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Interstate Water Disputes: A Road Map for States

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INTERSTATE WATER DISPUTES: A ROAD MAP FOR STATES

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I. INTRODUCTION

Disputes between states over their shared waters have long been common in the arid West. The waters of the Colorado River were first apportioned in 1922, after years of interstate wrangling.[1] In recent decades, as populations have risen, similar conflicts have developed in the East. Maryland and Virginia fight over the Potomac River;[2] South Carolina squares off against North Carolina over the Pee Dee River,[3] and against Georgia over the Savannah River; and in what is perhaps the most contentious of these battles, Alabama, Florida, and Georgia clash over the waters of the Apalachicola-Chattahoochee-Flint River Basin.[4] Competing demands include booming cities, agriculture, industry, environmental protection, fisheries, power generation, navigation, and a host of other human and non-human uses.[5] These conflicts will grow in number because the demands that spawn them will continue to increase with the swelling population. State governments will find themselves faced with situations in which their water needs and those of their sister states exceed what their shared waterways can supply. A state water manager facing such a situation needs answers to two questions: what power does my state have over this resource, vis-à-vis the states with which it is shared; and how can the state protect its interests?

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[1] Joseph L. Sax, *et al.*, *Legal Control of Water Resources* 695-96 (3d ed., West Group 2000).

[2] *See Va. v. Md.*, 124 S. Ct. 598 (2003) (holding that a Virginia county may divert water from the Potomac for use in Virginia without being subject to regulation by Maryland, even though the river is entirely on Maryland's side of the border).

[3] Douglas Jehl, *A New Frontier In Water Wars Emerges in East*, N.Y. Times A1 (Mar. 3, 2003).

[4] *See, e.g.*, Bruce Ritchie, *Florida willing to take river battle to court*, Tallahassee Democrat B3 (Aug. 27, 2003).

[5] *Id.*

The answers to those questions will vary by state and circumstances. However, this article provides guidance towards answering those questions by describing the development of the common law of interstate water use, and the methods by which interstate waters may be apportioned among states. Part 1 briefly describes the two legal approaches used by states to determine private water rights within their jurisdictions - the riparian and prior appropriation doctrines. These doctrines are relevant to interstate water disputes because states have sometimes argued they should apply among states as well as among private individuals. Part 2 discusses the three methods by which interstate waters are allocated. First, the U. S. Supreme Court's development of the federal common law of equitable apportionment and its principles is discussed, illustrating the relationship between the riparian and prior appropriation doctrines and the equitable powers of the Supreme Court. The second and third ways of resolving interstate water issues, congressional apportionment and interstate compacts, are then described. Part 3 focuses on the recent Apalachicola-Chattahoochee-Flint River Basin Compact, in order to highlight the strengths and weaknesses of the compact mechanism.

II. ALLOCATION OF INTRASTATE WATERS

The authority of states over the waters within their borders dates to the birth of the nation. When the original colonies separated from England after the Revolutionary War, they succeeded to the sovereignty over navigable waters and submerged lands that had previously been enjoyed by the Crown.[6] Subsequent states, entering the Union under the "equal footing" doctrine, have the same authority.[7] The states as sovereigns have near-absolute authority over allocation of navigable waters within their boundaries, limited by the federal navigational servitude, and Congress' power under the Commerce Clause to control navigation[8] and flooding,[9]

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[6] Sax, *supra* n. 1, at 462.

[7] *Pollard v. Hagan*, 44 U.S. 212, 222-23 (1845). There is an exception to this principle: before statehood, the U.S. may reserve the lands underlying navigable waters for federal purposes if it clearly expresses the intent to do so. *See Utah Div. of State Lands v. U.S.*, 482 U.S. 193, 201-202 (1987) (holding that title to bed of Utah Lake passed to state at statehood because Congress did not clearly intend otherwise) (citing *U.S. v. Holt State Bank*, 270 U.S. 49, 55 (1926)).

[8] *See, e.g., Phillips Petroleum Co. v. Miss.*, 484 U.S. 469, 479 (1988) ("[I]t came to be recognized as the 'settled law of this country' that the lands under navigable freshwater lakes and rivers were within the public trust given the new States upon their

as well as regulate hydropower development.[10] Waterways within each state, and the lands underneath them, are held in trust by states for the benefit of their citizens.[11]

A. The Riparian and Prior Appropriation Doctrines

To apportion their water among their citizens, the states have typically followed one of two water rights doctrines: riparianism, more common in the Eastern states, and prior appropriation, the preferred doctrine in the West. The typical riparian regime bases water rights upon ownership of land that is adjacent to a waterway and allows the riparian owner to make reasonable use of the adjacent water for beneficial purposes, taking into account the needs of other riparian owners.[12] No riparian proprietor has a right superior to any other.[13]

Prior appropriation rights, in contrast, do not depend upon land ownership.[14] An appropriative right is established by diverting water from the stream and applying it to beneficial use.[15] Unlike riparian rights, which are correlative and time-independent, appropriative rights are strictly hierarchical based on the dates the rights were established.[16] A right with an earlier priority date is entitled to full satisfaction before a right with a later priority date is entitled to any water use.[17]

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entry into the Union, subject to the federal navigation easement and the power of Congress to control navigation on those streams under the Commerce Clause") citing *Barney v. Keokuk*, 94 U.S. (4 Otto) 324, 338 (1877).

[9] Flood Control Act of 1944, Pub. L. No. 78-534, 58 Stat. 887 (1944).

[10] Federal Power Act, 16 U.S.C. §§ 791a-828 (2000).

[11] *Martin v. Waddell's Lessee*, 41 U.S. 367, 410 (1842) (states as sovereigns "hold the absolute right to all their navigable waters and the soils under them for their own common use, subject only to the rights since surrendered by the Constitution to the general government"); *See, e.g., Ill. Cent. R.R. Co. v. Ill.*, 146 U.S. 387, 452 (1892) ("[T]he State holds ... title to lands under navigable waters...in trust for the people of the State..."); Colo. Const. art. XVI, § 5 ("The water of every natural stream, not heretofore appropriated, within the state of Colorado, is hereby declared to be the property of the public, and the same is dedicated to the use of the people of the state, subject to appropriation as hereinafter provided").

[12] Joseph W. Dellapenna, *The Law of Water Allocation in the Southeastern States at the Opening of the Twenty-First Century*, 25 U. ALR L. Rev. 9, 11-12 (2002).

[13] *Id.*

[14] *Id.* at 18.

[15] *Id.*

[16] *Id.*

[17] *Id.* at 24.

The riparian doctrine or prior appropriation doctrine may determine the relative rights of private parties to water within a state, but the doctrines are of limited importance in disputes between sovereign states themselves. The different water rights doctrines of disputant states may be a factor for consideration if the dispute comes before the Supreme Court, but they are not themselves determinative.[18] Nonetheless, the doctrines frequently have been asserted in disputes between states, as will be described below.

III. ALLOCATION OF INTERSTATE WATERS

Although a state generally has broad authority over waters within its borders, and little or no direct authority over waters in neighboring states, exercise of its intrastate authority over an interstate stream cannot be entirely dismissive of the interests of downstream states. It stands to reason that an upstream state cannot entirely deprive a downstream state of the benefits of a shared river; but how much water can the upstream state use before it crosses the line? Who decides, and how? States involved in an interstate water dispute, whether they are negotiating a compact or poised to litigate, must understand the legal dynamics affecting the answers to those questions.

As discussed further below, there are three ways conflicts between states over interstate water quantity may be resolved: by Congressional action, by interstate compact, or by the U.S. Supreme Court. Congressional allocations and interstate compacts are, by their nature, *ad hoc* solutions that do not necessarily have precedential value in subsequent disputes. In the absence of a federal statute or interstate compact, the authority a state has, relative to another state, over the waters of an interstate stream is not clearly defined. The Supreme Court has attempted to fill this void in a series of decisions establishing a federal common law of interstate water allocation.

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[18] *See, e.g., Colo. v. N. M.*, 459 U.S. 176, 183-84 (1982) ("[T]he just apportionment of interstate waters is a question of federal law that depends 'upon a consideration of the pertinent laws of the contending States and *all other relevant facts.*'") (emphasis supplied by Court) (citation omitted).

A. Equitable Apportionment by the U.S. Supreme Court

In the absence of Congressional apportionment, the Supreme Court may apportion interstate waters pursuant to the Constitution's grant of original jurisdiction over conflicts between states.[19] The Court's original jurisdiction cases are essentially equitable in nature.[20] An equitable apportionment case typically arises when a downstream state seeks to enjoin a diversion by an upstream state. The downstream state must show that the diversion will cause real or substantial injury or damage. The burden then shifts to the upstream state to show that a diversion should still be permitted, based on the equities involved. The Court may examine a variety of geographical, hydrological, economic, and social factors in its deliberations.

Writing in 1931 in *New Jersey v. New York*, Justice Holmes characterized the situation this way:

> A river is more than an amenity, it is a treasure. It offers a necessity of life that must be rationed among those who have power over it. New York has the physical power to cut off all the water within its jurisdiction. But clearly, the exercise of such a power to the destruction of the interest of lower States could not be tolerated. On the other hand equally little could New Jersey be permitted to require New York to give up its power altogether in order that the river might come down to it undiminished. Both States have real and substantial interests in the River that must be reconciled as best they may.[21]

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[19] U.S. Const. art. III, § 2, cl. 2; *Kan. v. Colo.*, 206 U.S. 46, 80-84 (1907). The Supreme Court will not automatically take jurisdiction over any dispute between states. The dispute has to be serious enough that it would lead to war if the states were fully sovereign entities. *See, e.g., Mo. v. Ill.*, 200 U.S. 496, 519-21 (1906). The notion of states warring over water is not as far-fetched as it may seem; California and Arizona displayed considerable bellicosity over the Colorado River in 1934. *See* Robert Glennon, *Water Follies: Groundwater Pumping and the Fate of America's Fresh Waters* 193-94 (Island Press 2002)

[20] *Ohio v. Ky.*, 410 U.S. 641, 648 (1973).

[21] *N.J. v. N.Y.*, 283 U.S. 336, 342-43 (1931).

An early example of such a dispute over interstate water, between states as states, is *Kansas v. Colorado*.[22] Kansas, the downstream state, alleged that Colorado, the upstream state, and its licensees were diverting waters of the Arkansas River to diminish the river's flow to the detriment of the State of Kansas and its citizens.[23] The law governing interstate water disputes was yet undeveloped; in its absence, it is not surprising that the parties framed the issue using the water rights doctrines with which they were familiar. Kansas argued that, by the riparian doctrine, the state and its citizens were entitled to the undiminished flow of the Arkansas River.[24] Colorado argued that, by its constitution, which recognized the appropriation doctrine, it owned all of the waters within the state.[25]

In a seminal decision, the Court reaffirmed that states may determine how water is allocated within their own borders, but may not impose their methods upon other states.[26] As Congress had not spoken on the subject, the Court turned to federal common law – including "[f]ederal law, state law, and international law, as the exigencies of the particular case may demand" - as the appropriate law to apply.[27] The guiding principle was "equality of right" between the states, and the goal was to adjust the situation such that both states would share the river's benefits equally.[28] The Court found that, overall, Kansas had suffered little from Colorado's withdrawals (primarily for irrigation), and Colorado had benefited greatly from them; thus, the principle of equality of right precluded it from enjoining Colorado's withdrawals.[29] Colorado's beneficial use of the Arkansas River outweighed any harm the diversions may have caused Kansas.[30] Kansas could, however, bring the case again if Colorado's diversions increased to the point that the division was no longer equitable.[31]

The State of Colorado was brought before the Supreme Court over interstate water again in 1922, but this time by another prior appropriation

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[22] 206 U.S. 46 (1907).
[23] *Id.* at 47-48.
[24] *Id.* at 57.
[25] *Id.*
[26] *Id.* at 95.
[27] *Id.* at 96-97 (quoting Kan. v. Colo., 185 U.S. 146 (1902)).
[28] *Id.* at 97, 100.
[29] *Id.* at 113-14.
[30] *Id.* at 114.
[31] *Id.* at 117-18.

state, Wyoming.[32] Irrigators in Colorado were proposing to divert substantial amounts of the Laramie River into a purely intrastate watershed from whence none of the water would flow to downstream users in Wyoming.[33] Many of the Wyoming appropriation rights were prior in time to the Colorado rights, and one of Wyoming's arguments was that the Court should enforce the rule of prior appropriation – paralleling Kansas' assertion in *Kansas v. Colorado* that the riparian doctrine should apply.[34] Colorado argued three distinct theories: first, that it had absolute control over the water within its borders; second, that it was entitled to an equitable division of the water, and that the proposed diversions did not exceed such a division; and third, that the proposed diversions still left enough water in the river to satisfy Wyoming rights that had priority.[35]

The Court cited *Kansas v. Colorado* for the proposition that conflicts between states over interstate water were to be decided by the principle of equality of right, but distinguished that case as involving states that adhered to different water rights doctrines.[36] Between Wyoming and Colorado the Court found it "eminently just and equitable" to apply the prior appropriation doctrine that both states had consistently followed since their territorial days.[37] The Court determined the relative priorities of the Colorado and Wyoming appropriators and allocated the available water accordingly.[38]

In 1931, the Court faced a similar controversy between two riparian states in *Connecticut v. Massachusetts*.[39] In that case, Massachusetts proposed diverting water from the Ware and Swift Rivers to provide water for Boston and its surrounding towns.[40] The Ware and Swift Rivers, non-navigable waterways located entirely within Massachusetts, are tributaries to the Connecticut River, which is shared among New Hampshire, Vermont, Massachusetts, and Connecticut.[41] Connecticut sought to enjoin

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[32] *Wyo. v. Colo.*, 259 U.S. 419 (1922).

[33] *Id.* at 456.

[34] *Id.* at 457.

[35] *Id.*

[36] *Id.* at 465.

[37] *Id.* at 470.

[38] *Id.* at 496 (The decree was modified later that year in *Wyo. v. Colo.*, 260 U.S. 1 (1922), and ultimately vacated in *Wyo. v. Colo.*, 353 U.S. 953 (1957). The reasoning underlying the original allocation was not disturbed).

[39] 282 U.S. 660 (1931).

[40] *Id.* at 662.

[41] *Id.*

the diversion because, among other things, it would take water out of the Connecticut's watershed, hamper navigation, reduce hydropower potential, and harm agricultural lands that depended on yearly floodwaters.[42] Connecticut, like Kansas before it, sought to have the Court follow the riparian doctrine because – unlike in the Kansas-Colorado dispute – both party states adhered to that doctrine.[43] Connecticut, perhaps unwisely in light of *Kansas v. Colorado*, asserted a right to receive the waters of the Connecticut River "unimpaired as to quantity and uncontaminated as to quality."[44] The Court again refused to apply this harsh doctrine, reaffirming that "[t]he determination of the relative rights of contending States in respect of the use of streams flowing through them...is not governed by the same rules of law that are applied in such States for the solution of similar questions of private right."[45] After rejecting Connecticut's bold request for undiminished flow, the Court found that the state's injury was too speculative to support an injunction.[46]

Later that year, the Court decided *New Jersey v. New York*, another dispute between eastern riparian doctrine states.[47] New York proposed to divert substantial amounts of water from the Delaware River watershed to the Hudson River to fulfill New York City's water needs.[48] New Jersey, downstream on the Delaware, protested that New York's diversion would injure it by, among other things: depriving New Jersey riparians of the flow of the stream; diminishing hydropower potential; lowering water quality, to the detriment of New Jersey municipalities and fisheries; making cultivation of farmlands more difficult; and impairing recreation.[49] New Jersey, arguing for strict application of riparian doctrine, insisted upon the undiminished flow of the river.[50]

Justice Holmes, citing *Kansas v. Colorado*, *Wyoming v. Colorado*, and *Connecticut v. Massachusetts*, declared that the riparian and prior appropriation doctrines are not controlling in interstate water disputes. Instead, "the effort always is to secure an equitable apportionment without

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[42] *Id.* at 663.
[43] *Id.* at 669-70.
[44] *Id.* at 669.
[45] *Id.* at 670.
[46] *Id.* at 674.
[47] *N. J. v. N. Y.*, 283 U.S. 336 (1931).
[48] *Id.* at 342.
[49] *Id.* at 343-44.
[50] *Id.* at 342.

quibbling over formulas."[51] The Court rejected New Jersey's argument for the strict riparian rule, and equitably allocated the Delaware River in accordance with the Special Master's report.[52]

The Court followed this principle in a subsequent dispute among prior appropriation states. In *Nebraska v. Wyoming*,[53] Nebraska, Wyoming, and Colorado were at odds over the North Platte River. Nebraska asserted that irrigation diversions by upstream states Wyoming and Colorado both violated the rule of prior appropriation, which was in force in all three states, and deprived it of water to which it was equitably entitled.[54] Each state denied causing injury to the others and asked the Court to apportion equitably the waters of the North Platte.[55]

In determining the rule to apply for equitable apportionment, Justice Douglas noted in 1945 that the same considerations that led the Court to follow the prior appropriation doctrine in *Wyoming v. Colorado* seemed to be equally applicable among those two states and Nebraska, which also adhered to prior appropriation (although it had originally been a riparian doctrine state).[56] However, faced with a factual situation of enormous complexity, he allowed that

> [I]f an allocation between appropriation States is to be just and equitable, strict adherence to the priority rule may not be possible. For example, the economy of a region may have been established on the basis of junior appropriations. So far as possible those established uses should be protected though strict application of the priority rule might jeopardize them. Apportionment calls for the exercise of an informed judgment on a consideration of many factors. Priority of appropriation is the guiding principle. But physical and climatic conditions, the consumptive use of water in the several sections of the river, the character and rate of return flows, the extent of established uses, the availability of storage water, the practical effect of wasteful

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[51] *Id.* at 343.

[52] *Id.* at 345-48. In original jurisdiction cases, the Court usually employs a Special Master to hear the evidence and recommend a decision. *See* Sax, *supra* n. 1, at 739.

[53] 325 U.S. 589 (1945).

[54] *Id.* at 591-92.

[55] *Id.* at 592.

[56] *Id.* at 599, 617-18.

> uses on downstream areas, the damage to upstream areas as compared to the benefits to downstream areas if a limitation is imposed on the former - these are all relevant factors. They are merely an illustrative not an exhaustive catalogue. They indicate the nature of the problem of apportionment and the delicate adjustment of interests which must be made.[57]

This conclusion was supported by reference to the flexible approach announced in *Kansas v. Colorado*.[58] The bulk of the seventy-five page case describes an equitable apportionment of the North Platte based on factors like those listed above. *Nebraska v. Wyoming* resolved any doubt that the federal common law approach of *Kansas v. Colorado* would apply even in disputes among prior appropriation states.

More recently, the common law approach was reaffirmed in *Colorado v. New Mexico*.[59] Once again involved in a conflict between prior appropriation states, Colorado sought equitable apportionment of the Vermejo River, a small, non-navigable, interstate stream that originates in Colorado, of which the major portion flows through New Mexico.[60] The Vermejo had not previously been diverted in Colorado, but had been relied upon for years by agriculture and industry in New Mexico.[61] The New Mexico users consumed virtually the entire flow of the river, and their rights had been adjudicated in state court.[62] Colorado had granted to a corporation a conditional right to divert 4,000 acre-feet per year of the Vermejo and transport it to another basin for future industrial development.[63] New Mexico argued that the rule of priority should be strictly applied to prevent Colorado from diverting any of the Vermejo River.[64]

Writing in 1982, the Court noted that "[t]he laws of contending states concerning intrastate water disputes are an important consideration governing equitable apportionment" and that, among prior appropriation

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[57] *Id.* at 618.
[58] *Id.*
[59] 459 U.S. 176 (1982).
[60] *Id.* at 178.
[61] *Id.*
[62] *Id.* at 180.
[63] *Id.* at 178, 180.
[64] *Id.* at 181-82.

states, "priority becomes the 'guiding principle' in an allocation" between those states.[65] The Court reiterated that the multi-factor approach developed in the *Kansas v. Colorado* line of cases would apply here.[66] The case was remanded for further findings of fact[67] and ultimately dismissed because Colorado failed to carry its burden of proof.[68]

In its essential reasoning, *Colorado v. New Mexico* breaks no new ground. It is notable, however, for a few reasons. The first is its emphasis on the issue of conservation. The Special Master, in making his recommendation that the equities favored allowing the diversion, indicated that New Mexico users could make up for the loss caused by the diversion if they ameliorated the waste and inefficiency of their water delivery systems.[69] The Court agreed in principle, applying the duty to use the resource wisely to both states:

> We conclude that it is entirely appropriate to consider the extent to which reasonable conservation measures by New Mexico might offset the proposed Colorado diversion and thereby minimize any injury to New Mexico users. Similarly, it is appropriate to consider whether Colorado has undertaken reasonable steps to minimize the amount of diversion that will be required.[70]

The Court also clarified the burdens of proof that states bear in interstate water disputes. Whether plaintiff or defendant, a state that seeks to prevent or enjoin a diversion by another state must prove that the diversion will cause it "real or substantial injury or damage."[71] The opposing state must then prove by clear and convincing evidence that the equities nonetheless weigh in favor of its proposed diversion; that is, that without the diversion the other state would be enjoying more than its equitable share of the benefits of the stream.[72]

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[65] *Id.* at 183-84 (quoting *Neb. v. Wyo.*, 325 U.S. 589, 618 (1945)).
[66] *Id.* at 188.
[67] *Id.* at 190.
[68] *Colo. v. N. M.*, 467 U.S. 310, 324 (1984).
[69] *Colo. v. N. M.*, 459 U.S. 176, 182, n. 7 (1982).
[70] *Id.* at 186.
[71] *Id.* at 188, n. 13 (quoting *Conn. v. Mass.*, 282 U.S. 660, 672 (1931)).
[72] *Id.*

The Court also declared that the equities may favor a diversion for future use in one state at the expense of existing users in another, but that "the equities supporting the protection of existing economies will usually be compelling" because harm to them is usually immediate, while benefit from proposed uses is at least somewhat speculative.[73] Finally, in its 1984 *Colorado v. New Mexico* decision, the Court made clear that whether the headwaters of a stream are located in one state or another is "essentially irrelevant" to a balancing of the equities, at least among appropriation states.[74]

These cases clearly establish that, when called upon to allocate interstate water, the Court will seek to optimize the balance of benefits to and burdens upon the contesting states, which stand on equal footing. That is the cardinal rule. Subordinate principles include: (1) the internal water rights doctrines of the competing states are relevant to, but generally not determinative of, rights between the states (and arguing for strict application of a doctrine such that your state gets all the water is futile); (2) existing economic uses are to be protected, if possible, but may be subordinated to diversions for future uses; (3) states may be obligated to use water efficiently to protect the interests of other states; (4) the location of a river's headwaters is irrelevant, at least in a dispute among appropriation states; and (5) the Court may consider physical, climatic, and hydrologic conditions, and "all other relevant facts."[75] These dynamics will come into play if states resort to litigation to settle fights over interstate water, and as such, they may be useful tools for negotiation.[76]

The specter of litigation always hovers above interstate water disputes. However, as will be discussed below, the Supreme Court disfavors judicial apportionment of interstate water resources. Judicial apportionment has also been assailed as a poor method of settling these conflicts for other reasons. Primary among them is that the Court has insufficient expertise to decide such highly technical matters, and providing the justices with enough information to make an informed decision is voraciously

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[73] *Id.* at 187.

[74] 467 U.S. at 323.

[75] *Colo. v. N. M.*, 459 U.S. 176, 184 (1982) (quoting *Conn. v. Mass.*, 282 U.S. 660, 670-71 (1931)).

[76] *See Tex. v. N. Mex.*, 462 U.S. 554, 569 (1983) (noting that the threat of litigation probably persuaded New Mexico to enter into the *Pecos River Compact* with Texas).

consumptive of both time and money.[77] Secondly, judicial apportionments may be re-litigated whenever one state believes the allocation is no longer equitable under the circumstances.[78] Although this feature does provide some flexibility for changing situations, it also has two possible drawbacks: the party states have limited security vis-à-vis other states; and upstream states may be encouraged to incrementally increase withdrawals over their proper allocations, because downstream states' only remedy is burdensome litigation.[79] The open-ended, and therefore unpredictable, legal standard by which the Court makes allocation decisions could be added as a third discouragement to judicial apportionment. Finally, judicial apportionment is likely to favor existing and imminent uses over more uncertain and remote future uses.[80] This tendency may be especially troublesome for conservation-oriented or slow-developing states, which could be forced to watch the bulk of the shared resource allocated to their more assiduously consumptive neighbors.[81]

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[77] David N. Copas, Student Author, *The Southeastern Water Compact, Panacea or Pandora's Box? A Law and Economics Analysis of the Viability of Interstate Water Compacts*, 21 Wm. & Mary Envtl. L. & Pol'y Rev. 697, 717-18 (1997).

[78] *See e.g. Kan. v. Colo.*, 206 U.S. 46, 117-18 (1907).

[79] Copas, *supra* n. 77.

[80] In the Vermejo River case, an existing use in New Mexico that was known to be wasteful trumped a potentially efficient future use in Colorado. The "clear and convincing evidence" standard is biased towards this outcome because it is relatively easy to prove "real and substantial injury" to an existing use (as New Mexico did) but much more difficult to give clear and convincing evidence of the efficacy of undefined future conservation efforts or the magnitude of future benefits (as Colorado was unable to do). *See Colo. v. N. M.*, 467 U.S. 310, 316-321(1984).

[81] *See* Robert Haskell Abrams, *Interstate Water Allocation: A Contemporary Primer for Eastern States*, 25 U. Ark. Little Rock L. Rev. 155, 170-73 (2002). Professor Abrams suggests two courses of action for the slow-developing or conservation-oriented states. The first is negotiating with the other states. The second is employing "non-allocational devices," such as minimum flow requirements and Clean Water Act water quality standards and certification requirements, to protect instream flow for future uses. *Id.* at 171-72; *see also Ark. v. Okla.*, 503 U.S. 91 (1992) (Water quality standards of downstream state may limit activities in upstream state.). *PUD No. 1 of Jefferson County v. Wash. Dept. of Ecology*, 511 U.S. 700 (1994) (holding state minimum flow requirement to be a permissible condition of state certification required for federal dam license).

B. Apportionment by Congress

Congress' power to apportion the water of interstate streams among states is grounded in the power to regulate interstate commerce under Article I, § 8 of the U.S. Constitution.[82] By action of the supremacy clause, congressional apportionment supersedes any contrary arrangement by the states.[83] Similarly, provided it is constitutional, congressional apportionment will not be disturbed by the Supreme Court.[84]

Congress has been asked to consider, and has considered, apportionment of interstate waters many times, but has actually apportioned interstate waters only twice. In the Boulder Canyon Project Act of 1928 Congress divided half of the flow of the Colorado River among Arizona (2.8 million acre-feet/year), California (4.4 million acre-feet/year), and Nevada (300,000 acre-feet/year).[85] Intent to apportion the river is not explicit in the Act; however, the Supreme Court in *Arizona v. California* held that apportionment was, in fact, Congress' intent.[86] In 1990, Congress apportioned the waters of the Truckee and Carson rivers and Lake Tahoe between California and Nevada.[87] Though this was technically a Congressional apportionment, California and Nevada had negotiated the terms between 1955 and 1968 as a compact.[88] Congress would not ratify the compact out of concern over effects on the Pyramid Lake Paiute Tribe, but ultimately apportioned the waters by statute as part of a settlement involving the tribe and other parties.[89]

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[82] *See Ariz. v. Cal.*, 373 U.S. 546, 564-65, 587 (1963) (finding Congressional intent to allocate in the Boulder Canyon Project Act, which was passed under Congress' power over navigation); *see also Kaiser Aetna v. U.S.*, 444 U.S. 164, 173-74 (1979) (generally discussing Congress' commerce clause authority over the nation's waters).

[83] U.S. Const. art. VI, cl. 2.

[84] *See Arizona* at 565. Federal statutes typically displace federal common law on the same subject matter. *See City of Milwaukee v. Ill.*, 451 U.S. 304, 313-14 (1981) (federal Clean Water Act displacing federal common law of nuisance).

[85] 43 U.S.C. §§ 617-617v (1928). The Colorado River basin was divided into an Upper Division (Colorado, Utah, Wyoming, and New Mexico) and a Lower Division (California, Arizona, and Nevada) by the 1922 *Colorado River Compact*; 7,500,000 acre-feet per year were allocated to each Division. Sax, *supra* n. 1, at 696, 706.

[86] 373 U.S. 546 (1963).

[87] Pub. L. No. 101-618, § 204, 104 Stat. 3289, 3295-304 (1990).

[88] Sax, *supra* n. 1, at 720.

[89] *Id.* at 720-21.

C. Apportionment by Interstate Compact

Congress almost never apportions water among states, which is understandable given the intensely local or regional nature of interstate water disputes. The Supreme Court will apportion water under its original jurisdiction over controversies between states, but has expressed its opinion that "litigation of such disputes is...a poor alternative to negotiation between the interested States."[90] The Court observed in 1938 that, even at that relatively early date, the difficulties inherent in litigating interstate water disputes were prompting states with increasing frequency to settle their conflicts by interstate compact.[91] Common sense suggests that the compact mechanism guarantees that a state will get at least some of what it wants, whereas with litigation it could get all or it could get nothing. The first major interstate water compact was the 1922 Colorado River Compact,[92] in which the river basin was divided into the Upper Division (Colorado, Utah, Wyoming, and New Mexico) and the Lower Division (California, Arizona, and Nevada), with each division receiving 7.5 million acre-feet of the river's expected annual flow of fifteen million acre-feet.[93] There are now approximately twenty-five compacts apportioning interstate water among states.[94]

The authority of States to compact with one another is derived from the Compact Clause of the Constitution.[95] The Compact Clause does not

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[90] *Tex. v. N. Mex.*, 462 U.S. 554, 568, n. 13 (1983). *See also Neb. v. Wyo.*, 325 U.S. 589, 658 (1945) (Roberts, J., dissenting) (The "mutual accommodations for the future [that competing states] require should be arranged by interstate compact, not by litigation."). *See also* Felix Frankfurter & James M. Landis, *The Compact Clause of the Constitution – A Study in Interstate Adjustments*, 34 Yale L.J. 685, 701 (1925) ("The judicial instrument is too static and too sporadic for adjusting a social-economic issue continuously alive in an area embracing more than a half a dozen States," referring to the ongoing dispute over the Colorado River).

[91] *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*, 304 U.S. 92, 105 (1938).

[92] Colo. Rev. Stat. § 37-61-101 (2003).

[93] Sax, *supra* n. 1, at 696.

[94] *Id.* at 726 (examples include the Upper Colorado River Compact, Colo. Rev. Stat. §§ 37-62-101 to 106 (2003), between Arizona, Colorado, New Mexico, Utah, and Wyoming; the Canadian River Compact, ch. 135, 64 Stat. 93 (1950) and ch. 306, 66 Stat. 74 (1952), between Oklahoma, Texas, and New Mexico; and the Delaware River Basin Compact, Pub. L. No. 87-328, 75 Stat. 688 (1961), between Delaware, New Jersey, New York, and Pennsylvania (discussed *infra*)).

[95] "No State shall, without the Consent of Congress...enter into any Agreement or Compact with another State..." U.S. Const. art. I, § 10, cl. 3. For a thorough account of

encompass every agreement between or among states, but only those that may increase the compacting states' political power at the expense of the national government.[96] Thus, when an interstate agreement sufficiently implicates federal interests, the Compact Clause requires congressional approval. Interstate water disputes potentially implicate two federal interests: on navigable waterways, the federal power to regulate navigation is affected; on non-navigable waters, the exclusive power of the federal government to regulate interstate commerce comes into play. Because interstate water conflicts will invariably affect one or both of these federal interests, congressional approval is required.[97]

The compact process typically begins with congressional approval of the states' wish to negotiate.[98] After negotiating, the participating states pass identical legislation signifying their agreement on the compact's terms, purposes, and policies.[99] When Congress ratifies it by statute, the compact takes effect and becomes federal law.[100] As such, it takes precedence over contrary federal common law or state law. A compact is, in addition to being federal statutory law, essentially a contract (albeit one that requires federal approval), and is construed and interpreted as such by courts that are called upon to remedy a dispute between compacting states.[101] The flexibility of the interstate compact mechanism has allowed it to be adapted to such diverse subjects as regulation of interstate electricity, flood control, tobacco production, parks and parkways, crime

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the history and use of the Compact Clause through the early 20th century, see Frankfurter & Landis, *supra* n. 90.

[96] *See, e.g., N. H. v. Me.*, 426 U.S. 363, 369 (1976).

[97] *See, e.g., Cuyler v. Adams*, 449 U.S. 433, 439-40 (1981) ("The requirement of congressional consent is at the heart of the Compact Clause. By vesting in Congress the power to grant or withhold consent, or to condition consent on the States' compliance with specified conditions, the Framers sought to ensure that Congress would maintain ultimate supervisory power over cooperative state action that might otherwise interfere with the full and free exercise of federal authority" (citation omitted)).

[98] Carl Erhardt, *The Battle Over "The Hooch": The Federal-Interstate Water Compact and the Resolution of Rights in the Chattahoochee River*, 11 Stan. Envtl. L.J. 200, 215 (1992).

[99] 72 Am. Jur. 2d *States, Territories, and Dependencies* § 10 (2003).

[100] *See, e.g., Tex. v. N. M.*, 462 U.S. 554, 564 (1983).

[101] *Tex. v. N. M.*, 482 U.S. 124, 128 (1987). A court cannot, however, order relief that is inconsistent with a compact's express terms. *Tex. v. N. M.*, 462 U.S. at 564. For a discussion of contract remedies for breaches of compacts, *see* Joseph W. Girardot, Note, *Toward a Rational Scheme of Interstate Water Compact Adjudication*, 23 U. Mich. J.L. Ref. 151 (1989).

prevention, forest fires, fisheries, and radioactive waste management, in addition to water apportionment.[102]

Older compacts, like the Colorado River Compact, usually did little more than apportion water among the party states. As the mechanism has evolved, compacts have been used to establish regional administrative bodies, usually called commissions, with authority to manage the shared resource in accordance with the terms of the compact.[103] A typical commission includes an equal number of representatives from each state, as well as one representative of the United States.[104] Often the federal commissioner has no vote, as in the various Texas water compacts.[105] This structure is bound to cause difficulties in compacts in which decision-making requires unanimous consent among commissioners. The *Pecos River Compact* between Texas and New Mexico[106] is the prime example of the pitfalls of this structure.

D. The Pecos River Compact

The Pecos River Commission created by the *Pecos River Compact* consists of one voting member from each state and one non-voting federal member.[107] In 1947, a dispute arose when the standard by which allocations would be determined was found to be based on faulty data.[108] The original standard had favored Texas; a revised standard was more to New Mexico's liking.[109] The Pecos River Commission could not agree on which standard to use.[110] Because the compact did not specify how to break ties, Texas sued in the Supreme Court to enforce the compact as

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[102] Dale D. Goble, *The Council and the Constitution: An Article on the Constitutionality of the Northwest Power Planning Council*, 1 J. Envtl. L. & Litig. 11, 32-33 (1986).

[103] Sax, *supra* n. 1, at 726.

[104] *See Tex. v. N. M.*, 462 U.S. at 558 (*Pecos River Compact*); *Apalachicola-Chattahoochee-Flint River Basin Compact*, Pub. L. No. 105-104, art. VI, 111 Stat. 2221 (1997); *Delaware River Basin Compact*, Pub. L. No. 87-328, 75 Stat. 688 (1961).

[105] *See* Girardot, *supra* n. 101, at 159. Other compacts do allow the federal commissioner to vote, or provide federal arbitration of commission disputes. *See Tex. v. N. M.*, 462 U.S. at 565 (listing three such compacts: the Upper Colorado Basin Compact, the Arkansas River Compact, and the Yellowstone River Compact).

[106] N.M. Stat. Ann. § 72-15-19 (2003); Tex. Water Code Ann. § 42.010 (2003).

[107] *Tex. v. N. M.*, 462 U.S. at 558.

[108] *Id.* at 560.

[109] *Id.* at 560-62.

[110] *Id.* at 562.

written. The Court-appointed Special Master recommended, among other things, that the Court designate either the federal commissioner or a third party as a tiebreaker in commission votes.[111] Because the compact was constitutionally enacted federal law, the Court held that it was without authority to rewrite its express terms.[112] Fixing the structural defect in the compact would require negotiation between the states.[113] As of 2003, the compact has not been amended to fix this defect.[114]

While the *Pecos River Compact* provides a useful model of how not to structure a compact commission, the *Delaware River Basin Compact*[115] is often cited as a more positive example.[116]

E. The Delaware River Basin Compact

The 13,500 square mile Delaware River basin includes portions of Delaware, New Jersey, New York, and Pennsylvania.[117] In 1961, this relatively small watershed already served over 20 million people, including the populations of Philadelphia and New York City.[118] Wrangling over the basin began in the early 20th century, and eventually brought the states to the Supreme Court. The Court apportioned the river in 1931[119], and modified the apportionment in 1954.[120] The states had secured court-blessed rights, but with respect to the river, they still operated as separate entities with competing interests. The states, recognizing that this regime was inadequate to manage water predicted to serve an estimated 40 million people by 2010, sought to negotiate a compact that would allow for regional planning and management of the

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[111] *Id.* at 563.

[112] *Id.* at 564-65.

[113] *Id.* at 565. Although the Court had no authority to rewrite the compact, it still had the power to interpret and enforce the compact as part of its jurisdiction over disputes between states. *Id.* at 567-68. The Court therefore allowed the suit to proceed as framed. *Id.* at 571. In 1987, the Court decreed the amount of water New Mexico, the upstream state, was required to deliver. *Tex. v. N. M.*, 482 U.S. 124 (1987).

[114] *See Pecos River Compact*, 63 Stat. 159, 162 (1949). Ironically, one of the compact's purposes is "to remove causes of present and future controversies." *Id.* at 160.

[115] Pub. L. No. 87-328, 75 Stat. 688 (1961).

[116] *See, e.g.*, Erhardt, *supra* n. 98, at 224-25; Copas, *supra* n. 77, at 728-30.

[117] Sax, *supra* n. 1, at 734.

[118] Delaware River Basin Compact, pt. 1.

[119] *N.J. v. N.Y.*, 283 U.S. 336 (1931).

[120] *New Jersey v. New York*, 347 U.S. 995 (1954).

resource.[121] The result was the *Delaware River Basin Compact* and the Delaware River Basin Commission (DRBC) it created. Where governance of the basin had previously been unevenly divided among 43 state agencies, 14 interstate agencies, and 19 federal agencies,[122] it was now unified in one body whose purpose and policy are to "develop and effectuate plans, policies and projects relating to the water resources of the basin...[to] adopt and promote uniform and coordinated policies for water conservation, control, use and management in the basin...[and to] encourage the planning, development and financing of water resources projects according to such plans and policies."[123]

The DRBC is comprised of the governor of each compacting state and one federal commissioner appointed by the President of the United States.[124] All commissioners, including the federal commissioner, have a vote, which prevents impasses like those faced by the Pecos River Commission.[125] Active federal participation helps ensure coordination between state and federal interests, which serves to protect both the states and the federal government.[126] Most decisions require only a majority vote,[127] although changes in water allocations require unanimity.[128] The DRBC manages water supply throughout the basin for virtually all uses, including domestic, municipal, industrial, and agricultural.[129]

The central feature of the compact is its requirement of a comprehensive plan, developed by the DRBC, for the present and future use of the resource.[130] The plan includes "all public and private projects and facilities which are required, in the judgment of the commission, for the optimum planning, development, conservation, utilization, management, and control of the water resources of the basin to meet present and future needs."[131] The plan serves as the basis for the annual water resource program, which lays out the projects and facilities that will

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[121] Sax, *supra* n. 1, at 734; 75 Stat. at 689.
[122] 75 Stat. at 688.
[123] *Id.* at 692.
[124] *Id.* at 691.
[125] *Id.*
[126] *See* Erhardt, *supra* n. 98, at 225-26.
[127] Delaware River Basin Compact § 2.5.
[128] *Id.* § 3.3.
[129] *Id.* § 4.
[130] *Id.* § 13.1.
[131] *Id.*

be developed over the following six years.[132] The program includes a description of the quantity and quality of water resource needs over that period, and the existing or future projects and facilities that will be required to meet those needs.[133] Any project that will have substantial effect on the basin's water resources must be approved by the DRBC based on conformity with the comprehensive plan.[134]

The *Delaware River Basin Compact*'s comprehensive planning and regional management scheme has no equivalent in compacts (like the *Pecos River Compact*) that are primarily written to ratify apportionments and provide methods for each state to protect its share.[135] The *Delaware River Basin Compact*'s flexible, cooperative, planning-oriented structure has enabled the DRBC to meet challenges including droughts, water supply development, and pollution control.[136]

The next section will discuss the *Apalachicola-Chattahoochee-Flint River Basin Compact* in light of the preceding principles and case histories.

IV. THE APALACHICOLA-CHATTAHOOCHEE-FLINT RIVER BASIN COMPACT

A major interstate water conflict is ongoing among Alabama, Florida, and Georgia over the waters of the Apalachicola-Chattahoochee-Flint (ACF) River Basin. The water at stake is vital for municipalities, including Atlanta, navigational interests, farmers, the environmental health of the watershed, and the Apalachicola Bay oyster industry. The states unsuccessfully attempted to use the compact mechanism to resolve this conflict.

A. Background

The Chattahoochee River rises in the mountains of northeast Georgia, flows past the metropolises of Atlanta and Columbus, and forms the

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[132] *Id.* § 13.2.

[133] *Id.*

[134] *Id.* § 3.8.

[135] The *Pecos River Compact*, in fact, expressly protects the states' regulatory powers over water within their boundaries from interference as long as they meet their obligations under the compact. *Pecos River Compact*, art. VIII.

[136] *See generally* Sax, *supra* n. 1, at 735-37.

nonlinear segment of the Alabama-Georgia border that runs from just above Columbus to Lake Seminole at the Florida line. There it meets the Flint River, which meanders through west Georgia from just below Atlanta and provides vital irrigation water to farmers in the southwest part of the state. From this confluence, flowing though the Florida panhandle towards the Gulf of Mexico's oyster-rich Apalachicola Bay, the river is known as the Apalachicola. The basin drained by this river is the ACF River Basin.[137]

In 1939, the U.S. Army Corps of Engineers (Corps) reported to Congress on the development of the ACF basin, recommending "full development" of the basin for flood control, navigation, and hydroelectric power generation.[138] Acting on the Corps' recommendation, Congress authorized various projects in the basin.[139] Among these is the Buford Project, authorized in the 1940s and completed in 1958, which created the Buford Dam and its massive reservoir, Lake Lanier, northeast of Atlanta.[140] Although there is some question whether Congress authorized it to do so, the Corps has operated the dam and reservoir to provide municipal and industrial water for Atlanta in addition to the project's other purposes.[141]

Responding to Georgia officials' concern about Atlanta's long-range water supply, Congress in 1972 authorized the Corps to study alternatives that would meet the city's needs.[142] While the Corps studied the alternatives, major droughts in 1981, 1986 and 1988 lent urgency to the need for a decision. In 1988, after other alternatives had been considered and rejected, the Corps recommended reallocating storage in Lake Lanier from hydropower to water supply.[143] In 1989, the Corps issued a draft Post-Authorization Change report recommending reallocating twenty

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[137] Roy R. Carriker, *Water Wars: Water Allocation Law & the Apalachicola-Chattahoochee-Flint River Basin*, Univ. of Fla. Coop. Extension Serv., Doc. FE 208 (2000) (non-paginated) <http://edis.ifas.ufl.edu/BODY_FE208> (last accessed June 1, 2004); *see also* Copas, *supra* n. 77, at 697; Erhardt, *supra* n. 98, at 200.

[138] Carriker, *supra* n. 137.

[139] *Id.*

[140] *Ga. v. U.S. Army Corps of Engrs.*, 302 F.3d 1242, 1247 (11th Cir. 2002).

[141] *Id.* at 1247, n. 1.

[142] Carriker, *supra* n. 137.

[143] *Id.*

percent of the hydropower storage to water supply.[144] This change was expected to quench Atlanta's growing thirst through the year 2010.[145]

The changes recommended by the Post-Authorization Change report spurred the State of Alabama, in 1990, to sue the Corps to protect its interests in the waters of the ACF basin.[146] The Corps, Alabama charged, was unfairly favoring Georgia over other states in the ACF basin, and had also failed to comply with the National Environmental Policy Act (NEPA)[147] in recommending reallocation.[148] Florida and Georgia, as well as several smaller entities and groups, intervened in the lawsuit.[149] At that time, the major players in the ACF drama – Alabama, Florida, Georgia, and the Corps – were all in place.

The states were motivated by a variety of concerns. Alabama claimed that more water going to Georgia would mean higher hydropower costs, reduced dilution of pollution in the river, and a chilling effect on Alabama's ability to recruit industry to the state.[150] Florida feared for the health of the $70 million Apalachicola Bay oyster industry, which requires clean, fresh water to pass over the Bay's oyster beds.[151] Georgia argued that as a sovereign it could manage the water within its borders as it wished.[152]

In late 1990, with court approval, the parties agreed to attempt a settlement of the dispute without more litigation.[153] Two years later the parties agreed to conduct a three-year comprehensive study of the basin's water resources, which would be used to guide further negotiations on

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[144] *Id.*

[145] *Id.* In 1999, the Corps delivered, on average, 131.54 million gallons per day (mgd) of municipal and industrial water from Lake Lanier, while the average withdrawal from the Chattahoochee River was 277.7 mgd. Approximately 2.7 million people depend on this water – a population expected to increase to 4 million by the year 2030. *Id.*; *see also Ga. v. Corps* at 1247, n. 1.

[146] *Ala. v. Corps of Engineers*, CV90-BE-1331-E (filed June 28, 1990).

[147] 42 U.S.C. §§ 4321-4347 (2004).

[148] Carriker, *supra* n. 137, at "Alabama Sues the Corps of Engineers."

[149] *Id.*

[150] Greg Jaffe, *Water Deal May Settle Old Dispute*, Wall St. J. F1 (Sept. 11, 1996).

[151] *Id.*; Jeffrey Uhlman Beaverstock, Commentary, *Learning to Get Along: Alabama, Georgia, Florida and the Chattahoochee River Compact*, 49 Al. L. Rev. 993, 997 (1998); *see also* Bruce Ritchie, *River a Pearl for Oysters*, Tallahassee Democrat A1 (Nov. 10, 2001) (describing the function of fresh water in maintaining the health of Apalachicola Bay).

[152] Jaffe, *supra* n. 150.

[153] Carriker, *supra* n. 137, at "Memorandum of Agreement and Basin Studies."

basin-wide water resource management issues.[154] The study would consist of four categories of elements: (1) process support elements, including data, modeling, and public involvement; (2) water availability elements, including surface water and groundwater; (3) water demand elements, including agricultural, environmental, municipal, industrial, navigation, power, recreation, and water quality needs, and the needs of the Apalachicola Bay; and (4) comprehensive management strategy elements, including a basin-wide management study and a coordination mechanism.[155]

B. The Compact

Even before it was completed, the study yielded enough information to persuade the states to enter into compacts to resolve allocation issues in the ACF river basin (and, between Alabama and Georgia only, the neighboring Alabama-Coosa-Tallapoosa (ACT) river basin).[156] Alabama, Florida, and Georgia entered into the *Apalachicola-Chattahoochee-Flint River Basin Compact* (*ACF Compact* or Compact) in early 1997, for the purposes of "promoting interstate comity, removing causes of present and future controversies, equitably apportioning the surface waters of the ACF, engaging in water planning, and developing and sharing common data bases."[157] Congress authorized the compact by legislation, which was signed by President Clinton on November 20, 1997.[158]

The *ACF Compact* did not itself allocate water; rather than being an agreement on allocation, it was instead an agreement to agree on allocation. The compact established the ACF Basin Commission, comprised of the governors of Alabama, Florida, and Georgia, and a non-voting federal member.[159] All decisions and actions by the commission

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[154] *Id.*

[155] N.W. Water Mgt. Dist., *Alabama Coosa Tallapoosa Apalachicola Chattahoochee Flint River Basins Comprehensive Water Resources Study*, available online at <http://sun6.dms.state.fl.us/nwfwmd/rmd/acfcomp/ cstudy.htm> (last accessed June 1, 2004).

[156] C. Grady Moore, *Water Wars: Interstate Water Allocation in the Southeast*, 14 Nat. Resources & Env. 5, 7 (1999).

[157] *Apalachicola-Chattahoochee-Flint River Basin Compact*, Pub. L. No. 105-104, art. 1, 111 Stat 2219 (1997).

[158] Pub. L. No. 104-105.

[159] *Id.* at art. VI(a), (b), (d).

required unanimous votes.[160] The dispute resolution mechanism for conflicts over the allocation formula was to be non-binding mediation.[161]

The ACF Basin Commission's primary duty was to agree on a formula for equitably allocating the waters of the ACF river basin. The allocation formula could be in almost any form the commissioners chose,[162] but the state commissioners would have to approve it unanimously.[163] Until approval of an allocation formula, the status quo would prevail, with minor conditions. The compact provided that present withdrawals, diversions, and consumption not only could continue, but also could increase to satisfy reasonable increases in demand.[164] Written notice to other states was required for increases in use above certain levels, but the compact failed to include binding restrictions on any present or future use.[165]

The *ACF Compact* would automatically terminate if the states did not reach agreement on an allocation formula by December 31, 1998, unless the states unanimously voted to extend the deadline.[166] The deadline was extended numerous times, and several draft allocation proposals were developed.[167] In July 2003, the states came tantalizingly close to a final agreement when they signed a memorandum of understanding on several key principles that were intended to guide the development of the allocation formula.[168] Yet the August 31, 2003 deadline passed without

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[160] *Id.* at art. VI(d).

[161] *Id.* at art. XIII(a)(5).

[162] *Id.* at art. IV(b).

[163] *Id.* at art. VII(a). This part of the compact also features a role for the federal commissioner: he or she is obligated to concur or non-concur with the allocation formula. *Id.* Concurrence, or failure either to concur or to non-concur, effectuates the allocation formula. *Id.* Non-concurrence terminates the compact unless the commissioners unanimously agree to renegotiate an allocation formula over a single forty-five day period. *Id.* at art. VIII(a)(4).

[164] *Id.* at art. VII(c).

[165] *See Id.*

[166] *Id.* at art. VIII(a)(3).

[167] *E.g.*, Alabama's 1998 and 1999 draft allocation formulas, which may be viewed at <http://www.adeca.alabama.gov/content/owr/owr_acf_compact.aspx> (last accessed June 1, 2004); Florida's January 14, 2002 draft allocation formula, which may be viewed at <http://www.dep.state.fl.us/secretary/ comm/2002/acf.doc> (last accessed June 1, 2004); Georgia's January 16, 2002 draft allocation formula, which may be viewed at <http://www.dnr.state.ga.us/dnr/environ/> (last accessed June 1, 2004).

[168] Bruce Ritchie, *River Pact Moves Closer*, Tallahassee Democrat, A1 (July 23, 2003).

being extended, and the compact terminated.[169] Florida was unwilling to accept an agreement that guaranteed only minimum flows for the Apalachicola River; Georgia bristled at Florida's proposal that it limit irrigated farm acreage and control reservoir levels, refusing to be told by Florida how to "micromanage" its water use.[170] An equitable apportionment battle in the Supreme Court is the likely next step.[171]

C. The Compact's Flaws

The *ACF Compact*'s major flaw was its requirement of unanimity among the state commissioners for any decision or action, with no method of breaking the almost inevitable deadlocks. Non-binding mediation was not up to the task.[172] Nearly six years of negotiation brought the states no closer to an apportionment of the ACF. The only benefit obtained during this time was the information gathered for the comprehensive study, which will likely serve as important evidence in the equitable apportionment showdown.

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[169] Bruce Ritchie, *High Court May Hear Water Fight*, Tallahassee Democrat, A1 (Sept. 2, 2003).

[170] *Id.*

[171] *Id.* The likelihood of Supreme Court litigation is even greater due to Florida and Alabama's loss in another suit filed by the Southeastern Federal Power Customers (SeFPC) against the Corps of Engineers in 2000. See *SeFPC v. Caldera*, 1:00-CV-02975 (Feb. 10, 2004). In this suit, the SeFPC alleged that water supply contracts with Atlanta water providers did not provide adequate compensation for the decrease in hydropower that water supply withdrawals were causing, and that the water supply contracts exceeded the Corps' authority. On January 21, 2003, SeFPC, Georgia and the Corps reached a settlement, wherein municipalities agreed to higher prices for water withdrawals, in return for a guarantee from the Corps that 25% of the water in Lake Lanier will be dedicated to water supply needs over a period of 20 years. Florida and Alabama intervened, challenging the settlement agreement as exceeding the Corps' authority, violating NEPA, and violating a 1990 Stay Order of the Alabama District Court. A motion hearing was held on January 20, 2004 to decide the validity of the settlement agreement. The Court held that the settlement agreement was fair and reasonable, and execution of the agreement does not, in and of itself, trigger NEPA requirements. Furthermore, the Corps acted within its authority when it entered into the settlement agreement. Thus, the Corps is free to dedicate 25% of water from Lake Lanier for drinking water supply once the Northern District of Alabama lifts its injunction. This settlement leaves Florida and Alabama with little recourse other than Supreme Court litigation.

[172] Mediation was attempted at least once. *See* Bruce Ritchie, *Waging War Over Water*, Tallahassee Democrat A1 (Nov. 4, 2001).

A second flaw, at least from the perspective of the downstream states, is the compact's failure to impose any meaningful restrictions on water use during the allocation formula negotiations. In a deadlock situation, maintaining the status quo favors the upstream state.[173] In this case, Georgia could continue to increase withdrawals from the Chattahoochee as necessary to supply Atlanta, and continue to allow farmers to partially dewater the Flint River via groundwater pumping for irrigation.[174]

In short, the ACF states repeated the mistakes made by Texas and New Mexico in the *Pecos River Compact.* Although the situations in the two cases differed factually, the core problem was the same – inability to overcome an impasse. Even if the ACF states had emulated the lauded *Delaware River Basin Compact,* the outcome would likely have been the same, because that compact also requires unanimity among commissioners for changes in allocation. It should also be borne in mind that the Delaware Basin states had a legally enforceable Supreme Court allocation as a starting point, while the ACF states did not. Thus, while the ACF compact's failure is regrettable, perhaps the ACF states should not be judged too harshly under the circumstances.

V. RECOMMENDATIONS

States faced with an interstate water dispute should first consider how the conflict might be resolved in the Supreme Court, based on the federal common law principles that have developed since *Kansas v. Colorado.* This assessment, obviously necessary if the states go to the Court, is also necessary if they attempt to negotiate because it will help to determine the relative strengths of the states' negotiating positions.

If the states then decide to allocate water by compact, they should then agree on interim resolutions to immediate, pressing issues such as drought or pollution, pending establishment of an allocation formula. Such

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[173] *See Tex. v. N. M.*, 462 U.S. 554, 563 (1983). Perhaps not coincidentally, Georgia was represented by a law professor who had learned this lesson the hard way, having represented New Mexico on the losing side of the deadlocked *Pecos River Compact. See* Glennon, *supra* n. 19, at 191-92.

[174] *See* Glennon, *supra* n. 19, at 188-89 (describing agricultural water use in Georgia). It is encouraging that, after the compact terminated, a Georgia official declared the state's intention to "conduct ourselves policy-wise in a way that is equitable and environmentally sound." Bruce Ritchie, *Putting Water-Use Debate in Court's Hands May be Costly*, Tallahassee Democrat A1 (Sept. 3, 2003). Whether the state carries out this intention remains to be seen.

resolutions might include moratoria or meaningful, enforceable limits on additional withdrawals, groundwater pumping, and reservoir construction; mandatory conservation measures; or payments to water users or pollution dischargers in exchange for agreements not to use water or discharge pollution for a period.

Further, the states should agree on the scientific basis they will use as a standard to establish the allocation. The guiding principle should be that there is no substitute for quality data and analysis. The scientific basis should describe the water resource in question as accurately as possible, in terms of flow variations over short periods, such as seasons, and long ones, such as five-, ten- and fifty-year intervals.[175] Water quality, as well as quantity, should be considered. Recall that disagreement over data quality led to the *Pecos River Compact* litigation. The ACF comprehensive study, on the other hand, may serve as a useful model.

Additionally, the states should avoid allocation in absolute quantities. The tensions among the Colorado River basin states developed in part because the *Colorado River Compact* assumed an overly optimistic annual flow, and the Boulder Canyon Project Act apportioned that unrealistic flow among the states in firm quantities.[176] Hard numbers may inspire unwarranted confidence in future supply. An allocation formula should be able to account more flexibly for varying conditions, including extremes of flood and drought. Percentages of flow could be assigned; for example, the current apportionment of the Colorado River in the lower basin could be converted to percentages, with 37.3% going to Arizona, 58.7% going to California, and four percent going to Nevada. Alternatively, a realistic minimum annual flow could be apportioned in hard numbers with surplus apportioned by percentages.

In addition, the states should thoroughly and honestly evaluate existing and possible future uses of the resource and determine the water needs of

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[175] Using inadequate data to allocate water can have disastrous results. The 1922 *Colorado River Compact* assumed, based on approximately twenty years' data, that the allocatable flow was 15 million acre-feet per year; in fact, the dependable flow is closer to 14 million acre-feet per year. Sax, *supra* n. 1, at 696, 700-01. When Arizona and Nevada were not using their full shares, California took the surplus and the problem was largely academic; now, however, as populations boom in Arizona and Nevada, that is no longer the case. In October 2003, California signed an agreement whereby it will reduce withdrawals to its rightful share over fourteen years, largely by moving water from agricultural to municipal use. *See* Dean E. Murphy, *Pact in West will Send Farms' Water to Cities*, N.Y. Times A1 (Oct. 17, 2003).

[176] *See supra* nn. 92-93, 175, and accompanying text.

those uses. This evaluation must be completed *before* negotiation of an allocation formula begins. One reason the ACF negotiations failed was that the needs of the Apalachicola River and Bay had not been defined beforehand.[177] Without an accurate picture of demand as well as supply, the states stand on uncertain ground when negotiating.

Lastly, the states must structure the compact to maximize the chances that an allocation will actually be agreed upon. Otherwise, it might be more efficient to go directly to the Supreme Court for an allocation and use that as a starting point, as the Delaware Basin states in effect did. The case studies above show that mutual agreement on a method of overcoming impasses is essential. Options include decisions by a simple majority rather than a unanimous vote; a federal tie-breaking vote; and binding arbitration.[178]

VI. CONCLUSION

Clearly, there is no perfect method of apportioning interstate water among competing states. Congressional apportionment potentially is the fastest and most decisive method, but is extremely rare. Equitable apportionment by the Supreme Court has the advantage of being certain to provide an answer; its disadvantages are that it is expensive, time-consuming, and something of a gamble for the states, who may be stuck with an unfavorable outcome. The compact mechanism gives the states the most flexibility and control over their destinies, but it is prone to deadlock in the most contentious situations. Nonetheless, states are likely to continue trying the compact method of allocating water because they retain more autonomy with compact negotiation than they do with the other two methods. If states thoroughly evaluate their legal and equitable claims to interstate water, and avoid the pitfalls that have plagued previous compacts, the interstate compact may prove to be the best available mechanism to resolve interstate water quantity disputes.

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[177] *See* Bruce Ritchie, *Water-Agreement Deadline Nears*, Tallahassee Democrat B1 (Aug. 24, 2003).

[178] Arbitration clauses have been included in a few compacts, but apparently have not been triggered. *See* Girardot, *supra* n. 101, at 172-73.