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ASSOCIATION OF AMERICAN LAW SCHOOLS CONFERENCE: TRANSCRIPT OF THE SECTION ON NATURAL RESOURCES IN ATLANTA, GEORGIA, JANUARY 5, 2004

Barlow Burke

INTRODUCTION

At the end of August 2003, representatives of Alabama, Florida, and Georgia ceased negotiating over a water apportionment formula for an interstate compact governing the Apalachicola-Chattahoochee-Flint ("ACF") River Basin ("the Basin" or "the River Basin"). The negotiations began in 1998 after the states stepped back from ongoing litigation. They ended with the probability of future litigation, which might involve the doctrine of equitable apportionment in federal courts and could invoke the original jurisdiction of the United States Supreme Court. The negotiations

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2. See id.

3. See generally Kansas v. Colorado, 206 U.S. 46, 80-85, 95-96, 113-14, 117-18 (1907) (addressing the allocation of the Arkansas River). The Court noted its preference for the doctrine of equitable apportionment over the existing common law and statutory regimes of the disputing states and expressed its intention to use the method in future disputes. See id. at 117-18. This is the leading case for the
were the meat of a litigation sandwich. A panel discussed the reasons for the negotiations' failure at the meeting of the Section on Natural Resources of the Association of American Law Schools ("AALS") on January 5, 2004. This Article presents a profile of the Basin, reprints the transcript of the AALS panel, and concludes with a commentary by the panel's moderator.

I. PROFILE OF THE ACF BASIN

The ACF River Basin System ("the System") rises in the mountains of north Georgia. The Chattahoochee River begins at the outflow of Lake Lanier at the Buford Dam and flows southwesterly through Atlanta, where about half of Georgia’s population resides. About 4.1 million of Georgia’s 8.2 million residents inhabit Atlanta’s 16-county metropolitan area. Metro Atlanta takes about 75% of its water from the Chattahoochee and makes the greatest demand on the River's flow along its entire length. In other words, the demand is highest where the flow is near its source and is relatively slight. This has unfortunate consequences for those downriver. In 1990, the Metro Atlanta region’s water use was 331 million gallons per day ("mgd"). In 2000, it used 442 mgd. A year later, conservation doctrine of equitable apportionment. Under the doctrine of equitable apportionment, if the parties have the same regime, the doctrine is presumptively applicable. Dustin S. Stephenson, The Tri-State Compact: Falling Waters and Fading Opportunities, 16 J. LAND USE & ENVTL. L. 83, 95 (2000). If the disputing states use more than one regime, then the court has discretion to use the doctrine or not use it. Id. In the ACF System, Alabama and Georgia use a riparian rights regime for their water, and Florida has a more regulatory, less riparian regime. For a good explanation of the purpose of the doctrine, see Idaho ex rel. Evans v. Oregon, 462 U.S. 1017, 1025-27 (1983).

4. See infra Part II.
5. Georgia v. U.S. Army Corps of Eng’rs, 302 F.3d 1242, 1246 (11th Cir. 2002).
6. The Army Corps of Engineers maintains this lake, which Congress authorized in the late 1940s as a federal reservoir. See U.S. Army Corps of Eng’rs, 302 F.3d at 1247.
7. See Maria Saporta, Atlanta Isn’t the Sole Cause of Georgia’s Water Woes, ATLANTA J. CONST., Sept. 16, 2002, at C4; infra p. 249 (comments by Robert Kerr).
8. Saporta, supra note 7. Of the 1.2 billion gallons used each day statewide, the population consumed 528 million, and the rest returned to the State’s watercourses. See id.
9. Id.
measures, mostly outdoor water restrictions, only reduced that number to 429 mgd.\textsuperscript{12}

Southwest of Atlanta, the Chattahoochee River marks the Alabama-Georgia border as it flows toward Florida.\textsuperscript{13} At the Florida border, some 400 miles from its source in north Georgia, the River debouches into the western portion of Lake Seminole.\textsuperscript{14} There the Flint River joins the Chattahoochee at the eastern end of the Lake.\textsuperscript{15}

The Flint River is a 349-mile-long river rising just south of Atlanta.\textsuperscript{16} It actually rises as more of an urban drainage ditch and engorges with groundwater charges as it flows to the south.\textsuperscript{17} There, it flows through the most productive agricultural counties in Georgia.\textsuperscript{18} Up to the 1970s, farmers in these counties depended on rainfall for their crops.\textsuperscript{19} For the last three decades, however, they have increasingly used groundwater to irrigate these crops.\textsuperscript{20}

The waters of the Chattahoochee and the Flint River join in Lake Seminole to form the Apalachicola River at the outflow of the Lake.\textsuperscript{21} This is Florida's largest river, which flows through the Florida Panhandle.\textsuperscript{22} There, developing pulp wood forests and fast growing residential communities are in need of the fresh water that the River provides.\textsuperscript{23} The Apalachicola then spills over the estuary of Apalachicola Bay, where shrimp, crab, and particularly oysters

\begin{footnotesize}
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\item Cf. id.
\item Id. Net withdrawals—water taken and not accounted for by return flow—are more problematic, but all agree that they are increasing faster than gross withdrawals. Id.
\item See Alabama v. Georgia, 64 U.S. 505, 514-15 (1859) (determining the location of the boundary between the two states to be the western bank of the Chattahoochee River).
\item Id.
\item See David W. Hicks & Stephen P. Opsahl, The Natural Georgia Series: The Flint River, the Natural History of the Flint River, Sherpa Guides, at http://sherpaguides.com/georgia/flint_river/natural_history.
\item Saporta, supra note 7.
\item Id.
\item A Trickle for Three Rivers, supra note 14.
\item Id.
\item Stephenson, supra note 3, at 86.
\end{enumerate}
\end{footnotesize}
abound.24 Around 90% of Florida’s oysters come from that bay.25 The System then flows onward into the Gulf of Mexico.26 Overall, it drains some 20,000 square miles, or 12.5 million acres, in three states.27

In the late 1980s, drought reduced the flow in all the System’s rivers, and put the System under great stress.28 At the System’s top, Atlanta imposed limits on outdoor watering.29 At the bottom, the federal government declared Apalachicola Bay a federal disaster area in 1988 because the reduced flow devastated its oyster harvests.30

II. TRANSCRIPT OF THE PANEL DISCUSSION

Barlow Burke (moderator): The people on this panel represent, in some way, the three states involved in the interstate compact negotiations for the Chattahoochee River Basin. J.B. Ruhl is going to represent the State of Florida. J.B. began law teaching at Southern Illinois University after about a decade of practice with Fulbright and Jawarski. He is now at Florida State Law School, holding a named chair. He publishes more than any two of us put together in any one year.

Next is Bob Kerr. Bob is the Director of the Pollution Division in the Department of Natural Resources for the State of Georgia. He’s the Representative or Commissioner designated by Governor Barnes for these negotiations. He has worked for Georgia state government since 1991, and he’s been Georgia’s principal technical representative since 1997.

Representing Alabama is William S. (“Buddy”) Cox. He is a partner in the firm of Lightfoot, Franklin, and White in Birmingham,

24. Id. at 85-86.
25. Id. at 85.
27. See infra p. 249 (comments by Robert Kerr).
28. Stephenson, supra note 3, at 86.
29. Id. at 86.
Alabama. He occupies a position similar to Bob’s for the State of Alabama. He is a graduate of Vanderbilt and, like J.B., the University of Virginia’s law school. Buddy Cox has been practicing natural resources and environmental law throughout most of the decade of the 1990s and down to the present at Lightfoot Franklin.

We’ll let the non-lawyer in the group go first.

**Robert (Bob) Kerr:** Am I the only non-lawyer here? All right, I’ve got you surrounded. (Laughter). Let me begin by trying to set the stage. I said I would talk a little bit about history, how we got here, and what some of the issues are, and avoid, to a large extent, the legal issues and let the lawyers talk about that.

What we’re looking at on the [on-screen] map is 42,600 square miles of real estate contained in two major river basins. Each of those basins has three rivers in it—hence its name, the Alabama, Coosa and Tallapoosa [(“ACT”)] River Basin—that’s subject to its own compact; that’s about 22,800 square miles—24% of that’s in Georgia, 75% in Alabama, and 1% at its northern end, just poking into Tennessee. In the Apalachicola, Chattahoochee, and Flint Basin, there are about 19,800 square miles, mostly in Georgia. About 74% is in Georgia, 14% [is] in Alabama, and 12% [is] in Florida. In Georgia, these two basins represent about 40% of the State’s landmass and contain about 60% of our population.

In the ACF Basin, in the north is Lake Lanier, [and] further down is West Point Lake, then Lake Eufala-Walter F. George, and finally Lake Seminole. These are all federal reservoirs, built with taxpayer dollars. Combined, they hold about 11% of the total average annual flow. Roughly 60% of that is in Lake Lanier. Interestingly, Lanier only drains 5.3% of the Basin, or 1040 square miles, an extremely small part of the River Basin. However, this lake provides drinking water for a great percentage of the population of Georgia and will continue to do so, I hope, in the future. Atlanta’s greater metropolitan area comprises about 16 counties, and it overlaps five different river basins. This creates all sorts of interesting situations in Georgia.

So, that’s the background. In the ACF, you’ve got a major city—Atlanta—and then you have Columbus further down and Dalton to
the east. But [it contains] no major cities in Florida, only the Apalachicola River and Bay.

In the ACT, although I don't think we're going to talk much about it, you've got Birmingham on its ridge and then Montgomery, and in Georgia, [it contains] the City of Rome. One interesting aspect of this basin is that, on a population basis per-capita, Rome, or the area around Rome, has 40 times more water per capita than the metropolitan Atlanta area. So that gives you a sense of what we're faced with.

The population in the ACF is about 6.3 million. Above the fall line is the Piedmont and Mountainous Regions, including Atlanta. Below the fall-line lies the Coastal Plain and the Lower Coastal Plain [Regions]. These are two totally different topographic and geologic regions. The interesting thing is that in the upper portion of the State you have very small surface water streams because almost every stream in Georgia originates within the State. In the Blue Ridge Mountains, what you have is water in the small streams originating there but almost no ground water. In the lower part of the State, you find much larger streams and fairly significant groundwater resources.

So, we have people where the water isn't and water where the people aren't. What this does is create some very interesting water resource issues. Again, let me refer to population data. From 1960 to 2000, Georgia more than doubled in population, gaining 700,000 between 1960 and 1970, 900,000 between 1970 and 1980, a million between 1980 and 1990, and 1.7 million between 1990 and 2000. This population is expected to double our [current] population by 2030. A great part of that increase—6 to 8 million—will be in Atlanta's metropolitan area.

What does this mean? It means Georgia needs water—water to supply some 14 to 15 million gallons a day for each 100,000 new residents. This includes the capacity to supply about 9 to 10 million gallons a day for sewer purposes. This in turn indicates that we may be consuming 4 to 5 million gallons a day for each 100,000 new residents. Still more water is needed to handle some potential storm water effects: a lot of impervious cover runoff, non-point source,
potential violations of water quality standards, flooding hazards because of the impervious surfaces, and so forth. With all this growth, we’re seeing an accelerating use of current water sources.

One of the most emotional issues I’ve ever come up against, in the face of increasing consumptive uses by new residents and potential violations [of present allocation arrangements], is that we have to have in place a mechanism, policies, and legal arrangements to protect minimum stream flows to ensure habitat protection, not only in Georgia but further south.

Another of the big issues that we’re looking at, and a major issue of contention with the State of Florida, is irrigation. Until recently, the State of Georgia did not know how many millions of acres it had under irrigation. It also didn’t know how much water we were pumping. We have made some changes to obtain that knowledge, and I’ll touch on those later. Down in southwest Georgia, we have roughly 8000 irrigation system[s] permitted. About 2000 of them are surface water, and about 6000 [are] ground water. The interesting thing here is the interaction with surface water by ground water and [the] effect on surface water from ground water pumping.

Right now there is a moratorium on any additional permits in that area, but there are over 2000 requests outstanding. So we’re looking at how to deal with that. In 1960, we had only a few hundred irrigation systems in the entire State. Now we’ve got 22,000 permitted. All of this was emphasized by the four-year drought that just ended. When you examine crop losses by county, you notice that the southwest had some of the higher losses. This emphasizes that irrigation only supplements, it does not replace, natural rainfall. In the same slide, you’ll also notice the several cities and counties in north Georgia that got into pretty dire straits during that same drought.

So, as we engage in talks, issues arise that we have to deal with whether or not we ever have an agreement with the other states.

31. Irrigation was not common in Georgia agriculture until the early 1970s. See Saporta, supra note 7. Recently, irrigation amounted to over half of the State’s water uses. Id. That is, it uses about 1.6 billion gallons a day, 400 million gallons more than Atlanta’s daily use. Id.
Internally, we looked at a number of things. We looked first at what it takes to protect habitat and ecological diversity. I'm not sure that any of us have a good answer to that, whether we're representing Georgia, Florida, or anywhere else. We do know (and I'm sure the point will be made by others) that, if you reduce water flow significantly, then you can have a detrimental effect, or certainly an effect changing the habitat.

The second thing we have to look at is: How are we going to provide water quality in the small northern Georgia streams burdened by an increased population? We're already requiring local water, sewer, and wastewater treatment operators to use the highest levels of cleaning we know of. Our big need, of course, as I've already emphasized, is municipal and industrial water supply. We're facing a need of about 705 million gallons a day in terms of withdrawals in the greater metropolitan Atlanta area by 2030.

I've already mentioned that irrigation is a major issue we're having to deal with. I'll talk about some others. The ACF reservoirs were built primarily for hydropower production, navigation, and flood control and, secondarily (and we contend primarily in the case of Lake Lanier), for water supply, some recreation, and so forth. What we have found is, in order to meet all our supply needs, we're going to have to reduce the amount of hydropower production or at least change when that power is produced.

We also learned that it's going to be impossible for us to have full-time, year-round navigation capability on the lower Chattahoochee and Apalachicola Rivers. It just takes too much water. We're now looking to maintain a seven or eight foot channel, roughly 22,000 cubic feet a second. This level of flow will empty some reservoirs in a hurry. Flood control is also an issue that we would like to see addressed, in order to raise the summer pool in some of these reservoirs in order to increase the water supply, for we have to be very cautious of that.

We didn't get into recreation too much in our discussions—what we have in the metro area centers around Lake Lanier. Depending on whose numbers you believe, the contribution of Lake Lanier is worth something like $2 billion to $5 billion annually. A lot of that, of
course, is recreation. Another is improved property values, commercial increases ..., and so forth.

What this is all about, when you get down to the bottom line, is: What do you do when there’s not enough water? How do you manage drought? And Georgia has, in fact, moved forward with some policies on that. But we look at it as not only survival. You’ve got to have water for life, but also it’s a matter of economics and quality of life.

How did we get here? Back in 1973, we began to look at how we were going to solve this problem. We had several options. First, we could construct a dam below Lake Lanier, catch the hydropower releases, and then get them out later. Second, we could reallocate storage in Lanier from hydropower to water supply. And third, we could raise summer pools a little bit. In this connection, there is a small Georgia Power reservoir downstream that is totally silted in. We could have dredged out some of that and gotten a little additional supply.

The decision was to reallocate storage in Lake Lanier, but at the same time, for whatever reason, it was determined that, if we’re going to [do] that with Lake Lanier, we may as well go ahead in the ACT and do [Lake] Allatoona and Carters [Lake] as well. I think you will understand that this was a wise move at the time in that we are now dependant on all of these reservoirs for use by the metropolitan Atlanta area. As part of the ACT Basin in west Georgia, the Tallapoosa River is in the southwestern part of the State. It is a very small stream, and we need to put a small reservoir on it to provide us some more water supply.

Those actions created what I call a case of heartburn for the State of Alabama. It said, “Wait a minute. Hold it.” And it filed a legal action.32 Buddy will talk about that more, I’m certain. But it basically

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32. See Alabama v. U.S. Army Corps of Eng’rs, No. CV-90-H-01331-E (N.D. Ala. filed June 28, 1990) (showing the State of Alabama initially suing the Army Corps of Engineers to enjoin the City of Atlanta from diverting more water from the Chattahoochee days after Georgia announced plans for building a reservoir on the Tallapoosa River near the Alabama state line). The State of Georgia joined this suit as a third-party defendant on the side of the Corps. Stacy Shelton, Tri-State Water Talks Stall, Georgia Settlement Leads Alabama to Resume Suit, ATLANTA J. Const., Jan. 29, 2003, at B10, available at 2003 WL 8965023. During the late 1980s, Atlanta experienced several years of drought,
said the Corps of Engineers didn’t follow the proper NEPA [“National Environmental Protection Agency”] procedures in a combination of determinations, and it filed the lawsuit to stop them.

We could have proceeded with all the withdrawals at that point. However, Georgia’s decision then was to move forward to try to come to a resolution that we all could live with and to provide for a comprehensive study of the supply and demand, or needs, in both basins. We withdrew all the applications for post-authorization changes for Lakes Allatoona and Lanier, put the West Georgia Regional Reservoir section 404 permit process on hold, and later withdrew the post-authorization change for Lake Lanier. And, by an exchange of letters, we agreed with the State of Alabama, in particular (Florida came in later), to have a “live and let live” policy. We would meet our future needs, but we would notify them of any other activities and needs.

We supplemented those letters with a whole series of memorandum agreements, beginning in January of 1992 and probably ending in December 1998, if I recall correctly.33 Those water shortages, and rationing. Review of Selected 1997 Georgia Legislation, 14 GA. ST. U. L. REV. 47, 48 (1997) [hereinafter 1997 Legislation] (discussing the 1988 drought). As a result, Atlanta and the Corps agreed to propose increasing withdrawals from the Chattahoochee River system by 50%, allegedly enough to threaten both the electricity supply from Buford Dam and the barge traffic on the River. Id. at 48. At the time, Atlanta wanted to tap the River for 350 million gallons of water a day. A Trickle for Three Rivers, supra note 14. The Corps proposed a 20% diversion, fearing that diverting that much water would cause the hydropower needs in the region to suffer. See Robert E. Vest, Note, Water Wars in the Southeast: Alabama, Florida, and Georgia Square Off Over the Apalachicola-Chattahoochee-Flint River Basin, 9 GA. ST. U. L. REV. 689, 691-92 (1993). In its complaint, Alabama alleged that the proposed withdrawals would hurt its economic development. Id. at 692. In addition, Florida became a party to the suit. Id. at 693. When Florida intervened, it alleged that the diminished water capacity would be insufficient to maintain the Chattahoochee’s natural flow into its jurisdiction, where it was necessary to maintain the health of its seafood industry. Id. at 712. From the outset of this litigation, the two downstream states saw decreased water flow as a precursor of diminished water quality in the River. Id. at 709. This litigation continued over two years until the court stayed it in 1992 when Alabama and Georgia agreed to conduct a three-year study of their two common river basins—the ACF System and the ACT System. See id. at 689; 1997 Legislation, supra at 50. Florida also agreed to the ACF study. See id. The litigation-stopping study was the result of an agreement, signed on January 3, 1992, by the governors of all three states. Id.

33. The first agreement was to suspend Alabama’s 1990 legal action, to freeze usage levels, and to call on the states to share water use data. See Charles Seabrook, Water Wars: Three States Near Showdown, Georgia, Alabama and Florida Declared a Ceasefire over Crucial Water Rights Pending a Study’s Results. Time Is Almost Up, ATLANTA J. CONST., Sept. 9, 1996, at B07, available at 1996 WL 8230619. It envisioned a four-year (later five-year), $9 million (later $15 million) effort, with a deadline for completion in December 1997. See id. The Corps was to conduct this study. See id. By the end of
agreements incorporated most of the conditions in the letters. We went then from informal to formal negotiations. We introduced the equitable apportionment concept into these negotiations, and we pledged to develop interstate compacts. So, for a period of time, we went through the comprehensive study and the process of developing compacts.\textsuperscript{34}

Just to touch on those very quickly. There were the two that I already mentioned. The first authorizing enactment occurred on the Georgia side.\textsuperscript{35} All of this is based on identical legislation, except for the boilerplate. Alabama acted a week later, and then so did Florida as to the ACF. It has no borders or part of their state in the ACT. A little later, Congress acted.\textsuperscript{36} In the same year, the President signed off.\textsuperscript{37} We agreed to some operating guidelines in February of 1998 and began negotiations.\textsuperscript{38}

1997, however, it was still incomplete. See id. One difficulty was that the facts were still in dispute. See id. Another was that the City of Atlanta was under the federal gun to modernize its water treatment system and was also considering privatizing its water delivery utility as well. See Julie Hairston, Water Privatization: Winning Bidder Will Face Debt, Backlog, Major Upgrade, ATLANTA J. CONST., Aug. 23, 1998, at D6; Douglas Jehl, As Cities Move to Privatize Water, Atlanta Steps Back, N.Y. TIMES, Feb. 10, 2003, at A14 (reporting on the failure of Atlanta’s water privatization plans). Finally, the settlement of third-party suits complicated the process—water quality in the Chattahoochee remained a concern and the target of litigation. Charles Seabrook, Campell Suspicous of Three-State Pact to Divide Chattahoochee’s Waters, ATLANTA J. CONST., Sep. 24, 1996, at C01, available at 1996 WL 8233054. The City settled a Sierra Club lawsuit requiring the setting of total maximum daily loads (“TMDLs”) for the River. Lucy Soto, Fight for Clean Waterways: Pollution Pact May Affect Growth, Regulators May Soon Be Taking a Hard Look at Runoff from Development Sites, Mines, and Farms, ATLANTA J. CONST., Aug. 8, 1997, at C04, available at 1997 WL 3985465.

\textsuperscript{34} In anticipation of the study’s completion, federal and state administrative officials completed the first drafts of the ACF Compact in closed sessions to facilitate negotiations. See 1997 Legislation, supra note 32, at 51. The three states and Congress were to enact the Compact provisions during their 1996-1997 legislative sessions. Id. at 50. There were reportedly many revisions. Id. at 51. Newt Gingrich, the Speaker of the United States House of Representatives at the time, oversaw the final revision. Id. at 51.

\textsuperscript{35} See O.C.G.A. §§ 12-10-100 to -110 (2001); see also 1997 Legislation, supra note 32, at 50 (discussing the legislative history of the preliminary Compact in Georgia); Charles Seabrook, Water Wars: Thirsting for a Solution, ATLANTA J. CONST., Jan. 12, 1997, at C3 (discussing the Georgia General Assembly’s consideration of the proposed water compacts).


\textsuperscript{37} After Congress enacted the compact, President Clinton signed it on November 20, 1997. Stephenson, supra note 3, at 101 (reviewing the history of the negotiations).

\textsuperscript{38} The Compact’s terms authorized the governors of the three states to appoint representatives and authorized the President to appoint the federal representative. Stephenson, supra note 3, at 101. The Compact set the deadline for completing negotiations at December 31, 1998, but the representatives unanimously extended the deadline several times. Id. at 101-05. The final extension passed in August 2003. See Shelton, supra note 1. Negotiations during this period focused on the downstream states’
We began looking at the compacts from the standpoint of equitable apportionment. They created a Basin Commission composed of the three states’ governors and a Federal Commissioner appointed by the President. [They also] established the role of the Federal Commissioner which, oversimplified, is to coordinate the activities of eleven federal agencies that may have some interest in the negotiations, or some role to play, and either to concur or not, with whatever our final decision was. So, he had veto power. The compacts also established their own termination conditions. One of the most unique things about these compacts is [that they] did not already have an allocation formula built in. In most prior compacts, the parties have already agreed on how to apportion the water. These did not. And one of the compact termination conditions was that, if we did not extend our compact allocation formula negotiations, they would end.

[They] established some responsibilities of federal agencies. One of the beauties of these compacts, that we have now lost in the ACF, is a requirement that the federal agencies use their discretionary authority to support whatever our decisions were. They also established public participation requirements.

One of the questions we’re asked is: Why this did not work? And one of the reasons it didn’t work is we had to negotiate in public. One hundred fifty people sitting there representing all of the various organizations led to a great deal of posturing and no real good give and take—on the order of, “If I do this, will you do that?” kind of thing. It was more like, “Here is my position. Your position is this, and we’ll talk about it later.” The compacts did allow for non-binding insistence on a guaranteed minimum flow, but once Georgia overcame its resistance to that idea, negotiations shifted to determining the location at which to measure water flow. See id. Florida insisted that measurement occur at the Georgia-Alabama-Florida line. See id.

39. The Compact was for “promoting interstate comity, removing causes of present and future controversies, equitably apportioning the surface waters of the ACF [Basin], engaging in water planning, and developing and sharing common data bases.” Georgia v. U.S. Army Corps of Eng’rs, 302 F.3d 1242, 1246-47 (11th Cir. 2002) (quoting the ACF Compact, Art. I).

40. See supra note 38; O.C.G.A. § 12-10-100 art. VI (a) (2001). Additionally, the Compact provided that its terms would not preempt federal water pollution laws. O.C.G.A. § 12-10-100 art. X. The Federal Commissioner would have to submit a letter of concurrence within 210 days after the state commissioners agreed to an allocation formula. O.C.G.A. § 12-10-100 art. VII.
mediation, and we did go through two weeks of that with Talbot ("Sandy") D’Alembert, a former President of the American Bar Association who was the President of Florida State University at the time.

As to their status, as I said, we began in 1998. We extended the negotiations numerous times. We terminated last August 31st, anybody correct me if I’m wrong, due to a failure of the three states to agree to an extension. It has been suggested that informal discussions may be possible in the future and [that] if we could reach some agreement, we then could go back and try to reconstruct what we lost. I’m not sure of that.

What were some of the issues? Very quickly, [they involve] regulation of flows versus regulation of consumptive uses. We were willing to talk about either one, but we weren’t willing to agree to both. Florida wanted both. Irrigation, as I’ve already said—how much, and how do you control it? The issue of micro management—looking at each section of each stream within the State of Georgia and putting restrictions on it.

We agreed to a whole range of flows at the state line as well as some other places, but the issue was: Are these targets, or are they minimums always to be exceeded by the Corps? I can get into that later if you want to talk about it. [Based on] Florida’s desire for the natural hydrograph, we created a situation we felt did that, although we acknowledged that it was still going to have less water going downstream based on consumption.

In the final analysis, I think that we could almost make the argument that, from a political standpoint, it did not benefit the folks currently in office in that, no matter what they did, they had stakeholders that weren’t going to like it. We heard loud and clear, time after time, that this was the case. Finally, I think we needed, in the State of Georgia, far more than the other two states needed. So, while oversimplified, this provides some of the rationale for why it didn’t succeed. As to the ACT Basin, I’m just simply going to say that we are, in fact, still talking, and we have until, I think, July 2004.

Now there are three cases going on, and I’m going to just touch on them very briefly. The Alabama case brought in 1990 by Alabama
against the Corps.41 Most of the issues in that [case] have been withdrawn post-authorization changes. So the question that arises [is]: What is the basis of Alabama’s claim at this point?

And then we have the D.C. case.42 It was brought by the Southeastern Federal Power customers against the Corps. They basically said, “We don’t care if you give water to Metro Atlanta; we just want to get compensated for it.” So, that was the route that the case followed. Right now, there is a settlement agreement, that’s been agreed to by the parties, plus the State of Georgia and the water supply providers, that is under consideration by the judge, and the states of Alabama and Florida have intervened in it.

In Georgia, we have a case that we brought after the power customers did their thing.43 In May 2000, we requested that the Corps operate Lake Lanier to give us the water supply contracts that we felt we needed by 2030.44 They refused. We have filed an action, appealing their denial of that request, to force them to do so on the basis that water supply is one of the Lake’s purposes.

The compacts would have resolved what would happen, but the bottom line is that it really doesn’t matter. We’re still going to have to do everything very well on water planning because it’s the right thing to do and because poor water management will harm our case if we ever wind up in court.

43. See Georgia v. U.S. Army Corps of Eng’rs, 302 F.3d 1242 (11th Cir. 2002).
44. In 2001, Georgia again sued the Corps to force further allocations of water for Atlanta from Lake Lanier and the Chattahoochee River. See Georgia v. U.S. Army Corps of Eng’rs, No. 01-00026 CV-RWS-2 (N.D. Ga. filed Feb. 7, 2001) (Richard J. Storey, J.). The following year, the Eleventh Circuit allowed Florida to join this suit on behalf of the Corps. Georgia v. U.S. Army Corps of Eng’rs, 302 F.3d 1242, 1260 (11th Cir. 2002). Florida made two arguments in its petition to intervene. Id. at 1248. First, it argued that, because the 1997 ACF Compact did not result in an agreement, it did not provide Florida with a meaningful remedy. See id. at 1248, 1253. Second, Florida could not count on the equitable apportionment jurisdiction of the Supreme Court for that remedy. Id. at 1248, 1254-55. This was so because the Court’s jurisdiction was discretionary, and there was, at that time, no water shortage in effect compelling its exercise. Id. at 1254-55. The Eleventh Circuit found that Florida and the Southeastern Federal Power Customers, Incorporated could intervene as a matter of right. Id. at 1256, 1260.
So, there are some obvious conclusions—we’ve got to manage more effectively, et cetera. These current issues are going to cause us to change both laws and policies, and these are some of the outcomes. We now have a state drought management plan that’s considered one of the best in the country. We have put together a white paper on instream flows [and] intervention transfers, and all sorts of things have been adopted. We’re involved in a five year study on the lower Flint River to determine actual usage by agriculture. We have enacted a drought protection act that allows the State of Georgia to declare a drought and buy back, on an annual basis, any permits that we think [unnecessary] so [that] the farmer won’t irrigate.\(^\text{45}\) We have no idea at this point how needed that is. But it was a protective measure, and we’ve used it twice already during the last drought. We have now passed a law requiring agricultural irrigation monitoring. We’ve got a planning district in the metropolitan north Georgia water area, and [with] it has come a whole series of new rules and regulations that have been adopted. And we are currently looking at addressing comprehensive planning statewide. So we have moved forward, we think, to deal with this, whether we ever have agreement or not, because these are things that we need to do to manage the water in an appropriate manner. Thank you. (Applause).

William S. (Buddy) Cox: As Barlow said, my name is Buddy Cox. I’m an attorney with Lightfoot, Franklin, and White. I am not the negotiator for the State of Alabama like Bob is for the State of Georgia. My firm and I were hired back in 1990 when a series of events occurred, and people in the Governor’s Office in Montgomery said, “What can we do to have a say in what goes on with what the Corps is doing in these reservoirs?” So we were hired in May of 1990 [and] filed suit in June of 1990, and for the past 13 years or so, I’ve sort of watched this thing ebb and flow in many different

\(^\text{45}\) See O.C.G.A. §§ 12-5-540 to -550 (2001) (enacting the Flint River Drought Protection Act, which included authority to use part of the Georgia Attorney General’s settlement funds from the national tobacco litigation to pay Flint River Basin farmers not to irrigate during times of low flow). Farmers, not the state, must initiate the disbursement of these funds. See 2000 Legislation, supra note 16, at 34.
directions—from the high points of developing the comprehensive study and watching that go forward; seeing the work put into that lead to the development of the compacts that Bob mentioned; and then also seeing, on the downside, one of the compacts dissolve because the states couldn’t reach an agreement; and ultimately, even though I’m a litigator and would prefer to be in court than behind closed doors in a mediation room or in an open public forum trying to negotiate a compact, seeing three active cases going on between, or among, or with the various states and other interests that are impacted by these basins.

I want to take you a little bit back and tell you what the State of Alabama’s perspectives were and how we got to this point. From our perspective, it all really goes back to the late 1980s. At that time, historically, these two basins experienced some of the worst droughts ever. They were droughts of record in parts of these basins up until 2000, when we actually had a worse drought on the lower Chattahoochee Basin. Those droughts did a lot of things.

In the State of Alabama, it resulted in a Study Commission being formed at the time. If you ask anybody in Alabama what the problem was with water, they would tell you we had too much. But the Study Commission was formed because of the fact that people began to realize that water, particularly clean fresh water that can be used for drinking and other purposes, was in fact a very limited resource and one that needed to be managed appropriately. Going forward, that led to a Water Study Commission and ultimately led to the adoption of water resources legislation in the State of Alabama. It was, I think, the 15th state to come up with some water management scheme. It’s not strictly a permitting scheme; it is more of a use-registration scheme at this time. But it did get the State off the ground in terms of looking at water uses—how water was being used, how it was managed, and what improvements needed to be made.

Similar efforts in Georgia led to, what I call, the plan to drought-proof north Georgia. In the Chattahoochee Basin, as Bob mentioned,

Lake Lanier holds about 60% of the storage in the entire [Chattahoochee] Basin. Yet, it only drains about 4 or 5% of the [Chattahoochee] Basin. So, as it was designed, its normal operating elevation is 1071; its full pool elevation is 1071. Its power pool or conservation storage pool, if you’re familiar with the Corps’s terminology, goes all the way down to 1035. At full pool, it covers about 38,000 acres. It is a huge reservoir. The problem is, if it is ever allowed to get down to those lower levels or to the bottom of the conservation pool, it would take forever to fill back up.

And for those of you who like to boat and have lake houses and other things on Lake Lanier, if you had to walk 12 feet through mud and muck to get to your boat, you probably wouldn’t like [it] very much. You’d call the Corps of Engineers up and say, “What are you doing?” That, basically, is one of the big problems that we have—that recreation was not necessarily an issue when these reservoirs were built. Lake Lanier was finished in the 1950s, took about two years to fill up, and since that time, has developed an enormous attraction from a recreational standpoint. It has some very, very, attractive places on it, and the people who own those types of places don’t like to walk through mud to get to their expensive boats.

At the same time, studies were going on in the State of Florida. You’ll hear J.B. [Ruhl] talk about the interests the State of Florida has in the Apalachicola River and Bay. The Bay has a very productive oyster bed, and they—oysters—apparently need a certain amount of fresh water flow. But if they get too much flow at the wrong time, it can do more damage than a drought. So those studies were going on as well.

So, all of the three states were sort of working independently. There were some joint efforts going on, but most of it was independent. Then all of a sudden, you had all these plans by the State of Georgia—reallocate Lake Lanier, taking 206,000 acre-feet of water from hydropower production to be dedicated to municipal water supply. That would be the largest reallocation at any Corps’s reservoir ever, and [it] still would be today. I think the largest such reallocation that has been approved, ever, is about 75,000 acre-feet—
maybe in Lake Texoma or some place like that. It was an enormous amount of water.

Combine this with the reallocations at the north Georgia reservoirs, actually in the Coosa Basin, a part of the ACT Basin. Some of that water would involve inter-basin transfers, which is a topic that most people who deal in water issues don’t like talk about because everybody hates them. Significant amounts of water were proposed for reallocation out of those reservoirs—a large portion of it shifted to the Atlanta area.

Then there was also a proposal to develop a massive reservoir in the Tallapoosa Basin, about five miles from the Alabama state line. The proposal, made in 1990, was to build a reservoir that would yield about 150 million gallons a day, but 100 to 120 million gallons of that was going to be piped over to Atlanta. That reservoir proposal was later changed substantially, and we’ve had many of our concerns addressed. But that’s what set the stage.

Let me go back in time. We have an interesting situation in the State of Alabama. It’s not unique in this country. But when the State of Alabama was created, it was created by the State of Georgia ceding lands back to the United States, and then the United States ceded those lands to create both Mississippi and Alabama. The border between Georgia and Alabama is not the thread of the River, like it is in many places. It actually is the western bank of the Chattahoochee River that forms the border between Alabama and Georgia.\(^{47}\)

So, about the same time that all these actions were going on, two entities in Alabama got, what I’ll call, “nasty-grams” from the State of Georgia, saying, “You’re withdrawing water from the Chattahoochee River. That River is all in the State of Georgia. Therefore, you need to get a Georgia permit to withdraw this water,

\(^{47}\) Alabama v. Georgia, 64 U.S. 505, 515 (1859) settled this boundary when the Court agreed with Georgia’s argument that the border was the west bank of the Chattahoochee. Alabama argued that the border was the mid-point of the River’s channel, both as a matter of interpreting otherwise silent agreements between states as a means to encourage interstate commerce by giving both states access to a river and as in harmony with a recognized boundary principal in international law. Id. at 506-07.
and if you don’t, then our fines will be $100,000 a day. Where can we get you to send your check?”

So, we did what anybody would do at that point in time, and that was file suit.48 Mainly, this suit was filed against the Corps of Engineers. It was filed in Birmingham in 1990. It was dubbed a “water war” by many, mainly because of a lot of the rhetoric that was heard in both states, and [it was] not limited to any one particular state. While it wasn’t an action directly between Alabama and one of the other states, Georgia sought to intervene on behalf of the Corps of Engineers, and Florida sought to intervene on its own behalf. Recently, those motions to intervene were renewed and have been granted.49 So we have litigation in the federal district court in Birmingham, where you have Alabama and Florida on one side and the Corps along with the State of Georgia on another. This creates some interesting issues regarding jurisdiction and other issues that the Eleventh Circuit has spoken to at least once in the Georgia case and will have an opportunity to speak to again. I’ll get to that in a minute.

What Alabama did was challenge, under the National Environmental Policy Act, all of the actual proposals that were on the table at the time from the West Georgia Regional Reservoir to the reallocations of Lake Lanier, [Lake] Alatoona, and Carters Reservoirs. But we also challenged how the Corps operated. It’s our view that this is a system where you’ve got Buford [Dam] up here, holding a significant amount of storage but having very little drainage coming into it. Then you’ve got Morgan Falls, the reservoir of the power company that really is much smaller than Lake Lanier. Then you’ve got West Point Lake, George, Andrews, and Woodruff all acting as a system. Some of them run into the reservoir; some of them have a little bit of storage but not nearly what Lake Lanier has. And this [chart] just gives you an idea of how Lake Lanier is operated. They’re actually doing pretty well [in 2003], particularly if

49. See Georgia v. U.S. Army Corps of Eng’rs, 302 F.3d 1242, 1252 (11th Cir. 2002).
you looked at the prior two years. I think Bob will tell you they got down in this area. Did it get below 1060, Bob? It came close, which is very significant. And it took about, I think, 12 months to fill back up.

Kerr: We had those great winter and spring rains.

Cox: Right. That helped a lot because it does take a while to fill. Then you've got George and Woodruff as well. You see the elevation of Woodruff is 78. So you have basically a 1000 foot drop between the top of Lanier and the top of Woodruff, which is also fairly significant.

Blountstown is the last gauge before the River goes into the Apalachicola River and Bay. Again, you do see a lot of fluctuation in the gauge level in feet—from 20 feet down to a low of basically four feet, which is pretty low and not very conducive to navigation. (Laughter). At least I don't want to be on that boat.

So, the lawsuit did a lot, including bringing people to the table. As in any type of lawsuit, when you file it, everybody looks at it and says, “Well, what are we going to do with this?” And the response was to negotiate. It started with negotiations between the State of Georgia and the State of Alabama. Florida quickly joined in, and eventually, that led to bringing in the Corps of Engineers. They were the target in the suit anyway, and everyone created a Memorandum of Agreement in 1992 that, in essence, set the stage for the comprehensive study.

I think that, after the first year of negotiations, everybody realized that nobody was going to believe the other person's information. You know the sort of claim—Georgia was going to grow to a population of ten billion, Alabama said it needed more water than the City of Atlanta, and things of that nature. So the resulting idea was to put together what was called a comprehensive study that included a number of elements. It had a navigation element. It had a hydropower element. It had a recreation element. It had a basin-wide management element. And it also had a long-term, permanent allocation mechanism element to it, where we learned about every compact that was ever adopted, including ones that dealt with things other than water.
That comprehensive study, as most studies do (particularly when funded with federal dollars), took longer and cost more money than anybody imagined. It was first designed as a three-year study that was going to cost four or five million dollars. It lasted until 1998. It was never officially completed, in that there were a few elements that did not get completed. I think the Corps ended up spending about 25 million, and then on top of that, you had the states’ contributions, which were both in-kind contributions or monetary contributions, in addition to their own research. I believe the State of Florida was actually a contractor to the Corps for the work and the study that was done in the Apalachicola Bay.

In May of 1996, the State of Georgia, and the State of Alabama, and the State of Florida agreed that we needed to do something to continue the study process, that the negotiations or the study process was working to a certain extent, that the comprehensive study was going to run its course, and that we needed to go to the next step. So there was [an] agreement to develop interstate compacts, and those, as Bob has said, were approved in 1997. In the ACF, the negotiations took place from 1998 through August 31, 2003. At times, they involved direct meetings in the public forums between the governors of the three states. Some of you from this area may have seen some of that picked up in the newspapers. There was a meeting in Alabama. There were other meetings in Columbus, Georgia, all in an effort to try to do something to get over the final hurdle in order to reach an allocation formula.

Unfortunately, the ACF Compact did not succeed. The efforts to reach an allocation formula did not succeed. It was an unconventional Compact. With regard to any type of compact, basically, under the Constitution, states can’t reach an agreement with one another that has the potential for raising the states’ power at the expense of the federal government. That’s forbidden by the Constitution. So, in order to do that type of compact, you have to get the approval of Congress. In every situation involving water, other than these two basin situations, you either started with an allocation formula or an equitable apportionment that was set by a Supreme Court decree. The Delaware River Basin Compact is a good example.
There, you had a Supreme Court decree that basically said, "New York City, you are allocated this much water out of the Delaware River Basin." Then they came up with the Delaware River Compact, and everybody worked around the fact that the Supreme Court decided how much water New York City got out of that basin, which they are not in, by the way. The Susquehanna, which is another river compact on the East Coast that started with an allocation formula in the Compact itself.

But we weren't there yet. We couldn't necessarily agree on what a final allocation formula should look like in 1997. We just knew we needed something to continue the negotiation process. So we came up with the approach of actually negotiating the language for the Compact and left out the allocation formula. It has an article in the Compact that basically says how the allocation formula is to be developed. That's what we followed.

In essence, Congress delegated to the states the authority to come up with the allocation formula. There was no process by which the states would have to go back to Congress to get the allocation formula blessed.

Let me talk now about some of the difficulties in the Compact negotiations. I don't necessarily reflect the opinion of the State of Alabama, but I've been around these guys long enough to know that I'm pretty close.

Differences in technical approaches. There were different modeling platforms, particularly between the State of Florida, Georgia, and Alabama. There are all sorts of ways that you can plug in numbers to a computer, and then it spits out results. There were two principal platforms that had been developed as part of the 1992-1998 Comprehensive Study. One was called STELLA. So if you hear talk about STELLA, it's not anybody in particular. It's a modeling platform that tells you that, given these inputs, these are the results that you get. And the other one was an approach or model called

HEC-5, which was developed by the Corps’s hydrological engineering group in the West. It is a very common water model used to evaluate water proposals.

Because the two different modeling platforms were not altogether compatible, that incompatibility itself created some issues. You couldn’t compare their results. So, in order to compare what the modeling results were from a proposal by the State of Alabama, you’d have to run both models, and then you’d have to dicker over which model was more accurate.

Differences in underlying assumptions. This was probably a bigger one than it should have been, but there was a problem because, first, Georgia had one set of assumptions regarding agriculture—in terms of how many acres were under agricultural irrigation. And then second, it used what is called the “drought year multiplier”—basically, the dryer it gets, the more you have to irrigate. So it was using this multiplier for water consumption during dry years. So there was never an agreement between Florida and Georgia over those two assumptions regarding agriculture. I think that contributed to the failure.

Limitations on resource and assessment tools. This is a big one. In the case of the ACF, it was to be a 50-year agreement. You end up trying to crystal-ball, using these limited modeling tools, for 50 years, and that’s something that I don’t think any of the states became very comfortable with because they were using imprecise tools to measure down to cfs [cubic feet per second] quantities of water. In this type of system, I think that was too much to ask, given the limitations of what data was available. Maybe in the future, there’ll be more precise tools, but the way we were using the models, it was like doing surgery with a butcher knife. It was not very precise.

Incompatibility of certain uses and demands. The big one was reservoir recreation needs versus downstream flows. Droughts occur in this part of the world, and you have the least amount of rainfall during the summer months. But guess what the people who own the big houses on Lake Lanier want during the summer: a full pool. So you have that conflict. To be frank, I’m not sure how this one’s going
to be resolved. There’s going to have to be compromise on both sides. The people around Lanier do have an interest in this, and this conflict occurs at other Georgia reservoirs as well and [at] reservoirs in Alabama too. Alabama has several recreational reservoirs where people like to have full pools during the summer so they don’t run over stumps and other things while they’re trying to water-ski. So this is a continuing issue, particularly when you’re talking about storage. Because when there is no rainfall, the water in these systems has to come out of storage. So the problem is how to balance the competing interests between those who want the reservoir full 100% of the time, particularly during the summer months, and those who actually want to be able to drink water down stream. This is an extreme example, but this is where it’s going. That’s one of the incompatibilities with regard to what we were trying to do in terms of divvying up the water.

Attitude [differences.] This is one of my favorites. I had to pull out this old quote [from this Alabama newspaper cartoon indicating Georgia’s proprietary attitude with regard to the Chattahoochee River’s water]. Since I’ve told you the historical basis of where Georgia thinks the Chattahoochee River is, you will see that [it] is, and has been, part of the problem and will continue to be part of the problem. We don’t see this attitude in Bob Kerr and the people on the negotiating team. But it’s an issue that will be out there once we start in the litigation, and even they may change their tune.

The other thing is that, in January 2003 or late December 2002, the State of Florida and the State of Alabama got word that a settlement agreement had been reached in the D.C. litigation. This litigation started as a suit by the SEFPC [Southeastern Federal Power Customers, Incorporated], which is basically a group of people who buy the power from the hydropower facilities in north Georgia from SEPA, the Southeastern Power Administration. SEPA is an arm of the Federal Energy Regulatory Commission. We were briefed on the settlement agreement and decided that, what they really did is that,

they had settled the Alabama lawsuit, and we weren’t a party to the settlement. It was done through confidential mediation. Now there was nothing wrong with the mediation being confidential. In fact, I think it needs to be confidential. The agreement was between the Corps of Engineers, Georgia, the Southeastern Power Customers Incorporated (the plaintiff), and the Atlanta Regional Commission, which is the entity that supplies the water or acts as the resource agency for getting water to the various municipalities and systems around the City of Atlanta. Unfortunately, neither Alabama nor Florida was invited to participate. Again, the agreement potentially resolved issues that we believe are still some of the issues we started to litigate with the Corps of Engineers back in 1990, and that lawsuit is still in existence and still pending.

So, we did what we should do. We went to court in Birmingham, in the Northern District of Alabama, and got the agreement enjoined. Now, the Corps of Engineers, and ultimately, because Georgia had intervened, Georgia too is enjoined from implementing the settlement agreement. We also have a hearing in January 2004—later this month—in front of Judge Jackson, where he’s supposed to decide whether he is going to approve the settlement or not. In addition, we have an injunction that is issued and continues to be valid, preventing the Corps from implementing the settlement agreement even if Judge Jackson approves it. In addition to that, Florida and Alabama are seeking to have the settlement agreement tossed out in the D.C. litigation, and the Corps of Engineers and Georgia are appealing the order by the Northern District of Alabama enjoining them. All this would make for a very good issue-spotting test question that I so loved when I was in law school and probably has in it some very interesting constitutional and jurisdictional issues as well.

In terms of compacts, I guess when people ask me, “Would you do it again if you didn’t have an allocation formula in place,” I’d say “I don’t know.” Without the formula, it was much easier to start to negotiate but a whole lot harder to finish. I think that, if you had some more precise tools and if, going in, you could agree on some
underlying assumptions that you might put into the compact, it might make the negotiations for a formula easier.

I'm not sure whether Congress is going to give anybody this chance again. It was somewhat unique. We had some interesting sessions, including one all-night session with Newt Gingrich presiding. He basically found out what the Corps's problems were and then found a way to strong-arm the State of Georgia and the State of Alabama into amending what was then their proposed compacts in order to get the compacts through Congress. Congress may view the failure of the ACF Compact as something that they don't want to deal with again. It may tell states, "Come to us with an allocation formula, and then we'll talk. But we're not going to give you the authority to negotiate the allocation formula without coming back to us for our approval of it." I think, if you ask the Federal Commissioner (whose job I liken more to herding cats then anything else), I'm not sure if he would recommend to Congress that they do this.

[Former ATC Alternate] Commissioner Lindsey Thomas, ... Peter Conroy from Atlanta ... (the [current] Alternate Commissioner), ... [former Commissioner] Alex Ponevent from Columbus, Georgia, and ... [current Commissioner] Peter Field ... all basically had the responsibility of looking at what was being negotiated and traded off in public and then writing letters and reviewing federal agency comments that would probably fill up this table if we laid them end to end. That was a very difficult task. One of the main problems is the comments they worked with were often inconsistent. You had comments from the Corps of Engineers, and there was no way in the world you could reconcile them with comments from the EPA [Environmental Protection Agency]. Then, at the end of the day, the Commissioner was tasked with taking all those comments and deciding whether or not to concur [on] a formula where one agency was saying it was okay and the other was saying you would violate federal law if you did it. So, I'm not sure if Congress would give the states that discretion or authority again.

Negotiating the compacts in the public forum was extraordinarily difficult. There was no opportunity for any discussion of what
different approaches might be used. But the negotiations surely involved all the stakeholders. They certainly had every opportunity to tell us what we ought to do, even though we found in Alabama, (I don’t know what Bob’s experience was) that we had a whole lot more suggestions that we were doing things wrong than any suggestion that would actually work. Take that for what it’s worth.

**Kerr:** Actually, it was the easiest job in the world because everybody out there knew how we ought to do it.

**Cox:** But they wouldn’t tell us, so it was kind of hard.

Some other lessons learned—the 95% versus the 100% approach. Let me explain what I mean by that. Ultimately, it may be fairer to call it the 98% approach. In the Delaware River Basin, they use an allocation formula that will work a large percentage of the time. Under almost any condition conceivable, the Delaware River Basin Compact will work, but there is the possibility that, if things are worse than anybody could ever imagine and [if] their droughts are worse than anything anybody can imagine, then they’re going to have to get together to decide how to operate the system so nobody is basically harmed.

Here, I think the approach taken, probably by all sides, was that everybody wanted 100% certainty. When dealing with water resources that you can’t control because you can’t control the rainfall and when dealing with all the competing interests that the Corps of Engineers has to address, I just don’t think the 100% approach to an allocation formula is going to work. I think you would be better off looking at something that works most of the time and then trying to come up with a mechanism to solve the problems that nobody can foresee. That’s my opinion.

As to sharing the excess and sharing the pain, the problem when you’ve got competing uses, like recreation, water supply, and hydropower, is how do you decide how much of the excess everybody shares and, probably more importantly, is how do you decide who shares all the pain? If you, for example, operate Lake Lanier in a way so that it basically is only a water reservoir for recreation and municipal water supply, then you cut off a large amount of water storage that could augment downstream flows for
water quality, navigation, hydropower, and other things. How you deal with the issues arising when there's not enough water became critical to where we ended up. Again, the modeling assumptions that I've talked about before and the competing federal interests I've mentioned were critical. I don't know how you deal with this.

You’ve got so many laws and agencies out there—the Endangered Species Act and NEPA, the Corps of Engineers, and the EPA. If you can get them to the point where they won’t try to use the Compact to do things that they don’t have the authority to do themselves, you’re much better off. I found that what the EPA really wanted us to do was to do something that they didn’t have the authority to do. The brunt of their comments were, “You should do this. You should do that. You should do this other thing.” Then I’d ask them, “Okay, under what federal statute or regulation are we required to do that?” And the response was, “None, but we think it’s a good idea.” They should go to Congress and leave our compacts alone.

I don’t know how this is going to end. Again, litigation is never appealing when you are talking about water. If you look at the Supreme Court dockets, you’ll find cases that were filed in the 1800s that are still alive. So, I don’t feel bad that the case in Alabama is only 13 years old. But it is very expensive. It’s very protracted litigation. The process is not very appealing for entities that want to make decisions about what they’re going to do over the next ten years. That’s because what they’re facing, if it goes to the Supreme Court, is having a special master conduct what is really a trial on the merits. The master would make recommendations to the Supreme Court. The states would have an opportunity to file exceptions with the Supreme Court and then to argue those exceptions. Finally, once the Supreme Court makes a decision, either adopting, modifying, or rejecting the special master’s opinion, you’re stuck unless you can go back to the Court and ask that it be modified.

So that’s where we are. The ACT is still alive to a certain extent, even though, because of the linkage at the time between the ACT and the ACF, it has created issues of its own. I’ll now turn it over to J.B. Thank you for your attention. (Applause).
Ruhl: Thank you. I am neither a negotiator nor a representative of the State in the ACF situation. I’ve been an observer and a brain-stormer with different groups about approaches to it. It presents some fascinating legal issues. I hope that you’re familiar with an article that Bo Abrams published a year ago in the Arkansas Law Review. He discussed the dilemma of states that wish to conserve water for ecological or simply future purposes downstream of hungry, growing states that are very good at securing uses of water so as to essentially stack the deck against the downstream state in any equitable apportionment controversy that might reach the Supreme Court. Bo outlines their dilemma and offers suggested approaches that this case may very well put in front of the Supreme Court as options for reforming or evolving their jurisprudence on equitable apportionment. So that’s why I’m interested in the ACF situation.

Why is Florida interested in it? One reason is the ecological importance of the Apalachicola River and Bay. You may know that the Nature Conservancy believes one of the hot spots of biodiversity in this country includes that region, and the watershed we’re talking about is considered one of the critical ones in terms of potential for declining water quality and ecological quality. I’ll go into more detail on both points later.

The ecological importance of the region is undisputed. So let me just give a little more context in terms of the economics and the social setting. The ACF Basin is 19,000 square miles plus—about 19,600 square miles. That’s 12.3 million acres for those of us who are better at envisioning big chunks of acreage versus square miles. It’s about 385 miles from the top to the bottom. The 1995 population of the Basin was 4 million, and [it is] expected to go to 7 million by 2050. Of course, that’s mainly attributable to growth of population in Georgia. The land uses in the area are about 6% residential, 2% commercial, 25% agricultural. There are actually hundreds of reservoirs in the basin—many small reservoirs but only 16 on the

three principal river main-stems. Eleven of those 16 are non-federal, but of course, most of the fight is over the five federal reservoirs that are dedicated primarily to navigation, hydropower, and flood control. Increasingly, recreation is becoming an important use of those reservoirs. The largest in terms of surface area is the W[alter] F. George [Lake]. It has about 45,000 surface acres, and at its peak, Lanier has 38,500.

Georgia has about 90% of the population, 74% of the basin, and about 82% of the withdrawals of the surface water. Alabama’s got 7% of the population [and] 11% of the withdrawals. Florida has 3% of the population and about 7% of the withdrawals, mostly for agriculture.

Florida’s share of the basin is the least densely populated part of the State. It’s the middle of nowhere for the most part. Most of the land that borders the Apalachicola River in Florida is in a conservation status of one form or another—national forests, state conserved lands, et cetera. The State is aggressively buying tracts of land up and down the river corridor. It’s not ever going to become a population center. It’s not ever going to become a significant user of water from the surface system. What we’re really trying to protect in Florida is the riverine and estuarine habitat. That’s primarily what makes that [a] hot spot on the Nature Conservancy’s map.

Taking just a little tour, we start out where we are today—Atlanta. There you’ll see some of the dams along the Chattahoochee’s mainstem. Downstate, there’s some irrigation leading to massive use of ground water by the Flint River Basin farming industry. There’s a lot of controversy over the interplay there between groundwater extraction and its influence on surface water.

Navigation was, at one time, when cotton was king in this area, a major industry on the Chattahoochee River. It has declined since then. In 2001, there were four trips made for a variety of different reasons. But Columbus and Bainbridge remain very interested in maintaining their shipping-port status. So it’s a significant interest, but it’s very much declined over time.

And just to give you a sense of the differences, the Chattahoochee is heavily influenced by reservoirs. So there’s really no free-flowing
water in the Chattahoochee Basin. However, the Flint River has only two reservoirs, and it's mostly a free-flowing river. It's about a 350-mile-long basin. It has very high groundwater use, but it's, you know, a nice river, made that way by its free-flow.

The Apalachicola only has one reservoir. It's at its top-end, so it too is mostly free-flowing. But it's very highly manipulated for purposes of navigation. It has been dredged and channelized extensively. That's a big issue between the State of Florida and the Corps, but I'm not going to get into that (the Corps dumps the dredged sand in ways Florida doesn't like). So what we're really talking about is the flood plain habitat that is created by a natural flow regime. That's really the subject of the big issue between Florida and Georgia: How do we maintain a natural flow regime, why are we maintaining it, and what are the consequences of departing from it in order to serve all the interests?

The Apalachicola is the largest river in Florida. It is the 27th largest in the country in terms of flow. It provides 35% of the freshwater inflow to the western coast of Florida—35% of the fresh water. It's extremely important to the ecological dynamics of that part of the Gulf. It has a vast, vast wetland flood plain—a very complex flood plain, one that is very dependant on the timing of the pulses of the floods for its ecological dynamic to continue the way it is—and provides a tremendous habitat for fish moving in and out of the flood plain and into the main-stem of the river. This area has the highest concentration of listed threatened and endangered species in the Basin.

Apalachicola Bay itself is, as mentioned, a significant commercial oyster industry. Ninety percent of the oysters consumed in Florida come from Apalachicola Bay, and 10% of the oysters consumed in the country come from Apalachicola Bay. It's a wonderful habitat; if you're an oyster, you want to live in Apalachicola Bay. They mature a year earlier than oysters [of the native variety] anywhere else . . . . It's fabulous, fabulous oyster country.

The Apalachicola Bay has a huge estuarine wetland complex itself. It is protected by a series of barrier islands that are just drop-dead gorgeous. St. George Island is a wonderful place to go to the beach. It
has the white sand beaches that have made the Gulf such a popular beach destination.

The bay itself—the estuary in the bay—is not just oyster grounds. It’s very important to many of the species in the Gulf at different life stages—both shellfish and fish. What we’re doing in Florida now is studying just exactly how important, economically, a continued freshwater supply is to the economy, not just to the oyster industry in Apalachicola Bay but to the very large commercial, and even much larger recreational, fishing industry in the Gulf.

So, my focus is on, again, the fourth largest river in the Southeast, Florida’s largest river, and the State’s largest forested flood plain. This region is very important to the State in terms of its ecological contribution to the State. It’s interesting. The ACF is Florida’s only ecological link to much of the outside world. Basically, the State’s a peninsula, and it’s our direct link to the Appalachian and Piedmont ecosystems. It’s because those ecosystems cross this portion of Florida in the form of the ACF that you’re getting an interplay between three very distinct ecosystems, all then spilling out into the bay. That’s why we’ve got such an incredible biodiversity in the Florida portion of the ACF.

The real issue that Florida is pursuing, or at least that many of the stakeholders in Florida want the State to pursue, is summarized beautifully in the Corps of Engineers’s 1998 Draft Environmental Impact Statement. It simply points out what all the evidence points to—that the quantity, quality, and timing of river discharge into the Apalachicola Bay estuary is an integral component of the estuarine habitat. That’s what it’s all about. It’s not about a minimum flow or an annual quantity of water. It’s about what happens when the ACF water hits the Bay, and it’s got to work. Let me explain.

First, on the river and floodplain system, you can see that, because of the flat terrain, you’ve got a really complicated interplay between different kinds of habitats in close proximity. You don’t have long linear divisions between these habitats. You’ve got them all intermixed. You’ve got the very beautiful Tupelo Cypress swamps, bottomland hardwoods, and upland forests all relatively close to each
other. Only when you step back, do you see that it’s like just a hodgepodge or checkerboard of those habitats.

Now what happens is that the depth of the flood in different areas is going to dictate the type of habitat you’re going to wind up with. What we’ve got is basically a flood regime in which the big pulse is in the spring. That’s not unusual for any kind of flood plain like this. Your average flow is going to hit about 40,000 cfs [cubic feet per second] at the mouth of the river. Where you’ve got minimal flooding influence—in other words, only [during] the highest floods will the flood waters reach this habitat—that’s where you’re going to see high bottomland hardwoods. Then low bottomland hardwoods are areas that are more influenced by flooding. And, likewise, the Tupelo Cypress swamps are dependant on very regular flooding throughout that winter to spring season.

In the high bottomland hardwoods, the average flood duration is going to last about one to six weeks. That duration is one to four months for the low bottomland and six to nine months for your cypress swamps.

As the flood level and the reach of the floods is decreased because of less water coming down the Chattahoochee and the Flint Rivers, the effect is essentially to increase the amount of upland, increasing, in turn, the amount of hardwoods and increasing the amount of bottomland at the expense of the cypress swamps (which are the most productive of the three basic forest habitats). And so, you’re going to see a transformation [of] habitats. As you change the composition of trees and, in particular, as you change the intermixing of these habitats, the concerns raised are about the increased incursion of invasive species. You’re increasing the edge effect, basically. And as you’re drying out the land, you’re also drying out the soils increasingly. You’re increasing the fire risk, and we already have a significant fire risk in the dryer months in this area.

Fish productivity is also a concern. In the flood plain, in the high flood season, what you find is, of course, the fish are going out into the flood plain to find food. They’re spawning in the flood plain, but then they rely on the main-stem, for the most part, during the low-flow season.
Interestingly, you can change when the peak flood occurs. One of the things that the Corps does is, occasionally, they will send pulses of water down the main-stem to support navigation. The River has got to have a depth of about nine feet to support navigation. Well, if the pulse comes at the wrong time, and this happened a couple of years ago, fish get out into the flood plain. This pulse goes away pretty quickly, so they’re getting stranded. And so, you have significant fish kill problems if pulses come down the River at the wrong time. The fish are set up to survive but only in a natural flow regime.

The River also is habitat to several endangered mussel species. They depend, again, on the natural flow regime not only for their food sources but also for the way in which mussels are constantly being washed downstream. So, you ask: Why don’t all the mussels eventually wind up in the Bay? Well, it’s because they depend on fish to transport the larva upstream, and if the fish are having a harder time doing that, we all are going to see the mussels being more than just endangered.

Now let’s move into the Bay and the estuary. This is a vast estuarine research reserve that starts basically where you’re getting salt water influence in low flow season and out into the bay itself. Along the barrier islands—along St. George Island and Dog Island—what’s of concern is increased salinity. As freshwater flow leaving the river is decreasing, you’re getting more influence from marine water in the Gulf over time and slowly having more resident time in the estuarine habitat. Now oysters are extremely sensitive to salinity. They’ve got to have fresh water at the right time of the year and saline water at the right time of the year. Otherwise, they don’t do very well, and they have a hard time moving around to find the right kind of water. So basically, it’s got to come to them.

The concerns with higher salinity go beyond the oysters because the entire estuarine forestry and the wetland habitat [are] very dependant on saline levels. There are salt tolerant and salt intolerant species, and they’ve got to get the right flow regime in order to continue to maintain the integrity of their ecosystem. Also, as the salt water intrudes into the estuarine habitat, you get salt tolerant species
able to come further into the estuary wetlands and upset the balance of species in those settings.

So, researchers in Florida are beginning to understand the influence of lower flow regimes. We’re starting to study the influence of the decreasing flows on salinity levels in the Bay. We’re seeing increasing salinity at every station there measuring flow in the estuarine reserve. And we’re beginning to understand the effects on oysters of the increasing salinity moving up the main-stem and of higher resident time for higher salinity levels.

Let me just wrap up with a few observations on what I think some of the legal issues are and also try to provide some details that the prior two speakers left out. Some of these are just interesting details. For example, Lake Lanier has roughly 15,000 homes bordering it. They are very nice homes with about 25,000 registered boats. You know, two cars in every garage, two boats in every slip. These are very nice boats too. I think many of us would be happy living on some of the boats.

The operative language in the Compact (as has been pointed out, it’s an unusual Compact) did encompass ecological concerns very explicitly. The three states were authorized to develop an allocation formula for equitably apportioning the surface waters of the Basin. Notice it referred to surface waters. Ground water was left out of this Compact, and that’s why we need to understand what the influence of irrigation is and why that was a big issue between Florida and Georgia. Florida basically alleged that Georgia was overstating its consumption so that it could, when a time for conservation came, cut phantom irrigation. The surface waters definition for the ACF Basin, while protecting the water quality, ecology, and biodiversity of the ACF, was consistent with a long list of federal laws.

The Compact was, I think, pretty innovative in that it set up a Commission that would manage the system after the allocation formula was agreed upon, for such purposes as what to do in times of severe drought and how to depart from the formula. Also, of course, it set up a Tri-State Commission. It further set up a science advisory panel that was designed to establish performance indicators for the system and then monitor and provide information to the Commission
that the Commission could use in its decision making. So, it wasn’t just a “here’s the formula, now go do your thing” compact. It was meant to set up an ongoing river management system.

Its first deadline was January 1, 1999. It was extended. Georgia presented its first allocation proposal a couple of weeks before the first deadline. It was extended, I believe, a total of 14 times.

**Kerr:** At least.

**Ruhl:** At least. Now, you hate to hear negotiating in the public was really the worst thing that we could have done, but it presented a tremendous dilemma for the three states. And it happened in Florida, too. Florida, several times—of course, I wasn’t privy to the actual negotiations—was getting close to an agreement on proposals that got the states, you know, very close.

However, Florida really didn’t shop its proposals to Florida—to us. On two occasions, the Florida negotiators announced they had an agreement in principle that they were going to present to the other states, and the environmental groups—in particular, in Florida—said, “This isn’t going to work.” They really exerted tremendous pressure on the State to pull back from their proposal positions. In essence, each state was negotiating with two different entities: the other states and its own set of internal stakeholders, and in Florida, the most vocal and aggressive stakeholders were environmental groups trying to preserve that basic natural flow regime that is all important to the River and Bay habitats.

The talks broke down in 2003, and the quote from the head of the Florida DEP [Department of Environmental Protection] at the time, David Struhs, was that, “in the end, Florida was unwilling to accept an agreement that relied on the minimum flow.” In other words, we just weren’t willing to let Georgia guarantee, whether it’s target or guarantee, a minimum flow because you see what happens—minimum flow, when we need the big pulse in the spring, doesn’t cut it for that habitat.

As to the legal context and questions, both Florida and Georgia are undergoing, and I know much less about what Georgia’s doing, a top to bottom overhaul or examination of their state water law system and of how they deal with water. If you go talk to the farmers in the
Flint River Basin, they'll refer to the "State of Atlanta." They don't like Atlanta. They have their quarrels with municipal water users, and so you've got a problem with each state, particularly Florida and Georgia, having to deal with their own internal water problems.

Recently, and ironically, a so-called "Florida Council of 100"\textsuperscript{55} came up with this great idea that south Florida really needs water and [said], because desalination isn't working as well as we thought it would in Tampa, let's get "our" water from north Florida. I felt that idea was ironic in that, here we are ready to wage war in the Supreme Court with Georgia over sucking the water out of the Chattahoochee River and now we've got, internally, south Florida wanting to suck the water out of north Florida. We have got a lot of water in north Florida, but you know, we feel like it's ours. I suppose that's kind of how Georgia feels about the Chattahoochee but . . . you know . . . (Laughter). So, internally, the states are in turmoil over water. It's not just between the states.

I think that the cases that are dealing with NEPA [the National Environmental Protection Agency] and the authority of the courts to reallocate water are interesting, but what really interests me is that this case might present, if it ever went to the Supreme Court, an opportunity to think about the dilemma of a state like Florida, which is attempting to conserve water primarily for ecological reasons.

Although, there are economic benefits involved in Florida's ecological position, too. In April, a researcher at Florida State University applied the same methodology to the ACF that Robert Costanza used in his ecosystem services study.\textsuperscript{56} Basically, the issue

\textsuperscript{55} This is a private group of business leaders, formed in the 1960s to advise and lobby state government. In September 2003, the group issued a Task Force Report that proposed the creation of a statewide Water Supply Commission consisting of seven members appointed by the Governor with authority to oversee the State's five water management districts and to transfer water from north Florida to south Florida. See Lloyd Dunkelberger, Opening the Floodgates: Gov. Bush Considers a Plan to Tap North Florida's Water for the Growing South, SARASOTA HERALD-TRIB., Sept. 26, 2003, at 1 A; United Press Int'l., Fla. Lobbying Group Wants Water Transfer (Sept. 27, 2003) (reporting that 80% of the State's freshwater supply exists north of Tampa while 80% of the State's population resides south of Tampa), available at http://quickstart.clari.net/qs_se/webnews/wed/ca/Us-fla-water.RQv_-DSR.html.

\textsuperscript{56} See Robert Costanza et al., The Value of the World's Ecosystem Services and Natural Capital, 387 NATURE 253 (1996). Costanza, an ecological economist at the University of Maryland during the 1990s, made two arguments. Id. at 253. He first advocated going beyond the negotiated settlements for environmental disputes using tools like habitat conservation plans, which value things that traditional
is what's the floodplain value. What's the estuary habitat value? What are the ecosystem service values? Considering just the Apalachicola River, he came up with five billion, give or take. So, how do you take that number and factor that into the Court's jurisprudence when Lake Lanier and Atlanta are going to hold up their four to five billion? How is the Court going to take [that] into account? [They could do this] by basically including the emerging knowledge of the value of ecosystem services and not just the commercial landings of oysters, which is about ten million a year. You know, that's nothing. . . . Is it more than that? Forty million? Okay. Still, if we have [the] fight in the Supreme Court with a $40 million price tag versus 5 billion, you know, we lose.

So, this is the dilemma. We don't intend to use the Apalachicola River. We want it to go into the Bay; that's all. It will never be developed. In fact, we're trying as a State to ensure that. Those habitats really fall apart if we can't, through the equitable apportionment doctrine, first establish the injury to get into court. I know many of you know more about water law than I do. But I know that first you've got to get the standing by demonstrating substantial injury, and only then, do you get to litigate about the formula. It just doesn't compute. I think the Court is going to have to reform its law to respond to these kinds of issues. The jurisprudence leaves us hanging. And the first thing I would think of is what the West is dealing with in formulating a new "Law of the River," so the Endangered Species Act would be something I'd reread.

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57. economic measures, such as the gross national product, do not, like the destruction of the environment. Id. at 253, 257. Second, he advocated getting beyond the idea that an environment used by people is an unhealthy ecosystem. Cf. id. at 259. Dispute resolution, he argued, requires that parties have a vision about what a healthy ecosystem looks like. See id. at 259. In the popular phrase of today, a "win-win solution" often requires that the parties to a dispute re-evaluate what winning means. See id.

58. Again, Bo Abrams has pointed the way. See Abrams, supra note 54.

59. The "Law of the River" is shorthand for the collection of interstate compacts, treaties, federal statutes, and United States Supreme Court cases that have emerged from decades of legal struggle over the waters of the Colorado River. John H. Davidson, Indian Water Rights, the Missouri River, and the Administrative Process: What Are the Questions? 24 AM. INDIAN L. REV. 1, 1 (1999). Most assume that the western states have over-appropriated available water. Id.

59. See, e.g., J.B. Ruhl, Is the Endangered Species Act Eco-Pragmatic? 87 MINN. L. REV. 885, 888-89 (2003) (arguing that the ESA's Habitat Conservation Plans have relied on establishing a baseline environment, have been formulated with a precautionary principle in mind, and have been implemented
Q: You could bring water up from south Florida. (Laughter).
Ruhl: That's another option.
Kerr: Everyone will move to Georgia then.
Burke: Maybe, with Joe's comment, we ought to, since he already has, open it up to the audience.
Ruhl: Yes. Thanks. (Applause).
Q: I was wondering, are there significant differences in the natural flow regimes, jurisprudentially or statutorily, in these three states that would have an impact on equitable apportionment? Do any of these states use reasonable-use rules so that more can be taken out of the river than is possible in the others? Is there an imbalance there?
Burke: Anyone want to respond? In general, I think Florida has the most regulation. Buddy?
Cox: Georgia's probably a close second. Both of them have gone from a pure riparian rights system where, for land abutting the stream, its owner has a right to make a reasonable use of that water but, generally, only on the riparian property. The legal structure in Alabama still consists of traditional riparian rules. If it got to the Supreme Court, what the Supreme Court's jurisprudence tells you is that the justices would look not only at those three states' systems that are in dispute but [would] also look at other states' water law systems, even prior appropriation doctrines, in order to divide up what water's there.
Burke: And most of the discussion in the Supreme Court cases is of the "extra factors" being used only once you get beyond the guiding principles of state law. The relevant cases are mostly all appropriation state discussions.
Q: Two questions. One, with respect to the irrigation in Georgia, I assume that agriculture's been significant for a long time, and I wonder what the cause of the increased irrigation demand is compared to earlier agriculture. And the second question is, where does Florida get any leverage in this—absent a decision by the Supreme Court on either equitable apportionment or a federal

through case-specific impact assessments using empirical and experiential knowledge and requiring an ongoing decision-making process).
intervention in one way or another through the ESA or something else? It seems to me, Florida has no leverage whatsoever, absent that. Is that true?

**Ruhl:** You can certainly see it that way.

**Kerr:** On the irrigation, I think the reason we have gone from dry farming to more wet farming or supplemental irrigation is technology, pure and simple. We now know how to drill better wells. We know how to operate the pumps. We know how to put out these systems. We’re learning more and more about how to do supplemental irrigation to increase the crop. So, it’s a matter of economics—productivity—right? If you put enough water on to assure that you’re going to get the maximum crop, then you will be in a better economic condition, and you try to balance these off against how much it’s going to cost to pump, the cost of fuel, and, in some cases, state programs. In the two years, when we did actually invoke the Flint River Drought Protection Program, a number of farmers came forth and took cash in lieu of farming with water.

**Ruhl:** There’s also a slight change in long term rainfall patterns. There’s more rain in the winter and less in the summer over the last 30 or 40 years than there was in the past.

**Kerr:** That’s right.

**Q:** A couple of comments more than a question. Apropos of how the Supreme Court’s likely to make an equitable apportionment, the justices have never paid attention to temporal priority in the few eastern cases that they’ve decided. Now, it’s always possible that they’ll change their mind, but even in the cases where they even talk about who was using water first, they don’t apply it as an absolute rule. And even there, the disputes are all between western states, which means that the question of how a special master or the Supreme Court would ultimately apportion the water is much more up in the air than it would be in the West. That’s the first point.

Second point: I think *Virginia v. Maryland*,60 decided about a month ago, settles the question about the Chattahoochee River’s not going through Alabama. The Supreme Court decided that, even

60. 540 U.S. 56 (2003).
though the river boundary between Virginia and Maryland is the south bank of the Potomac—so that the whole Potomac River, at least the normal low water line, is in Maryland—Maryland still cannot require permits from Virginia entities taking water out of the River. Since Virginia has classic riparian rights law and since Virginia touches the river, its entities have a right to make a reasonable use, without the permission of the other State, and that seems to settle that question.

**Kerr:** I think that Buddy’s comment was to the effect that Georgia’s “ownership” of the Chattahoochee was an attitude of some people but not the negotiators. We, in fact, have acknowledged all along and in any proposed allocation formula a sharing of the water rights and even the assimilative capacity.

**Q:** I do have one question which some of you, or all of you, or none of you, might be able to answer . . . . I think Buddy mentioned that the Delaware and Susquehanna River Basin Compacts were unique in the sense that they set up a Commission that has a federal member who is a full voting member, the decisions of which, with some limited exceptions, bind federal agencies. So that, and it has happened, at least in the Delaware River Basin Commission, when the federal agencies wanted to do something or block something because a majority of the commission, four out of the five commissioners, who are state commissioners, voted no. That doesn’t exist, as far as I am aware, in any other compact arrangement relating to water. The feds usually keep separate and say, “We do what we do, and you’ll just have to live with it.” That was not attempted in the southeastern compacts, and I wonder why. Would it have been a good idea, instead of saying, “Federal Commissioner, you can veto what we decide,” to say instead, “Federal Commissioner, you have a vote, but you’re also bound by the majority?”

**Cox:** Well, several points. . . . There are several reasons for that, I guess, dichotomy. You do have more than three states in both of those compacts. I can’t remember the count on . . . .

**Q:** Susquehanna’s got three.

**Cox:** Susquehanna’s three? I knew that the Delaware was four or five.
Q: Five votes with the feds.

Cox: Right. With the allocation formula coming later, we had the issue of no one want[ing] to agree to anything other than a unanimous decision establishing the allocation formula. You also have, particularly in the Delaware River Basin, a Commission being basically the water management agency for those states in that Commission. You have them issuing, not only withdrawal permits wherever—within the entire Basin—you also have them being, I think, the entity that’s got the authority under the Clean Water Act to issue MPDS permits. And that’s not a role that . . .

Q: I don’t think that’s true. I don’t think they do the MPDS.

Cox: Do they not do the MPDS permits? The thought was that the powers delegated to a Commission that had a full federal voting member, were not powers that the states were comfortable ceding to a Commission. And I couldn’t remember all the specifics. It’s been a while since I looked at the Delaware Compact and talked to Jerry Hansen, but that’s some of the reason for that distinction there.

Kerr: Though I haven’t looked at that aspect of the compacts in quite some time, but if I recall correctly, the Commissioner or Federal Commissioner did not have a vote on the formula but became a full voting member later on other decisions.

Q: Although it’s not as big [of a] biodiversity hot spot as Apalachicola Bay and the estuary, the Tallapoosa and the Coosa Systems are big areas of biodiversity as well. I just wanted to ask you what the status of the ACT Compact is now; what the likelihood of an agreement may be; what will happen next; how much water is going to be transferred from it into the Chattahoochee System through the Cobb County water system; and whether or not some sort of natural flow kind of regime is going to maintained along the Coosa, or will it suffer at the hands of the Lake Allatoona property owners?

Burke: Is that a compound question?

Ruhl: That’s a compound question. (Laughter).

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Kerr: Let me answer a couple of those. I’m not sure I can remember them all. The maximum inter-basin transfer out of the Coosa is a hundred million gallons a day. It doesn’t specify where that goes. But that’s the maximum, and that would be graduated up until roughly 2030. And one of the first things we’d look at... is... what are the habitat diversity requirements? We’re very familiar with the biodiversity there; the University of Georgia folks make sure we are. What was another one?

Q: Shouldn’t there be some sort of natural flow regime for the Coosa, or is that River going to be regulated by dam releases?

Kerr: The dams are so far upstream in Georgia, that is upstream from Rome, that, by the time the water gets down the Coosa, the River probably has more of a natural flow than you would experience on the Chattahoochee, for example. Whether or not you can call it a true natural flow (I would say no), it’s just not going to happen.

Cox: In terms of the current status, the allocation formula was put out for public review and comment in May 2003. The comment period expired after 60 days. The states have the comments and are, I guess, still in the process of reviewing them, which is why the states agreed to a year-long extension until July 31, 2004.62 There are some issues that have to be dealt with—not only those generated from the public comments from both sides, from both Georgia and Alabama stakeholders, but also those involving the linkage with the ACF Compact—in terms of when performance would start under the ACT Compact. Now that we don’t have an ACF Compact, that issue needs to be revisited.

Q: Speaking of natural flows, has anyone in Florida or elsewhere advocated taking out any of these dams? Is anyone even thinking along this line? I can’t imagine it happening, but is it even attainable?

Kerr: Taking out the dams?

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62. See Stacy Shelton, Georgia, Alabama Strive for Rivers Pact, ATLANTA J. CONST., Aug. 1, 2004, at C3 (reporting last minute proposals on July 31, 2004 and that Georgia negotiators had “asked Alabama to agree to let metro Atlanta take more water out of the Chattahoochee in exchange for an agreement on the Coosa River” and had proposed to send Alabama less than the agreed minimum flows in time of drought if Georgia reduced its own use, and further reporting that Alabama wanted Georgia to accept a cap in its water use).
Q: Yes, any of them?

Kerr: I haven’t heard. Florida doesn’t have many dams because it’s flat. But it has tremendous amounts of groundwater, and of course, they cut little boat passages through certain islands in order to make it more convenient for boaters. And that allows us to limit the end of the Bay. If we provide the fresh water, we can offset it. Just thought I’d throw that one in.

Burke: On that note, let’s adjourn. (Applause).

III. CONCLUDING COMMENTARY

This commentary explains the advantages of a compact for allocation of water resources in interstate disputes, explains some of the problems of shifting from compact negotiations to litigation, and details some of the models for that litigation.

A. Why an Interstate Compact Is a Preferred Solution

As illustrated during the 1996-1997 legislative sessions of the three states involved in the ACF dispute, the procedure for creating an interstate compact often begins with a request from the states to Congress. The purpose of the request is to authorize the negotiation of a resolution of their dispute. After authorizing the negotiation, Congress usually stipulates that the negotiation take place, as with the ACF negotiations, in the presence of a federal representative or mediator. The states then begin negotiating. After they reach an agreement, they seek congressional approval of it. When Congress consents by passing a resolution, the compact becomes law.

The advantages of the usual compact, then, lie in its silences. If the parties substituted a federal lawsuit for the compact, they would raise all of the issues they responsibly could. Thus, federal rules of apportionment, federal and state water pollution statutes and regulations, endangered species acts, and federal land management

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issues would be at issue, presenting points of law that the Court would have to resolve.

As the speakers pointed out, the ACF Compact was different because there was no prior equitable apportionment formula for the ACF Basin waters. With the ACF Compact, the parties were capable of incorporating any number of issues into the apportionment formula negotiations.

In contrast to apportionment litigation, no federal statutes or regulations govern the formulation of any compact. Instead, the United States Constitution authorizes them. The Constitution states, in pertinent part, that "[n]o State shall, without the Consent of Congress . . . enter into any . . . Compact with another State." Thus, a compact's constitutional status makes it function like a proviso in a statute—a provision wholly outside the purview of a statute and not merely an exception to a more general rule. This means that Congress can assume that any compact presented to it for approval is suitable for use in the states involved in the negotiations—something no court would feel safe assuming. This assumption, in turn, means that Congress rarely refuses to consent to a compact as negotiated. It also means that the United States Supreme Court has little inclination to do anything but enforce the compact as written. This inclination is,

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64. See supra Part II passim.
65. U.S. Const. art. I, § 10, cl. 3.
67. This assumption is particularly useful in any ACF Compact context because the doctrine of equitable apportionment works best, and some think only applies, when the disputing jurisdictions have something close to the same system for water rights. For a review showing the differences between Alabama, Florida, and Georgia law in this regard, see Joseph W. Dellapenna, The Law of Water Allocation in the Southeastern States at the Opening of the Twenty-First Century, 25 U. Ark. Little Rock L. Rev. 9, 47-52, 59-73 (2002) (noting that Florida has moved, much more than either Alabama or Georgia, toward a system of regulated riparianism by dividing itself into five water management districts).
68. See Texas v. New Mexico, 462 U.S. 554, 564-65 (1983) (holding that, when a compact lacks a tie-breaking mechanism, the courts may not supply one). Even changed circumstances do not override this deference to the terms of a compact. Cf. id. The federal courts will not restructure a compact to
as one water expert has written, "a separation of powers induced deference." 69 If a compacting state undertakes certain duties and obligations, then the Court will enforce them as written—the Court does not grant discretionary relief from these duties. 70 These duties and obligations are also binding on the citizenry of each signatory state "even where the [s]tate ha[s] granted the water rights before it entered into the compact." 71 This generally means that any issue involving the interpretation of a compact is a federal question; the consent of Congress makes it so. 72

The first compact resolving an interstate water allocation dispute involved the Colorado River in 1922. 73 There are over 30 compacts now in existence, and they involve every western state, often more than once. 74 The eastern compacts are the Susquehanna River Basin Compact, the Delaware River Basin Commission Compact, and the Great Lakes Basin Compact. 75 Most compacts involve the establishment of a standing interstate commission to resolve issues as they arise, often with at least one federal representative having full voting rights. In 1961, the Delaware River Basin Compact was the first to involve the federal government as a full voting member. 76 Thus, the governors of Delaware, New Jersey, New York, and Pennsylvania are among its members, usually appointing alternates to represent them, while the Army Corps of Engineers usually represents the federal government. 77

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69. See Abrams, supra note 54, at 157.
70. See id.
76. Id. For background on the Delaware River Basin Compact, see Delaware River Basin Commission v. Bucks County Water and Sewer Authority, 641 F.2d 1087, 1089 (3d Cir. 1981).
77. Miano & Crane, supra note 75.
The commissions generally have continuing authority to study problems and gather data. This authority amounts to a mandate to conduct continuous negotiations. This continuing authority is a means of avoiding the necessity for overstating the need for water and also a means of avoiding wasteful or inefficient allocations, thus insuring that commissions allocate water as needed but not precipitously or in advance of foreseeable needs.

Most interstate compact commissions have a comprehensive plan “for regulating and managing individual withdrawals of both surface water and groundwater within the basin[s].” Generally, they only require a permit for withdrawals in times of low flow or in those parts of basins where demand creates a water shortage or interferes with the commissions’ plans. The commissions usually delegate authority to issue permits to the states within the basins, provided they have management plans consistent with the commissions’ plans.

All compacts have some disadvantages. First, they involve expensive and time-consuming negotiations. The current ACF dispute illustrates this. The studies underlying the negotiations cost millions of dollars, and the states’ representatives often delay them while consulting with their respective state governments and governors. Second, state elections, particularly gubernatorial elections, interrupt their administration. Third, compacts inevitably involve some ambiguous language and unresolved issues, just as any contract does. The lack of data about south Georgia’s agricultural needs and the amount of unallocated water in the ACF System are illustrations of this third disadvantage. However, so long as ambiguities and open issues do not control a compact or create exceptions to it, they need not unravel it. Finally, ambiguous language gives discretion to a commission on an on-going basis, and exceptions and open issues leave the lingering possibility of future

78. Miano & Crane, supra note 75, at 17.
79. Id.
80. Id.
81. See supra Part II passim.
82. See supra Part II passim.
litigation unless a compact expressly delegates them to a commission or to some other forum. In the ACF dispute, Florida last year reportedly saw litigation as a preferred, solution-seeking pathway to vindicating its positions.\(^{83}\)

B. Switching Back to the Courts

The reasons that the three disputing states preferred negotiating an interstate compact during the 1990s as a solution to their dispute signal the difficulties ahead. The compact is a contract that states can tailor to the specific needs mirrored in a dispute. The resources of the court, its ability to handle complex facts, and the limits of the adversary process limit litigation as a solution. Smaller, more diffusely held needs are likely to get lost, and each of the parties must develop the facts. In contrast, interstate commissions implementing most compacts can develop information on a centralized basis for all the parties involved and can utilize experts, rather than attorneys learning to be experts, on water issues. Parties switching back to the courts must do the following: (1) be willing to employ significant resources in the fact-finding process, probably relying on an independent special master to do so; (2) be willing to admit that the fact-finding process focuses on a moving target and cannot be final, which makes the measurement of the facts more important than the conclusions reached; and (3) be willing to formulate a judicial consent order that undertakes continuing jurisdiction to resolve future implementation problems.\(^{84}\) Without this multi-pronged willingness, cheating on any judicial allocation is likely because the cheater knows that only litigation can discipline him. Therefore, a judicial apportionment of the ACF System is unlikely to be more than a stopgap solution.\(^{85}\)


\(^{84}\) See Miano & Crane, supra note 75, at 15-16.

\(^{85}\) Consolidation of lawsuits involving "one or more common questions" is subject to 28 U.S.C. § 1407(a) (1993). For an example involving river basin litigation, see In re Operation of the Missouri River System Litigation, 277 F. Supp. 2d 1378 (J.P.M.L. 2003). See also Marya K. Lucas, Comment, The Missouri River Compromise: Negotiated Rulemaking as a Suggested Resolution to the River Basin
To avoid these difficulties, continuing jurisdiction by the court is necessary even though it ensures future litigation. In contrast, the administrative process before a compact’s interstate commission is likely to be less costly, and judicial appeals from its decision are restricted and less costly. It is, therefore, unlikely that switching back to the courts will result in the most efficient solution to the ACF dispute.

Moreover, litigation’s adversarial nature tends to encourage overstated, wasteful, or inefficient claims of a party’s need for water. This is because parties have to be mindful of exiting the litigation in a settlement agreement and because of the necessity of appealing to a fact-finder presented with contrary views and expert opinions. Thus, it is also likely to protect pre-existing, but overstated, uses of water. Finally, it is likely that the Court may choose not to award a state the water necessary to satisfy its future needs or may suggest investigation of conservation measures. Litigation protects against severely adverse scenarios but little else.\(^{86}\)

With these aspects of the switch in mind, there is one judicial decision under the doctrine of equitable apportionment that bodes well for a resolution of the ACF dispute. *New Jersey v. New York*\(^{87}\) involved a boundary river—the Delaware River.\(^{88}\) It also involved withdrawals of water from the River by a predominant metropolitan area similar to Metro Atlanta—New York City.\(^{89}\) Moreover, New York City’s urban demands on the Basin system were upstream from the other disputants.\(^{90}\) New York claimed, much like Georgia in the ACF dispute, that it needed further future withdrawals to sustain its growth, and New Jersey, the downstream state like Alabama and Florida, made the same claim, albeit to sustain a less concentrated, more diverse growth pattern.\(^{91}\) The Supreme Court, in its opinion by

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\(^{86}\) See *infra* Part III.D for a discussion of burdens of proof in equitable apportionment cases.

\(^{87}\) 283 U.S. 336 (1931).

\(^{88}\) Id. at 338.

\(^{89}\) Id. at 341.

\(^{90}\) Id. at 341-42.

\(^{91}\) Id. at 342-44; Stephenson, *supra* note 3, at 95.
Justice Holmes, gave partial recognition to the claims of each state—New York could not reduce the flow of the River to a trickle, and New Jersey could not enjoin New York’s supply.\textsuperscript{92} The Court prohibited New York from increasing its level of withdrawals.\textsuperscript{93} The River’s flow had to be sufficient to ensure that a certain quantity reached New Jersey and that water quality in the watercourse remained high.\textsuperscript{94} As to quantity, the Court provided for the release of water impounded by the upstream state when the river level dropped below a certain point.\textsuperscript{95} As to water quality, the Court specified effluent standards for the upstream state’s discharge of water back into the River.\textsuperscript{96}

This case also suggests that downstream states fare better in judicially imposed equitable apportionments than they might in compact negotiations. A caveat to this conclusion is that the upstream State of Georgia is not a political monolith. Metro Atlanta consists of 16 counties and other jurisdictions with various interests, and south Georgia also has agricultural interests with claims.\textsuperscript{97}

\textit{New Jersey v. New York} further suggests that the doctrine of equitable apportionment is a rule of fairness—one stating that every riparian state should share fairly in the watercourse it abuts with other states.\textsuperscript{98} One of the constitutional foundations of equitable apportionment is the equal footing doctrine.\textsuperscript{99} This doctrine recognizes that interstate allocations of water involve transactions between sovereign entities in our federal system—the states. While it is conceivable that the federal government might, under the authority of the Commerce and Supremacy Clauses, formulate a national water policy for interstate watercourses, this is unlikely to occur soon. Meanwhile, the equitable apportionment doctrine is the shadow of

\begin{footnotes}
\item[92.] New Jersey v. New York, 283 U.S. 336, 342 (1931). See Badgley v. City of New York, 606 F.2d 358, 361-63 (2d Cir. 1979) for a review of the background of this case.
\item[93.] 283 U.S. at 346 (1931).
\item[94.] \textit{Id.} at 346-47.
\item[95.] \textit{Id.}
\item[96.] \textit{Id.} at 346.
\item[97.] \textit{See supra Part II passim.}
\item[99.] See Sax, \textit{supra} note 98, at 97 (quoting Connecticut v. Massachusetts, 282 U.S. 660 (1931)).
\end{footnotes}
such a policy and provides the correct framework for resolving disputes. While the doctrine has many features, the court should limit allocations to diversions of those amounts that the diverters may use beneficially. The incentives created by this aspect of the doctrine might well cause a race to divert in advance of any judicial apportionment.

Deeper into the century-old history of equitable apportionment is the case of *Bean v. Morris*. This case involved two appropriation jurisdictions that disputed the flow of an interstate watercourse that rose in Montana, flowed into Wyoming, and then flowed back into Montana. The Supreme Court granted Morris, a downstream senior appropriator in Wyoming, relief against an upstream Montana junior appropriator. Justice Holmes found that states along a shared watercourse should ignore state boundaries and treat the watercourse as subject to one unified appropriation regime, thus allowing rights outside a state to be recognized within it. Holmes characterized contrary action by Montana as suicide. The need for a unified regime was clear, even though one possible result was denial of the Montana user Bean’s use of the water.

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100. See *Idaho ex rel. Evans v. Oregon*, 462 U.S. 1017, 1025 (1983) (basing the equitable apportionment doctrine on the dormant or negative Commerce Clause). The dormant Commerce Clause involves situations where Congress has the power to regulate commerce through legislation but has declined to do so or has simply not done so. See Daniel A. Farber, *State Regulation and the Dormant Commerce Clause*, 3 Const. Comment. 395, 395 (1986) (arguing for a reduced judicial role in cases falling under the dormant Commerce Clause). It gives the courts the power to invalidate state statutes that unreasonably hinder the free flow of interstate commerce. See id.

101. See *Nebraska v. Wyoming*, 325 U.S. 589, 618 (1945) (stating the factors considered in applying the equitable apportionment doctrine).

102. See, e.g., *Borough of Westville v. Whitney Home Builders*, 122 A.2d 233, 240 (N.J. Super. Ct. App. Div. 1956) (stating that riparian rules of reasonable use “allow[ ] full use of the watercourse in any way that is beneficial to the riparian owner provided only it does not unreasonably interfere with the beneficial uses of others”); see also *Taylor v. Tampa Coal Co.*, 46 So. 2d 392, 394 (Fla. 1950) (stating that only detriment to other users’ rights will destroy a riparian owner’s right to use).

103. As J.B. Ruhl suggested, *Abrams*, supra note 54, at 156 argues this position well. See supra Part II.

104. 221 U.S. 485 (1911).

105. *Id.* at 485-86.

106. *Id.* at 485-86, 488.

107. *Id.* at 487.

108. *Id.*
Downstream states also benefit from the time-consuming, fact-finding process required by litigation. The delay involved can help the downstream states. In the AFC Basin for example, the downstream states know that, during the litigation, Metro Atlanta’s need for water will grow, spurning a search for alternative sources. Perhaps meanwhile a solution will arise in the end that will take the pressure off the Chattahoochee, an ever-present hope.

On the other hand, Kansas v. Colorado109 suggests that the fastest growing state may have an advantage in court when dealing with riparian jurisdictions.110 This is particularly true when the fast-growing state has already begun to divert and use the water. This factor may lead to judicial reluctance to curtail any existing diversion. That Metro Atlanta’s growth rate has been the fastest in the region in recent decades suggests that Georgia has an advantage over Alabama regarding the Chattahoochee.

C. Inter-basin, Interstate Transfers

In 2000, the Tennessee Legislature instituted a permit requirement for inter-basin transfers.111 Tennessee aimed this legislation at transfers to Georgia amid discussion of and involving the flow of the Tennessee River.112 Atlanta also has cast a covetous eye on North Carolina’s water, so the North Carolina Legislature enacted the same sort of restrictions that Tennessee had.113 South Carolina’s coastal cities are also dependent on water supplies flowing from out of state and, during the last two summers, have experienced water shortages, particularly in the area around Myrtle Beach.114 As Bob Kerr

109. 206 U.S. 46, 112-17 (1906) (involving a dispute over the allocation of the Arkansas River and recognizing that Denver, Colorado, upstream of the plaintiff, had the fastest growth rates on the River).
110. id. at 111.
indicated, the conflict between maintaining flow for hydropower and municipal water needs is a constant theme in the Southeast. 115

What are the implications of these statutes for interstate commerce? This legislation is a modification of the common law and, arguably, a relaxation of its rules. Occasionally, a prohibition on diverting water out of the watercourse’s basin was a feature of a state’s common law of riparian rights. 116 This was an extension of the common law rule that the diversion of a watercourse was a per se unreasonable use of it117 and that a riparian owner had to use water on riparian land.118 Functionally, it was a bright-line rule that supplemented the fact-driven, flexible rules of reasonable use. Thus, courts often said that a transbasin use of riparian water was per se unreasonable.119 It prevented deprivation of use to other riparian users and ensured that the return flow from any diversion maintained the watercourse’s flow.120 Whether or not a court can examine a statute enacting a similar prohibition in light of its surrounding circumstances is an issue that perhaps only litigation can settle. Legislative motive is not usually the stuff of litigation over statutes; because of the separation of powers doctrine, courts are rightly reluctant to second guess a legislature.

Sporhase v. Nebraska121 limits state sovereignty over water under the dormant Commerce Clause.122 The case prohibits a state from

115. See supra p. 249.
116. See, e.g., Anaheim Union Water Co. v. Fuller, 88 P. 978, 981 (Cal. 1907). But see Pyle v. Gilbert, 265 S.E.2d 584, 588 (Ga. 1980) (upholding a grant of water rights from a riparian grantor to non-riparian grantee so long as the grantee’s use is reasonable).
117. See Evans v. Merriweather, 4 Ill. 492, 494-95 (1842) (deciding a case where one mill owner diverted the flow of a river obstructing another mill owner’s use of the water).
118. See TARLOCK, supra note 98, at § 10.04[3][b].
119. See, e.g., Stanton v. Trs. of St. Joseph’s Coll., 254 A.2d 597, 600 (Me. 1969) (quoting and discussing Stratton v. Mount Hermon Boys’ Sch., 103 N.E. 87, 89 (Mass. 1913) (stating that the governing law is that riparian owners may only diminish current flow by a reasonable amount)); see also Rancho Santa Margarita v. Vail, 81 P.2d 533 (Cal. 1938); Sayles v. City of Mitchell, 245 N.W. 390 (S.D. 1932). See generally T. E. Lauer, The Common Law Background of the Riparian Doctrine, 28 Mo. L. Rev. 60 (1963). This is the majority rule, but see Gillis v. Chase, 31 A. 18 (N.H. 1892) (holding that defendants failed to show damage from diversion).
120. In the same vein, preferring non-diverting, non-consuming uses encourages the reuse of a watercourse. See Crommeline v. Fain, 403 So. 2d 177, 184 ( Ala. 1981).
122. Id. at 957-58.
enacting laws that discriminate against out-of-state buyers by prohibiting or curtailing the export of water to another state, unless the discrimination is necessary to advance a compelling governmental interest.\textsuperscript{123} For example, the \textit{Sporhase} opinion notes that there may be an exception for states that are "demonstrably arid," a condition uncommon in the Southeast.\textsuperscript{124} Thus, an acceptable governmental interest is unlikely to occur in the southeastern states absent a severe water shortage. States may nonetheless enact conservation requirements, provided they are non-discriminatory and apply to both exported and non-exported water. Whether the courts will find facially neutral requirements to be \textit{de facto} bans on exports remains an open question.\textsuperscript{125}

\textbf{D. The Need for Accurate Water Use Data in Litigation}

One of the scientific data sticking points of the recent ACF negotiations was the data on net withdrawals and irrigation. The judicial use of the doctrine of equitable apportionment will require precise definition of these variables. Moreover, the accuracy of the data was not the sole problem in the negotiations; the relationship between the watercourses in the ACF System was also an issue, particularly the relationship between the Chattahoochee and the Flint Basins. Even if good usage data is available, as Buddy Cox pointed out, dispute may remain over how best to model the data.\textsuperscript{126}

If the data remains incomplete and the modeling in dispute, a reviewing court may well decide the case on procedural grounds—specifically, by allocation of the burden of proof. This was the result in the twin cases, identically named \textit{Colorado v. New Mexico,}\textsuperscript{127} that

\begin{footnotesize}
\begin{enumerate}
\item[123.] \textit{Id.} (noting that the Colorado statute was not narrowly tailored to the stated purposes of conservation and preservation).
\item[124.] \textit{Id.}
\item[125.] \textit{See} Farber, \textit{supra} note 100, at 395-96 (stating that the core of the dormant Commerce Clause doctrine is as follows: "State regulations having a discriminatory effect on interstate commerce are subject to stringent judicial scrutiny even if the discrimination was inadvertent. On the other hand . . . a state law that burdens local and interstate commerce equally will be upheld if the law's local benefits outweigh the burden on commerce.").
\item[126.] \textit{See supra} p. 259.
\end{enumerate}
\end{footnotesize}
involved a relatively small allocation of 4000 acre-feet of Colorado water. These cases place the burden of proving that a diversion causes a real and substantial injury to the petitioner on the state petitioning to enjoin the diversion. This allocation applies regardless of whether the party seeking the injunction is a plaintiff or a defendant. Thus, Alabama will have to prove that Atlanta’s diversion substantially injures Alabama users. If Alabama meets this burden, Georgia must then show that the equitable apportionment doctrine justifies the diversion.

These allocations in the burden of proof are recent additions to equitable apportionment jurisprudence. They show the Supreme Court’s reluctance to police non-beneficial or wasteful uses of water and its desire for some bright-line rules for use within an otherwise fact-driven and flexible doctrine.

The need for both accurate and independent data for a complex river basin system in the upcoming ACF litigation suggests the need for a special master. The appointment of a master is the exception rather than the rule, especially when a jury trial is the alternative. Neither the complexity of the case, docket congestion, nor the length of a trial are grounds, singly or in combination, for such an appointment. Yet, a federal district court judge may appoint a special master in any pending case without regard to its subject matter. Courts often use special masters in basin-wide water rights disputes. Courts may divide the costs and fees incurred by the use of the master, including his or her compensation, among the parties. The role of the master is to assist, not replace, the court.

128. 459 U.S. at 177; 467 U.S. at 312.
129. See 459 U.S. at 186-88; 467 U.S. at 320.
130. See 459 U.S. at 187-88; 467 U.S. at 320.
131. See Abrams, supra note 54, at 165-67.
134. Sierra Club v. Clifford, 257 F.3d 444, 446 (5th Cir. 2001).
135. See FED. R. CIV. P. 53(a).
136. FED. R. CIV. P. 53(h); see Aird v. Ford Motor Co., 86 F.3d 216, 221 (D.C. Cir. 1996).
137. See FED. R. CIV. P. 53(c)-(g); In re Bituminous Coal Operators’ Ass’n, 949 F.2d 1165, 1168 (D.C. Cir. 1991).
E. Rights Trading and Storage in the ACF System

With accurate water use data in place, transfers and trading of water rights become more probable. This is in the long-term best interests of Atlanta and its municipal water system. In 2003, Georgia House Bill 237 proposed water rights trading. In addition, the Flint River Drought Protection Act of 2000 authorizes irrigation rights auctions as a means of handling drought conditions on the Flint. Even though the holder of the irrigation right must initiate the auction, it is a short step toward legislative authorization of withdrawal rights trading. In appropriation systems, water transfers have occurred on the lower Colorado River between agricultural and urban uses. Interstate transfers have occurred between Arizona and southern Nevada around Las Vegas. More generally, the State of California facilitated intrastate transfers of groundwater through its Water Bank; this program mostly involved trading rights to excess or unused water, stored for times of high demand or low flow to handle drought conditions, among public agencies. Any permanent ACF solution might utilize knowledge from this experience with transfers. The precondition to trading rights in water is water storage—in an aquifer for groundwater or in a reservoir for surface water—ability to transfer, and when the trade involves excess or unused water, a method for monitoring the trading of instream rights.

F. Environmental Statutes Aiding Watershed Management

J.B. Ruhl suggested that the Endangered Species Act contains implications for water basin planning. This is in part because

140. See id.
142. Id. at 103.
144. See supra p. 273.
authorities should designate an endangered species' critical habitat at the time that they list the species as endangered. These designations are more the exception rather than the rule, but this may not be the fault of statutory language.

J.B. might have said the same thing about the Clean Water Act, particularly its wetlands mitigation and permitting process. Likewise, municipal land use law and regulation may have widespread effects on a watershed and basin. Water allocation is the concern of state governments, and water law is usually divorced from land ownership law. Nonetheless, municipal governments may still have an indirect effect on water conservation through their zoning and land use regulations. State law does not preempt municipal governments in this effort. Allocation and conservation are different, but compatible and equally legitimate, public purposes. Thus, municipalities in the ACF Basin might enact stream buffers, tree preservation provisions, and site planning ordinances to prevent erosion and preserve natural features all to conserve water supplies in the ACF Basin. Ordinances for agricultural use districts might

149. See Baldwin v. County of Tehama, 36 Cal. Rptr. 2d 886, 891 (Cal. Ct. App. 1994) ("Even in matters of state-wide concern the city or county has police power equal to that of the state so long as the local regulations do not conflict with general laws."); see also Chavez v. Sargent, 339 P.2d 801, 809 (Cal. 1959), overruled by Petri Cleaners, Inc. v. Automatic Employees, 53 Cal. 2d 455 (1960).
150. See Baldwin, 36 Cal. Rptr. 2d at 891.
151. See City of Alpharetta v. Estate of C.R. Sims, 533 S.E.2d 692, 694 (Ga. 2000) (denying a special exception or conditional use permit to an applicant who did not demonstrate reasonable efforts to save a
likewise require no tillage farming along stream corridors. These ordinances might reduce the need for allocating water for future demand by slowing and regulating urban growth. If there is doubt about the authority for these enactments, the States of Alabama and Georgia could, by jointly enacted state enabling statutes, authorize these ordinances within the Chattahoochee watershed.

G. Florida’s Downstream Priority and Litigation

Is there such a thing as a downstream priority? As J.B. Ruhl’s discussion indicates, he believes that Florida has, or should have, some degree of priority in the ACF negotiations. Florida argued that environmental and conservation goals might establish its priority. Riparian water law has occasionally recognized this type of priority, given the passage of enough time. It is certainly possible in an appropriation system that senior downstream users can assert their rights and force delivery of water even when upstream junior users might use the water more efficiently. However, the general rule in riparian water law is that upstream or downstream ownership makes little difference, absent some statutory reversal of the rule.

152. See supra p. 273.
153. See supra p. 273.
155. See, e.g., State ex rel. Cary v. Cochran, 292 N.W. 239, 248 (Neb. 1940) (enforcing senior downstream appropriators’ rights even when upstream juniors proved a 77% loss of the watercourse between their points of diversion). See generally Clayton K. Yeutter, A Legal-Economic Critique of Nebraska Watercourse Law, 44 Neb. L. Rev. 11, 39-43 (1965) (discussing and criticizing the holding in State ex rel. Cary v. Cochran.).
156. See Dorey v. Estate of Spicer, 715 A.2d 182, 184-86 (Me. 1998) (discussing the rights created by the State’s Mill Act as in derogation of the common law riparian rules and finding that the flowage rights attaching to a mill dam are in the nature of an easement rather than a riparian right).
CONCLUSION

The equitable apportionment doctrine calls for the use of informed judgment when adjudicating riparian rights, as would either a common law or regulatory riparian regime of water law. While consideration of state law is "the guiding principle," courts using the doctrine also consider the

physical and climatic conditions, the consumptive use of water . . . , the character and rate of return flows, the extent of established uses, the availability of storage water, the practical effect of wasteful uses on downstream areas, [and] the damage to upstream areas as compared to the benefits to downstream areas if a limitation is imposed on the former . . . .157

There is much discretion and uncertainty here, but the states containing the Basin nonetheless find themselves relying on this traditional, yet uncomfortable, proposition. Any future allocation of the ACF Basin water must necessarily rely on the skill of the litigators, and substantive outcomes become hard to predict. As Justice Benjamin Cardozo put it:

Sooner or later, if the demands of social utility are sufficiently urgent, if the operation of an existing rule is sufficiently productive of hardship or inconvenience, utility will tend to triumph. . . . Division of the water into small quantities among the various water users and on the general principle of equality of right would be a division so minute as not to be of advantage to anybody. It is better . . . that some have enough and others go

without, than that a division should be so minute as to be of no real economic value. 158

Cardozo discussed the shift from riparian rights to prior appropriations regimes in the western United States. 159 Scarcity induced this shift, but his statements provide a good perspective on the switch from compact negotiations grounded in state law to litigation in federal court governed by the doctrine of equitable apportionment. Cardozo's quote is also a good observation on the inherent risk in litigation over water because concepts like "utility" are available to everyone. In the East, water has not, until now, seemed scarce enough to cause states to move beyond regulated riparian rights. The issue today is whether water in the AFC Basin has become scarce enough to warrant moving past even the existing modification of water law.

158. BENJAMIN N. CARDOZO, THE GROWTH OF THE LAW 117-18 (1924) (internal quotation marks omitted) (commenting on the switch to appropriation systems).
159. See id.