. He also



mentioned a change in attitudes toward water as a property right, as well as political grandstanding. As positions between the states hardened and more money was invested in the conflict, no state would want to suffer politically if it was the first to admit defeat or have its arguments and stakes lose credibility. This is further complicated by Dr. Kundell explaining that the ACF Compact was the most complicated yet, due to the numerous environmental laws and increased economic development in the South since previous water struggles.

Ms. Adams also listed more reasons why the water war remains intractable. She mentioned that the UCR and Newt Gingrich had to change the ACF Compact legislation “in the eleventh hour” to include environmental concerns (Adams, 2005 - interview). She also stated that the downstream states felt that the 1992-1997 comprehensive study mandated by the 1992 stay order merely gave Atlanta more time to grow and accrue power. Thus the growth of Atlanta would strengthen the bargaining power of Georgia, which could have made the downstream states less willing to cooperate and fund comprehensive scientific studies. A growing Atlanta would have a legitimate claim to water, as people have a right to water under Eastern Water Law. Ms. Adams said that any future success in water management requires a stronger scientific and monitoring aspect, paralleling the views of many other participants, most particularly Mr. Thomas and Mr. McLain.

Participant	How it Began	Why Difficult to Resolve
Feldman	Metro Atlanta’s rapid growth	Inadequate framework to resolve the dispute
Kundell	FL/AL concerns of Atlanta’s growth	Complicated conflict of water availability versus economic development
Appel	Lawsuit by Alabama against the USACE	UQ
Thomas	TO	TO
Howett	Fear North GA would use geographical position to dominate	UQ

	ACF water resources	
Adams	Atlanta asking USACE for water	Entrenched positions of states
Sides	Atlanta asking USACE for water	UQ
McLain	Not clear	Bad faith by upstream interests

Table 5: Do you believe the Compact Process was effective, why or why not?

With the exception of a clear “yes” by Dr. Appel, the participants provided various reasons for their negative responses. Both Ms. Howett and Ms. Sides held that the ACF Compacts failed because of the failure to produce a settlement to the water war. Ms. Sides also mentions that Georgia was very unaccommodating of any disagreements by downstream interests and that progress was only made when the downstream interests did not oppose Georgia. This answer reflects a lot of the dissatisfaction that the downstream stakeholders had with Georgia and Atlanta in particular. Ms. Howett also criticized the ACF Compact over the lack of incentives necessary to develop transparent use formulas, claiming that this neglect was crucial in the failure of the Compacts. Mr. McLain considered the Compacts a noble attempt at dispute resolution, but he considered the ACF Compacts a failure for not achieving an equitable-use formula and was also united with the other downstreamers on criticizing North Georgia. A “no” response by Mr. Thomas was also based on the failure to achieve a settlement and satisfactory use-formula. He further asserts that the states failed to complete scientific studies which could have provided impartial data which could have served to inform use formulas.

All of these responses feed into the response of Dr. Feldman who states that the ACF Compact failed to produce a settlement and furthermore failed to set up a framework for future dispute resolution. This failure further encompasses all of the reasons given by the other participants whose criticisms and suggestions could possibly inform a future framework. Dr. Kundell gave a weak negative response. His response was conditional upon “if you define effective as resulting in their continuation (of the ACF Compacts until a resolution is reached)” (Kundell, 2005 - interview). Dr. Kundell did not criticize the ACF Compacts or its components unlike the other participants.

Dr. Appel gave the sole affirmative response. He stated that the ACF Compacts was successful insofar that public participation was secured. He further added the caveat

that actions by the state governments of Georgia and Florida hurt public participation. On the whole, the participants judge the ACF Compacts to have failed and harshly judge the states, in particular Georgia, and offered a number of reasons for failure. Even the sole positive appraisal of the ACF Compacts contained a major caveat and criticism of the states. Few, if any, positive appraisals of the states were found in this question or in the interviews in general due to the unwillingness of state government officials or their legal representation to be interviewed.

Two questions which were tried out during the interview process later went unused. They are “More specifically, what has been your involvement in the Interstate Compact Process?” and a version of Question 5 asking “If not, what actors and interests do you think were the most responsible for the ineffective outcome of the Interstate Compact Process?”. The first question is redundant to Question 3 which is about their involvement in the overall water war while the last one is redundant in that the participants demonstrated ample criticism of other stakeholders and governments in the other questions. Mr. Thomas objected to the question stating that no one side or actor could be blamed (Thomas, 2005 - interview). The question was dropped from subsequent interviews for being redundant, whereas other questions sufficed to elicit criticism of the institutions and actors involved in the water war.

Participant	Yes/No	Why
Feldman	No	Failed to set up a framework for dispute resolution
Kundell	No	Compacts may not be the reason the ACF Compacts failed
Appel	Yes	Successful in securing public involvement, but damaged by FL and GA attempts to bypass hearings
Thomas	No	Failure of states to finish the scientific studies prior to the Compacts by disinterested third-party
Howett	No	No incentive provided to develop use formulas, transparent use formulas could have served as basis for agreement
Adams	TO	TO
Sides	No	Successful insofar downstream interests were willing to agree to GA's demands, otherwise fell apart
McLain	No	Noble attempt but severely flawed

Table 6: Do you believe the Interstate Compact Process adequately took into account local stakeholder and management issues regarding ACF freshwater resources? Why or why not?

This question had a healthy balance of “yes” and “no” answers and several reasons for those answers. The “yes” answers tended to cite how state and federal level authority could be held accountable to the general public and how alternate forms of resolution involving litigation would be much less open to the public than the ACF Compacts. Mr. Thomas mentioned that the state governors directly appoint the negotiators during the ACF Compacts; therefore, failure to include stakeholders could become a political issue which could politically hurt the governor and state government administration. Mr. Thomas further mentioned that this did become an election year issue in 2002 with now-governor Purdue of Georgia making promises to expedite a settlement to end the water war. Ms. Howett offers an affirmative answer for different reasons, stating that the ACF Compacts required public hearings and were far more open to public involvement than litigation.

Ms. Adams gave a very tentative negative response. She mentioned that while the Governor of Georgia did convene a Georgia Governor’s Stakeholder’s group, this group all too often played a passive listening role regarding the plans of the Georgia Negotiator. She further stated that public hearings were of “limited participation as the dialogue was often one way in which the states set the agenda and laid out their reasoning” (Adams, 2005 - interview).

Both Dr. Appel and Dr. Kundell offered noncommittal responses. Dr. Appel did not have a strong opinion on the question and did not explain why. Dr. Kundell gave a cautious response. While he admitted that there was a great deal of local and stakeholder interest, he was not sure if adequate attention was paid to local concerns or not.

Ms. Sides, Mr. McLain, and Dr. Feldman gave strong negative responses to the questions and were highly critical of the ACF Compacts and the state governments. Ms. Sides stated that the Flint Watershed within the ACF was completely ignored, further giving the impression that local areas and tributary watersheds received insufficient attention. Mr. McLain mentioned that the state government of Florida tried to avoid the

public hearings mandated by the ACF Compact. He stated that “negotiating in the sunshine was deemed to difficult by each state’s negotiators” (McLain, 2005 - interview). Not only is the avoidance of public hearings a violation of the ACF Compacts, but this is also a violation of Florida State Law. Florida has ‘Sunshine Laws’ which require records and proceedings of the local and state government be open to public participation and inquiry. Avoiding the public hearings would have constituted a violation of those laws. Thus, much of the media and public pressure brought to bear on the Florida state government must also have had a considerable legal threat associated with it as well. Eventually, Florida did hold the mandated public hearings. Dr. Feldman further criticizes the ACF Compacts in his response, claiming that NGOs and local governments did not have a place at the negotiating table. The closest the city and county governments got to the negotiating table was the provision of their calculated water needs to the state negotiators; otherwise, they were treated the same as any other local stakeholder.

Looking back on the ACF Compacts, it appears that there was a generally insufficient consideration of public input. Litigation will not be an improvement, for it will take place at a level of scale even further removed from many stakeholders and will not necessarily include public hearings. It is unclear whether or not stakeholders were able to exert enough pressure on the state governments to include their concerns. Although Governor Purdue did mention the water war during his 2002 campaign, there were many other issues with which the water war had to compete for attention. In Florida, public hearings were legally required but only occurred after considerable public pressure. On the other hand, stakeholders alleged that the states did try to dodge the public hearings, that smaller tributary watersheds were ignored, that municipal governments did not have access to the negotiations, and that many smaller NGOs did not have their needs adequately addressed.

Participant	Yes/No	Why
Feldman	No	NGOs and local governments had no place at negotiating table
Kundell	Neither	Lots of local/regional and stakeholder interests, but did not know if adequate attention was paid
Appel	Neither	No strong opinion on this question

Thomas	Yes	Plenty of consideration given to local groups
Howett	Yes & No	ACF Compacts required public hearings and litigation will be less open to general public versus ACF Compacts
Adams	Weak No	GA Governor did convene meetings with stakeholders, but stakeholders spent most of time listening to plans of the GA Negotiator
Sides	No	Flint River Watershed completely ignored
McLain	No	Public hearings were granted by Florida only after persistent political and media pressure exerted by general public

Table 7: How did the states frame their arguments on how water should be allocated and what authority should control the allocation of water, and how did these debates help or hinder a potential settlement?

With the sole exception of access to some legal briefs, this question did not yield useful information. It was used after the interview with Mr. Thomas and went unanswered by Ms. Sides and Mr. McLain. It was not posed to Ms. Adams due to time constraints. Ms. Howett did not answer it directly except to provide a short sketch of the court cases involved, which was very helpful in informing the research.

Participant	How and where to allocate water?
Feldman	NA
Kundell	NA
Appel	NA
Thomas	NA
Howett	No direct answer, court case data provided.
Adams	TO
Sides	UQ
McLain	UQ

Table 8: What would you have recommended to make the Compact Process more effective? Why or why not?

This question was asked of all but one of the participants. Four participants provided answers while three abstained. Of the four answers, there was some criticism of the states, as well as calls for more open negotiations.

In his role as Federal Commissioner, Mr. Thomas did not have a vote, but could scuttle an agreement between the states if it was in violation of federal law. Mr. Thomas believed that had there been a voting power for the Federal Commissioner, then the final settlement would automatically be within the guidelines of federal law. Mr. Thomas also reiterated the need for an impartial scientific study to have been completed prior to the negotiations, and then for there to be further studies to occur during and after the negotiations so new information could be constantly brought in to help negotiators and adjust the allocation formula as necessary. The responses of Mr. Thomas dovetail into those of Dr. Feldman. Dr. Feldman agreed that the first task of the ACF Compacts should have been to agree on a decision-making framework followed by negotiations on the actual allocation formula. Such a decision-making framework would likely have included a scientific study aspect and this certainly would have aided the third suggestion of having more transparent negotiations with greater coverage of the positions and issues. Such greater coverage could be aided via dissemination of the results of an impartial third party study.

Ms. Howett stated that the ACF Compacts could also have benefited from more stakeholder participation. She believed that representatives, elected by stakeholder coalitions, should have had the power to vote in the negotiations. While this would have given local stakeholders and municipalities a voice at the table, a method by which stakeholders would elect representatives was not provided. Mr. McLain provided a short answer, stating that state acceptance of federal proposals for mediating an end to impasses could have kept the ACF Compacts alive.

The general theme of these recommendations is that the stakeholders wanted their interests to have a wider role. Mr. Thomas wanted a more interactive role by the federal agencies while local stakeholders called for access to the negotiating table, as well as for the states to accept federal help and oversight for resolving impasses. Stakeholders wanted more democratization of the ACF Compacts both up to the federal level and

down to the local level, as well as a more orderly, transparent, and scientifically informed negotiations.

Participant	Recommendations
Feldman	1) Agree on decision-making framework, 2) negotiate an allocation formula, and 3) more transparent negotiations with greater coverage of positions and issues
Kundell	UQ
Appel	UQ
Thomas	1) Vote at federal level, 2) 3 <sup>rd</sup> party scientific study, and 3) further comprehensive studies during and after settlement
Howett	More stakeholder participation.
Adams	TO
Sides	UQ
McLain	State acceptance of federal offers to mediate an end to impasses.

Table 9: Do you believe the Supreme Court of the United States (SCOTUS) will be a better forum for resolution of the water conflict, and will the SCOTUS better address local stakeholder and management issues?

This question received five responses, the balance of them negative, with no unambiguous positive responses. Due to time constraints Mr. Thomas, Ms. Howett, and Ms. Adams did not have a chance to be asked. The responses by Dr. Feldman, Dr. Kundell, and Dr. Appel are negative, while Ms. Sides and Mr. McLain present pros and cons of a Supreme Court settlement.

Dr. Kundell provides a good starting point for the objections by stating that the state and federal agencies are better suited for resolution. Furthermore, the court appointed Water Master would benefit from the work done by the states. Dr. Appel and Dr. Feldman provided complementary responses. Dr. Appel mentioned that the allocation would be performed by the Water Master and that the outcome would depend very heavily upon the level of participation possible by interests, briefs filed, and quality of the advocacy. Such an undertaking would be prohibitively expensive for many



interests and thus would be off limits to many of the stakeholders. Once a court ruling was made, Dr. Feldman suggests it would be very difficult to revisit, amend, change, or adjust. The result of a poor ruling could have profoundly negative circumstances on stakeholders and states alike. Yet, Georgia and particularly Florida seem unfazed by the prospect of litigation, potentially due to the influence that North Georgia and Florida could exert at the federal level.

These responses mesh well with the response of Ms. Sides, who also believed that the Supreme Court would be too far away, both place and scale-wise, from the stakeholders to result in an amenable settlement. Likewise, a strength of the Supreme Court is that it would also be removed from the state-level politics which held back a settlement. This nicely parallels the two key calls of the riverkeeper organizations, which called for more oversight and incentives from the federal level, but also demanded more inclusion of local voices. Mr. McLain asserted that while a good ruling would be better than a bad ACF Compact settlement, it would not be better than a good ACF Compact settlement. He also defined a good resolution to be “a negotiated equitable distribution of the freshwater flows of the ACF basin based on a scientific assessment of the flow regime (quantity, frequency, and duration) necessary to maintain the ecological health and productivity of the system” (McLain, 2005 - interview).

Participant	Yes/No	How and Why
Feldman	No	Rulings are hard to revisit, amend, change, or adjust
Kundell	No	State and federal agencies better suited, their work would benefit court appointed Water Master
Appel	No	Actual allocation performed by court appointed Water Master
Thomas	TO	
Howett	TO	
Adams	TO	
Sides	Both	Pros and cons due to change in scale.
McLain	Both	Better than bad agreement, but would not be better than a good resolution

Table 10: What do you think Congress would do if given authority by the SCOTUS to resolve the water war?

All five participants asked provided their thoughts on the question. Three participants were not asked due to time constraints. There were a variety of responses, most citing how people outside of the watershed could decide the issue without taking into account the needs and wants of people inside the watershed.

Dr. Appel said that Congress can allocate water in an interstate watershed without the permission of the Supreme Court. Yet Congress has chosen not to, therefore there must be several reasons that it would not. The first reason is provided by Dr. Feldman, who states that there is nothing politically advantageous for Congress should it decide to allocated water. Congress would likely throw such an issue back to the states and would hope that the states could work out the issue without Congressional intervention.

Dr. Kundell states that if Congress did decide to attempt an allocation agreement, Florida would have an advantage due to its larger population and, thus greater representation in Congress. Most of the representatives from Florida represent areas far removed from the watershed, which lends support to Ms. Sides' fears that the prospect for an agreement would become worse. Most local stakeholders are not comfortable with the fate of the watershed being determined by those living outside of the watershed or the states in which the watershed lies. Another factor to consider is that House Districts are hardly contiguous with, and frequently arbitrary compared to, the watershed and regional boundaries which help define resource conflicts.

Mr. McLain provided further crucial details of Congress being a poor avenue for resolution, citing the current political climate. He provided three items that would heavily influence any attempt at resolution via Congress. First, votes would be heavily influenced by "money and political power" (McLain, 2005 - interview). Two, President Bush is the brother of Governor Bush of Florida and both Governor Bush and former Speaker of the House Newt Gingrich have been touted as presidential hopefuls within the next ten years, making their involvement a possible issue. Three, Republican voting positions could be heavily influenced by the existing strong ideological camps on social and foreign policy within the party, rather than by issues within the states or districts. Also, it is unlikely the Democrats, searching for an electoral rebound after 2004, would

want to split their southern delegations over this issue. Newt Gringrich, after the 1994 Republican win he helped spearhead, could have resolved the issue in Congress then, but instead backed the drafting of the ACF Compacts. Neither party wishes to divide their ranks over what is viewed as a local or state issue.

In general no one, including Congress, is excited with the idea of Congress allocating water. While it has been difficult for stakeholders inside the geographical reach of the water war to make steps towards settlement, none of the participants seeks to invite resolution by those who would vote in their own interests without any interest or needs situated inside the watershed. Regardless, Congress has already voted to let the states initiate the ACF Compacts.

Participant	What would Congress do?
Feldman	Throw it back to the states
Kundell	Using sizes of Congressional delegations, GA would have a harder time getting a favorable resolution
Appel	Congress can allocate water without Court permission
Thomas	TO
Howett	TO
Adams	TO
Sides	Worse resolution, as conflict would be determined outside of the watershed and respective states
McLain	Current political climate could be a wild card

Table 11: How do you think the states and stakeholders in the water conflict would respond if the water conflict was sent, via Congress, back to the states and the Interstate Compact Process for resolution?

This question was asked to the three academics and similar answers were received. The consensus is that without hard and firm deadlines and guidelines provided by Congress, no progress would be made towards settlement. Also, Congress had already made a decision regarding the water war by authorizing the ACF Compacts along with

the state legislatures. Following the interview of Dr. Appel, this question was dropped from the prospective question list.

Participants	What would the states do?
Feldman	No difference, unless Congress imposed hard and firm guidelines
Kundell	Without forcing, no progress
Appel	Already done via ACF Compacts
Thomas	TO
Howett	NA
Adams	NA
Sides	NA
McLain	NA

Table 12: What within established legal precedent, procedures, and institutions may be holding back a solution to the water conflict?

This question was posed to six of the participants and received five responses. Most responses included comments regarding the need for more adequate accounting of ecological needs of water, the need to implement NEPA, and questions regarding the sustainability of Atlanta's growth. There were also some responses which questioned Eastern Water Law and the possibility of privatization as well.

Dr. Appel mentioned that there were several different forums for possible litigation. The most likely forum is the Federal District Court in Alabama. Should that court make a ruling, there is a high probability it would be appealed to the Supreme Court.

Both Mr. McLain and Dr. Feldman expressed frustration with the status of Riparian or Eastern Water Law. Dr. Feldman thinks that the law should be revised so as to allow innovation on water-marketing. Mr. McLain would rather the law be clarified, particularly as it applies to the rights of those downstream.

Dr. Feldman, Dr. Kundell, and Ms. Howett brought up environmental and related management concerns. Ms. Howett believed that NEPA should have been fully implemented, which could possibly serve as a vehicle to more fully account for the

ecological needs of water which Dr. Feldman views as crucial. Dr. Kundell mentioned several areas needing to be addressed as well. The first is to explore how irrigation water usage in the Flint River Basin affects flow, a task which could be accomplished by integrating agriculture into Georgia's state water management program. Second, Alabama needs to increase the management capacity of its water management agencies. Third, the different institutional interests of each state need to be considered. Fourth, the impact of the Endangered Species Act on the water war needs to be assessed.

Ms. Howett and Mr. McLain also attacked the idea that Atlanta's growth can be sustainable indefinitely. No details were presented on how this idea could be questioned, but it shows the fear of downstream interests that a growing Atlanta would come at the cost of stagnation or poverty in the hinterlands.

Participant	Problems with Decision-making Infrastructure
Feldman	Riparian law inhibits innovation on water markets, insufficient accounting of ecological needs for water
Kundell	Numerous considerations in political and state institutions
Appel	Many different litigation forums, settlement attempt by federal district court in AL could be appealed to SCOTUS
Thomas	TO
Howett	Political maneuvering, Atlanta's growth disregarding other regions, non-use of NEPA, lack of scientific studies
Adams	TO
Sides	UQ
McLain	Complete misunderstanding of Eastern Water Law and the belief that Atlanta's growth is indefinitely sustainable

Table 13: Do you believe water resources should be privatized or be managed from a public authority? If privatized, to whom?

This question was posed to six participants, three of whom do not support privatization, one who does, and one who entertains the possibility. Mr. Thomas did not answer the question, citing that he did not feel comfortable doing so. Only Dr. Appel

mentioned to whom water might be privatized while those against privatization had no need to answer to whom water might be privatized.

Dr. Appel gives a “yes” answer, but mentioned he only supports “certain aspects of privatization [that] could be effective to ensure economically sound water distribution” (Appel, 2005 - interview). He does not seem to support a total privatization of water, but does support using economic incentives to aid in efficient use of water. Dr. Appel believes that if water is privatized, it should be privatized to very small, local-scale permit holders, such as households. He further stated “we have privatized water in our own homes. If my neighbor were to tap into water I pay to receive from Athens-Clarke County and use it to water his or her lawn, I could certainly sue him or her for unlawfully taking my property” (Appel, 2005 - interview). In the example given, Dr. Appel still invokes public control of water.

Dr. Feldman lends some support to privatization. Should privatization mean “allowing the existence of water markets as a means of steering water usage to high-valued applications, as is done in the West, then this could be a good thing” (Feldman, 2004 - interview). Based upon the definition he provides for privatization, it is unlikely he would support full privatization. He does mention that riparian law “militates against markets because there are no real designated water quantities that belong to anyone” (Feldman, 2004 - interview).

Dr. Kundell lends potential support to using economic incentives for more efficient water management, but sides against privatization. He states “you have to be a public authority to manage water. Both Western and Eastern states are moving in this direction”(Kundell, 2005 - interview). Dr. Kundell’s response is interpreted as a negative response, as he thinks that it is public, and not private, managers that should be manipulating economic incentives.

Ms. Sides and Mr. McLain, representing ecological interests and downstream stakeholders, strongly opposed privatization. Ms. Sides states “if water resources are privatized, poor people will not be able to afford clean, healthy water” (Sides, 2005 - interview). She further asserts “privatized water resources would not consider the ecological needs of the rivers. Rivers and water are a public trust resource” (Sides, 2005 - interview). Mr. McLain also states that water “goes to the highest bidder without regard

to irreparable harm to the ecosystem we depend on for life”, closely paralleling the response of Ms. Sides (McLain, 2005 - interview). More forcefully, he further says “Absolutely not. Wait till that bottled water you buy in the grocery store goes from \$2 per bottle to \$50 per. Let market forces operate?” (McLain, 2005 - interview).

Although Mr. McLain’s statement is somewhat hyperbolic, it does serve to show the trepidation that Atlanta, under a scheme of privatization, could buy up significant allotments of the ACF and systematically starve the downstream regions. The participants opposing privatization oppose large-scale privatization that would allow national and international actors to outbid local actors. Likewise those participants considering privatization or even the use of economic incentives view doing so on a local level, to small permit holders, and with the final regulative authority in the hands of the public sector. Any privatization that does occur in the ACF will be very unpopular and ineffective if it ignores local stakeholders and ecological concerns.

Participants	Yes/No	If yes, to whom?
Feldman	Possibly	UQ
Kundell	No	NA
Appel	“yes”	Individual permit holders
Thomas	UQ	UQ
Howett	TO	TO
Adams	TO	TO
Sides	No	NA
McLain	No	NA

Table 14: If public, should the U.S., individual states, or counties/municipalities be the primary manager? How should power be shared?

Six participants responded to this question. All answers supported the idea that all levels of government should participate in water management. Some participants offered suggestions of how power could be better shared, as well as anticipated the next question regarding watershed level authorities.

Both Dr. Feldman and Mr. Thomas mentioned that the federal level of power needs to be improved. Mr. Thomas mentioned that more interaction and participation by the federal government is necessary. Dr. Feldman would like to see the federal government hold states and municipal areas accountable to common goals and keep them from bidding against one another.

Both Dr. Appel and Mr. McLain mention the idea of multi-state watershed level authorities for dispute resolution and power sharing. Ms. Sides thinks this will be an area of debate and is expanded upon in the next question.

Participant	Who?	Power Sharing?
Feldman	All levels	Federal government needs to hold states and communities accountable, rather than bidding against each other
Kundell	Not sure	UQ
Appel	All levels	Supportive of a watershed level authority
Thomas	All levels	Desires more interaction and participation by the federal government
Howett	TO	TO
Adams	TO	TO
Sides	All levels	Noncommittal answer, does foresee debate in next decades
McLain	All levels	Power sharing between states, anticipates next question regarding multi-state compacts

Table 15: Would a better solution be to create a special watershed-scale management authority and who would be the members and how would it operate?

Most participants support the creation of a watershed-level authority. Each has their own vision of how such an authority would work. Some participants also offer conditions which would be necessary for adequate functioning of the authority.

Dr. Appel and Ms. Adams provide short answers, which are only tentatively supportive. Dr. Appel would only be supportive of slight modifications to the Interstate Compacts and might not support the creation of a full authority. Ms. Adams thinks that a



watershed-level body is novel, but warns that a lot of the dynamics of the water war could change and new problems could arise. These potential problems are not specified.

Dr. Kundell is potentially supportive, but did not provide a clear answer. He did mention several details. The first is that watershed or river basin councils already exist and deal with some local land-use planning and non-point source management. Second, the ACF watershed crosses several physiographic boundaries. Third, surface and ground water interaction needs to be considered in Southwest Georgia and thus a management body would need to be able to exert authority over groundwater as well. Finally, a management body would also require the necessary legal, financial, and managerial capacity to be effective.

Dr. Feldman, Ms. Sides, and Mr. McLain support the creation of a watershed-level authority, but each specify some necessary conditions. Mr. McLain mentions that precedent already exists in the model of the Delaware River Basin Authority, but concedes it is not a perfect model. He also mentions that such a body would require a scientific advisory component and would need to be equitably funded by a user tax. Ms. Sides further states that such a body would need to involve all the polities encompassed by the watershed and that the level of power should be federal if the watershed crosses state boundaries. Finally, Dr. Feldman provides that stakeholders should be elected to represent NGOs and municipalities and should have a place at the negotiating table. Dr. Feldman also believes in implementing a public visioning process to articulate goals and objectives for the watershed level authority.

Participant	Yes/No	How?
Feldman	Yes	Local and stakeholder reps, public visioning process
Kundell	Possibly	Mentions several existing infrastructural details
Appel	Weak Yes	Only slight modifications to Interstate Compacts
Thomas	TO	TO
Howett	TO	TO
Adams	Possibly	Novel idea, but could cause new problems to arise
Sides	Yes	Sets a number of necessary conditions
McLain	Yes	Precedent already exists, also sets some conditions

Table 16: Which level of government is currently most capable of managing ACF water resources and should management capability be developed among the other levels of government?

Four of the eight participants provided responses to the question. Most participants were critical of the current management capability, regardless of which level of government they thought had the most capability. All responses also supported the need to develop management capacity at all levels.

Dr. Kundell mentioned that the federal government is mandated by the U.S. Constitution to provide the necessary authority and capacity for management, but states that the Constitution views states as semi-sovereign and that a lot of power is vested there. On the other hand, Mr. McLain mentioned that “water policy and planning being vested in the office of each governor, subject to the ratification by the state legislature based on a common, scientifically established distribution formula for the surface waters of the ACF Basin” (McLain, 2005 - interview). Dr. Feldman is critical of all levels, stating “none is doing really well right now, although state efforts at comprehensive planning and demand-side management are making the best headway in all three states” (Feldman, 2004 – interview).

Mr. McLain provides a brief response of capacity-building, stating that there should be a “ubiquitous, coordinated function of all levels of government” (McLain, 2005 - interview). Dr. Kundell adds to this, stating that responsibilities need to be shared at all levels and that legal, financial, and managerial capacity is needed at all levels. Dr. Appel also provided that directives are needed from a more assertive federal government to keep the states accountable and make them include sub-state and local areas in decision-making. The end result of this question is that the participants believe that greater responsibility and capacity development is needed at all levels.

Participant	Current Capability	Develop Capabilities
Feldman	Neither	UQ
Kundell	Federal	Shared responsibilities. Capacity building needed at all levels
Appel	All levels	States must involve sub-state and local areas, more

		assertive federal government needed
Thomas	TO	TO
Howett	TO	TO
Adams	TO	TO
Sides	UQ	UQ
McLain	States	Capacity-building at all levels

Table 17: What role do you think local social capital and institution-building plays in the water war?

Many of the participants did not answer or understand the question. Mr. Thomas was the only participant who assessed the role of influence in Georgia. He stated that Southwest Georgia exerted influence against Atlanta and divided the state of Georgia. He also stated that more work needed to be completed prior to the Compacts, namely completion of scientifically-based formulas.

The other responses brought up a number of considerations. The first, by Dr. Kundell, is that local areas need to envision how they fit into larger scales so that state and federal authorities can understand their interests. Dr. Feldman mentioned that he would like to see local areas elect representatives so that local social capital can be more efficiently wielded. He also states that a public visioning process is needed to articulate goals and objectives.

Participant	Roles
Feldman	NA
Kundell	Local interests need to envision how they fit into the larger state and federal frames so their interests can be understood
Appel	UQ
Thomas	SW GA stakeholders exerted influence versus Atlanta and north GA, more needed to be accomplished before an agreement was attempted
Howett	TO

Adams	TO
Sides	UQ
McLain	UQ

Table 18: Would an investment in more effort in local social capital as it pertains to local resource management yield a more just or equitable solution to the water conflict? How?

This question received responses from three participants. Dr. Feldman believed that such an investment may achieve some results, but also stated that it would require an adequate investment of resources to accomplish. Dr. Kundell did not provide a “yes” or “no” answer and looked back on the ACF Compacts. He stated that not enough effort might have been undertaken to include or inform local interests. He further mentioned that some local stakeholders might have abstained because they did not agree with certain courses of action by the states. Mr. Thomas did not answer the question directly, but did provide a brief procedural outline for adaptive management of water resources. The first step would be to complete the necessary scientific work. This would be followed by making an allocation agreement. Third, the status of the agreement and its impact on the watershed would be closely monitored. Finally, as conditions changed, the agreement could be revised or renegotiated. From the limited responses it is not clear that increased investment would achieve the desired results, and that more capacity-building and incentives would need to be provided if any attempt were to be successful.

Participant	Yes/No	How?
Feldman	Possibly	Would require adequate resources
Kundell	Not sure	Despite considerable effort, not enough might have been done to include local stakeholders
Appel	UQ	UQ
Thomas	Different answer	Listed several ideas for adaptive management
Howett	TO	TO
Adams	TO	TO
Sides	UQ	UQ

McLain	UQ	UQ
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Table 19: What are the advantages and drawbacks of using democratic and representative bodies and civil society to resolve resource management conflicts?

All participants who responded to the question agreed that democratic methods are the best of all options. Several participants did invoke problems of inefficiency and irrationality. Some participants also mentioned how to make democratic methods more effective.

Dr. Feldman specified that democratic methods can be slow and inefficient in the short-run, but this is offset by longer-term endurance of this method against conflict. Dr. Appel provided a similar response, but held that even democratic methods are not always rational. He mentions several small problems with water management in Georgia. One example is that agricultural permits for water cannot be revoked and have only recently begun to be measured. A more efficient scheme would have measured the water withdrawals. Golf courses are also considered an agricultural use, despite the fact that green fees could be raised to pay for water, golf courses do not produce edible or cash crops, and golf courses could use xeriscaping, which is not water intensive. Another caveat is provided by Ms. Sides, who states that representatives do not always listen or act on the needs of their stakeholders. Yet Ms. Sides is a strong supporter of democratic methods, citing that such methods can avoid conflict and use of force and that by using representatives, not every stakeholder needs to be present to represent him or herself.

Dr. Kundell, Mr. Thomas, and Mr. McLain all mentioned several ways by which democratic methods can work better. Mr. McLain stated that short-term goals will override long-term needs if such processes are not based on sound science and a fundamental principle of “do no harm” (McLain, 2005 - interview). Relating to the need for more sound science, Mr. Thomas states he would like to see a more interactive and adaptive water management scheme employ more input from scientists and engineers as well as local knowledge from stakeholders and guidance by the federal government. Dr. Kundell also specified their needs to be a division of labor within management agencies. He believes that representative bodies should set policy while agencies should perform tasks requiring technical expertise. When policy-makers attempt technical tasks or

agencies attempt to set policy, the process often becomes inefficient and problems will arise. In general, many of these recommendations could apply well beyond water management to the functioning of any democratic body engaged in any aspect of management.

Participant	Answer
Feldman	No drawbacks, except for slowness and inefficiency, best of all options
Kundell	Representative bodies should set policy while agencies deal with technical tasks
Appel	Democratic and representatives bodies are not always rational
Thomas	Supports more interactive and adaptive approaches to water management
Howett	TO
Adams	TO
Sides	Best of all options, but representatives donot always have stakeholder interests at heart
McLain	Will need to be based on sound science and a fundamental principle of “do no harm”

The last two questions were only used as methods to obtain further sources for data and do not factor into data analysis. The next part of the research project is to answer the research question using the information obtained from the interviews and documents. In this section, resource management theory and the analyzed data will be used to construct the scale-based narrative of the Tri-State Water War.

## CHAPTER 7: DISCUSSION OF THE RESULTS

### Discussion Outline

The first section of the discussion will explore the failure of the ACF Compact negotiations to achieve a satisfactory allocation formula. The second will look at the federal options for solving the conflict and the promises and problems of litigation at the federal level. The third will examine the support and opposition to privatization as a method for water management. The final section will look at alternative methods of water management, some of which could take the form of a more democratized compact.

### The Failure of the ACF Compact Negotiations

The ACF Compact failed to achieve its objective, and it appears that compact negotiations will not be revived. The failure of the ACF Compact is due to the termination of the ACF Compact by the states before a satisfactory water allocation agreement or framework for long-term water management could be reached (Feldman, 2004 - interview; Kundell, 2005 - interview; Sides, 2005 - interview).

Most research participants believed that the ACF Compact failed to achieve its objectives, but some provided caveats. The Executive Director of ABARK, Mr. McLain, thought the Compact was a noble attempt at resolution, despite failure (McLain, 2005 - interview). Dr. Kundell of CVIOG thought problems with the Compact may not be the reason why the water conflict remains unresolved (Kundell, 2005 - interview). Dr. Appel, professor of environmental law at the University of Georgia, dissented by stating that the compacts were successful insofar that public involvement was secured (Appel, 2005 - interview). Regardless of the noble try at negotiations or the securing of public involvement, the ACF Compact has failed to achieve an allocation formula or water management plan, and thus the reasons for this failure must be investigated.

Examining the failure of the Compact will be broken into several parts. The first part will examine flaws within the structure of the ACF Compact. The second part will examine the failure to procure objective scientific knowledge and the failure to follow the guidelines in the National Environmental Policy Act (NEPA). The third part will examine the problems of public participation and will end with a critique of actions by the states and bad faith attempts by Georgia to obtain water.

### Structural Problems in the ACF Compact

Dr. Kundell of the CVIOG asserts that a successful compact would have been able to provide an agreement between the states on water allocation, as well as have built a framework for longer term dispute resolution (Kundell, 2005 - interview). The first step is to examine flaws within the structure of the compact. One of those flaws lies in the direction and overall formula of the ACF Compact.

Dr. Feldman, in a more neutral position outside of the ACF watershed and the three states, suggests the ACF Compact may have been successful had it developed three goals to accomplish. The first would have been for the three states drafting the compact language to agree on a decision-making framework for arriving at an allocation agreement (Feldman, 2004 - interview). The second would then be to proceed with negotiations regarding the allocation of water and the future of ACF watershed water management (Feldman, 2004 - interview; Kundell, 2005 - interview). The third would have been to make the negotiations more transparent, with greater coverage of the states positions and issues involved in water management (Feldman, 2004 - interview).

Mr. Thomas, the former Federal Commissioner of the ACF Compact during the Clinton Administration, suggested that the ACF Compact stymied input from the federal level and did not allow for the Federal Commissioner to vote in the compact despite the power of the Federal Commissioner to scuttle any allocation agreement that would be in violation of federal law (Thomas, 2005 - interview). Mr. Thomas believed that by allowing the Federal Commissioner a vote, the Federal Commissioner could make sure that prospective agreements complied with federal law from the outset of negotiations. Another missed opportunity potentially caused by the Federal Commissioner not having a vote lay in the many offers by the federal government to resolve impasses between the states that were rebuffed by the states (McLain, 2005 - interview; Thomas, 2005 - interview).

### Lack of Scientific Knowledge and the Failure to Implement NEPA

The ACF Compact also lacked many incentives necessary to help the states work past impasses (Howett, 2005 - interview). Such incentives could come from attempts by



the federal government to help resolve impasses had such offers been accepted (McLain, 2005 - interview; Thomas, 2005 - interview). Another problem with the ACF Compact is that there were no means by which to produce transparent use-formulas which could have been the basis for an allocation agreement (Howett, 2005 - interview). Such transparency would have required the completion of scientific studies, possibly in the guise of the 15 million dollar U.S. Army Corps of Engineers comprehensive study of the watershed or the implementation of the NEPA environmental impact statements. These studies were never completed to the extent necessary for the creation of transparent allocation formulas.

A particularly important component of the failure of the ACF Compact happened to lay in the lack of objective scientific data available on which to base an allocation agreement. Mr. Thomas, the former Federal Commissioner, made clear the need for the completion of studies of the watershed and water usage patterns so there would be solid data available for an allocation formula (Thomas, 2005 - interview). Ideally, such studies would have been carried out by an objective, disinterested third-party, with the results available to the state negotiators, local and regional stakeholders, and the Federal Commissioner (Thomas, 2005 - interview). Such studies would also be useful for the implementation of an allocation agreement and could further be carried out as needed to monitor the status of an agreement so changes could be made should the factors affecting water management change. Such completed scientific studies could have also been a way to justify allocation proposals, eliminating the suspicion existing between the states. Particularly glaring is the incomplete research regarding water quality and riparian ecosystems in the Atlanta metropolitan area of the Chattahoochee River and the Flint River, where the ACF watershed interacts with aquifers in South Georgia (Adams, 2005 - interview; Sides, 2005 - interview). How important the completion of an objective scientific study is for the riverkeeper coalitions who represent most of the local and regional stakeholders that are not in the state governments can be summed up in the statement “a good resolution” would require a “negotiated equitable distribution of the freshwater flows of the ACF basin based upon a scientific assessment of the flow regime (quantity, frequency, and duration) necessary to maintain the ecological health and productivity of the system” (McLain, 2005 - interview).

Many impasses in the negotiation arose from the lack of impartial scientific knowledge available to negotiators, stakeholders, and officials involved in the conflict. One of the provisions that served to stop expensive litigation on the 1989 Alabama v. U.S. Army Corps of Engineers case was the requirement for each state to contribute to a fifteen million dollar comprehensive study of current and future water consumption. This study was not finished by the time allocation negotiations began in the ACF Compacts. As a result, the negotiations over allocation proposals suffered from the incomplete status of scientific research which could have served to break impasses caused by suspicion between the states over how each state's allocation proposal was justified.

The incomplete status of scientific studies became a major complaint the riverkeeper coalitions had in regards to the continued negotiation impasses and bad faith lawsuits pursued by the states. In seeking a remedy to this problem during the renewed litigation, the riverkeeper coalitions sought legal counsel from the Southern Environmental Law Center, which filed an Amicus Curiae brief stating the need to carry out NEPA-mandated environmental impact statements regarding how a different water withdrawal regime would affect the environmental health of the watershed under new allocation agreements or rulings. The neglect to carry out the NEPA-mandated environmental impact statements caused problems with which states and stakeholders could claim water stored in Lake Lanier (Southern Federal Power Customers, Inc. v Caldera et al, Amicus Curiae). The National Environmental Policy Act mandates that a "hard look" be required in all legal and management decisions that affect the natural environment (Howett, 2005; SFPC, Inc. v Caldera et al, Amicus Curiae). The provisions of NEPA were never carried out, and this failure to carry out NEPA remained one of the strongest claims-making tools wielded by the stakeholders representing ecological interests. Thus, the neglect of NEPA, combined with the failure to complete objective scientific studies, led to a lack of adequate data on which to base allocation proposals. The end result was heightened suspicion between the states, which created impasses in the compact negotiations.

The studies alone, had they been completed, may not have eliminated suspicion between the states regarding allocation formulas. Mutual recrimination and bad faith aside, the states could still harbor doubts about completed studies for reasons which the

literature of political ecology can be informative. These reasons arise from the problems presented by what objective scientific literature is and how it is defined. “There can be no viewpoint except from a viewpoint” asserts a key detail within political ecology that objectivity in its impartial ideal is not possible and that objectivity itself is itself an ideology that can benefit certain political actors over others (Soderbaum, 1999: 162, quoting Myrdal, 1978). Political ecologists go even further to assert that ideology and values are always present in any discussion of any issue connected to ecology, including natural resource management (Soderbaum, 1999). Thus, the possibility exists that scientific data could be biased or perceived as such, and the interpretations of scientific findings by stakeholders and the states would be biased and could potentially derail any allocation agreement based on scientific knowledge. Allocation proposals could be undermined and suspicion between the states introduced into the negotiations by questioning the scientific data.

There are five possibilities which remain as a result of scientific studies not being carried out. First, the framework of political ecology is flawed and there are unquestionably objective facts and knowledge which stakeholders can use for management. While there are no participants who spoke against political ecology as being a poor viewpoint with which to examine resource struggles, most participants do believe that objective scientific data would have contributed to a greater chance of success for the ACF Compact (Adams, 2005 - interview; Howett, 2005 - interview; Kundell, 2005 - interview; McLain, 2005 - interview; Sides, 2005 - interview; Thomas, 2005 - interview). Second, political ecology is not flawed and that a successful scientific study may not at all affect the completion of a successful compact which is a political rather than a scientific matter. Testing these two propositions may not be possible because there are many other reasons why a compact process could fail or a successfully completed compact agreement could be based on inaccurate scientific knowledge.

The third point concerns the failure to complete scientific studies mandated by a federal court ruling and also covered by NEPA. This could mean that a successful agreement between the states could still be overruled by the Federal Commissioner or by a federal court for failure to comply with court rulings and law at the federal level. This point is also not testable for two reasons. The first is that the Federal Commissioners of

both the Clinton and Bush administrations never had a chance to test a successful compact. The second is that if there was a successful agreement, Mr. Thomas did not directly indicate if he would have used his power to contest a successful agreement that lacked sufficient scientific background but was still in compliance with federal law. It is possible that had the Federal Commissioner had the voting power that would have given the federal party an equal voice in crafting an allocation formula that the scientific studies may have received enough attention in order to be completed. Finally, the lack of scientific study added to problems with stakeholder representation and claims-making as well as the uncompromising positions of the states. Had the scientific studies been adequately completed, the findings could have provided a basis for compromise between the states as well as allowed NGOs, local governments, and other stakeholders to frame their arguments and claims more accurately. With the states willing to compromise due to reasonably objective scientific information and with the non-voting stakeholders able to make their claims with more accurate information, ACF Compact hearings could have been more inclusive with more input from the local governments and NGOs included into the negotiation process.

Given that these last two points deal with political processes and claims-making, a few points on political ecology are needed. The first is that political ecology is highly-scale sensitive and combines ecological concerns with political economy (Greenberg & Park, 1994; M'Gonigle, 1999; Peterson, 2000). Political ecology also examines concepts of relative power as well and demands that cultural, ideological, political, and natural aspects be addressed when confronting environmental issues and resource management (Greenberg & Park, 1994; Bryant, 1998). The questions of the water management in the ACF watershed involve ideologies, values, and other subjective beliefs. As a result, it is insufficient to conclude that lack of scientific knowledge is the causal factor in the failure of negotiations. The lack of scientific knowledge must be addressed as a factor which negatively influenced the political problems already existing with the ACF Compact's language, which included the attempts by the state to block public participation, bad faith lawsuits, and the refusal by the states to accept federal help in ending impasses to the negotiations.

The negotiation process was marked by claims that involved manipulation of science, geography, law, and appeals to authority or the common good of society to achieve desirable results. The first claims were by stakeholders constructing responses to the initial circumstances of the conflict, such as trends in water use and supply, accusations of harm potentially or actually done, and filing of initial litigation. The next step consisted of attacking other interpretations and rival solutions while defending theirs. The final step is that the decisions made by various forms of authority create new realities which set the stage for the next conflict as these realities of economic growth, population growth, and climate change evolve. Another potential for conflict arises when new interpretations of the new realities come to challenge the established interpretations, of which case appeals and changes in governments and stakeholders are examples (Kurtz, 2002).

This is the process in which federal agencies and courts, state officials and appointed negotiators, and local governments and stakeholders are all involved when trying to decide, articulate, and acquire how much water they want for their needs and wants and how such water will be managed. Likewise, examining how well the actors engaged in this process were represented brings the discussion to the third problem contributing to the failure of the ACF Compact. On the local level there are a larger number of these stakeholders performing these tasks which outnumber, but do not necessarily overpower, the state-and federal-level authorities. While the participant responses indicate that state and federal authority and guidance are necessary, they also stated that these authorities, particularly the states, failed to achieve the full inclusion of the local-level governments, NGOs, and other stakeholders (Feldman, 2004 - interview; Adams, 2005 - interview; Howett, 2005 - interview; Kundell, 2005 - interview; McLain, 2005 - interview; Sides, 2005 - interview; Thomas, 2005 - interview).

#### Problems of Public Participation

The riverkeeper organizations were particularly critical of how local voices and knowledge were neglected and what should have been done to address their input. One area of concern lies with how the states treated the smaller watershed areas within the ACF. One participant alleged that the Flint River basin was mostly ignored throughout

the negotiations (Sides, 2005 - interview). This response was further corroborated by another pointing to inadequate knowledge of natural water transfer between Flint River surface waters and the aquifers of South Georgia (Appel, 2005 - interview). This water transfer presents a local and regional challenge that Georgia has seemed to gloss over in negotiations. This water transfer problem has its origins in farmers (being the primary water-users south of the Atlanta metro) withdrawing water from aquifers, thereby lowering the surface water level due to the vacuum created by water withdrawal from the aquifers. If an allocation proposal does not account for the aquifer-surface water relationship, the allocation agreement could ultimately fail due to this missing information and cause significant harm to the downstream ecosystems. This is due to what would be too much water withdrawal at the headwaters of the Flint (which lie in the southernmost portion of the Atlanta Metropolitan Area) in relation to aquifer withdrawals which further lower the surface water available for the Flint River, Lake Seminole (reservoir shared by all three states into which the Chattahoochee and Flint drain), and the Apalachicola River. If Georgia was to incorporate agricultural water usage into its proposals and account for aquifer withdrawals, the result could be less water availability for Atlanta, which could prove quite unsettling to the most powerful political interests in the state, whose fortunes depend partly on the concentration of wealth and power in Atlanta (Appel, 2005 - interview).

Further worsening this situation is that agricultural water-use and permits are not included in the state's water management infrastructure and that these permits cannot be revoked and even went unmeasured for many years (Appel, 2005 - interview). Furthermore, even golf courses, which have proliferated with the growing concentration of wealth and power in Atlanta, are considered an agricultural use of water despite the fact that golf courses do not produce cash or subsistence crops and can use xeriscaping to significantly reduce water requirements (Appel, 2005 - interview). Thus the glossing over by Georgia could be due to lack of scientific knowledge, a more deliberate effort to garner more water for stakeholders who benefit from more water being available to Atlanta under an allocation agreement, or a lack of coordination between state agencies in Georgia. Another problem arose in the lack of knowledge addressing questions of watershed health and water quality that the Upper Chattahoochee Riverkeeper has of the

section of the Chattahoochee River between Buford Dam and Franklin, GA, a problem further exacerbated by lack of scientific knowledge (Adams, 2005 - interview). Further problems also arose in Alabama's water management programs being underdeveloped in comparison to Georgia or Florida (Appel, 2005 - interview). Taking these problems all into account shows that lack of knowledge, as well as non-coordination between the state agencies, hurt the claims-making abilities of stakeholders and infuriated the riverkeeper organizations due to the inadequate accounting of water by the states.

Further complaints show flaws within the ACF Compact which indicate that the structure was too restrictive for public input (Feldman, 2004 - interview; Adams, 2005 - interview; Howett, 2005 - interview). One respondent believed the best way to eliminate this problem would have been to give representatives, elected by stakeholder coalitions, the right to vote on allocation proposals (Howett, 2005 - interview). Dr. Feldman who researches water management issues at the University of Tennessee, also mentioned that local governments were also denied a voice at the negotiating table, which could only participate insofar as informing the state negotiators of their current and projected water needs (Feldman, 2004 - interview).

Further implicated in the stifled public participation are the state governments themselves. The ACF Compact language required the states to hold regular public hearings at each phase of the negotiations to listen to concerns by stakeholders and to solicit information. In Georgia these hearings took the form of the Georgia Governor Stakeholders group, but they consisted primarily of one-way communication of the Governor's staff and the negotiator telling those assembled what proposals they were putting to the table and less about what the stakeholders might want to see in the proposals (Adams, 2005 - interview). The one-way hearings conducted by Georgia may have left a lot to be desired in terms of the state's acceptance of public input, but the situation in Florida was worse. In Florida, despite the ACF Compact language and state 'sunshine' laws mandating public input and transparency, the state government decided to forego public hearings as "negotiating in the sunshine was deemed too difficult by each state's negotiators" (McLain, 2005 - interview). This decision to hold the ACF Compact negotiations in a non-transparent venue was a violation of Florida state law. Furthermore, Florida attempted to forego public hearings mandated by the ACF

Compact. This decision infuriated ABARK, and the stakeholders in ABARK applied persistent political pressure and media exposure until Florida caved in and held the promised public hearings regarding proposed allocation formulas (McLain, 2005 - interview). Still other respondents considered the states themselves responsible for the lack of public input, stating that the local governments were left out of the negotiating process except for having a chance to state their water needs and that most forums were instances where stakeholders listened to state proposals rather than provided input (Feldman, 2004 - interview; Adams, 2005 - interview; Appel, 2005 interview). Thus there is a pattern, alleged by the riverkeeper executive and policy directors, their legal counsel, and Dr. Feldman (whose research specialty lies in public administration of water by stakeholder organizations) of the states attempting to curtail public input on the negotiation process or of making the public hearings primarily a one-way dialogue of the states declaring what the proposals would be.

In all fairness, it should be stated that there were some participants who felt that the states allowed ample room for public input or felt that problems with public input into the process did not cause the failure of the ACF Compact. The former Federal Commissioner had the strongest affirmative answer while another participant considers the compact negotiations, though imperfect, to be far better than the looming litigation process (Howett, 2005 - interview; Thomas, 2005 - interview). Mr. Thomas mentioned that the state governors directly appoint the negotiators, hence a failure on behalf of the negotiator to successfully represent the state and stakeholders could hurt the effectiveness of the gubernatorial administration (Thomas, 2005 - interview). Assuming that the negotiator does not do well, the handling of the water war could become an election year issue. As a result, failure of the negotiator to listen to the stakeholders could result in the failure of the gubernatorial administration or their political party to maintain the governor's office in the next election.

Ms. Howett of the Southern Environmental Law Center, though in favor of greater representation for stakeholder coalitions in the negotiations, also comes out in defense of the compact. The ACF Compact is the most open method through which the water war could be resolved. The litigation, already underway since the end of the ACF Compact, is going to be a lot less open for most stakeholders and the general public



(Howett, 2005 - interview). While the compact allowed for some public input, the litigation process will likely favor larger stakeholders over smaller stakeholders and be less open to public input than any compact (Howett, 2005 - interview).

Dr. Kundell from Georgia is unsure if sufficient attention was paid to the stakeholders and general public and asserts that problems with public participation may not be the main reason that the ACF Compact failed (Kundell, 2005 - interview). He further mentioned that further guidance and incentives provided by the federal government could have helped the ACF Compact better factor in public input, develop a visioning process, and weather the impasses between the states (Kundell, 2005 - interview). Other participants also believed that more federal participation could have helped the ACF Compact as well. A number of participants cited the need for more federal involvement in terms of providing guidance, building managerial capacity, and providing incentives for the states to keep the ACF Compact alive (Appel, 2005 - interview; Kundell, 2005 - interview; McLain, 2005 - interview; Thomas, 2005 - interview). The desire for some federal guidance also criticized the states as well, mentioning their refusal to accept federal help in avoiding impasses (McLain, 2005 - interview). Given that the most pointed criticism came from one of the riverkeeper coalitions, it appears that many of the stakeholders would have preferred greater representation and action on behalf of the local and federal level. Many of the participants seem very critical of the actions of the states, although the sample of participants is not very representative, as most potential research participants who represented the state governments directly refused to be interviewed due to the impending litigation.

#### Bad Faith Actions by the States

Finally, there is the fourth issue that needs to be addressed regarding the failure of the Compacts, which are the problems at the level of the state governments. The first, already reflected upon, is the mishandling of public participation in which Georgia and Florida tried to downplay or avoid stakeholder forums until forced by public and media pressure (Adams, 2005 - interview; McLain, 2005 - interview). Secondly, the states themselves were seen as being very uncompromising and retrenched in their stands,

presenting a fatal problem in light of inadequacies in the compact language which became prevalent in how compact negotiations remained fruitful as long as the downstream interests did not staunchly oppose North Georgia (Adams, 2005 - interview). The final problem involves litigation undertaken by Georgia at the same time it was engaged in the Compacts. Such litigation, though forbidden by the stay orders of the January 3, 1992 agreement contingent upon freezing water withdrawal levels, sought to unilaterally allocate water from Lake Lanier to Georgia (Howett, 2005; SFPC, Inc v Caldera et al, Amicus Curiae; Stephenson, 2000).

Georgia's attempt to secure water without a completed ACF Compact goes back to the founding of Lake Lanier back in the 1940s. Lake Lanier is an artificial reservoir, formed when the Chattahoochee River was dammed by the Buford Dam. The construction of the dam was authorized by Congress and carried out by the U.S. Army Corps of Engineers (SFPC, Inc v Caldera, et al, Amicus Curiae; State of Georgia v United States Army Corps of Engineers, Florida Reply Brief; SFPC, Inc v USACE & Florida, U.S. Court of Appeals, D.C. Circuit). The reasons for the building of the dam included the need for flood control, navigation, and hydropower. The rapid population and industrial growth of Atlanta did not occur until much later so Congress never authorized water withdrawals for municipal uses (SFPC, Inc. v Caldera, et al, Amicus Curiae). The water in Lake Lanier was supposed to be off-limits for municipal use, but was eventually allocated for municipal use in North Georgia regardless.

These attempts of Georgia to access water have to be put in light of the rapidly urbanizing areas of North Georgia as well as claims of sovereignty Georgia has made of the entire Chattahoochee River all the way downstream to Lake Seminole (Seabrook, 2003). This is important because Lake Lanier lies entirely inside of Georgia and with the failure of Georgia to build a ring of reservoirs on the ACT and ACF watersheds to supply Atlanta, Lake Lanier became a critical source of water (Seabrook, 2003). Another detail is that Georgia has had agreements ongoing since 1973 with the Corps allowing water withdrawals from Lake Lanier for municipal uses, on which the NEPA analysis was never performed (SFPC, Inc. v Caldera, et al, Amicus Curiae). Prior to the 1989 litigation and 1992 stay orders, no one in the other states filed litigation objecting to those agreements and the stay orders did not revoke the 1973 agreements because these

agreements came before the 1989 litigation. Regardless of NEPA, water withdrawals at the 1992 level continue to go on.

Georgia was wishing to obtain yet more water from Lake Lanier and sought to press the Corps on this issue, finally filing suit to press for increased water withdrawals. In response, fearing a loss of water for hydroelectricity generation, the Southern Federal Power Customers (SFPC), Inc. filed a suit against the Corps to demand that Georgia's request go unheeded. The other states and stakeholders, realizing the potential impact on the watershed as well as Georgia's attempt to circumvent the struggling compact negotiations, immediately intervened on the side of the SFPC, Inc. The Georgia v USACE and SFPC, Inc. v Caldera were consolidated, with the U.S. Court of Appeals (D.C. District) deciding on March 5, 2005 to overturn previous rulings favorable to Georgia, largely due to the violations of NEPA and the ongoing Alabama v Corps case in the Northern Alabama Federal Circuit, whose stay orders froze water withdrawal levels (SFPC, Inc. v USACE & Florida, U.S. Court of Appeals, D.C. Circuit).

Georgia's litigation, which started in late 2000, only further worsened the strife within the compact negotiations and may have helped end them entirely as Florida and Alabama intervened in the case six months prior to the end of the ACF Compact. Many states and stakeholders accused Georgia of acting in bad faith (Howett, 2005 - interview). Although such an accusation would be debated by the state government of Georgia, the actions of Georgia were the most overtly aggressive of the actions by the state governments that hurt compact negotiations.

### The Federal Options

In 1989, when Alabama filed suit against the Corps, the case immediately became a federal case due to the involvement of a federal agency and the multi-state extent of the ACF and ACT watersheds. It is also readily apparent that the states sought to avoid litigation at the federal level, choosing in 1992 to negotiate. Litigation is expensive, takes a long time, is not as representative as other methods, and leaves precedents which are hard to change and adapt to changing circumstances (Hull, 2000). Thus the states were quite satisfied to begin negotiations compared to having to undergo litigation at the federal level.

Once the states chose to begin negotiating in 1992, this set in motion the course towards the start of the ACF Compact. The first moves towards the compact method of negotiation began in 1994 and the formal ACF Compact negotiations began in January of 1998. Such moves were initiated in both the state legislatures as well as Congress, and Congress was quite content that the states were willing to take on the dispute via the ACF Compact rather than using the Congressional route to resolve an interstate dispute.

Most of the participants interviewed took a dim view of a Congressional or Supreme Court resolution to the water war. While the balance of responses on the Supreme Court resolving the water war is negative, some participants believed that the Supreme Court does have strengths in comparison to the states or the ACF Compact. On the other hand, all participants took a very critical view of any possibility of Congress becoming involved.

Of the responses considering the role of the Supreme Court in a negative light, Dr. Feldman of Tennessee mentions that the Supreme Court's decisions would be based upon precedent and the finding of a court-appointed master (Feldman, 2004 - interview). A Supreme Court ruling would also be extremely difficult to revisit, amend, change, or adjust in the event of changing circumstances (Feldman, 2004 - interview). Dr. Kundell, reflecting his past position of serving the state of Georgia on water issues, believes that the governors, state, and federal agencies are better suited to handling the water war than the courts (Kundell, 2005 - interview). The court-appointed master would have to heavily rely on monitoring work already done by the state agencies, and the Supreme Court would be hard pressed to improve upon that work (Kundell, 2005 - interview). This last point is debatable, as the states did not finish the comprehensive scientific studies, a task which a court-appointed master would probably need to finish. Another problem is the massive monetary and time cost of court proceedings to the states and stakeholder coalitions (Appel, 2005 - interview). This massive cost means that the few interests such as the states and only the largest coalitions (those that can afford the litigation process) are going to have access to litigation and the outcome will depend on the quality of advocacy, level of participation, and briefs filed in addition to the studies and findings of the court-appointed master (Appel, 2005 - interview; Sides, 2005 - interview). Given the difficulties of changing or adjusting a Supreme Court ruling, the

inaccessibility to stakeholders, the high cost, and the incomplete set of facts and data with which the court-appointed master has to work, the Supreme Court is neither a very representative nor efficient and cost-effective option, despite the likelihood of the litigation reaching this level in the federal court system.

Given that the water war is likely to reach the Supreme Court, a few points must be presented in the defense of the Supreme Court. If the distance and inaccessibility of the Supreme Court to local and regional stakeholders poses a disadvantage, then this is also one of the Supreme Court's greatest advantages. This advantage arises from the distance which allows the Supreme Court to be isolated from local and state petty politics which could have worsened the impasses between the states (Sides, 2005 - interview). Also, if the court-appointed master is capable of carrying out and completing the scientific studies on the watershed and how different allocation regimes would affect the watershed, the end result may be an expensive and hard to change ruling that does succeed in allocating water fairly and in such a way that does little or no ecological harm. Such an ideal ruling would be better than an uninformed or flawed allocation agreement based on negotiation. It could be said that a good Supreme Court ruling, while "better than a bad agreement... would not be better than a good agreement" (McLain, 2005 - interview). Even though there is some support for the prospect of a Supreme Court ruling, but a good ruling could still be compromised by disadvantages and costs that would make a good compact superior to the outcome of litigation.

While the Supreme Court enjoyed some support from the participants due to its perceived benefits, none of these benefits would apply to a Congressional attempt to resolve the water conflict. There were no positive reactions from the participants on the question of a Congressional intervention and such a prospect evoked considerable apprehension from the participants. Congress can choose to intervene in the water conflict at any time it deems necessary, whereas involvement by the Supreme Court would require an appeal following an action at the lower courts (Appel, 2005 - interview).

If Congress did attempt to resolve the water conflict, several factors could affect the outcome. The first is that Florida's large Congressional delegation could vote in a bloc and effectively nullify an advantage that Georgia (or more specifically the Atlanta

Metropolitan Area) may have in its upstream position on the ACF Basin in which most of the ACF watershed lies (Kundell, 2005 - interview). Although the Apalachicola River flows through a sparsely populated part of Florida, the rest of the state is much more heavily populated and has an extensive socioeconomic influence on the rest of the nation. This could significantly worsen the prospects of a good resolution to the water war as those voting on the issue of ACF water management would not be representing, living in, have a constituency depending on, or have contiguous districts with the ACF watershed (McLain, 2005 - interview; Sides, 2005 - interview). An even worse possibility is that the effort to resolve the water war could be tacked on as an amendment to a partially or totally unrelated bill which would be voted on by out of state lawmakers in which other issues and partisan rivalry would outweigh the voices of the stakeholders in the ACF watershed (McLain, 2005 - interview; Sides, 2005 - interview).

Another consideration in Congressional intervention is the current political climate. The president has final authority over any bill that Congress passes, and a presidential veto can only be undone by a 2/3 supermajority vote by Congress. Until 2008, the brother of the governor of Florida is President of the U.S. and Governor Bush of Florida has a high likelihood of winning a 2006 reelection race in Florida and is a possible presidential candidate for the 2008 race should he choose to run. Another potential presidential candidate for the 2008 electoral race is Newt Gingrich of North Georgia. Newt Gingrich, as speaker of the House, helped devise the ACF Compact legislation which passed both Congress and the three states feuding over the ACF watershed (Adams, 2005 - interview). If either Bush or Gingrich were to become President in 2008, either could appoint Supreme Court justices, agency heads, or encourage Congress to introduce legislation which could resolve the water war in favor of the President's state or political allies. Attempts to resolve the water in Congress could meet with wide cries of bias or could be very unpopular to the states that feel shortchanged in Congress compared to either the compacts or litigation. Also there is no guarantee that Congress would attempt to resolve the water war without first completing scientific studies of the Basin. Another problem is also representation of stakeholders. While some stakeholders could exert considerable influence on some House and Senate members, these same Congressional officials would also be under pressure from the state

governments and from other (on unrelated issues) stakeholders as well. Thus the stakeholders, particularly those on the local level, would have their power weakened compared to the power they could manifest either against their state governments or at the negotiating table themselves. One final point is that neither of the two political parties wishes to divide its ranks over a water management issue. The GOP is the party in power in all three states, and wishes to avoid conflict over water so as not to endanger its grip on power. The Democratic Party, seeking to hold and hopefully regain seats, seeks to avoid hurting itself through arguments over water management. As a result, a Congressional intervention is not likely to happen, as both parties in Congress would rather not be forced to resolve the water war. If the Supreme Court was to ask Congress to intervene, the most likely outcome of Congress would be to set new guidelines and legislation which would force the issue back to the states. That was the action took by Congress in concert with state legislatures in 1997, and the resulting ACF Compact failed to achieve its objective seven years later. Since the failure of the states to continue to ACF Compact has resulted in renewed litigation, the water war is likely to head for the Supreme Court, of which the final outcome of the conflict is uncertain.

At this time there is a very low probability that a new interstate compact will be attempted by the three states. In the event such a new compact was to be drafted, there were several suggestions and ideas the participants put forth as potential new ventures for water management. A chief concern of these new ventures is the debate of privatization versus public management of water resources within the ACF watershed.

#### Market Solutions, Market Nightmares

At present the water war is in federal court and the three cases, Alabama v U.S. Army Corps of Engineers and Georgia v the U.S. Army Corps of Engineers (which have been consolidated), as well as Southern Federal Power Customers, Inc. v U.S. Army Corps of Engineers, are either being appealed to the 11<sup>th</sup> Circuit Court of Appeals or are waiting for appeal (the case of SFPC, Inc. v the Corps). It is very likely that successive rulings and appeals will consolidate all three cases and lead to a Supreme Court case. For reasons already explored, the states, stakeholders, and the Supreme Court do not consider this to be the most desirable outcome.

Two new ideas regarding water management have been advanced that could potentially win support to change water law and allow openings for these ideas to begin informing water management. These two ideas are to either change riparian law to allow privatization of water or to create a long-term public institution for the management of water. The first idea will be discussed in this section, which will examine arguments for and against privatization of water.

Before the two new ideas can be mentioned, a bit of explanation of water law in the Eastern United States is necessary. Water law east of the Mississippi River is based upon English Common Law; although modified over the last couple of centuries, the law still holds that water usage is a right for anyone owning land abutting, adjacent to, or overlying a water source regardless of whether it is surface water or groundwater (Kundell & Tetens, 1998). This form of water law is also known as riparianism. Riparianism makes water a right for any “reasonable use”, including unlimited withdrawals as well as reasonable uses which could negatively impact other users (Kundell & Tetens, 1998). Thus riparian law serves as the legal bulwark which keeps water as a public resource despite the need to identify the exact parameters of reasonable use and when such use could become harmful to others’ use of water. Some participants have found some faults in the riparian approach (Feldman, 2004 - interview; McLain, 2005 - interview). The first of these problems are misunderstandings of what constitutes reasonable uses of water, whereas the second touches on inadequate accounting of water and wasteful uses, which Dr. Feldman alleges is a flaw with intense use of a common resource (Feldman, 2004 - interview; McLain, 2005 - interview).

The first solution will be mentioned and debated here, which consists of changing water law to allow water markets, permit holders, and other aspects of privatized ACF water resources. According to Dr. Appel of the University of Georgia School of Law, a strong point in favor of water privatization would be that privatization could “ensure economically sound water distribution,” but he does not go as far as to endorse a program of total privatization (Appel, 2005 - interview). In mentioning how water could be privatized, Dr. Appel believes this could be done through individual permit holders, such as households (Appel, 2005 - interview). Dr. Feldman’s response to this question also indicates some support for privatization but does not specify who could participate in



water markets (Feldman, 2004 - interview). Dr. Feldman also provides a definition for privatization as “allowing the existence of water markets as a means of steering water usage to high-valued applications, as is done in the Western U.S., then this could be a good thing” (Feldman, 2004 - interview). He further mentions that the current riparian law does not support water markets as there are no defined quantities of water that could belong to anyone (Feldman, 2004 - interview). Dr. Feldman thus lends support to the possibility of water privatization while Dr. Appel views privatization as a possible method by which individual permit holders such as households (Feldman, 2004 - interview; Appel, 2005 - interview) These responses suggest privatization could be an option for stakeholders in spaces smaller than localities (Feldman, 2004 - interview; Appel, 2005 - interview).

Dr. Appel and Dr. Feldman make several assumptions in voicing their support for privatization, assumptions which have their basis in neoclassical economic theory and the homo-economicus model of human behavior. Neoclassical models of human behavior posit that humans are rational actors who, based upon objective evidence, will make the decision that most maximizes their gain, be it profit or happiness. It is assumed that private rather than public management of water resources will lead to their most efficient and profitable usage, which in turn will bring the greatest amount of benefit to the largest number of people. In terms of water quality, advocates of privatization also believe that rational behavior will reduce the amount of pollutants entering into downstream areas of the watershed. Privatization also involves the opening of water markets, which hinges on adequately monitoring the water quantity and quality so that per unit prices can be levied and adjusted as conditions change. A third assumption of privatization is that water is a natural resource that is critical for the ecosystems connected to the ACF watershed. To set a price on water, a quantitative assessment of the ecosystems connected to the ACF watershed must also be possible and that all possible competing uses and benefits from these ecosystems must be quantified in order to have a rational basis for a price on water. These assumptions of rational actors, objective knowledge about the supply, and quantitative understanding of ecological relationships are key parts of privatization regardless of the scale of human activities. Thus these assumptions apply to both

household permit holders as well as to massive multinational corporations or privatized public utilities.

If a price can be set on water, then it is theoretically possible for a single utility or interest to buy every last drop of water in the watershed, so long as said actor can pay for the loss or changed status of the riparian ecosystems and connected human relationships. Although such monopolization of ACF water is unlikely, it is theoretically possible if ACF water undergoes a completely deregulated privatization. Neither Dr. Appel nor Dr. Feldman specifically mentioned the privatization of water on a large regional or state-wide scale (Feldman, 2004 - interview; Appel, 2005 - interview). Thus the researcher does not have sufficient data to tell if any interview participants would support large private corporations, such as Nestle or Bechtel, or publicly managed corporations, such as a municipal or state-wide public management board, buying a water allotment from the ACF watershed. The fears that large corporations could buy out smaller stakeholders is what motivated most of the negative responses on privatization. The negative responses came from those involved in the riverkeeper NGOs who represent large groupings of smaller stakeholders whose livelihoods could be endangered if a significant or total privatization of water was undertaken. Likewise, the affirmative responses came from researchers and academics who believe that the application of neoclassical economic theory to water management on a smaller scale may result in more efficient use and less pollution.

In between the affirmative and negative responses is the response of Dr. Kundell whose response is slightly negative. He argued against water privatization based upon the increasing prevalence of public management by specific public water authorities emerging from water resource struggles in both the eastern and western half of the United States (Kundell, 2005 - interview). Yet, he is not completely against economic theory and conditions from providing public water managers with incentives to efficiently manage water (Kundell, 2005 - interview). Thus the response is classified as a negative response, but it is not very different from those of Dr. Appel or Dr. Feldman. The reason the response is considered a negative response is because the economic factors influencing water distribution would be affecting public management instead of going as far as to allow water markets. This response seems to be corroborated by Dr. Kundell's

background as an academic in which he would be very familiar with how economic theory influences resource management, but he also has an extensive background as a highly placed advisor within the state government of Georgia and has more firsthand experience with public management in the hands of the state than the other academics interviewed.

The other negative responses to privatization are more forceful. These responses clearly show the position of the riverkeeper executive or policy directors in defending the access to water for smaller stakeholders and localities from changes in water management law and policy that could unduly benefit larger and more powerful stakeholders. Ms. Sides of the Alabama Rivers Alliance states that privatization of water resources will deny poor people access to clean freshwater and that privatization would be inconsiderate of the ecological health of the rivers (Sides, 2005 - interview). Ms. Sides also makes further mention that current Eastern Water Law has established rivers and water as a public trust resource, guaranteeing the public access to water (Sides, 2005 - interview). Mr. McLain of the Apalachicola Bay and Riverkeeper echoes Ms. Sides in stating that privatization would mean that water would go to the most powerful stakeholders without regard to ecosystems that undergird human survival (McLain, 2005 - interview). McLain further compares water to breathable air as a public resource (McLain, 2005 - interview).

In their objections, the riverkeeper executives clearly mention their concerns about the scale at which privatization could be carried out. This is made clear in their worries that privatization would result in the opening of water markets in which powerful stakeholders would be able to buy enough water or access to it that the smaller stakeholders could be driven out of business or their lifestyles due to the increasing costs of water. This possibility of stakeholders being disenfranchised by a high cost of water is mirrored in the concerns of Ms. Sides as well as in the strong 'no' response by Mr. McLain when he states, "Absolutely not. Wait till [sic] that bottle of water you buy in the grocery store goes from \$2 per bottle to \$50 per. Let market forces operate?" (McLain, 2005 - interview). While this response is hyperbole, it does bring in a wider critique of not only privatization, but also questions the underpinnings of neoclassical economic theory. Chiefly questioned is whether or not humans, as individuals or in groups, public or private, are capable of strictly rational decision-making. One example,

provided by Dr. Appel, who indicated that privatization may make water management more efficient, also provided the researcher with the anecdote of inefficient golf courses (private users of water) and incomplete accounting of water in agriculture for the permission of water withdrawal permits. Under a rational scheme, the price of water would militate against an inefficient use of water and would demand that golf courses rely on drought tolerant flora while farmers would use more efficient irrigation systems so the water level supports an ecosystem which does not hurt the seafood industry in North Florida. Such a scheme has not evolved and is not guaranteed under privatization. As neither government nor regulations could be entirely privatized except in the most radical of theoretical frameworks, the likely outcome of water markets would be that prices would be largely set by the largest interests, which would likely favor golf courses and larger-scale agricultural practices over the small fisherfolk.

Also worth considering are the concerns of the riverkeeper executives about the ecosystems. Due to the need for complete objective accounting of water resources and the interrelationships of water-dependent ecosystems in order to set a price on water, this hinges on human ability to accurately carry out such appraisals of water resources and riparian ecosystems. Political ecologists are very critical of the ability of humans to be able to do this. First, humans lack full information of the complexity of riparian ecosystems. Second, there is a constant state of flux of the relationships between different attributes of riparian ecosystems and human society. Third, objectivity itself comes under question, which is that there “can be no viewpoint, except from a viewpoint” and that rationality, objectivity, and quantitative assessment suggest certain ideological and political biases (Soderbaum, 1999: 162, quoting Myrdal, 1978). If the idea of privatization does reflect a certain political bias, then it is likely that certain interests stand to gain power at the expense of others, thus justifying the concerns of the riverkeeper NGOs.

Such concerns, however, could potentially be rendered moot if future public management only proceeds with limited water markets on very small scales such as households, small farms, fishing permits, or small businesses. Small organizations comprised of the small stakeholders are the constituents of the riverkeeper NGOs and

could enjoy some marginal benefits from limited privatization due to less pollution and waste (Feldman, 2004 - interview; Appel, 2005 - interview).

A dilemma is presented as privatization is both advanced and criticized as being good for the smallholders and the ecosystems. The advocates do not necessarily speak for large-scale privatization while the critics do not specifically criticize local-or-micro-scale pricing or permits. The future of how privatization may affect the water conflict will entirely depend on how far privatization is allowed to enter into water management and to what degree privatization remakes the geography of ACF water management. What invites further scrutiny is the answer of Mr. Thomas, the former Federal Commissioner and a current Senior Vice President at AGL Resources, who could not answer the question due to confidentiality concerns (Thomas, 2005 - interview; [www.aglresources.com](http://www.aglresources.com)). Such concerns are likely due to legal issues, which could suggest that possible future settlements by the courts could significantly change the status of riparian law and that privatized water resources is a future possibility for the ACF watershed. Such a fight to change the riparian status of water resources would not be easily accomplished and opponents of water privatization have already used local legislation, as well as pressure on their state representatives and senators, to inveigh against privatization of water. The Georgia cities of Augusta, Rome, Statesboro, Pembroke, Suwanee, Columbus, and Savannah recently approved resolutions opposing the sale of water (Ezzard, 2003). Although some of these cities are outside of the ACF watershed, water privatization would likely have far-reaching and uncertain economic impacts beyond the ACF Basin, as well as opening up the possibility that privatization could enter into water management in neighboring watersheds as well. Privatization of water has an uncertain future, which could be a blessing or a curse for different stakeholders in the ACF watershed.

#### Towards Adaptive Interactive Regional Approaches to Water Management

Upset with the failures or flaws of the ACF Compact, litigation, federal intervention, and privatization, many stakeholders are attempting to envision a new philosophy and means of public water management. This new paradigm, described by the interview participants, would stress principles of interaction between several layers of

power scale based upon complementing abilities, sound scientific knowledge, adaptive monitoring and management, and a vastly improved and much more inclusive negotiation structure that could provide a new avenue of water management. Most of these visions of water management start with the commissioning of a new ACF Compact that would include new revisions and ideas to give fresh impetus to public water management. Most of the participant responses still seem to favor the idea of this new paradigm being implemented via a modified Compact, so this portion of the discussion is directed at envisioning what this new Compact or Management Authority might look like given the visions of the interview participants and theories in the academic literature.

The first question that immediately needs to be considered is to what degree this new method would be democratic and would involve civil society and that all stakeholders affected by management decisions should be represented. All of the participants support the supremacy of democratic methods (which can include a variety of consensus, parliamentary, Robert's Rules of Order, and other procedures of representative and direct democracy) over authoritarian means of resource management, albeit several problems were mentioned and explored by the participants.

Dr. Feldman, who has studied the water war from his vantage point in Tennessee, mentions the problems that can arise. First, democratic methods are the best option, although there are problems of slowness and inefficiency, but democracy is more durable over the long time horizon than its alternatives (Feldman, 2004 - interview). Dr. Kundell of the CVIOG mentions how democracy can work best between different actors, but states that representative bodies do best when they stay focused to setting policy while agencies should focus on technical tasks of management which require highly specialized expertise (Kundell, 2005 - interview). The implication of Dr. Kundell's statement is that problems are likely to arise when representative bodies attempt to micromanage technical details or when agencies are overly involved in ideological questions of policy outside their sphere of technical expertise. Dr. Kundell states that successful democratization of resource management require precise specialization in dealing with complicated systems and problems.

Dr. Appel mentions that one chief problem is that democratic decision-makers are not guaranteed to act rationally (Appel, 2005 - interview). Chief examples in the Tri-

State Water War include that agricultural permits for water withdrawal cannot be revoked and have not been measured until recently (Appel, 2005 - interview). Another example, highlighted further above in the discussion, is the luxury uses of water for golf courses which could be better managed via higher greens fees for water consumption or low water tolerance xeriscaping (Appel, 2005 - interview). The former Federal Commissioner of the ACF Compacts, Mr. Thomas, further mentions some water war specific problems, which are 1) had Newt Gingrich not been Speaker of the House – the ACF Compact may never have had the impetus to become drafted, 2) the ACF Compact language was flawed and the states required more help from the federal government, and 3) future hindsight will reveal that litigation will prove very costly and will not yield the best possible solution (Thomas, 2005 - interview). Mr. Thomas' views on litigation seem to confirm that he would have preferred to see negotiations be more effective, vis-à-vis more help from the federal agencies he represented during the Clinton Administration. As for his criticism of the former Speaker of the House, while Gingrich did aid the formative stages of the ACF Compact, the flaws within the compact are too diverse to pin to one lawmaker or agency (Adams, 2005 - interview).

From a broader viewpoint, Ms. Sides of the ARA makes mention that democratic methods avoid bloodshed to solve management disputes while popularly-elected representatives can streamline the process among large groups of stakeholders (Sides, 2005 - interview). A problem that Ms. Sides does concede is that representatives do not always adequately represent or struggle effectively enough for their constituencies (Sides, 2005 - interview). Mr. McLain, the Executive Director of ABARK, further provides that democratic methods of management will benefit from sound scientific knowledge as well as a fundamental principle of 'do no harm' (McLain, 2005 - interview). While an exploration of the meaning of objective science within the frame of political ecology does explore the limits of such, the principle of doing no harm could potentially solve many problems. A codified principle of 'do no harm' could enable management bodies to avoid making decisions which cause ecological harm as well as to preempt decisions which cut stakeholders from being represented or losing their rights to water. Then again, since to do no harm needs to have a viewpoint of what is to be considered harmful,

what harms one set of stakeholders may benefit another or the harm being done may not be visible to the management agencies or the representative boards.

Having decided that democratically-representative methods are the best for water management, the next visioning process involves deciding which level of power should have the most authority or the greatest role in water management. The debate over where to situate representative water management authority will focus on some mode of power sharing between local, state, and national governance, as well as their relationships to the stakeholders and the stakeholder NGOs.

Six participants responded and gave their input on how water management power could be shared between the different levels of public governance. All six participants believed that all levels of government (local, state, and national) should be involved in the public management of water. Five participants directly justify this while Dr. Kundell elaborates instead on some points of how water is already managed, which will further help the development of ideas such as multi-state or watershed-based water management authorities. The size of the watershed militates in favor of power-sharing and that “providing water supply...is beyond the ability and jurisdiction of any one local government. For this reason alone, multijurisdictional or regional cooperation may be the best way, if not the only way, for individual cities and counties to continue to grow and prosper” (Kundell & DeMeo, 1999: iii). Issues of power sharing will become a major issue in the coming years in both litigation and negotiation processes as how power is shared will directly impact any allocation scheme. In the use of power-sharing, Dr. Kundell asserts that the federal government has the most power to manage watersheds crossing state boundaries (Kundell, 2005 - interview). Powers that the U.S. Constitution does not afford to the federal government are then devolved to the states. For power-sharing to succeed, the shared responsibilities of the federal, state, and local governments need to be further developed. Thus capacity for water management needs to be built in the areas of legal, financial, and management (Kundell, 2005 - interview). Dr. Kundell from the CVIOG did not provide any insight into how the process of building capacity may be done.

Dr. Feldman mentions that federal programs need to hold states and smaller polities accountable rather than having these jurisdictions bidding against and competing



with each other (Feldman, 2004 - interview). He further argues that neither level of government has performed these tasks well (Feldman, 2004 - interview). In terms of actual performance thus far, Dr. Feldman states that “state efforts at comprehensive planning and demand-side management are making the best headway in all three states” and his idea of using federal programs to hold the states accountable is geared towards maximizing the planning efforts of the states in their strongest areas (Feldman, 2004 - interview).

Dr. Appel of the UGA School of Law mentions power could be shared as part of setting up a new watershed level authority that would use local-state-and national-level offices closely paralleling Dr. Kundell’s notes on power-sharing (Appel, 2005 - interview; Kundell, 2005 - interview). Dr. Appel further insists that directives are necessary, perhaps from the federal level, to make the states involve sub-state regions and local areas so the needs of all tributary watersheds are accounted for (Appel, 2005 - interview). He further states that the federal government should also be more assertive in helping the states meet their targets for managerial goals (Appel, 2005 - interview). Similar to the ideas of Dr. Appel, former Federal Commissioner Mr. Thomas mentions that he would like to see more interaction and participation by the federal government (Thomas, 2005 - interview).

Ms. Sides from Alabama does not provide much detail of the power sharing in public management but foresees that power sharing will be a key issue in what management solutions are developed in the litigation process (Sides, 2005 - interview). Mr. McLain from North Florida mentions that power needs to be better shared and states that there should be a “ubiquitous, coordinated function of all levels of government” (McLain, 2005 - interview). Mr. McLain does provide some critique of current government handling of the water war. He asserts that the state-level is the strongest in terms of management capacity due to the water policy and planning authority being vested in the office of state governor and subject to ratification by state legislatures (McLain, 2005 - interview). Thus Mr. McLain believes that it is necessary to adequately develop links between all levels of government and capacity should be built to more effectively coordinate water management.

There is a distinct possibility that a court-ordered solution will include the provision of a special public body that will encapsulate the inter-governmental cooperation. This body will be an interstate body but would not be a federal agency, and it would be tasked to oversee and integrate all functions and needs of water management within the ACF basin. Although there is an obvious desire for power sharing between the different levels of government within this body, also necessary is how this body would represent stakeholders and who those stakeholders could be.

Dr. Feldman, who resides outside the watershed in Tennessee, is very supportive of such an authority and believes that representatives could be elected by the stakeholders or the stakeholder NGOs (Feldman, 2004 - interview). Also represented could be the elected city and county officials whose public utilities use ACF water (Feldman, 2004 - interview). Such an arrangement would be very novel, allocating equal influence to both local elected officials, as well as the elected stakeholder representatives, and this body of representatives could allow for a public visioning process to articulate goals and objectives for water management (Feldman, 2004 - interview). Dr. Kundell, who served the state government of Georgia, mentions another facet to the visioning process, that local interests and stakeholder NGOs need to envision how they can fit into the larger-scale frames at the state and federal level so these larger-scale frames governments can better understand their interests (Kundell, 2005 - interview). This part of the visioning process can help insert the smaller scale stakeholders into the larger scale frames of political power, which would likely occur through lobbying the states as well as running candidates and attempting to get staff members onto technical agencies of a hypothetical future watershed management authority. Both Dr. Feldman and Dr. Kundell believe that an increased investment in building local social capital could possibly yield a better solution (Feldman, 2004 - interview; Kundell, 2005 - interview). Dr. Feldman further reiterated that any such effort would require a lot of resources including public input, time, and genuine scientific authority to accomplish (Feldman, 2004 - interview). Dr. Kundell is slightly more pessimistic, mentioning that not enough efforts may have been made by local interests to mobilize in their own defense, despite the considerable efforts made to inform and involve stakeholders (Kundell, 2005 - interview). Whether or not there will be future efforts by various stakeholders to mobilize and whether the results of

litigation or future negotiation will be accommodating to such grassroots mobilization remains to be seen.

Ms. Sides of the Alabama Rivers Alliance further adds that any potential water management structure should include all polities crossed by the watershed on both local and state levels (Sides, 2005 - interview). Furthermore, should the watershed cross state boundaries, the ultimate level of power in decision-making would have to involve federal oversight (Sides, 2005 - interview). This addition would federalize the structure, and it is likely that given Mr. Thomas' position on increased federal involvement on the Compact that he would support an interactive federal oversight that would extend voting rights to state and federal officials (possibly legislators and/or governors) in the representative body. This last point is somewhat in doubt; however, there was not sufficient time in the interview to ask Mr. Thomas this question. The former Federal Commissioner did provide a short discussion of the impact of local social capital in the conflict and mentioned the revolt by local areas in Georgia against the positions taken by the state government. This local revolt was spurred by a variety of stakeholders and local areas feeling left out of the Atlanta-centric positions advocated by the state government (Thomas, 2005 - interview). Mr. Thomas also further mentioned that a factor inhibiting more local involvement in the water war was that the scientific studies had not been completed, the result being that there was no information that the local and state stakeholders could not impute their needs and come into an allocation agreement (Thomas, 2005 - interview). Another related issue is that without accurate scientific information, there will be an absence of credible information and facts on NGOs and local interests with which to question an allocation proposal or base a court case. Thus the scientific studies could serve as a concrete step to build capacity for water management that could be more inclusive of interests whose impact and power is smaller than that of the states.

In terms of precedent that the courts could use in litigation, Mr. McLain of ABARK mentions that a settlement requiring the creation of a watershed level body could borrow from the Delaware River Basin Authority (McLain, 2005 - interview). Although this would not be a perfect model, Mr. McLain adds the need for the body to have a sizable scientific advisory component and would need to be equitably funded by a

user-tax to be effective (McLain, 2005 - interview). These schemes for funding and advisory boards would need to work out some watershed specific issues as well, which Dr. Kundell mentions. The first issue is that the representative body and management agency would need to account and plan for the strong physiographic differences that occur between the headwaters and mouths of the long but narrow ACF and tributary watersheds (Kundell, 2005 - interview). This is particularly important in Southwest Georgia where the surface water of the ACF Basin has considerable interchange with several aquifers used for irrigation. Thus the withdrawal from the aquifers affects the depth of the water in the Flint River. Another issue reflects the concerns of the participants. Dr. Kundell mentioned that a water management authority could only be successful if it was able to maintain sufficient legal, financial, and managerial capacity (Kundell, 2005 - interview).

Both Dr. Appel and Ms. Adams of the Upper Chattahoochee Riverkeeper were very tentative about exploring the possibilities of a watershed-level authority for water management. Dr. Appel, who is a professor of environmental law at the University of Georgia, offers tentative support, but only in versions for which there exists precedent while Ms. Adams did not offer much detail (Adams, 2005 - interview; Appel, 2005 - interview). The models likely to have support from Dr. Appel would be more limited than the model proposed by Dr. Feldman and would probably be similar in approach to a revived compact.

The participants have provided an outline of a future public solution for water allocation and management which could potentially avoid federal litigation. A possible structure for a water management authority, amalgamated from the participants' responses detailed above, is summarized below. Within the parameters mentioned for such a management body, sufficient ambiguity is allowed to accommodate the diversity of responses, particularly over points of management methods and details of management.

Starting at the ultimate level of governmental authority in water management, a few participants support the idea of more federal involvement. Some of the roles envisioned for the involvement of federal agencies in the new water management paradigm would be to build management capability by providing funding as well as by

holding states and local communities accountable for their actions (Feldman, 2004 - interview; Kundell, 2005 - interview). Also, the federal government could have a role to play in terms of providing incentives, which are critical in order to ensure that the institutions of civil society effectively manage resources (Baland & Platteau, 1999; Kundell, 2005 - interview). Although such incentives cannot always be equally distributed, such distribution should be done in such a manner that all stakeholders have a vested interest in cooperation rather than fighting and that the federal government also give the local powers enough empowerment to have genuine authority (Sundar, 2001; Kundell, 2005 - interview). In negotiations, federal agencies should also have more power to help oversee and guide the process, as well as have a voting role in future negotiated agreements as well (Thomas, 2005 - interview).

The states, treated as semi-sovereigns by the federal government and the Supreme Court, also have important roles in the potential future water negotiations. The main facet of state involvement would be to provide the space and legal language necessary for a future compact or water management authority to adapt new solutions and fix past problems. Also, future Compacts, with enforcement and guidance from the federal government, could help the states to negotiate openly in good faith, and to also be more inclusive of sub-state watershed areas and local stakeholders (Howett, 2005 - interview; McLain, 2005 - interview).

Another aspect of a new water management authority could be to draft measures to ensure greater cooperation through the water management agencies in each state. Such measures would include revisiting the structure of the state water management agencies to reduce the gap between Alabama's decentralized agencies and the centralized ones of Georgia and Florida (Kundell & Tetens, 1998). Furthermore, the water agencies in Georgia could be changed to include the portions of the agricultural agencies which deal with water management, as to well as further clarify the role of agricultural water management within the fertile lands of the Flint River watershed (Appel, 2005 - interview).

Some of the greatest changes would happen for the local communities and stakeholders. The first of these changes would include the empowerment of local communities to fund and build infrastructure towards strengthening management

capability, as well as placing local elected leaders and stakeholder representatives a place at future negotiating tables (Feldman, 2004 - interview; Kundell, 2005 - interview). Furthermore, a public visioning process could also be included to establish goals and help in policy formation (Feldman, 2004 - interview). These ideas have already surfaced at previous stakeholder forums, as have other ideas, including greater program oversight and monitoring of management decisions (Kundell, et al, 2004).

The next role of this new riparian paradigm is the addition of a very strong monitoring and scientific arm to be added to the new watershed management institutions. Many participants faulted the previous negotiations for the lack of completion, and such an arm would be necessary to deal with the onset of changes in population growth, economic development, or climate change (Adams, 2005 - interview; Thomas, 2005 - interview). Furthermore, a new tool may be useful in the arsenal of future water managers, that being the possibility of a user-tax to pay for monitoring and adjustment efforts (McLain, 2005 - interview). Failing that, such monitoring could also be provided by the state and federal governments to build the necessary capacity, and funding could be used as an incentive to encourage cooperation by larger level authorities over local level stakeholders (Kundell, 2005 - interview).

As for adaptation, several steps could be provided by which adjustments could be made in order to avoid unnecessary conflict. The first would be to empower local agencies, composed of scientists and technicians to make minor infrastructural adjustments within the realm of policy to adapt to fluctuations in water use and water supply. The second would be to have stakeholder representatives act in concert with state officials to change policies if the changes in water supply and use were larger than what the technicians could address without violating policy. To further aid this process, the state governors and federal agencies could provide a place for open and transparent negotiations, as well as add input, solicit input, give guidance, and set deadlines when necessary. For such a system to work, however, it would be necessary that representatives and state officials not leave matters of policy to the management agency technicians while the technicians could do their part not to foist technical duties onto representatives and officials who would be concerned with policy (Kundell, 2005 - interview). Finally, it would be important to allow multiple scientific opinions and ideas

for technical solutions so as not to constrain management alternatives, as well as leave a path for open inquiry.

A few final notes on the new riparian paradigm also make apparent a few more benefits of this approach. These final few benefits are that such incentives and new capacities for civic engagement could build social capital and spur interest in environmental and economic issues in these regions and strengthen local democracy (Pretty & Ward, 2002). Another factor supporting the regional approach is that the local scale could also better monitor and address non-point pollution issues through intimate local knowledge of the local human and ecological landscapes (Kundell & Tetens, 1998). A final strength of this new riparian paradigm is that, if successful, this new management system could ultimately be far cheaper and better to the states and local stakeholders than what litigation has to offer.

## CHAPTER 8: CONCLUSION

The belief that “twenty or thirty years down the line we will look back after the court battles, fights, delays, and we will look back on the state’s bottom line positions and in 20-20 hindsight will realize a better decision could have been realized than what the courts could have yielded” characterizes the anxiety many of the interview participants and stakeholders have of the future of resolution of the water war in the federal courts (Thomas, 2005 - interview). This anxiety is directed primarily at the large spatial scale setting of the federal courts and the fears that this level will be inaccessible to the less powerful stakeholders who primarily act on smaller spatial scales at which they can more easily represent and defend their claims to water. A second anxiety concerns the state governments of Alabama, Florida, and Georgia, for whom litigation will be very expensive, the time and cost of which could become issues by which the smaller stakeholders within the states could seek to hold their state governments accountable during the upcoming election cycles.

The ACF Compacts were the most representative option for all stakeholders and governmental agencies involved in the water war. Therefore, it is not surprising that the participants, when asked what they would have done differently or how they would like to see water managed, often envisioned an alternative compact which would be more accessible to local-scale stakeholders yet also solicit a more interactive role of federal agencies. The interview participants, who have the most representation due to their willingness to be interviewed, are staunchly in favor of democratic forms of resource management and conflict resolution. If the participants had the ability to launch a new Interstate Compact, the State Governor-appointed negotiators, the Federal Commissioner, elected representatives of the stakeholder coalitions, and local county/city commissioners would have had a vote in the negotiations. Furthermore, negotiations over allocation proposals would not have proceeded apace for reasons of incomplete third-party scientific studies and the legal requirements of the National Environmental Policy Act environmental impact statements which, if completed, would have had the potential to form a stronger basis on which to debate the merits of allocation proposals. Additionally, the participants were also very disillusioned over the process of including the general public, stating that Georgia and Florida attempted to dodge the public hearings required



by both the ACF Compact and state law. Some of the participants also alleged that the litigation filed by the State of Georgia during the duration of the ACF Compact is an action in bad faith that caused harm to the negotiation process. Although the participants did outline some brief sketches of what they would like to see happen in future water management, not as much information was obtained on how such reforms or visions could be implemented or if implementation would be possible. On the issue of privatization, the participants defend and reject privatization primarily on the grounds of what would benefit local stakeholders, even using the household user as an example. The proponents of privatization defended it by showing the potential benefits for local users by mentioning household users and the increased efficiency. The opponents of privatization attacked privatization on the grounds that large, private interests or public corporations could outbid smaller, local stakeholders and damage the environmental sustainability. Although both sides presented good arguments in defense of their views, current events may be favoring the anti-privatization viewpoint, given the city commissions that have passed resolutions militating against water markets. Also, despite the supportive voice (although silent on the issue of privatization) of the former Federal Commissioner, it remains unknown how state and federal officials would respond to the proposals of the academics and riverkeeper executives. This is due to the state officials and their legal counsels wishing to avoid interviews, which was due to time concerns as well as a pressing need for confidentiality and remains an area in which future research could be conducted.

On the future of water management as the participants would hope to see it there is a common thread. The common thread of the participant responses is the desire to implement reforms and a multi-decadal-long management effort that would seek greater democracy and, in the future, include local interests. This reflects the local interests which formed coalitions, often between unlikely allies such as businesses and environmental organizations, in order to exercise power on scales far larger than the local county or city scales of power. This allowed the riverkeeper coalitions to be represented by the Southern Environmental Law Center, which will likely continue the fight to represent the coalitions of local and weaker state interests on the level of the state and federal power. Thus the participants, due to the unwillingness of the state officials and

their counsel to be interviewed, were very critical of the states and sought to have more synthesis between the state, federal, and local management authorities, as well as have greater inclusion of the local interests in management decisions, even if such decisions are being made at state or federal levels. Although the participants do support greater local inclusion, this research project could find no definitive proof or strong evidence in favor of the hypothesis that local decision-making is superior. Thus a prime conclusion of this project is that while local decision-making is not necessarily superior to decision-making on larger scales, actors acting on larger scales do need to consider local actors in order to best manage freshwater resources when considering the roles of incentives, capacity development, and decade-long commitments.

There is currently not enough information to estimate how the Tri-State Water War will influence the future of water management. The only certainty does seem to be that the water war will continue to maneuver through federal court and will eventually reach the Supreme Court. Of all of the states most interested in the federal solution, the state of Florida has powerful allies in the executive branch, has the largest Congressional delegation, and also has the strongest economy compared to Georgia or Alabama. Alabama and Georgia have tried to continue negotiating over the Coosa portion of the ACT watershed with some success, but these negotiations are less open to the public than the ACF Compact. Thus, it is possible that the future of the water war may turn into a battle between Florida and the Atlanta Metropolitan Area on the federal level where only the most powerful stakeholders will have the access necessary to present their arguments.

Political ecology, originally conceptualized to understand the tangle of political, social, ideological, economic, and ecological factors impacting the efforts to alleviate poverty and protect the environment in the developing countries, may have substantial utility in understanding environmental problems and resource conflicts in the developed countries. Although this project did investigate the value-subjective nature of social constructions of economic and political scales of power, further research on resource struggles and environmental problems will be necessary to gain a broader understanding of the utility of the perspective of political ecology in the developed countries, particularly with regards to reformist visions and collective action. Unfortunately, given increased demands for freshwater resources, a growing gap between the relative positions

of the haves and have-nots, and the multiple scales of political power involved in the maladaptive response to Hurricane Katrina's impact on the North Central Coast of the Gulf of Mexico, it is all too likely that future research will be a necessity.

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## APPENDIX A: INVENTORY OF INTERVIEW QUESTIONS

This appendix serves to inventory the interview question list.

### Interview Question List.

Explanations of what the researcher hopes to achieve with the question are included:

#### Background:

These questions are primarily for biographical and setting purposes and to obtain a basis for analyzing the positionality of the research subject.

(1) When did you become involved in the Tri-State Water War?

At what point was the research subject involved?

(2) Which region and interests are you concerned about or representing?

This question examines the place and scale the research subject is involved in.

(3) How did you become involved?

This question helps tie together the last two as well as elicit more information about their background within the water conflict.

(4) How do you think the Tri-State Water War began and why does it remain extremely difficult to resolve?

This question aims to further illuminate the positionality of the researcher as well as gain a window into their professional, political, and economic opinions on the water conflict.

#### Compact Process:

These questions seek to address the situatedness of the Compacts and the attempts at resolution, thus identifying where and how the research subjects think the water conflict could/should have been resolved. Additionally, these questions also seek to

discover the research subjects views on who, how, and at what level of decision-making power the water should be managed and why.

(5) Do you believe the Compact process was effective, why or why not?

This question seeks to find out what they thought about the procedure of the Compact process, likewise the research subjects are encouraged to tell the researcher what they might have done differently, had they the power to do so.

(6) Do you believe the Interstate Compact Process adequately took into account local stakeholder and management issues regarding ACF freshwater resources? Why or why not?

This question attempts to find out if the Compacts included enough local stakeholder input. It follows that if the Compacts were too situated at the state and national level of political power, that the local stakeholders might scuttle the Compacts by putting pressure on the state governments to force a ‘no’ vote by a negotiator, thus holding up the Compacts.

(7) How did the states frame their arguments on how water should be allocated and what authority should control the allocation of water – how did these debates help or hinder a potential settlement?

This question, central to the research question, asks directly of how the negotiations were situated with respect to stakeholders and the different levels of scale considered by stakeholders and states, with respect to both the scale of political decision-making as well as the ACF water resources.

(8) What would you have recommended to make the Compact Process more effective? Why or why not?

This question is repetitive and was added to allow the research subject to sum up their ideas on the previous questions as well as allow further room for response elaboration by the research subject.

Legal/Congressional Process:

The legal and political structures of resolving water resource conflicts are built upon several different levels of scale. Thus these questions address what about these structures might work or might not which will provide some input onto what level of scale the research subjects think the water conflict should be resolved at.

(9) Do you believe the Supreme Court of the United States (SCOTUS) will be a better forum for resolution of the water conflict, and will the SCOTUS better address local stakeholder and management issues?

This question is to find out if the research subject views litigation as a better alternative than the Compacts. Also an affirmative answer to this question would show that the research subject believes that the national level of political power is optimal for a water conflict resolution.

(10) What do you think Congress would do if given authority by the SCOTUS to resolve the water conflict?

The SCOTUS has the authority to defer resolution of the water conflict to Congress, and this question seeks to find out what the research subject thinks may be done as well as what might be the most optimal route for Congress to take.

(11) How do you think the states and stakeholders in the water conflict would respond if the water conflict was sent, via Congress, back to the states and the Interstate Compact Process for resolution?

This question is being asked to gauge the possible reaction of the states if the federal government decided to send the conflict back to the states.

(12) What within established legal precedent, procedures, and institutions may be holding back a solution to the water conflict?

The aim here is to find out what the research subjects think is inadequate about the legal structures used thus far to resolve the water conflict. Answers to this question could have impact at all levels of political and resource scale.

Political Ecology:

These questions attempt to compare the research participants ideas about water resource management with the theory of water resource management.

(13) Do you believe water resources should be privatized or be managed from a public authority? If privatized, to whom?

This question introduces the public versus private debate within water resource management. Most of the scale approaches to the water conflict have considered the scale of political institutions in resource management. Private institutions also have their own hierarchy of scale in decision making, with particular differences between non-governmental organizations versus private corporations.

(14) If public, should the U.S., individual states, or counties/municipalities be the primary manager? How should power be shared?

This question asks which level of public political authority would best be capable of managing water resources of the ACF in the opinion of the research subject.

(15) Would a better solution be to create a special watershed-scale management authority and who would be members and how would it operate?

Given the ACF rivers comprise a watershed that is a physical place that exists on a regional scale and does not easily match any similar spatial level of governmental institution, this questions seeks to find out if the research subjects think a new level of government institution needs to be created for water resource management.

(16) Which level of government is currently most capable of managing ACF/ACT water resources and should management capability be developed among the other levels of government?

Given the previous questions ask about the opinions of the research subject, this question seeks to find out at what level the research subject thinks the water is being currently managed at and at what level(s) management capability should be built. Also importantly, the research subject may digress on how this transition of institutional capacity could be carried out.

(17) What role do you think local social capital and institution building plays in the water war?

Here I seek to solicit the research subject's ideas and views on how smaller scale institution-building and socio-political capacity influences, and more importantly, may help or hinder the resolution of the water conflict.

(18) Would an investment in more effort in local social capital as it pertains to local resource management yield a more just or equitable solution to the water conflict? How?

This question attempts to gain more insight from the research subject on how local institutional management capacity could be built to make for an easier resolution of the water conflict. Those in favor of smaller scale level institutions would probably develop capacity measures favoring autonomous management practices while those in favor of state or national level management would likely seek to build institutional capacity to serve as adjuncts to the role of the state as well as provide a town hall type forum for citizen input into the larger level of power dynamics.

(19) What are the advantages and drawbacks of using democratic and representative political bodies and civil society to resolve resource management conflicts?

This question seeks to elicit opinions from the research subjects of what they think is the optimal level of democracy in resource management and what about the democratic institutions should be preserved or changed.

The Researcher's Project:

These questions are to identify possible sources of information for the research project.

(20) Is there anyone you would recommend I interview to further the breadth of information within the project?

This question uses the 'snowball' technique to try and identify further research subjects.

(21) What documents (compacts, journal articles, legal precedent, etc) would you recommend to be included within the project?

This question is for the sole purpose of obtaining negotiation proposals, legal briefs, and water use studies for the project.

## APPENDIX B: INVENTORY OF POLICY DOCUMENTS AND BRIEFS

This section contains the bibliographical information of legal and policy documents that contributed to the data analysis. Bibliographical entries for these documents can also be found in the bibliography.

Kundell, James E. & DeMeo, Terry A. (1999) 'Cooperative Regional Water Management Alternatives for Georgia.' Carl Vinson Institute of Georgia, University of Georgia. 81 pp.

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## APPENDIX C: RESEARCH PARTICIPANTS.

This section of the methodology provides a list of all of the people the researcher contacted as potential participants. Their names, occupation classification, location bias, and interview status is included.

## Academics:

- (1) Dr. David Feldman, Head of the Department of Political Science, University of Tennessee. No location bias, located outside of ACF watershed. An email questionnaire interview was successful.
- (2) Dr. Jim Kundell, Senior Public Service Associate/Environmental Policy Program Director, Carl Vinson Institute of Government, University of Georgia. In the state of Georgia, but outside of ACF watershed. An email questionnaire interview was successful.
- (3) Dr. Peter Appel, Associate Professor of Law, University of Georgia School of Law. Georgia, outside of ACF watershed. An email questionnaire interview was successful.
- (4) Dr. Aaron Wolf, Associate Professor (Water Policy and Planning), Oregon State University. Contacted, on sabbatical, interview was not possible.
- (5) Dr. Elizabeth Blood, National Science Foundation. Contacted, following short correspondence, did not return email regarding an interview.

## Federal &amp; State Officials:

- (6) Lindsay Thomas, Former Federal Commissioner during the Clinton Administration, now at AGL Resources. Responsible for making sure Compacts would adhere to federal law. A forty minute telephone interview was successful. There is no

recording of the interview, extensive notes were immediately transcribed following the interview.

(7) Tom Swihart, Office of Water Policy, Florida Department of Environmental Protection. Referred the researcher to Florida's Office of General Counsel in the water war, neither Mr. Swihart nor the legal counsel returned the researcher's calls.

(8) John Abendroth, Nonpoint Source Management Section, Florida Department of Environmental Protection. Accepted an offer to do an interview, but declined after the Office of General Counsel advised him not to. The exact text of the refusal email follows:

"Dear Mr. Sparks:

I forwarded your interview questions to our Office of General Counsel to obtain an opinion from our attorneys whether I could discuss these matters with you, considering the current ACF litigation. Unfortunately, because that litigation is ongoing, they responded that it would be inappropriate for state employees to discuss with you matters that may be within the scope of the litigation. We regret being unable to be of assistance at this time.

Sincerely,

John Abendroth"

(9) Maureen Malvern, Florida Office of General Counsel. Ms. Malvern was the person in the Florida Office of General Counsel I had correspondence with. She also was helpful in providing briefs filed in the Tri-State Water War.

(10) Ron Bartel, Northwest Florida Water Management District. I received Mr. Bartel's contact information from Mr. Abendroth, and likewise was unable to obtain an interview, text of refusal email follows:

"Dear Mr. Sparks:

The Northwest Water Management District forwarded your request for an interview to me, as one of the attorneys involved in the current ACF litigation. Unfortunately, because that litigation is ongoing, it would be inappropriate for state employees to discuss with you matters that may be within the scope of the litigation. We regret being unable to be of assistance at this time.

Sincerely,

Maureen M. Malvern”

- (11) Larkin Radney, Counsel for State of Alabama. Mr. Radney was one of several members of legal counsel for Alabama in the water conflict. After a short telephone correspondence, none of my messages were returned.
- (12) Kevin Chambers, Georgia Environmental Protection Division. There was a short correspondence by phone followed by a short and sharp refusal email. The email text follows:
- “don't have time for this, and NOT interested in forensic examination of the process”

This email was from Carol Couch and was not signed.

- (13) Ciannat Howett, Director of the Atlanta Office of the Southern Environmental Law Center. Legal Counsel for Environmental Coalitions in the water conflict. A telephone interview of about 40 minutes was successful. The interview was not recorded and notes were transcribed immediately following the interview. The Southern Environmental Law Center acted as legal counsel for stakeholder coalitions throughout the ACF watershed.

- (14) Alexandra Adams, Policy Director, Upper Chattahoochee Riverkeeper. Official for the Coalition of stakeholders in the UCR. An email questionnaire interview was successful. In the course of the interview, I also spoke to Sally Bethea who is the Executive Director and Riverkeeper in the UCR. Both Ms. Adams and Ms. Bethea answered questions. A 20 minute unrecorded phone interview was successfully completed and notes were immediately added to this project following the interview.
- (15) Amy Sides, Watershed Communications Coordinator, Alabama Rivers Alliance. Official for the coalition of stakeholders in the ARA. An email questionnaire was successful.
- (16) Jim Phillips/Sherry Spurlin, Executive Director of the Chattahoochee Riverkeeper. Official for the coalition of stakeholders in the CR. Although Ms. Spurlin did agree to an interview, the email questionnaire was never returned.
- (17) David McLain, Executive Director of the Apalachicola Bay and Riverkeeper. Official for the coalition of stakeholders in ABARK. An email questionnaire was successful.
- (18) Dr. Charles Woods, Miles College Environmental Justice Program. Several emails and phone calls were not returned.

