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Water Federalism and the Army Corps of Engineers' Role in Eastern States Water Allocation

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I. INTRODUCTION

It is black letter constitutional theory that the several states are the masters of their property law, and hence their water law,[1] unless the states in making their property law rules impinge on some federal constitutional guarantee, such as the prohibition against takings of property[2] or the dormant commerce clause.[3] For that reason, states have been free to adopt regimes as widely different as reasonable use riparianism and prior appropriation, depending on local conditions and perceived needs. Since nationhood, states located in the relatively humid eastern regions of the United States have maintained as the core aspect of their water law the riparian rights doctrine to allocate the use of surface water.[4] Those state law precepts appeared primarily in the case law and, at times, as confirmed and loosely codified in statutory enactments adopting common law reasonable use riparianism as the guiding principle for determining water rights.[5] More recently and increasingly, states are enacting administrative permit systems, while retaining riparianism's correlative sharing of the water as the operative allocative principle that determines rights of use of the available water.[6] The core principles of "water federalism" begin with the recognition of state law water allocation.

Operating in a parallel universe, superimposed on the same physical water resource network, is the United States Army Corps of En-

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1. A. DAN TARLOCK, LAW OF WATER RIGHTS AND RESOURCES, 1-2 (Thompson Reuters/West 2008) (2008) [herinafter TARLOCK TREATISE].

2. U.S. CONST. Amends. V and XIV; *see also* Franco-American Charolaise, Ltd. v. Okla Water Res. Bd., 855 P.2d 568 (Okla. 1990).

3. Sporhase v. Nebraska, 458 U.S. 941 (1982) (holding that a Nebraska statutory restriction on certain water resources violated the commerce clause because it impermissibly burdened interstate commerce).

4. *See, e.g.*, JOSEPH SAX, BARTON THOMPSON, JR., JOHN LESHY, ROBERT ABRAMS, LEGAL CONTROL OF WATER RESOURCES 12–13 (Thompson West 4th ed. 2006) [hereinafter SAX, LCWR 4th]. See, e.g., Tarlock Treatise 1–2.

5. *See, e.g.*, Pyle v. Gilbert, 245 Ga. 403, 265 S.E.2d 584 (1980).

6. *See* Peter Davis, *Eastern Water Division Permit Status: Precedents for Missouri?*, 47 MO. L. REV. 429, 477 (1982). *See also*, AM. SOC'Y OF CIVIL ENG'RS, REGULATED RIPARIAN MODEL WATER CODE, § 2R-1-01 (2004).

gineers (Corps). Up through the end of the nineteenth century, the Corps' principal and nearly exclusive role in regard to the nation's waters was to promote and enhance navigation. The Corps discharged that function by constructing various public works projects allied with that on-stream mission, building lock and dam systems, undertaking dredging, and preventing obstruction of navigation.[7] Even for a half century thereafter, the Corps' direct activities had only occasional water allocation consequences, although its regulatory power over navigation and construction of diversion works in navigable waters at times gave it jurisdiction to review major water supply projects. The best known example of this latter authority is the so-called "Chicago Diversion," a water works project that required the Corps' approval by which that city was able to divert at a rate as high as 8500 cubic feet per second (cfs) from Lake Michigan and channel the water southward into the Mississippi River Basin, where it would not have naturally flowed.[8] In that role as guardian of navigation, the Corps did not involve itself in the water law of the states. The states' primacy in water allocation remained the hallmark of water federalism to the extent that anyone even considered the topic.

Beginning in the middle of the twentieth century, the scope of congressional initiatives carried out by the Corps expanded into the multipurpose dam building business[9] and implementing an expanding array of public purposes that included flood control, hydropower, flat water recreation, and even irrigation and municipal water supply.[10] With the expanded activities and the broader federal purposes the Corps was being directed to pursue, the easy co-existence of state water rights and Corps' activities affecting water use faced a new potential for conflict. Even then, conflict between the Corps' pursuit of its

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7. *See, e.g.*, Rivers and Harbors Act of 1899 §§ 10, 15, 33 U.S.C. §§ 403, 409 (2006).

8. *See* Wisconsin v. Illinois, 278 U.S. 367, 415–18 (1929). Although Illinois claimed that the Corps' issuance of a permit amounted to federal authorization for the diversion and resulting allocation of water rights, the Supreme Court rejected this argument and held that the Corps permit was merely a response to the public health threat of the sewage and not a federal decision regarding management of the navigable waters of the Great Lakes. *Id.* For a complete discussion of the Chicago Diversion and the *Wisconsin v. Illinois* cases, see Noah D. Hall, *Toward a New Horizontal Federalism: Interstate Water Management in the Great Lakes Region*, 77 U. COLO. L. REV. 405, 419–22 (2006).

9. The leading example of the expansion is the Flood Control Act of 1946, which authorized massive projects in the Missouri Basin. The statute set general parameters and each individual project has its own specific authorizing legislation and purposes.

10. Water Supply Act of 1958, 43 U.S.C. § 390b (2006).

authorized activities and state law allocation of water remained more potential than real. Many of the Corps projects being proposed, approved, and funded had strong state support and were not antithetical to any existing or near-term foreseeable pattern of water use being made in accordance with state created water rights or water management policies. As with the survival of the imprecise underlying riparian rights water use allocation regime, in most places where Corps' dams were being built, there was plenty of water to go around and significant water user conflicts were rare.[11] The Corps' programmatic efforts that provided flood control, hydropower generation, recreational opportunities, and water supply were welcomed by the states. Seldom, if ever, was there a discernible shortage of water that called for hard choices about water allocation.

In the absence of conflict between Corps' water control actions and state water use prerogatives, there was no test posed for water federalism in the East. The remainder of this Article proceeds on the premise that water is no longer relatively plentiful in an increasing number of basins found in the humid eastern states. The presence of Corps' facilities in basins now experiencing short supply opens the door to state and federal water allocation conflict that calls for mediation under the principles of water federalism, a doctrine that has varied considerably over time. This article will recount those changes in doctrine and then consider whether any of the past variations of water federalism are well-suited to contemporary conditions. Finding that they may not be, the Conclusion suggests what appear to be fruitful avenues for forging a now role for the Corps that better supports the core water federalism recognition of state water allocations than does the emerging status quo.

II. THE NEW REALITY

Times change, and if the change places new and important demands on water resources, the law controlling allocation of rights to use water will change as well.[12] In the humid eastern portion of the United States, several recent changes have occurred that increase the demand for the use of water and decrease the available supplies. In some places it is simply a matter of water demand finally coming ab-

11. *See generally*, Robert Abrams, *Replacing Riparianism in the Twenty-First Century*, 36 WAYNE L. REV. 93 (1990); T.E. Lauer, *Reflections on Riparianism*, 35 MO. L. REV. 1 (1970).

12. *See* Robert H. Abrams, *Charting the Course of Riparianism: An Instrumentalist Theory of Change*, 35 WAYNE L. REV. 1381 (1989).

reast of, and passing available supply. Depending on the locale, the demand escalator is likely to be increased population, sometimes coupled with increased per capita water use. In some parts of the eastern United States, massive increases in water demand are the result of vastly increased irrigation. Both of these phenomena are on display in the heated controversy over the waters of the Apalachicola-Chattahoochee-Flint (ACF) basin, which will be utilized as the principal example of contemporary Corps' operations and the potential for conflict with state water allocation prerogatives.[13]

In other locales, the total reliable supply is contracting. In coastal regions, numerous supply reductions trace to the advent of saline intrusion that imperils groundwater supply. Saline intrusion occurs when current pumping levels are drawing so much water from the aquifer that the hydrostatic barrier that keeps saline water from mixing with the fresh groundwater is weakened and can no longer maintain the separation.[14]

Still more ominous constriction of supply in the East is associated with global warming.[15] The best climate models now uniformly predict that many areas in the eastern United States will experience warmer, wetter winters; hotter, drier summers; more extreme precipitation events; and more drought events.[16] Those same predictions portend an obvious spiking in the amount of summer water demand, primarily for cooling and irrigation. In almost all eastern rivers, summer is the time of lowest flows, which leads to greatest reliance on groundwater sources and reservoir supplied water. On the ground, observable changes in water supply consistent with these dire predictions are already occurring. Again, the ACF basin is a leading example.[17]

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13. *See infra* Part V.

14. *See, e.g.*, BRITISH GEOLOGICAL SURVEY, UK GROUNDWATER FORUM, SEA WATER INTRUSION, http://www.groundwateruk.org/archive/sea_water_intrusion.pdf (last visited Mar. 23, 2009). Increased saline intrusion also is potentially threatened by rising ocean levels that may turn some aquifer recharge areas brackish, or accelerate the mixing of adjacent salt water into the groundwater supply.

15. *See* Noah D. Hall, Bret B. Stuntz & Robert H. Abrams, *Climate Change and Freshwater Resources*, 22 NAT. RESOURCES & ENV'T 30 (2008) and sources cited therein.

16. *See generally* PETER H. GLEICK ET AL., WATER: THE POTENTIAL CONSEQUENCES OF CLIMATE VARIABILITY AND CHANGE FOR THE WATER RESOURCES OF THE UNITED STATES, REPORT OF THE WATER SECTOR ASSESSMENT TEAM, UNITED STATES GLOBAL CHANGE RESEARCH PROGRAM (2000), http://www.gcrio.org/NationalAssessment/water/water.pdf.

17. *See infra* Part V.

Several climate change-induced phenomena pose a special challenge to water supply management. Under the old pre-climate change norms, the variation in seasonal flow was within well-established historical limits. That pattern of the expected frequency and timing of flows and droughts within predictable upper and lower limits is referred to as stationarity. Water managers relied on stationarity in planning and designing their facilities and in making water allocation decisions. So, for example, a planner would calculate the amount of storage capacity needed for flood control and design the relevant project with upper bounds of flows predicted assuming continued stationarity. Similarly, operating rules for the dams, such as when to spill water to ensure adequate unfilled flood control capacity, or when to fill the pool to ensure sufficient summer storage, also relied on continued stationarity. As the chance of more extreme rainfall events becomes a reality, however, flood control protection requires that more water be spilled sooner as a hedge against the stormwater. On the flip side of the same equation, the possibility of more intense drought and warmer summers increase the need to hold more water in storage. If the same dam is serving both purposes, the operational conflict is patent—the old operating pattern is being tugged in two opposite directions by the failure of the stationarity premise that was the fundamental planning and operating basis for the dam.

In short, with climate change, the historical patterns can no longer be relied upon.[18] Water managers face a changed and more complex reality. Not only is supply more erratic, the peak demand for water to be supplied by the same facilities is greater, and the design of the facilities and past operational planning are likely to be out of synchronization with the timing of rainfall and drought events. The demise of stationarity opens the worst possibilities of all, a simultaneous increase of demand in what are likely to be the periods of lowest supply, with a concomitant threat of flooding due to more intense rainfall events, which counsels against maintaining overly full reservoirs.[19]

As the assumptions that water mangers used in building their systems begin to fail, the need for more responsive water allocation regimes is increasingly obvious. The states are becoming acutely aware

18. P. C. D. Milly, Julio Betancourt, Malin Falkenmark, Robert M. Hirsch, Zbigniew W. Kundzewicz, Dennis P. Lettenmaier & Ronald J. Stouffer, *Stationarity is Dead: Whither Water Management?*, 319 SCIENCE 573 (Feb. 1, 2008) *available at* http://www.gfdl.noaa.gov/reference/bibliography/2008/pcm0801.pdf.

19. Also escalating the threat of flooding is the continuing land use driven destruction of wetlands and encroachment on the flood plain that has accompanied the rapid growth in the American southeast.

of the control they require over the waters that sustain their citizens, their ecologies, and their economies. The superimposed systems—state water allocation and Corps projects—no longer co-exist as comfortably. States want to control allocation and the Corps' facilities can be a major asset, if operated in accordance with the states' desires. The Corps, however, operates the dams in accordance with its own legal authorities, obligations, and attendant policies. The Corps' legal structure, of course, is federal and has the force of the Supremacy Clause[20] behind it. Adding to the dissonance, the water user stakeholders who see their interests imperiled are joining the fray and are seeking to use any and all legal handles available to them to "force" the states and the Corps to protect their interests. As in the ACF, the competing uses can cross state lines and import an additional overlay of legal doctrine that addresses interstate water disputes.

In this altered water supply and user-conflict reality, the Corps, whether consciously or not, is performing a role in intrastate water allocation policy that has traditionally resided with the states. When interstate matters arise in addition to intrastate competition for the available water, the Corps' actions begin to address issues that are historically the province of the states, when they can agree through an interstate compact (subject to Congressional approval[21]), and of Congress and the United States Supreme Court, when the states cannot reach an agreement. Perspectives differ. Some would describe this development as one in which the Corps is arrogating to itself powers belonging the states or other branches. Some would describe the Corps' actions as no more than necessary to operate the dams and other projects under the legal mandate with which they are charged by Congress. Without resolving that debate, the fact remains that the Corps' physical position and operational control of its facilities puts the Corps in the middle of the water allocation revolution in the eastern United States. The remainder of this article will examine some of the issues surrounding that fact.

III. THE THREE ERAS OF AMERICAN "WATER FEDERALISM"

American water federalism is founded in part on a well-settled principle of state hegemony over water allocation as an incident of state sovereignty in defining property rights. Alternatively, a broader ascription of state power over water allocation attaches as part of the

20. U.S. CONST. art. VI.
21. U.S. CONST. art. I, § 10, cl. 3.

traditional state police power authority to regulate natural resources for the benefit of the people. This latter justification is amply supported in the nation's jurisprudence as it describes the states as the inheritor from the English crown of the public trust responsibility over navigable waters.[22] The idea that the states should be the authority making allocative choices about water is deeply ingrained in doctrines throughout water law, whether it be the federal Equal Footing Doctrine,[23] or the courts of the western states announcing that their local conditions require a water law different than that of England, the eastern states, and even their own territorial law;[24] and that was eventually held to fully displace riparian rights in those states.[25]

Federal water-related interests were simultaneously recognized and vindicated under the Supremacy Clause. The foremost of these during the nation's earlier history was the federal role under the interstate and foreign commerce power[26] to champion navigation. Even state law property rights as fundamental as the riparian right of access to the watercourse fell before the federal navigation servitude. Thus, federal projects promoting the national interest in navigation extinguished vital incidents of state law property rights without Fifth Amendment compensation.[27] Somewhat less expansively, but also in derogation of state water law, the Supreme Court recognized federal reserved rights as attaching to portions of the then unappropriated water found on public lands that were withdrawn from the public domain and reserved to a particular federal purpose.[28] Thus, within its sphere of enumerated powers, under the influence of the Supremacy Clause, federal laws and initiatives displace in part the otherwise complete power of the states over water law.[29]

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22. Robert Haskell Abrams, *Walking the Beach to the Core of Sovereignty: The Historic Basis for the Public Trust Doctrine Applied in* Glass v. Goeckel, 40 U. MICH. J.L. REFORM 861, 884 (2007).

23. *See, e.g.*, Pollard v. Hagan, 44 U.S. (3 How.) 212 (1845).

24. *See, e.g.*, Coffin v. Left Hand Ditch Co., 6 Colo. 443 (1882).

25. Cal. Or. Power Co. v. Beaver Portland Cement Co., 295 U.S. 142 (1935). The displacement extends even to potential riparian rights claims of the United States on retained federal lands of the public domain.

26. *See* U.S. CONST. art I, § 8, cl. 3.

27. "Whatever rights may be as between equals such as riparian owners, they are not the measure of riparian rights on a navigable stream relative to the function of the Government in improving navigation." United States v. Willow River Power Co., 324 U.S. 499, 510 (1945).

28. Winters v. United States, 207 U.S. 564 (1908).

29. An additional incursion on state power traceable to the Commerce Clause is the authority of Congress and the Supreme Court to make allocation of "interstate" waters. *See generally*, Sax, LCWR 4th 835–873.

What emerged, at the beginning of the twentieth century, taking a high level view of those arrangements, was a fairly coherent picture of United States "water federalism." In the main, the states were the source of water rights, but superior federal rights also existed, supporting specific federal interests, especially the interest in navigation. That comfortable early 1900s picture of state-federal co-existence, when navigation was the dominant federal water resource interest,[30] was challenged by the advent of two major federal programmatic initiatives that more directly affected the use of the waters themselves: hydropower development and reclamation.

As written, the first two major federal water program-creating statutes appeared to adhere fully to that simple view of American water federalism allowing the states full authority over water allocation. The concept was incorporated in both the hydropower and reclamation fields, finding expression in section 27 of the Federal Power Act which was enacted in 1920[31] and section 8 of the Reclamation Act of 1902.[32] Those two statutory provisions share highly similar language, with the provision in the Federal Power Act being a bit broader, explicitly addressing the whole spectrum of state water uses, rather than focusing on state irrigation laws as was done in the Reclamation Act §8.[33]

The interpretation of state-federal conflicts under those laws sparked a far more discordant note that gave rise to the second era in water federalism. Section 27 of the Federal Power Act, in relevant part, reads as follows:

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30. In that earlier age, the federal navigation interest was almost always confined to areas where there was ample water available for all on-stream and off-stream uses. A century ago, under the technologies of the time, it was virtually impossible to find a case in which a state's interest in its own water law making allocations of the use of the resource was in conflict with navigation. A century ago, the same was true even in the arid West because navigation was only an option on major rivers that were not yet being exhausted by irrigation drafts.

31. 16 U.S.C. § 821, 41 Stat. 1077 (1920).

32. 32 Stat. 390 (1902). See California v. United States, 438 U.S. 645 (1978).

33. The more restrictive language of the Reclamation Act is as follows:

> [N]othing in this Act shall be construed as affecting or intended to affect or in any way interfere with the laws of any State or Territory relating to the control, appropriation, use, or distribution of water used in irrigation, or any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions of this Act, shall proceed in conformity with such laws, and nothing herein shall in any way affect any right of any State or of the Federal Government or of any landowner, appropriator, or user of water in, to, or from any interstate stream or the waters thereof.

32 Stat. 390, now at 43 U.S.C. §§ 372, 383 (2006).

> Nothing [in this statute] shall be construed as affecting or intending to affect or in any way to interfere with the laws of the respective States relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein.[34]

Although that provision seems to ensure conformity to state water laws, it masks a much more subtle realm of potential conflict between effectuation of the federally authorized activity and state "control" of the water involved. The leading case is *First Iowa Hydro-Electric Cooperative v. Federal Power Commission*.[35] In *First Iowa*, state law required a water use permit that could not be granted under Iowa law unless the water impounded behind a dam was returned to the original water course at the "nearest practicable place," a requirement that would not be met under the plan as authorized by the Federal Power Commission.[36] The Court found that section 27 established "a division of the common enterprise between two cooperating agencies of Government, each with final authority within its own jurisdiction,"[37] and gave more emphasis to the "division" than to the "common enterprise" strand of analysis:

> The securing of an Iowa state permit is not in any sense a condition precedent or an administrative procedure that must be exhausted before securing a federal license. It is a procedure required by the State of Iowa in dealing with its local streams and also with the waters of the United States within that State in the absence of an assumption of jurisdiction by the United States over the navigability of its waters. Now that the Federal Government has taken jurisdiction of such waters under the Federal Power Act, it has not by statute or regulation added the state requirements to its federal requirements.[38]

That same principle, making express provision for recognition of existing state water rights, but none for recognition of concurrent state regulation of the water itself, was extended to reclamation law by the Court in a series of cases decided in the 1950s and 1960s.[39] For exam-

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34. 41 Stat. 1077 (1920) (codified at 16 U.S.C. § 821 (2006)).
35. 328 U.S. 152 (1946).
36. *Id.* at 166.
37. *Id.* at 167.
38. *Id.* at 170.
39. *See* Ivanhoe Irrigation Dist. v. McCracken, 357 U.S. 275 (1958); City of Fresno v. California, 372 U.S. 627 (1963); Arizona v. California, 373 U.S. 546 (1963). *Ivanhoe* summarized the key ruling regarding section 8, stating that, "it merely re-

ple, in *Ivanhoe Irrigation District v. McCracken*,[40] the Supreme Court ruled that the 160-acre limitation on water deliveries of the federal Reclamation Act was enforceable despite a California state law that forbade the acreage limitation in the delivery of water.[41] Similarly, in *City of Fresno v. California*,[42] the Supreme Court expressly rejected an argument that section 8 of the Reclamation Act "requires compliance with California statutes relating to preferential rights of counties and watersheds of origin and to the priority of domestic over irrigation uses."[43] The project water would be delivered according to federal law, the state law of water allocation notwithstanding.

Applying the water federalism represented by the Supreme Court decisions of the second era, it should be fairly plain that the old understanding was largely displaced and the federal program or project enjoys legal primacy over state law requirements other than previously vested property rights.[44] In relation to the Corps' dams and projects, the second era precedents would fully establish the Corps as the preeminent water allocator to whatever extent that the congressional authorization for either the general program under which the Corps is acting or the specific project empowered the Corps to take actions that had the effect of allocating the water to various users or *in situ* uses. That result is not difficult to justify as a matter of legal doctrine. If the application of state law would materially impede or frustrate the federal program or project, state law must give way under the doctrine of conflict preemption.[45]

The third era in American water federalism was ushered in by Justice Rehnquist's majority opinion in *California v. United States*,[46] which is often referred to as the *New Melones* case because of the name of the dam involved in the case. In *New Melones,* the Rehnquist majority rather cavalierly reinvented the precedents of the second era[47] and limited them to cases of more or less express statutory

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quires the United States to comply with state law when . . . it becomes necessary for it to acquire water rights or vested interests therein." 357 U.S. at 291–92.

40. 357 U.S. 275 (1958).

41. *See id.* at 289–90.

42. 372 U.S. 627 (1963).

43. *Id.* at 630.

44. *See, e.g.*, Douglas L. Grant, *ESA Reductions In Reclamation Water Contract Deliveries: A Fifth Amendment Taking Of Property?*, 36 ENVITL. L. 1331, 1343 (2006).

45. *See, e.g.*, Laurence H. Tribe, AMERICAN CONSTITUTIONAL LAW 1177 (3d ed., vol. 1 2000) (1978) (noting that "field" preemption may fall into any of the categories of express, implied, or conflict preemption).

46. *New Melones Dam*, 438 U.S. 645 (1978).

47. Justice White wrote, "The short of the matter is that no case in this Court,

preemption.[48] In so doing, the majority remanded a federal court decision that had exempted the United States from state-imposed conditions affecting dam operations and subsequent use of water that would be impounded in conformity with California law. The Court to a significant degree reversed the polarity of the federalism primacy[49] by instructing the federal district court to limit its review on remand to "the United States' alternative contention that the conditions actually imposed are inconsistent with congressional directives as to the New Melones Dam."[50]

Stepping away from the debate in the Supreme Court about adherence to precedent, Justice Rehnquist's reshaping of American water federalism advanced a policy position that advocates state sovereignty in water resource allocation. The states are closer to the resource and more in touch with the water users and other stakeholders more generally. To the extent there are thorny problems of allocation bound up in dam operations, if these federal programs are to partake of the cooperative federalism ushered in by the environmental law revolution of that same era, the real allocational horse trading ought to be done by the states, not the more remote federal bureaucracy.[51] As a matter of political theory, adherence to Rehnquist's interpretation of the Reclamation Act's section 8 in *New Melones* is an instruction that the only time when the federal government will dictate the ultimate water resource allocation will be when there is a clear congressional command. The federal government will not allocate the resource when there is merely a delegation to an agency as part of general programmatic legislation.

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until this one, has construed § 8 [of the Reclamation Act] as the present majority insists that it be construed. All of the relevant cases are to the contrary." 438 U.S. at 692 (White, J., dissenting). *See also*, Amy Kelley, *Staging a Comeback—Section 8 of the Reclamation Act*, 18 U.C. DAVIS L. REV. 97 (1984).

48. *New Melones Dam*, 438 U.S. at 690.

49. In regard to hydropower, federal prerogatives, even those adversely affecting state environmental water management, appear to remain preemptive. *See* California v. Fed. Energy Regulatory Comm'n (Rock Creek), 495 U.S. 490 (1990).

50. 438 U.S. at 679.

51. The real "horse trading" is, for example, allocating air emissions among stationary sources under the Clean Air Act State Implementation Plan process. 42 U.S.C. § 7410 (2006). This is a matter for state regulators, not the federal government. *See* Union Elec. Co. v. Envtl. Prot. Agency, 427 U.S. 246 (1976) (economic feasibility and stringency of permit conditions for state agency). *See generally* ZYGMUNT PLATER, ROBERT ABRAMS, WILLIAM GOLDFARB, ROBERT GRAHAM, LISA HEINZERLING & DAVID WIRTH, ENVIRONMENTAL LAW AND POLICY: NATURE, LAW AND SOCIETY 578–93 (3d ed. 2004).

IV. THE CORPS AND ITS OPERATIONS IN THE THIRD ERA OF WATER FEDERALISM

Lest anyone underestimate the growing water footprint of the Corps, the Corps is now the most significant player in United States water management. The process began gradually, with the Corps expanding beyond its traditional ports and waterways/navigation role in the twentieth century. According to its own history, the Corps began its involvement in dam building for hydropower as part of the New Deal.[52] Roughly contemporaneously, the Corps began to build projects to prevent or minimize flood damage. With the enactment of the Flood Control Act of 1944,[53] sometimes referred to as the Pick-Sloan Plan, Congress enlarged the scope of uses that the Corps could pursue in a single project by authorizing planning and eventual construction of huge multi-purpose projects in the Missouri Valley that simultaneously would provide flood control, irrigation, navigation, water supply, hydropower, and recreation.[54] With the federal reclamation project building era well in the past, the Corps has even expanded into water supply and irrigation projects west of the 100th meridian.[55]

The scope of the expansion of Corps' projects and their diversity is quite considerable. In addition to its many flood control efforts, the enumerated activities of the Corps include 75 hydropower facilities that generate one quarter of all hydropower in the United States (3% of all electric generation), 235 locks that create 12,000 miles of inland waterways, and the Corps' 463 projects provide water recreation at almost 5,000 separate sites (some of the sites are operated by state and local governments) that support an estimated 360 million annual visits by 25 million different users each year. Corps dams have a storage capacity of 329.9 million acre feet of water (MAF). Those reservoirs supply municipal water to nearly 10 million people in 115 cities. Of the total storage, 55.9 MAF is allocated to irrigation storage, all of which is located in the 17 western and plains states.[56]

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52. United States Army Corps of Engineers, Brief History, available at http://www.hq.usace.army.mil/History/brief.htm. [hereinafter *Corps Brief History*].

53. Pub. L. No. 78-534, 58 Stat. 887 (1944).

54. *Corps Brief History*, *supra* note 52.

55. *See infra* text accompanying note 56.

56. UNITED STATES ARMY CORPS OF ENGINEERS, INSTITUTE OF WATER RESOURCES, WATER SUPPLY DATABASE http://www.iwr.usace.army.mil/inside/products/pub/iwrreports/IWRReport05-PS-1.pdf.

There is no one way in which Congress authorizes Corps projects. One common pattern begins when Congress enacts a major bill that establishes authority for an entire Corps program, such as the previously mentioned Flood Control Act of 1944 that created the legal framework for Pick-Sloan Plan projects. Regional Corps offices in the relevant locales thereafter design and propose projects under the umbrella created by the programmatic legislation and submit those projects for specific congressional authorization and funding. Projects also can well up from inside of the Corps or at the behest of local interests, who usually ask local representatives in Congress to request that the Corps study the feasibility of particular projects and report on that to the congressional committees on Public Works.[57] In the end, each project is authorized by Congress with a specific set of purposes,[58] usually as part of a larger annual bill that encompasses multiple Corps' and other agency public works requests.[59]

The project authorization process, not surprisingly, mixes parts of rational planning, bureaucratic self-interest of a construction-oriented agency, and political considerations. Together, those elements combine to generate a legislative enactment that enunciates the specific purposes of the project.[60] The omnibus construction bills that mark the end of the process are viewed widely as pork barrel legislation. Critics repeatedly assail the benefit-cost comparisons the Corps puts forth in justification of the projects as grossly inflated. Similarly, the Corps is not considered to be an objective or disinterested participant in the process. The Corps is a project promoter in the process that measures

57. This process was followed in relation to the West Point Dam and Lake, a part of the ACF series of Corps' facilities discussed *infra* at Part V. *See* George W. Sherk, *The Management of Interstate Water Conflicts in the Twenty-First Century: Is It Time To Call Uncle?*, 12 N.Y.U. ENVT'L L.J. 764, 782–84 (2005).

58. For example, all of the Corps facilities in the ACF Basin have specific authorizations, see George W. Sherk, *The Corps' Conundrum: Reconciling Conflicting Statutory Requirements in the ACF River Basin*, Proceedings of the 2005 Georgia Water Resources Conference at the University of Georgia, Athens, Ga. (Apr. 25–27, 2005), available at http://www.uga.edu/water/GWRC/Papers/SherkJ%20Corps%20Conundrum.pdf.

59. For example, the Buford Dam that forms Lake Lanier near Atlanta, GA on the Chattahoochee River was initially authorized as part of the Rivers and Harbors Act of 1945, 59 Stat. 17, and that authorization was subsequently amended by the Rivers and Harbors Act of 1946, 60 Stat. 635. The latter authorization specifically referenced a Report of General Wheeler of the Corps in relation to the dam's authorized purposes.

60. For an extensive exposition on Corps water project decision making, see A. Dan Tarlock, *A First Look at a Modern Legal Regime for a "Post-Modern" United States Army Corps of Engineers*, 52 U. KAN. L. REV. 1285, 1299–1307 (2004).

its success, at least in part, by getting as many projects funded as possible.[61] Other than in its own public relations materials, the Corps does not enjoy a reputation as a careful steward of the nation's water resources.

The overriding point, here, however, is not the Corps' role in the authorization process, but that Congress, in the end, speaks directly regarding project purposes. This aspect of congressional project approval has two significant consequences: (1) it reduces the Corps' discretion to manage projects adaptively if doing so is at variance with the original congressional direction, and (2) it strengthens the argument that the federal legislative pronouncement should preempt state law and policy in regard to water allocation of properly acquired project waters. Those two divergent impacts on Corps' authority may result in the worst of both worlds – reduced flexibility in meeting changed water supply and demand conditions, and greater insulation from state and stakeholder control reflective of state laws or state law entitlements.

V. THE APALACHICOLA-CHATTAHOOCHEE-FLINT BASIN AS A CONTEMPORARY CASE STUDY

There are numerous articles addressing virtually every aspect of the continuing ACF water controversy.[62] For that reason, the discus-

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61. *See generally* KATE COSTENBADER, STEVE ELLIS & DAVID CONRAD, NATIONAL WILDLIFE FEDERATION & TAXPAYERS FOR COMMON SENSE, CROSSROADS: CONGRESS, THE CORPS OF ENGINEERS AND THE FUTURE OF AMERICA'S WATER RESOURCES (2004) *available at* http://www.nwf.org/wildlife/pdfs/Crossroads.pdf.

62. The following is a *partial* list of ACF articles: Robert Haskell Abrams, *Interstate Water Allocation: A Contemporary Primer for Eastern States*, 25 U. ARK. LITTLE ROCK L. REV. 155 (2002); Jessica A. Bielecki, *Managing Resources with Interstate Compacts: A Perspective from the Great Lake*, 14 BUFF. ENVTL. L.J. 173 (2007); Josh Clemons, *Interstate Water Disputes: A Roadmap for the States*, 12 S.E. ENVTL. L.J. 115 (2004); Carl Erhardt, *The Battle Over "The Hooch": The Federal-Interstate Water Compact and the Resolution of Rights in the Chatahoochee River*, 11 STAN. ENVTL. L.J. 200 (1992); Robert P. Fowler, Jeffrey H. Wood & Thomas L. Casey, III, *Maintaining the Navigability of America's Inland Waterways*, 21 NAT. RESOURCES & ENV'T 16 (2006); Douglas L. Grant, *Interstate Allocation of Rivers Before the United States Supreme Court: The Apalachicola-Chatahoochee-Flint River System*, 21 GA. ST. U. L. REV. 401 (2004); Arnall Golden Gregory, LLP, *Eleventh Circuit Allows Settlement on Lake Lanier Between Corps Atlanta Area Governments*, 17 NO. 4 ENVTL. L. LETTER 3 (2005); C. Grady Moore, *Water Wars: Interstate Water Allocation in the Southeast*, 14 NAT. RESOURCES & ENV'T 5 (1999); J.B. Ruhl, *Equitable Apportionment of Ecosystem Services: New Water Law for a New Water Age*, 19 J. LAND USE & ENVT'L 47 (2003); J.B. Ruhl, *Water Wars, Eastern Style: Divvying Up the Apalachicola-Chatahoochee-Flint River Basin*, 131 J. CONTEMP. WATER RES. & EDUC. 47 (2005); Dustin S. Ste-

sion here will be limited to a brief description of prominent basin features and only a summary of the most recent events on the ground and in court. The focus here will be on the implications of this article's discussion of water federalism on the likely course of near term ACF events.

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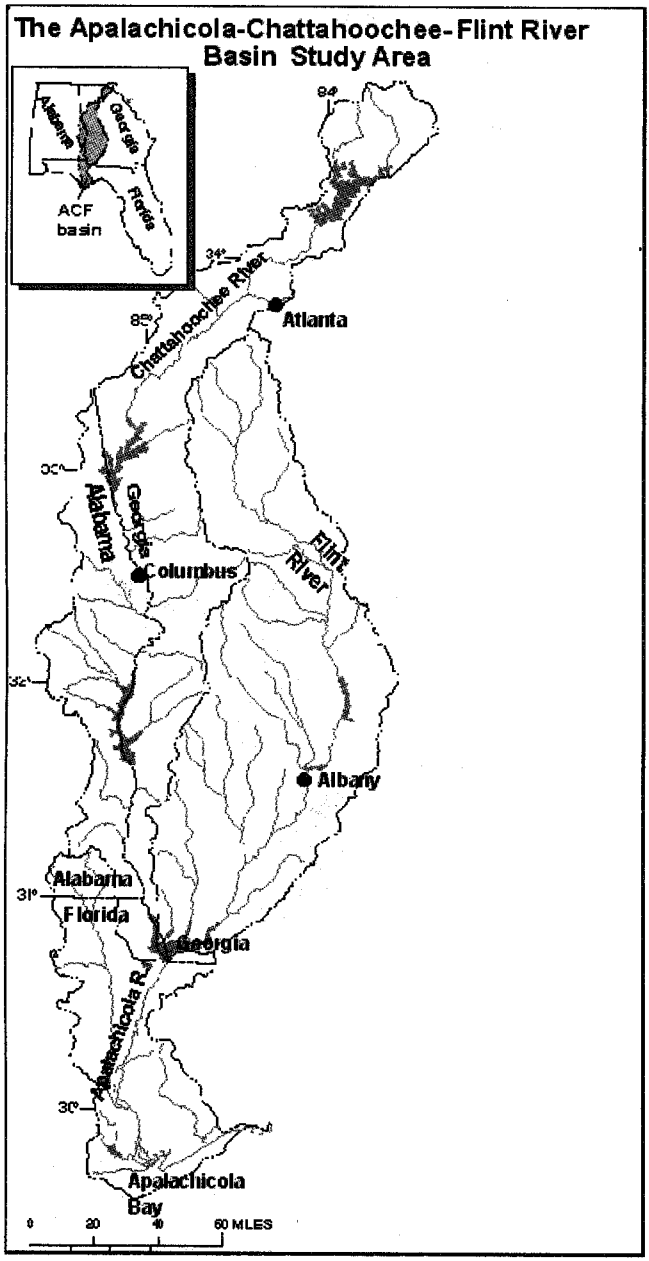
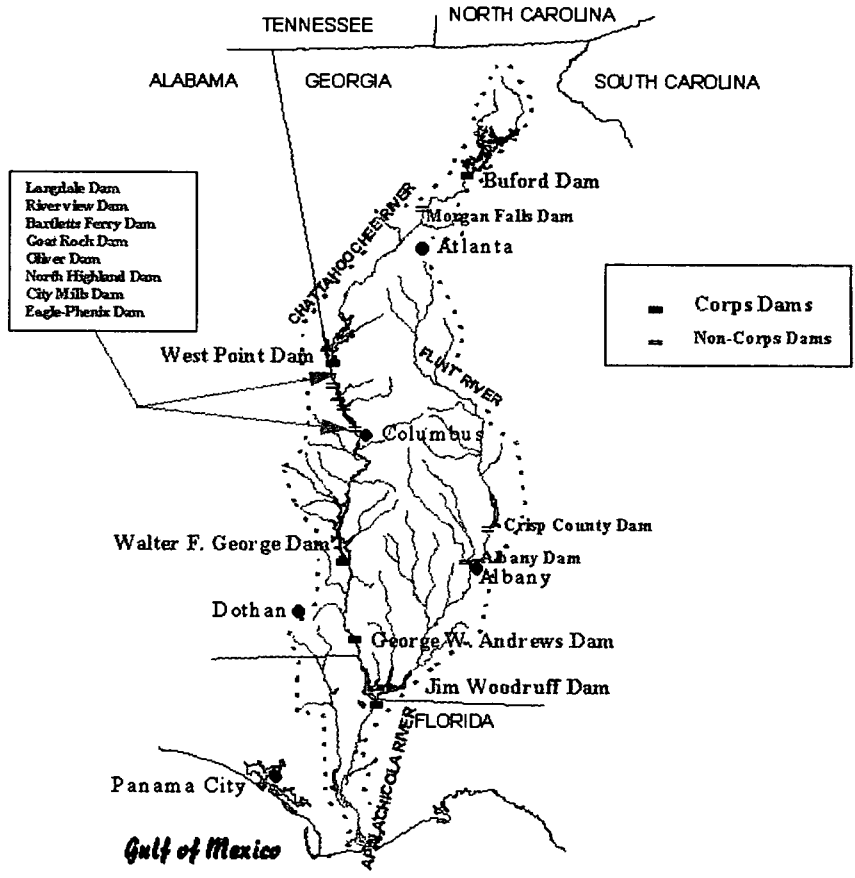
phenson, *The Tri-State Compact: Falling Waters and Fading Opportunities*, 16 J. LAND USE & ENVTL. L. 83 (2000); Jeffrey Uhlman Beaverstock, Comment, *Learning to Get Along: Alabama, Georgia, Florida and Chattahoochee River Compact*, 49 ALA. L REV. 993 (1998); Drew Melville, *Whiskey is for Drinking: Recent Water Law Developments in Florida*, 20 J. LAND USE & ENVTL. L. 489 (2005); Natasha Meruelo, Note, *Considering a Cooperative Water Management Approach in Resolving the Apalachicola-Chattahoochee-Flint Basin Water War*, 18 FORDHAM ENVTL. L. REV. 335 (2007); C. Hansell Watt, IV, Comment, *Who Gets the Hooch?: Georgia, Florida, and Alabama Battle for Water from the Apalachicola-Chattahoochee-Flint River Basin*, 55 MERCER L. REV. 1453 (2004).



Map of the ACF Basin
Source: United States Geological Service
http://ga.water.usgs.gov/nawqa/graphics/map.basin.gif



Apalachicola-Chattahoochee-Flint River Basin

Dams of the ACF Basin
Source: United States Army Corps of Engineers
http://water.sam.usace.army.mil/acfmap.htm

On the ground, the Chattahoochee and Flint Rivers rise in north and central Georgia respectively. The Chattahoochee flows westerly before turning to an almost due south course, forming part of the border of Georgia and Alabama. The two rivers join at the Florida border and form the Apalachicola River, which then flows through the Flori-

da panhandle into the Gulf of Mexico. The Atlanta metropolitan area lies in part in the upper Chattahoochee basin. Lake Lanier, formed by the Corps, and constructed and operated by Buford Dam, is now the principal source of water storage and supply for the millions of people in the metro area. Atlanta has no significant groundwater or other surface water supply.[63]

Further down the Chattahoochee are four more Corps operated dams, mostly providing vast opportunities for flat-water recreation, but also supporting some hydropower and, in the lower part of the basin, navigation that supports farm product and industrial shipping. Most of the industry is on the Alabama side of the river, and a major nuclear power facility that draws cooling water from the river is located there. The Flint Basin is entirely within Georgia and is dominated by agriculture and some forestry. There are no major dams on the Flint. Portions of the Flint Basin are underlain by the very productive Floridian Aquifer, and drafts on the aquifer deplete the base flow of the Flint. Finally, the Apalachicola, which is roughly fifty miles in length and runs through a rural region, supports tourism and provides the ecologically vital fresh water flows into the highly productive Apalachicola Bay, which is famous for its oysters.

As an oversimplified view of supply and demand, the Atlanta region users near the top of the basin want to retain water in Lake Lanier for municipal supply as the region is enduring record droughts. The Alabama users want water released from Lake Lanier through the Buford Dam to ensure flat-water recreation, cooling water availability and navigation in the middle and lower sections of the Chattahoochee. The hydropower interests favor those releases as well, but they are willing to accept reduced Lake Lanier releases through the turbines in exchange for what amount to monetary benefits.[64] The Flint farmers want to be allowed to continue to increase irrigation in the pursuit of crop production that is made lucrative by federal commodity price stabilization programs. The Floridians at the bottom of the system want water released upstream to ensure adequate ecological flows to support the Bay's ecology and the tourism that the bay and the Apalachicola River attract. Finally, there are required environmental flows associated with non-economic interests.

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63. City of Atlanta Planning and Community Development website, "Hydrology and Watersheds," *available at* http://apps.atlantaga.gov/citydir/dpcd/cdp/section_1121291920390.html.

64. Water released from Lake Lanier to supply Atlanta does not return to Lake Lanier. Atlanta's wastewater system does return a portion of its discharge to the Chattahoochee.

The ACF is home to listed endangered species, fresh water mussels that are killed when parts of the riverbed become exposed due to low flow, and sturgeon that need higher flows at particular times to permit spawning and the development and movement of juveniles. The extended drought in the upper Chattahoochee has brought the user conflicts under short supply into high relief. The Corps, although it claims only to be operating the dams in conformity with its many legal obligations and authorities, has tried to allocate as much water as possible to Atlanta, and those efforts have become the flashpoint for extended litigation among the three states and also among other water-using stakeholders in the basin.[65]

With the focus here on the Corps and its role in managing the water, one thing stands out almost immediately—the Corps is the entity with the greatest physical control in the basin. Thus, at least as long as the ongoing interstate wrangling among the basin states persists, and possibly thereafter,[66] the real world results are being dictated by the Corps as a function of its dam operations. Correspondingly, the most effective method of altering present water allocation decisions is to influence the Corps, whether through negotiation or litigation. "[T]he goal . . . is to affect the Corps' operation of its controlling dams on the Chattahoochee in a manner that results in a favorable outcome for the party seeking that influence."[67]

The five Corps' dams on the Chattahoochee,[68] as indicated previously, each have a specific set of congressionally authorized purposes.

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65. *See infra* text accompanying notes 80–82.

66. There is no assurance that a judicially imposed interstate equitable apportionment, for example, would reduce the role of the Corps. A resolution that involved Congress is more likely, but not certain, to address some of the potential friction between the Corps' missions and states and water-user interests. *See infra* Part VI.

67. Robert Abrams, *Settlement of the ACF Controversy: Sisyphus at the Dawn of the 21st Century*, 31 HAMLINE L. REV. 681, 682 (2008)(footnotes omitted).

68. These dams are, from north to south, Buford, West Point, George, Andrews, and Woodruff. A very simple schematic is provided by the Corps at http://water.sam.usace.army.mil/acfframe.htm. The Morgan Falls Dam below Buford is a private dam built for hydropower generation.

Corps Dams on the Chattahoochee[69]

Dam	Initial Authorization Date	Purposes
Buford	1945, amended 1946	Flood control, hydropower, and secondarily to assist downstream navigation[70]
West Point	1962	Hydropower, flood control, fish and wildlife recreation, general recreation, and navigation
George	1945	Flood control, navigation and hydropower
Andrews	1946	Navigation
Woodruff	1945, amended 1946	Navigation and hydropower

In addition to the explicitly authorized purposes, the Corps operates its facilities under the authority of other Corps-specific and more general laws. In the Water Supply Act of 1958,[71] Congress allowed incidental use of unallocated storage in Corps' dams for municipal

69. Information on the dams is taken from George W. Sherk, *The Management of Interstate Water conflicts in the Twenty First Century: Is it Time to Call Uncle?* 12 N.Y.U. ENVT'L L.J. 764, 781–86 (2005) [hereinafter Sherk] and the sources cited there.

70. The Corps disputes this limited list of purposes and claims that Congress also authorized secondary purposes of water supply and water quality, navigation, recreation, and fish and wildlife management. *See* Sherk, *supra* note 69, at 771.

71. 43 U.S.C. § 390b (1986).

water supply. In more general terms, the Corps is subject to laws that affect all federal agencies, most pointedly, the National Environmental Policy Act[72] ("NEPA") and the Endangered Species Act[73] ("ESA").

Turning now to the management of the waters of the ACF basin, the states have not reached any direct agreement that either allocates the water between them or establishes a management regime for the basin. Importantly, had they done so by interstate compact, congressional ratification would have been required and could have been used as a lever to ensure that the compact addresses the Corps' role and the extent to which Corps' facilities are to be operated in subservience to the compact. In the absence of such a federalized interstate agreement, the Corps is left with the unenviable position of being the de facto water manager in much of the basin because its dams control the timing and amount of water that will be available in Lake Lanier and in the various stream stretches of the Chattahoochee and Apalachicola Rivers; those flows function as a limit on how much water can be devoted to the competing uses.

The Corps, in this aspect of its operations, is very much like any other executive branch agency.[74] Agencies, as the name suggests, are agents who fulfill the instructions of a principal, in this case, Congress. Unless the authorizing legislation provides otherwise (and it does not), the first obligation of the Corps in the operation of the facilities must be to the authorized purposes.

This bedrock legal obligation is potentially anachronistic. If, as Professor Sherk argues, the authorized purposes of Buford Dam are only flood control and navigation, and secondarily release of water to assist downstream navigation, providing water to supply the Atlanta metro region is *ultra vires*. Taking the Water Supply Act of 1958 into account, the Corps is authorized to devote otherwise unallocated storage to municipal supply in conformity with the state and local laws. The allocation of storage water to municipal supply is subject to an express limitation:

> Modifications of a reservoir project heretofore authorized, surveyed, planned, or constructed to include storage as provided in subsection (b) of this section which would seriously affect the pur-

72. 42 U.S.C. §§ 4321 et seq. (1986).

73. 16 U.S.C. §§ 1531 et seq. (1986).

74. In some of its military-support functions, the ultimate authority arguably may be the executive, but that is inapposite to dam operations affecting water allocation and use.

> poses for which the project was authorized, surveyed, planned, or constructed, or which would involve major structural or operational changes shall be made only upon the approval of Congress as now provided by law.[75]

For a moment, consider the ACF dispute in a light that casts a cloak of reasonableness on what the Corps attempted to do. Atlanta is a rapidly growing metropolitan region with very few water supply options. It is located at the upper end of two watersheds, the Chattahoochee and the Ocmulgee, and due to its position on the Atlanta Plateau of the Greater Georgia Piedmont region, there are few reservoir sites. Even if there were still undeveloped sites, all of the water that those reservoirs are likely to capture and store is already being stored in Lake Lanier. The United States Geologic Survey describes Atlanta's water situation as follows:

> Atlanta grew at the intersection of several ridges on the drainage divide between the Atlantic Ocean and the Gulf of Mexico. Consequently, most streams in the Atlanta area are small and many are severely affected by prolonged droughts. The only sizable stream which flows through the metropolitan area is the Chattahoochee River, the headwaters of which are in the mountains of north Georgia. The Chattahoochee River is of marginal size to supply a metropolitan area the size of Atlanta's, and ground-water resources in the area are comparatively limited.[76]

Two Corps' reservoirs are relatively close at hand, Lake Lanier and Lake Allatoona—in the neighboring Alabama-Coosa-Tallapoosa Basin that is farther to the west and for which reservoir operations are also controversial.[77] As Atlanta grew, the Corps began to allocate stored water to municipal supply on an interim basis beginning in the 1970s.[78] Although the Atlanta area was drought prone, as a historic matter the ACF basin overall was less so and there were not severe shortages downstream at the time Atlanta's interim storage allocations

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75. 43 U.S.C. § 390b(d) (1986). The statute was originally enacted in 1958 at Pub. L. No. 85-500, Title III, § 301, July 3, 1958, 72 Stat. 319.

76. USGS, Atlanta Area Water Supply and Use, *available at* http://ga.water.usgs.gov/olympics/atlanta.wu.html.

77. *See, e.g.*, Benjamin L. Snowden, Note, *Bargaining in the Shadow of Uncertainty: Understanding the Failure of the ACF and ACT Compacts*, 13 N.Y.U. ENVTL. L.J. 134, 138–41 (2005).

78. The history of the water use developments and the litigation described in this portion of the text are recounted in Alabama v. Army Corps of Engineers, 424 F.3r 1117, 1122–27 (11th Cir. 2005). *See also*, Georgia v. Army Corps of Engineers, 302 F.3d 1242 (11th Cir. 2002).

began. The lack of conflict plausibly explains why there was little reaction to the Corps' initial water supply use of "unallocated storage" under the Water Supply Act of 1958.

Atlanta continued to grow, and the growth accelerated greatly in the 1980s and 1990s. The only viable source of additional water was increased amounts of water supplied by the Corps. Alabama and Florida, the downstream states, feared that the Corps' ACF operations would harm their sovereign interests in the waters of the basin and initiated litigation challenging the Corps' efforts to increase the amount of water going to Atlanta. Georgia intervened to defend and also brought its own lawsuit against the Corps that sought to perpetuate the larger amounts of storage dedicated to municipal supply. Those lawsuits were stayed for roughly a decade, as the three states agreed to negotiate a settlement that would allocate the waters of the basin. The states went so far as to enter into an interstate compact in which they agreed on a process that was intended to reach an agreed allocation.[79]

Although the tri-state negotiations dragged on and ultimately failed, the effects of the Corps' allocation of increased storage space to municipal supply had a more focused and immediate impact on the amount of hydropower generated at Buford Dam, one of the two specifically enumerated purposes of the project. The larger municipal supply use changed the timing of Lake Lanier releases and most of the city's water bypassed the turbines by being withdrawn directly from Lake Lanier rather than from an intake on the Chattahoochee below the dam. The hydropower interests, spearheaded by the Southeastern Federal Power Consumers ("SeFPC"), sued the Corps in the District of Columbia to obtain greater releases of water through the turbines pursuant to their contract with the Corps.

Ultimately, SeFPC was willing to accept a settlement and consent decree granting them monetary relief instead of forcing the water to be used for hydropower generation.[80] Alabama and Florida, which had intervened, viewed that settlement as a defeat for them and as a de facto approval of the Corps' allocation of additional water to Atlanta. They objected to the settlement and appealed the eventual consent judgment. Leaving no lawsuit unattended, the downstream states also renewed proceedings in the long-stayed cases against the Corps and

79. Apalachicola-Chattahoochee-Flint River Basin Compact, art. I, Pub. L. No. 105-104, 111 Stat. 2219, 2219 (1997); Alabama-Coosa-Tallapoosa River Basin Compact, art. I, Pub. L. No. 105-105, 111 Stat. 2233, 2233 (1997).

80. *See* Se. Fed. Power Customers, Inc. v. Caldera, 301 F. Supp. 2d 26 (D.D.C. 2004).

even brought a collateral attack on the D.C. proceedings claiming that the Corps had violated the terms of the stay in the 1990s Alabama lawsuit by entering into its agreement in the SeFPC suit. Although the downstream states did not prevail, they were allowed to file an amended complaint which permitted them to renew and sharpen claims against the Corps under NEPA and ESA, and launch a claim under the Water Supply Act of 1958 ("WSA").

Outside of the courtrooms, regional drought meant that the Corps' dam operations exerted important control over the timing and amount of flows. The changed flow regime exacerbated the user conflicts by at times reducing channel depth for navigation, threatening shutdown of the nuclear power plant for lack of cooling water, dropping levels on recreational lakes, and reducing flow to Apalachicola Bay which increased its salinity. The Corps' imposed flow regime, along with the drought, also posed threats to listed endangered mussel and sturgeon species.[81] And while these real world effects were what was motivating the stakeholders to act, the focus of their lawsuits was not on achieving a good overall result for the basin, it was narrowly directed at trying to force the Corps into one management and water allocation posture or another. Although each of the litigants might claim to be the true champion of the best interests of the basin, all are seeking to force a pattern of Corps' dam operations that effectively displace and discount the importance of other water uses in the basin. At the end of the day, the argument is about what inflexible legislative mandate the Corps must obey and a more-or-less wooden water allocation that will follow. That may be a proper litigation posture, but it demonstrates just how unlikely the present system is to reach a Solomonic solution.

As 2008 came to a close, the downstream states enjoyed the taste of the latest legal victory, because the Corps' reallocation of additional water to Atlanta, even during a drought of record was ruled to be not legally permissible.[82] Although there may be many reasons to doubt that Atlanta has done all it can to conserve its water, the decision did not rest on the bona fides of Atlanta's water needs, nor did it even rest on arguments about Endangered Species flow, or if the Corps' current operations are causing irreparable harm to other uses in the basin that

81. The ESA threats to the species caused Florida to bring motions for immediate injunctions in the pending Alabama lawsuit. These efforts were, in the main, unsuccessful. Eventually the remaining Alabama and Georgia litigation was consolidated into multidistrict litigation that is being heard in Jacksonville, Florida by United States District Court Judge Magnuson, whose home venue is Minnesota.

82. *See* Se. Fed. Power Customers, Inc. v. Geren, 514 F.3d 1316 (D.C. Cir. 2008).

would exceed the harm to Atlanta if its share of Lake Lanier-stored Chattahoochee water was reduced. Rather, the court decision rested solely on the previously reproduced limitation Corps' authority passed fifty years ago as part of a law that, ironically, was intended to permit the Corps' somewhat greater flexibility in operating its dams. The current system of trying to "force" the Corps' hand is an affront to informed water allocation and management. It also is anathema to the underlying principle of state control of water use.

VI. THE ACF EXPERIENCE AND WATER FEDERALISM

The myriad of ACF litigation portends a major step back into the second era of water federalism. When a Corps project is in control of the water, just as much as when a Federal Energy Regulatory Commission ("FERC") licensed dam is operating, state water allocation law recedes into the background. There is only argument about what the federal law requires the Corps to do, not consideration of the state water allocation policies and interests. Tacitly, the parties, and explicitly the court, are saying that the allocation must follow the path drawn by Congress for the Corps in statutes and project authorizations passed a half century ago. In this case, as far as the court of appeals was concerned, the only relevant question had nothing to do with the water; Congress set the parameters: "Section 301 of the WSA plainly states that a major operational change to a project falling within its scope requires prior Congressional approval."[83] This change was major, and therefore, *ultra vires*.[84]

This federalist position not only prevents the Corps from responding to a water reality that was unforeseen when those laws were enacted, it also gives no recognition to the states' sovereign interests. Perhaps worse, the decision being made is totally out of touch with the real problem facing the ACF, a problem that, in part, is increased demand, but is also the more endemic problem of loss of stationarity that is associated with climate change. The elimination of responsive options that could be pursued by the Corps is all the more troubling since the Corps currently is the only entity[85] possessed of the physical

83. *Id.* at 1323.

84. *Id.* at 1324.

85. Other entities do, in fact, have power to act in meaningful ways, although none as dramatically as the Corps. Conservation efforts in the Atlanta region have ranged from modest to laughable, and the Georgia Department of Environmental Conservation has blithely permitted excessive Flint River irrigation to deplete the summer flows into the Apalachicola from that source. *See*, Robert Abrams, *Broaden-*

or regulatory capacity to respond to the crisis, whether the proper response entails providing water for Atlanta's municipal supply, or water for navigation and nuclear power plant cooling in the middle reaches of the basin, or water for ecologically vital flows in the lower basin and Apalachicola Bay. What also is precluded is a method by which the Corps can become a facilitator whose operations provide water to support a carefully calibrated mix of uses that is arrived at by a rational process that accounts for the comparative benefits and costs of the choices being made and foregone. Giving greater, less fettered power to the Corps is not an appealing solution. Doing anything to increase the power of the Corps beyond its narrow, congressionally-circumscribed project and more general statutory authorities stands water federalism on its head. States would lose their traditional police power role entirely. None seem ready or willing to appoint the Corps as Platonic Guardians of the nation's water resources, and many would be aghast at the prospect.

More optimistically, a changed approach to the ACF could serve as a bridge to a modern era of water federalism. The abject failure of the states of Georgia, Alabama, and Florida to reach a consensus on allocating the water of the basin is a major obstacle in resolving the ACF controversy on a lasting basis. Simultaneously, in the absence of interstate agreement, none of the basin states are in a position to confidently adopt a state water policy to be respected and fostered by federal agencies in the operation of their physical facilities. The states cannot be faulted for not trying to reach an agreement, that they have done. But the states can be faulted for the type of agreement they have been seeking. Their goal was a quantified division of the water, with each state in control of its allocated share.[86] The model for such agreements was the typical western states water compact, where in many places the uses across the state lines were similar and dominated by irrigation and much of the water was consumed by the use.[87]

In the ACF, however, it is patently clear that the uses of basin water are much more varied than the typical rural western setting, and the upstream and downstream uses are physically interrelated by the

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ing Narrow Perspectives and Nuisance Law: Protecting Ecosystem Services in the ACF Basin, 22 J. LAND USE & ENVTL. L. 243, 255–62 (2007).

86. Robert Abrams, *Secure Water Rights in Interstate Waters*, WATER LAW: TRENDS, POLICIES, AND PRACTICE, 330, 331–334 (Kathleen Marion Carr & James D. Crammond, eds. 1995); *see also,* Robert Abrams, *Interstate Water Allocation: A Contemporary Primer for Eastern States*, 25 U. ARK. LITTLE ROCK L. REV. 155, 169–70 (2002).

87. *See, e.g.*, Pecos River Compact, 63 Stat. 159 (1949)

movement and timing of flows through the ranges of the basin. The best result for the basin is to optimize the system to maximize the benefits across all of the uses. Particularly with the loss of stationarity, which makes quantified allocations almost impossible to negotiate because of the unreliability of annual flows, the search should be for agreement on management principles rather than on quantified water allocation.[88]

There are at least two models other than the western water compacts that the ACF might emulate. The first and most successful to date is the type of integrated basin management practiced by the Delaware River Basin Commission under authority granted to it by the Delaware River Compact.[89] The management perspective of the Delaware River Basin Commission is the entire basin, rather than its individual states. The second is exemplified by the "horizontal federalism" that is at the core of the recently enacted Great Lakes Compact,[90] which has been approved by all of the basin states and ratified by Congress. Under that system, the basin states compact to manage the resource according to a common set of standards that are then implemented by each of the basin states within their respective boundaries.[91]

As a third alternative approach, the ACF basin states ought to reconsider the process by which they seek agreement. The ACF is not the first basin to experience complex, interconnected water allocation issues. In the West, particularly in the context of inter-sovereign disputes that include tribal water claims, but also in mediating allocation contexts in basins where environmental flows place added demands on the system, there are now decades of experience in seeking negotiated settlements. There, as a matter of process, the greatest level of success is being obtained by an inclusive process in which the water users, the so-called "stakeholders," participate.

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88. For a perspective that criticizes the absence of an ecologically based, unified water management system, *see* Robin Kundis Craig, *Climate Change, Regulatory Fragmentation, and Water Triage*, 79 U. COLO. L. REV. 825 (2008).

89. Delaware River Compact, 75 Stat. 688 (1961). For similar management aspects, *see* the Susquehanna River Compact, 84 Stat. 1509 (1970). *See also* Douglas L. Grant, Interstate Water Allocation Compacts: When the Virtue of Permanence Becomes the Vice of Inflexibility, 74 U. Colo. L. Rev. 105 (2003).

90. Great Lakes-St. Lawrence River Basin Water Resources Compact, Pub. L. No. 110-342, 122 Stat 3739 (Oct. 3, 2008).

91. For the framework principles of that agreement and their federalism aspects, *see* Noah D. Hall, *Toward a New Horizontal Federalism: Interstate Water Management in the Great Lakes Region*, 77 U. COLO. L. REV. 405 (2006).

Unlike the political demagoguery that has characterized the state positions in the ACF controversy,[92] a bottom–up process has a different dynamic and greater potential for compromise. Involving the stakeholders allows them to clearly identify their water needs, their tolerance for alternatives that are feasible as to modes of use, and promotes shared understanding of the needs of others in the basin. That same sort of exposition, because it opens the claims of need to review by others, tends to expose what positions are inflated or unnecessarily inflexible. When those sorts of discussions can be backed by a very accurate basin hydrologic model, the conditions become more favorable for reaching a consensus on how the water of the basin should be managed up and down the rivers. The interests are all on the table—municipal water supply, ecological integrity, hydropower, navigation, cooling, recreation, irrigation, and whatever else the basin supports with its water. An agreed model of the basin makes the trade-offs of different management options plain for all to see. That improved knowledge and better understanding of consequences frequently allows a prioritization among the water uses and alternative solutions that ameliorate the injury to others whose uses are curtailed.

With a move to any of those new management strategies, a new water federalism is possible in which the Corps is a facilitator, operating its facilities in furtherance of the basin management plan. Congress, of course, must agree to this via legislation, but when the basin states are able to agree, Congress is usually quick to give its support.

VII. CONCLUSION

The Eastern states, no less than the Western states, believe that critical decisions about the allocation of vitally important state re-

92. For example, U.S. Rep. John Linder, R-Georgia is quoted as saying, "What we've learned from this is what a blunt weapon the Endangered Species Act has become, where some obscure bureaucrat in Fish and Wildlife and some obscure judge can decide that mussels are more important than our children and grandchildren." Karen Chenoweth, *Georgia Gov. Sonny Perdue Declares State of Emergency*, Oct. 20, 2007, *available at* http://www.monstersandcritics.com/news/usa/news/article_1367125.php/Georgia_Gov._Sonny_Perdue_declares_state_of_emergency. Governor Sonny Perdue of Georgia had made similar comments and also criticized Florida's position, saying, "Utilizing the Endangered Species Act as a weapon in this battle is somewhat disingenuous. We know what this is about, we know it's about the bay and the quality of the bay and the oysters and that very powerful, very loud political constituency. Let's don't try to make it about a federal law that really it's not all about, about mussels or about sturgeons." Associated Press, *Gov. Sunny Perdue Questions Fla. Argument in Water Wars*, Nov. 12, 2008, *available at* http://www.accessnorthga.com/detail.php?n=215180.

sources, especially water, are a matter to be decided by the state exercising its police power. The states do not gladly cede those decisions to the Army Corps of Engineers as an included by-product of Corps' project operations. To state the matter that way highlights the two most patent drawbacks of current Corps operations that are affecting water allocation outcomes in the East. The states are being stripped of what is their due under both traditional police power authority and under the prevailing historic and more recent view of the proper allocation of roles in American water federalism. Simultaneously, the Corps' allocation decisions are being made, not on the merits of the allocation, but as a consequence of dated project authorizations or general statutes that do not consider the trade-offs that inhere in water allocation decisions made under conditions of water scarcity.

The more conventional options usually thought of as available to redress the problem of outmoded authorizations are not particularly appealing. Even if the Corps was given a freer hand in water allocation matters, that does not begin to address the misallocation of decisional authority as a federalism matter, and it does not address the lack of qualification of the Corps, as it presently functions, to be the arbiter of this issue. As an historic matter, putting the Corps in charge of major water management decisions and leaving the Corps to its own devices does not inspire great confidence.[93] Even in its more mundane functioning, the Corps has lost credibility as an unbiased, scientifically sound project proponent. Its unrelenting advocacy for marginal pork barrel projects seems to be more in the Corps' interest than in the public interest. The Corps has lost public confidence as a judicious broker of competing interests, especially more subtle environmental and ecological concerns.

Still, the Corps or some other governmental agency is going to have to remain an invaluable part of any water management regime. Someone possessed of the power of eminent domain must build and operate the dams and other projects. Because of the potential effect on navigation, that entity must be federal in origin, or an interstate compact commission whose powers are ratified by Congress. The Corps is at least as well suited to that task as any new entity that might

93. Even beyond the disastrous consequences of Corps actions in the Everglades and the catastrophically misguided design of the Mississippi River-Gulf Outlet Channel and levee-induced wetlands destruction in that region, there are numerous instances in which Corps' projects continue to have significant negative consequences. For a catalogue of such criticisms, see Kate Costenbader, Steve Ellis & David Conrad, *Crossroads: Congress, the Corps of Engineers and the Future of America's Water Resources* (2004), *available at* http://www.nwf.org/wildlife/pdfs/Crossroads.pdf.

be created—the real question will be how the operating plans are drawn and modified. That role has been left to the Corps in the past and, at present, there is nothing in the Corps' history or current legislation that provides reliable guidance or a framework on which holistic water allocation decisions can be reached.

Creating a new and responsive mechanism for making the water allocation decisions—the hard choices among competing interests—is the real challenge facing contemporary water institutions. Initially, although the argument for it has been by implication rather than direct, the management units need to follow basin lines. Management on other than a basin scale creates the likelihood of externalized costs and improper consideration of all affected interests. Watching the ACF states vie with one another in apparent disregard of each other's interests is a classic case in point.

Whatever is put in place also must start from a base of complete information—the data on water availability and demand must be accurate and the model of inflows and outflows, including timing, must be well calibrated. The policy judgments as to allocations among competing state law water users need to be made by the states. The federal inputs as to policy judgments are limited to matters clearly addressed by Congress, such as flood control and protection of endangered species. As a major change, Congress has to agree that water for navigation is to be one of the uses that is balanced in the process of determining an optimal pattern of project operations—it cannot trump all other uses just because it is part of the original authorization of a federal waterways project. The federal imperative and authority must be available to keep any one of the states from frustrating others, but the importance of navigation as a competing use of a watercourse has to be as open to question and curtailment as does any other use of the water.

There is no one way that a management plan can be drawn or its content established. What seems most promising is to create an inventory of uses that catalogs the amount and timing of water needed, the extent to which that use can be accomplished with less water, and the harm that will ensue—both short term and permanent—if the use is curtailed in a period of water shortage. The next step is to assign priorities or preferences to uses or sub-sets of those uses. A careful listing of those sorts of carefully delineated priorities gives a basis for determining a rough guide to what should be the order in which water allocated to the competing uses is curtailed.

The plan needs to be publicly supported, so that generation of the priorities needs to be through an open and broadly participative process. The western experience in negotiated water rights settlements

has clearly taught that all of the stakeholders have to have a seat at the table. The resulting operations plan ought to give as much notice as possible of how the water will be managed under varying degrees of shortage—users are better able to plan their operations if they know how the managing entity will respond to shortage. Once adopted, the agency charged with the implementation has to be able to make rapid, plan-consistent adjustments in response to changes, such as a deepening of drought. Finally, in an era after the demise of stationarity, there has to be a mechanism that allows for both long-term and emergency alterations of the plan in the event that the conditions being faced do not correspond to the conditions that were anticipated and planned for, or if the system is not performing as expected.

The responsive, rationalist system just described has a bit of a utopian quality to it, both in obtaining initial agreement and then in operating up to that level. That is true enough, but the goal is clear and is one that could command broad assent, and the means of accomplishing the goal can be described with sufficient particularity so that the resultant product can be readily imagined. Making the exercise less academic, the Delaware River Basin Commission is the current example of an agency that operates in roughly that fashion. In that case the formal interstate water allocation was imposed by the United States Supreme Court as part of an equitable apportionment, but the subsequent management efforts fit the pattern described. Even the bright line water allocation of the Court has been treated as protective of a first priority interest—New York City's need for water supply—and not just a numeric entitlement. In crisis, New York has shown a willingness to accept less than that minimum so long as its highest priority interests would be protected in the event of modified operational responses. The new Great Lakes-St. Lawrence approach also is promising, offering a model where individual states retain greater control, but overall plan consistency is achieved.

Returning to the immediate topic of the eastern states' water management, the arguments presented in this Article suggest the proper role for the Corps is as the facilitator of state water allocation policy. The eastern states' water policy development should not be left to the Corps by default, as is now the case. Both as a matter of the Supremacy Clause and in deference to overriding national policies, a state water policy needs to be tempered by national interests, such as flood control, navigation, energy policy, endangered species protection, and floors on water quality. But tempering of state allocation decisions to co-exist with federal interests, some of which are entrusted to the Corps, is not a justification for making the Corps the decision-maker. In project after project the Corps has not shown itself

to be an impartial arbiter of conflicting values. Neither should that policy choice be left to the Corps under a delegation from Congress. The Corps is very good at constructing, operating, and maintaining water facilities. The Corps would likewise be good at effectuating a plan that incorporates the substantive water policy and water allocation decisions reached through a consensus of the states and the stakeholders. They are the parties closest to the resource and most directly affected by good or poor management decisions.

In its first and third eras, deference to states' sovereign water allocation policies was the core of American water federalism. The current controversies, as evidenced by the manner in which they are being contested, suggest a relapse into the second era. The fourth era, while leaving room for national water use imperatives, should put the states back in control of water resource pursuant to a rational, adaptive policy-making process that the federal government then helps to effectuate.