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WHERE EAST MEETS WEST IN WATER LAW: THE FORMULATION OF AN INTERSTATE COMPACT TO ADDRESS THE DIVERSE PROBLEMS OF THE RED RIVER BASIN

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Introduction

The completion of the Red River Compact in 1978 and its subsequent approval by Congress in 1980 was an important milestone both in the proper management of an increasingly precious natural resource and in the use of the interstate compact device to address the multifaceted problems of a region such as the Red River basin. The overall objective of this article is to examine the formulation and approval of the Red River Compact in addressing the diverse problems arising within the watershed of the Red River system.

Part I assesses the divergent legal, environmental, and intergovernmental problems which shaped the compact. The genesis of the compact, of course,

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did not occur in a political or legal vacuum. In order to provide a context in which the negotiations were undertaken, part II of this article chronicles the adjustment of interstate disputes from colonial days until the middle of the twentieth century when the impetus to negotiate the Red River Compact began. The principal alternative mechanism for resolving interstate water problems, i.e., resort to litigation, is discussed in part III, which also reviews the enunciation by the Supreme Court of the basic principles applicable to interstate water disputes. As a background to the preliminary assessment of the compact made herein, part IV examines the expansion of federal authority over the nation's waters. Part V reviews the impetus to negotiate the compact, charts the progress of the deliberations from 1956 until congressional approval of the compact in 1980, and recounts some of the difficulties encountered during the negotiations. Finally, part VI explains the compact's structure and primary powers and offers a preliminary assessment of its accomplishments. In sum, this article endeavors not only to describe the development of the compact and to explain and evaluate its provisions, but also to assess the position of this compact in the nation's history of the adjustment of interstate disputes.

I. The Red River Compact in Perspective

The Showdown at Denison Dam

More than a hundred and fifty persons watched at high noon, May 12, 1978, as the duly authorized representatives of the states of Arkansas, Louisiana, Oklahoma, and Texas and of the United States government assembled atop Denison Dam on the Red River near Denison, Texas, to sign the Red River Compact. The formal signing of this multipurpose compact expressed, inter alia, the agreement of the four signatory states to an equitable apportionment of the water of the Red River system, the sixth longest river

^{1.} States Ink Water Pact, Oklahoman & Times, May 13, 1978, at 3, col. 1. An editorial in one Oklahoma newspaper heralded the historic signing of the compact as "at least a start at facing up to Oklahoma's future water needs," which constituted "easily Oklahoma's No. 1 problem of the 1980's and '90's." Time to 'Divvy Up', Daily Oklahoman, May 9, 1978, at 8, col. 1. The same editorial couched the apportionment of water made by the compact in terms of state versus federal control of decision making, observing that while "[i]t's not much fun to share Oklahoma water with other states, . . . it's better for these states to make those sharing decisions than for Uncle Sam to do the dividing-up for them." Id. The signing of the Red River Compact was viewed by one news analyst as possibly "the first step in keeping waters from the Red River Basin from later being drawn off by arid regions demanding relief through federal courts." E. Kelley, Historic Red River Water Pact Ready for Signing, Sunday Oklahoman, May 7, 1978, at 1, col. 1. An official of the Oklahoma Water Resources Board (OWRB) commented that presidential approval of the compact "would make it difficult' from a legal standpoint for Texas to use the basin's tributaries as a source of water for piping it to the thirsty High Plains region." Id. However, the exportation of water from the system is not prohibited by the compact. See infra text accompanying notes 550-554.

^{2.} Red River Compact, art. I, § 1.01(b), Act of Dec. 22, 1980, Pub. L. No. 96-564, 94 Stat. 3305 (1980) [hereinafter cited as Red River Compact, with applicable U.S. Stat.]. For purposes of the compact, "Red River" means the stream below the crossing of the Texas-

in the United States.³ The ceremony ended more than twenty-two years of congressionally authorized negotiations between and among the four states over the creation of an interstate legal framework for the conservation and development of the Red River system, one of the greatest resources of the Southwest.⁴

The official signing ceremony culminated sixty formal meetings of the Red River Compact Negotiation Commission (RRCNC)⁵ since the enactment by Congress and the promulgation by President Dwight Eisenhower on August 11, 1955, of legislation specifically consenting to the negotiations.⁶ During the ensuing year and a half following the formal signing ceremony, the compact was ratified by the respective legislatures of the signatory states and approved by the Congress.⁷ The Red River Compact became legally effective and binding on December 22, 1980, when President Jimmy Carter approved the consent legislation.⁸

Oklahoma state boundary at longitude 100° west. *Id.* § 3.01(b), 94 Stat. 3307. "Red River basin" denotes all of the natural drainage area of the Red River and its tributaries east of the New Mexico-Texas state boundary and above its junction with the Atchafalaya and Old rivers in Louisiana. *Id.* § 3.01(c). The term "Red River system" is used interchangeably with "water of the Red River basin" to refer to the water originating in any part of the Red River basin and flowing to or into the Red River or any of its tributaries. *Id.* § 3.01(d), 94 Stat. 3308.

- 3. See Oklahoma ex rel. Phillips v. Guy F. Atkinson Co., 313 U.S. 508, 520 (1941), citing H.R. Doc. No. 541, 75th Cong., 3d Sess. 17 (1938).
 - 4. 126 Cong. Rec. H11386 (daily ed. Dec. 1, 1980) (statement of Rep. Hall).
- 5. Minutes of the 60th Meeting of the Red River Compact Negotiation Comm'n (RRCNC), at 1 (May 12, 1978). Although governmental records generally refer to the commission that negotiated the Red River Compact as the "Red River Compact Commission," the author uses "Red River Compact Negotiation Commission" or "RRCNC" to denote the commission that negotiated the compact and to distinguish it from the Red River Compact Commission or "RRCC," the interstate agency created to implement the compact. Unlike other river basin compacts, no bound volume of the official records of the negotiations has ever been compiled for the Red River Compact. See Verbatim Transcript, Red River Compact Comm'n, at 21 (2d Annual Meeting, Apr. 27, 1982). Photocopies of the official minutes of the meetings of the RRCNC and the Red River Compact Commission and other records of the deliberations cited herein are on file in the author's office at the University of Tulsa College of Law in Tulsa, Okla., and in the office of the Oklahoma Law Review in Norman, Okla.
 - 6. Act of Aug. 11, 1955, ch. 784, 69 Stat. 654.
- 7. Louisiana ratified the compact in 1978. 1978 La. Acts No. 71. The legislatures of Oklahoma, Texas, and Arkansas ratified the compact the following year. 1979 Okla. Sess. Laws, ch. 136, §§ 1-2 (codified at 82 Okla. Stat. §§ 1431-1432 (1981)); 1979 Tex. Gen. Laws ch. 261, § 1 (codified at Tex. Water Code Ann. §§ 46.001-46.013 (Vernon Supp. 1982-83)); 1979 Ark. Acts No. 201 (codified at Ark. Stat. Ann. §§ 9-1601 to 9-1603 (Supp. 1983)). The Red River Compact was approved by the U.S. Senate on Sept. 24, 1980. S. 2227, 96th Cong., 2d Sess., §§ 1-4, 126 Cong. Rec. S13327-31 (daily ed. Sept. 24, 1980). After amending the enactment clause of the Senate version of the consent legislation, the U.S. House of Representatives approved the compact on Dec. 1, 1980. 126 Cong. Rec. H11380-91 (daily ed. Dec. 1, 1980). The Senate gave its final approval to the consent legislation, with the enactment clause as amended by the House, on Dec. 12, 1980. 126 Cong. Rec. S16384-89 (daily ed. Dec. 12, 1980).
- 8. Acts Approved on Dec. 22, 1980, by the President, 16 Weekly Comp. Pres. Doc. 2842 (Dec. 29, 1980).

As discussed herein, the problems of the Red River basin are very different from those in other river basins for which compacts have been negotiated in the past. Denison Dam, which impounds the waters of the Red River and its tributaries to form Lake Texoma, was a fitting location for the historic signing ceremony for many reasons associated with these problems.

Denison Dam and Texoma Reservoir, the only main-stem lake on the Red River, were completed by the Army Corps of Engineers in 1943 after five years of intense opposition by the state of Oklahoma and local Oklahoma interests.¹⁰ The dam is symbolic of the traditional animosity of state and local governmental interests to domination by the federal government, overtones of which were heard sometimes during the negotiations. The dam is also representative of the extensive federal interests and activities in the basin,¹¹ which complicated the negotiations. Most of the decisions concerning the

9. The climatic, hydrologic, and geological conditions of the Arkansas River basin are similar to those in the Red River basin. See Minutes of the 6th Meeting of the RRCNC, at 2 (Apr. 23-24, 1957). However, three separate compacts were negotiated for the Arkansas River system. Arkansas River Compact of 1948, Colorado-Kansas, infra note 173, 63 Stat. 145; Arkansas River Basin Compact of 1965, Kansas-Oklahoma, infra note 174, 80 Stat. 1409; Arkansas River Basin Compact of 1973, Arkansas-Oklahoma, infra note 174, 87 Stat. 569. The negotiation of the compacts for the Arkansas River system between two states at a time probably facilitated the completion of the compacts. In contrast, the Red River Compact was negotiated between and among the four interested states, thereby complicating the process with a number of factors. See infra text accompanying notes 13-74.

10. Wilson, Denison Dam Construction Ended An Era, Tulsa World, Feb. 19, 1984, at 8B, col. 3. The report of the Chief of Engineers, U.S. Army, transmitted to Congress on Mar. 12, 1938, recommended the construction of Denison Dam for the dual purposes of flood control and hydroelectric power development. Oklahoma ex rel. Phillips v. Guy F. Atkinson Co., 313 U.S. 508, 519 (1941) (summarizing the legislative history of congressional authorizations and appropriations for the construction of the dam). The proposed dam and reservoir was opposed by the state of Oklahoma and by farm owners, including the Fred Chapman family who owned more than 6,000 acres of prime farmland known as "Washita Farms" or "Chapman Farms" along the Red and Washita rivers. Tulsa World, Feb. 19, 1984, at 8B, col. 3. In October, 1939, Oklahoma filed a motion in the Supreme Court for leave to file a bill of complaint seeking to enjoin the U.S. Secretary of War from proceeding with construction of the project. See Oklahoma v. Guy F. Atkinson Co., 313 U.S. at 510-11 n.1. Oklahoma's motion for leave to file was denied by an equally divided Court. Oklahoma ex rel. Williamson v. Woodring, 309 U.S. 623 (1940). Oklahoma then filed a motion in U.S. District Court seeking to enjoin the construction of the dam on the basis that the authorizing legislation and the project exceeded the power of Congress and contravened the sovereign and proprietary rights of the state of Oklahoma. Oklahoma v. Guy F. Atkinson Co., 37 F. Supp. 93, 95 (E.D. Okla. 1941). The three-judge federal district court sustained the defendants' motion to dismiss Oklahoma's complaint. Id. at 94, 99. On June 2, 1941, a unanimous Supreme Court affirmed the decree of the federal district court. 313 U.S. at 509-10, 535. The dam was completed in 1943, and Lake Texoma was created by the impoundment of the waters of the Red and Washita rivers. Tulsa World, Feb. 19, 1984, at 8B, col. 3.

11. See generally S. Doc. No. 13, 85th Cong., 1st Sess. 61-83, 765-1011 (1957). See also Statement regarding Interests of the U.S. Dep't of Army, Corps of Eng'rs, in Connection with Negotiations for Red River Compact, Texas, Oklahoma, Arkansas, and Louisiana, at 1-8 (Mar. 1959) and Statement of Interests in Interstate Compact Negotiations, Red River Basin [U.S. Dep't of Interior], at 1-8 (1960).

apportionment of the water of the basin entailed meticulous evaluation of existing and proposed federal projects located there.¹²

The Climatic and Hydrologic Diversity of the Basin

Denison Dam occupies an almost totemic position in the Red River basin. Since drainage of the upper 39,700 square miles of the basin is controlled by Denison Dam,¹³ the dam and Lake Texoma divide the river and its enormous drainage basin into two major and highly contrasting segments.¹⁴ The climate in the upper portion of the basin above Denison Dam is semiarid near the headwaters of the river in the high plains of western Oklahoma and Texas.¹⁵ The average annual rainfall is relatively small and the resulting stream flow is inadequate to meet all existing needs.¹⁶ The major concern in the high plains is the provision of adequate water supplies for domestic, municipal, and irrigation uses.¹⁷

In the huge portion of the river basin below Denison Dam, the climate is humid, rainfall increases to about sixty inches per year in places, and damaging floods occur at times.¹⁸ Even though water disposal, particularly flood control and drainage, is important in the lower reaches of the basin below the dam, water shortfalls also occur, particularly during droughts.¹⁹ Moreover, the water shortages that have occurred in the past are anticipated for the future as the economy in the region expands. Lying between the semiarid high plains of the West and the humid coastal plain of the lower eastern portion of the basin is the transitional area of the central lowlands. Rainfall in the central area increases progressively as one goes east, reaching

- 12. See infra notes 476-486 and accompanying text.
- 13. 126 CONG. REC. H11385 (daily ed. Dec. 1, 1980) (statement of Rep. Danielson). The total drainage area of the Red River basin, including the Ouachita-Black River system, is 93,450 square miles. RRCNC, Draft Eng'g Advisory Comm. Report (J. Bliss ed. Sept. 5, 1967) [hereinafter cited as 1967 RRCNC Draft Eng'g Rep.]. A map of the Red River basin is located *infra* in the text at page 91.
- 14. Red River Compact and Caddo Lake Compact: Hearings on H.R. 7205 and H.R. 7206 Before the Subcomm. on Admin. Law & Governmental Relations of the House Comm. on the Judiciary, 96th Cong., 2d Sess., attachment 1, at 1 (1980) (statement for the record by Col. Alan L. Laubscher, Assistant Director of Civil Works, Corps of Eng'rs, U.S. Dep't of the Army) [hereinafter cited as Hearings, Statement by Col. Laubscher]. The environmental characteristics of the basin reflect the varied climate and terrain: antelope are seen near the headwaters and alligators are found at the lower end; plant life changes from mesquite in the headwaters area to pine forests in the transitional reaches and finally to semitropical bayous in the lower eastern portion of the basin. Id. at 2.
 - 15. Id. at 1.
- 16. Id. For a more detailed description of the variations in the river system, see 1967 Draft RRCNC Eng'g Rep., supra note 13, at 15-16, 19.
 - 17. See 1967 Draft RRCNC Eng'g Rep., supra note 13, at 39.
- 18. Id. at 28, 39, 41. See also "The Purposes and Accomplishments of the Red River Compact Comm'n," Address by Henry C. Beckman, Federal Representative and Chairman, RRCNC, at Meeting of Red River Valley Ass'n, at 3 (Mar. 23, 1957) [hereinafter cited as Beckman Address to Red River Valley Ass'n].
 - 19. See Beckman Address to Red River Valley Ass'n, supra note 18, at 3.

an average high of forty-five inches per year just west of the Arkansas-Oklahoma state line.²⁰

The extremes in climatic, hydrologic, and topographic conditions in the river basin had enormous implications for the negotiations. For example, Louisiana, the southernmost downstream state on the river, lacked any reservoir sites of significant size and therefore could not store water in times of high flow to fulfill future needs.²¹ Consequently, Louisiana was primarily concerned with some assurance of flow, preferably on a daily basis, during periods of drought.²² The upstream states, particularly Oklahoma and Texas, have reservoirs to capture rain as it falls and were comfortable in negotiating an apportionment of the water in terms of annual allocations.²³ Under no circumstances, however, did the upstream states wish to agree to release water from storage to guarantee flows to the downstream states of Arkansas and Louisiana.24 Finally, Oklahoma and Texas wanted to preserve in the compact the flexibility to make transbasin diversions and transfers from the Red River system, an idea that initially received a cool reception from Louisiana.25 The subject of importation and exportation of water was addressed in the compact.

- 20. See 1967 Draft RRCNC Eng'g Rep., supra note 13, at 39.
- 21. RRCNC Legal Advisory Comm., Red River Compact with Supplemental Interpretive Comments of the Legal Advisory Committee 14 (Sept. 1979) [hereinafter cited as Supplemental Interpretive Comments].
 - 22. Id.
 - 23. Hearings, Statement by Col. Laubscher, supra note 14, at 14.
 - 24. Supplemental Interpretive Comments, supra note 21, at 14.
- 25. Initially, the engineering advisers for Louisiana proposed that the unanimous consent of the downstream states be a condition precedent to the diversion of water from the Red River watershed whenever proposed diversions would interfere with or decrease the stipulated low flows set forth in the compact. Memorandum from Daniel V. Cresap & C.K. Oakes, Louisiana representatives to RRCNC Eng'g Advisory Comm., at 3 (Aug. 29, 1961) (regarding proposed method for the equitable apportionment of the water of the Red River basin below Denison Dam). When the subject of transbasin diversions arose again in 1965, Louisiana sought the inclusion of a compact provision stipulating that water removed from the main stem of the Red River below Denison Dam shall not be exported from the Red River basin without the unanimous consent of the commissioners of the signatory states. Draft Transcript of 34th Meeting of RRCNC, at 5, 16-17 (Apr. 1-2, 1965). Texas then insisted that it could not properly use its water supplies or meet its statewide water requirements without provision for transbasin diversions. Id. at 5, 15-18. For example, if Dallas needed water to satisfy a severe municipal shortage, Texas would have to divert the water from the Red River basin below Denison Dam. Id. at 18. Oklahoma Commissioner Guy H. James also opposed Louisiana's position on transbasin diversions, pointing out that no state can invest monies in diversion projects as long as any state, in effect, has a veto power over the exportation of water. Id. at 17. Oklahoma wanted to protect its investments in the Central Oklahoma Project, a study to determine the practicability of transbasin water conveyance from the Red River basin reservoirs in southeastern Oklahoma to the vicinity of Oklahoma City. See Minutes of 31st Meeting of RRCNC, at 4 (Sept. 9-10, 1964). For a brief description of the Central Oklahoma project, see U.S. ARMY CORPS OF ENG'RS, SOUTHWESTERN DIV., WATER RESOURCES DEVELOPMENT BY THE U.S. ARMY Corps of Eng'rs, Oklahoma 91 (Jan. 1979). The Louisiana commissioner later elaborated upon his state's position, maintaining that while Louisiana did not wish to preclude the Central Oklahoma Project from going forward, Louisiana objected to any transbasin diversions pending

Water Quality Problems

Denison Dam and Lake Texoma also demarcate the great variations in the chemical quality of the surface waters of the Red River basin. The water quality of the tributaries in the eastern portion of the basin, with some exceptions, has generally been rated from good to excellent.²⁶ Some of the tributaries arising in the Ouachita Mountains have been given water quality ratings of superior.²⁷ On the other hand, the waters of the tributaries upstream from Lake Texoma have generally been rated from poor to unsatisfactory, primarily because of chloride and sulfate contamination from natural and man-made sources.²⁸

Ten natural sources contribute about two-thirds of the 3,300 tons of chloride that enters Lake Texoma on an average basis each day.²⁹ Other tributaries flowing into the lake dilute the contamination and cause the lake to serve as a water quality "equalizing pond."³⁰ In the most western portion of the basin, salt springs and seeps arising from salt-saturated underlying formations contribute large quantities of briny water to the tributaries, rendering the water unusable for most purposes.³¹ The tributaries also pick up large quantities of sulphate and gypsum overlying most of the high plains.³²

When negotiations on the Red River Compact began, little was known of any practicable and cost-effective methodology for reducing the salt contamination.³³ Many of the ideas advanced for reducing the natural deterioration of the water had the potential for materially affecting stream flows and water quantity.³⁴ Consequently, the compact negotiators had to be ever

the consummation of agreements on the division of water in the Red River basin. Minutes of 35th meeting of RRCNC, at 3 (Jan. 19-20, 1966). When Dolph Briscoe became governor of Texas, he declared on Nov. 27, 1973, that the greatest need of his state was to provide more water to the dry land of west Texas. See Statement Regarding the Position of Texas on the Red River Compact, Minutes of 49th Meeting of RRCNC, app. statement, at 3 (June 13, 1974). According to Texas Commissioner H. Deskin Wells, Governor Edwin Edwards of Louisiana announced in May, 1974 that he had "changed his mind" about transbasin diversions from the Mississippi River system to west Texas and now favored water exportation plans. Id. at 4. The Red River system used to be a major tributary of the Mississippi River; in fact, the development of the Red River is an important chapter in the lengthy history of flood control on the Mississippi River. Oklahoma v. Guy F. Atkinson Co., 313 U.S. at 516. The water of the Red River was subsequently captured by the Atchafalaya River, the drainage system of which ultimately empties into the Gulf of Mexico.

^{26.} See 1967 Draft RRCNC Eng'g Rep., supra note 13, at 51.

^{27.} Id.

^{28.} Id. at 51-52.

^{29.} See Tulsa Dist., U.S. Army Corps of Eng'rs, Red River Chloride Control Project: Project Overview and Economic Reanalysis 2 (rev. Apr. 1983).

^{30.} Statement of RRCNC Eng'g Subcomm. on Stream Pollution Control presented to Meeting of Southwest Section, Am. Water Works Ass'n, 3 (Oct. 20-21, 1959) [hereinafter cited as RRCNC Subcomm. Rep. to AWWA].

^{31.} Id. at 4-5.

^{32.} Id. See also 1967 Draft RRCNC Eng'g Rep., supra note 13, at 52.

^{33.} See Beckman Address to Red River Valley Ass'n, supra note 18, at 3.

^{34.} See Progress Report of RRCNC Eng'g Subcomm. on Stream Pollution Control, at 2

mindful that control methods attempted in the future might reduce the amount of water flowing through the river system even though the water would be of better quality.

Although substantial progress has now been made in reducing and controlling man-made pollution in the Red River basin, historically the major sources of this pollution have been salts discharged into the water from oil and gas well operations and from industrial wastes.³⁵ The negotiators considered very carefully the role the compact should take in the abatement and control of the pollution in the river basin.

State and federal water pollution control laws were in their embryonic stages when negotiations commenced in 1956 on the Red River Compact. Each of the four states participating in the negotiations already had an agency for dealing with water pollution within its jurisdiction.³⁶ Most of the negotiating commissioners wanted an interstate agency established to administer the Red River Compact that would have power to address interstate pollution in the basin effectively, but without encroaching on the jurisdiction of the individual state agencies or duplicating their efforts.³⁷ Because of the evolutionary strengthening of water quality laws, particularly at the federal

⁽Apr. 23-24, 1957), attached to Minutes of 6th Meeting, supra note 9. By 1957 the ideas advanced for controlling natural contamination included underground injection, construction of large retention basins to provide for disposal by solar evaporation, and installation of retention basins with regulated discharges during times of flood flows. Id. Any of these methods of control of natural pollution might materially affect the flow characteristics of the Red River system. Id. The chloride control alternatives recently evaluated by the Corps of Engineers include: importation of fresh water to dilute the brine at salt sources; construction of desalination plants; transportation of brine by pipeline to the Gulf of Mexico; construction of dams and diversion systems upstream from salt sources to bypass fresh water around the salt-emission areas; suppression of brine emissions from large isolated springs by application of hydrostatic pressure; construction of a total impoundment dam downstream from salt sources in areas with relatively small drainage areas; collection of brine from subsurface or surface sources and disposal of it in a manner that prevents environmental damage; and no action by the federal government, thereby leaving the resolution of the problem to municipal, industrial, and agricultural users. See RED RIVER CHLORIDE CONTROL PROJECT, supra note 29, at 5-6. Unless natural pollution sources are controlled, municipal and industrial water users will be forced either to rely on more expensive alternatives for their water supply or risk damage to equipment. Id. at 6. Agricultural users are faced with the choice of having lower crop yields or growing lower value, salt-tolerant crops. Id.

^{35.} See 1967 Draft RRCNC Eng'g Rep., supra note 13, at 52. Much of the industrial waste apparently has come from industries allied with oil production. See RRCNC Subcomm. Report to AWWA, supra note 30, at 4.

^{36.} See RRCNC Subcomm. Report to AWWA, supra note 30, at 1-2. The 1959 composition of the RRCNC Engineering Subcommittee on Stream Pollution Control was representative of three different types of state pollution-control administration: Texas and Oklahoma retained administration of pollution problems within their state departments of health; Arkansas had a pollution control commission established within its state department of health; and Louisiana vested responsibility in a separate state agency.

^{37.} See Letter from Henry C. Beckman, RRCNC Chairman, to L.R. Matthias, Exec. Vice Pres., Red River Valley Ass'n, at 1 (May 21, 1962) [hereinafter cited as Beckman Letter to Red River Valley Ass'n]. Beckman wrote this letter in response to criticism by the Red River Valley Association that the negotiations of a compact for the Red River system were proceeding too slowly.

level, and the difficulty of reaching a consensus on the enforcement authority of the interstate administrative body, the negotiators redrafted the pollution provisions of the compact several times during the course of the deliberations.³⁸

The compact drafters also concluded early in the negotiations that a readily available and neutral forum for the litigation of water pollution issues arising between states under an interstate compact was imperative to effective compact enforcement.³⁹ Federal statutory law in force at the time the negotiators initially drafted the pollution provisions of the compact gave the United States Supreme Court exclusive jurisdiction in controversies between states.⁴⁰ However, the interstate water pollution controversies litigated between states until the middle of the twentieth century had proved the Supreme Court to be an inadequate forum for the resolution of interstate water quality disputes. The strategy pursued by the Red River Compact negotiators resulted in the 1962 passage of federal legislation of general application to address this jurisdictional matter.⁴¹

Reconciling the Divergent State Water Laws

Though the boundaries of the four signatory states to the Red River Compact are obviously not coterminous with the Red River basin, their respective legal systems nevertheless reflect the climatic and hydrologic extremes in the basin. The water laws of Arkansas and Louisiana largely adhere to the principles of the riparian rights doctrine developed by the humid states of the East.⁴² The water laws of Oklahoma and Texas contain many of the elements

- 38. See Rough Draft of Red River Compact, art. V (Apr. 24, 1957). See also Memorandum from Richard M. Huff, Chairman, RRCNC Legal Advisory Comm. to Henry C. Beckman et al., at 1-10 (Feb. 12, 1958); Minutes of 9th Meeting of RRCNC, including attached Reports of the Eng'g Advisory Comm. and the Legal Advisory Comm. (Feb. 26-27, 1958); Minutes of 38th Meeting of RRCNC, at 3 (Mar. 28, 1967). For background and history of the evolution of water quality laws, see generally 1 A. Reitze, Environmental Law four-1 to four-154 (1972) [hereinafter cited as Reitze]; W. Rodgers, Jr., Environmental Law 354-550 (1977) [hereinafter cited as Rodgers]; Zener, The Federal Law of Water Pollution Control, in Environmental Law Institute, Federal Environmental Law 682-791 (E. Dolgin & T. Guilbert eds. 1974) [hereinafter cited as Zener].
- 39. See Progress Report of RRCNC Legal Advisory Comm., at 1 (Feb. 26, 1958), appended to Minutes of 9th RRCNC Meeting, supra note 38. The Legal Advisory Committee maintained that although the interstate administrative entity contemplated by the compact should have authority to proceed under the enforcement provisions of the Federal Water Pollution Act of 1956, that law alone was "not adequate for proper enforcement of pollution abatement." Id. The committee suggested that, if practicable, the act of Congress approving the Red River Compact should recognize the jurisdiction of federal district courts in certain legal actions to abate interstate water pollution. Id. See also Letter from Texas RRCNC State Comm'r Buster Cole to Hon. Sam Rayburn, Speaker, U.S. House of Representatives, at 1 (Jan. 25, 1961).
- 40. S. Rep. No. 2211, 87th Cong., 1st Sess. 1, reprinted in 1962 U.S. Code Cong. & Ad. News 3282-86 [hereinafter cited as S. Rep. No. 2211].
- 41. Act of Oct. 15, 1962, Pub. L. No. 87-830, § 1, 76 Stat. 957 (codified at 33 U.S.C. § 466g-1 (1982)).
- 42. Arkansas' reasonable use theory of riparian rights is set forth in Harris v. Brooks, 225 Ark. 436, 443-45, 283 S.W.2d 129, 133-34 (1955). See also NATIONAL WATER COMM'N, A SUM-

of the appropriation doctrine fashioned by the arid western states to allocate an inadequate supply of water.⁴³

Under the riparian rights doctrine, the right to use water is usufructory in character and is governed by the ownership of land bordering a stream.⁴⁴ Under the natural flow theory of riparian rights, every proprietor of water is entitled to the usual flow of a natural stream undiminished in quantity

MARY-DIGEST OF STATE WATER LAWS 3-4, 117-25 (R. Dewsnut & D. Jensen eds. 1973) [hereinafter cited as NWC SUMMARY-DIGEST OF STATE WATER LAWS]. For a discussion of the development of Louisiana's complex water laws, see NWC SUMMARY-DIGEST OF STATE WATER Laws, supra, at 347, 352-58. The classification of Louisiana as a riparian doctrine jurisdiction is an oversimplification since a provision in the Louisiana Civil Code of 1870 apparently adopted the riparian system as the cornerstone of Louisiana water law. Id. at 347, 352. The Louisiana Civil Code was based upon the Code Napoleon. See Wiel, Waters: American Law and French Authority, 33 HARV. L. REV. 133, 134 (1919). Upon becoming a state, Arkansas "received" the English common law; although the riparian rights doctrine is sometimes said to be based upon English common law, in the early English common law there was little litigation over the private use of water. Grimes, Lex Aquae Arkansas, 27 ARK. L. REV. 429, 430 (1973). Thus, Arkansas, like many other states, adapted the common law of water rights to fulfill its own local needs. Id. For additional background on riparian rights in Arkansas, see generally L. Mack, Water Law in Arkansas 9-13, 37 (1963). The adequacy of the current water law of Arkansas in addressing the changing needs of the state was assessed recently by several authors, including the well-known water law expert, Professor Frank J. Trelease. See J. JACKSON & L. Mack, Arkansas Water Law: Why Wait for the Crisis? (1982); Looney, Modification of Arkansas Water Law: Issues and Alternatives, 38 ARK. L. Rev. 221, 222-23, 238-67 (1984) (summarizing the development of a proposal for a comprehensive water code for Arkansas that was rejected by the legislature in 1983); Trelease, A Water Management Law for Arkansas, 6 U. ARK. LITTLE ROCK L.J. 369 (1983). The acquisition and utilization of water rights in Louisiana has been examined by a number of writers. See generally Yiannopoulos, Common, Public, and Private Things in Louisiana: Civilian Tradition and Modern Practice, 21 LA. L. REV. 697, 699, 701-02, 706-29 (1961); Comment, Water Rights in Louisiana, 16 LA. L. REV. 500-11 (1956); Comment, Acquisition of the Right to Use Water, 29 Tul. L. Rev. 554-65 (1955).

43. For examples of appropriative elements in the surface water laws of Oklahoma and Texas, see 82 Okla. Stat. §§ 105.2, 105.9-105.18 (Supp. 1983) and Tex. Water Code Ann. §§ 5.021-5.030 (Vernon 1972). See also NWC Summary-Digest of State Water Laws, supra note 42, at 5-6, 603-13, 699-711. Oklahoma water law has been discussed at length by Professor Joseph Rarick. See generally Rarick, Oklahoma Water Law, Stream and Surface, The Water Conservation Storage Commission and the 1965 and 1967 Amendments, 24 OKLA. L. REV. 1-16 (1971); Rarick, Oklahoma Water Law, Stream and Surface under the 1963 Amendments, 23 OKLA. L. REV. 19-70 (1970); Rarick, Oklahoma Water Law, Stream and Surface in the Pre-1963 Period, 22 OKLA. L. REV. 1-44 (1969); Rarick, The Streams of Oklahoma as a Source of Municipal Water Supply, 30 OKLA. B.A.J. 1281-95 (1959); Rarick, The Right to Use Water From a Stream, 29 OKLA. B.A.J. 1958-64 (1958); Rarick, Appropriate vs. Riparian, A Preliminary Examination, 10 OKLA. L. REV. 416-27 (1957). A history and an analysis of Texas water law was published in 1961 by the Texas Board of Water Engineers. See W. HUTCHINS, THE TEXAS LAW OF WATER RIGHTS 1-4, 9-17, 77-83, 101-490 (1961). Hutchins' exposition on Texas' water law is slowly becoming outdated. NWC SUMMARY-DIGEST OF STATE WATER LAWS, supra note 42, at 700.

44. J. CRIBBET, PRINCIPLES OF THE LAW OF PROPERTY 371, 383 (2d ed. 1975) [hereinafter cited as CRIBBET]. A usufruct is "the right of enjoying a thing, the property of which is vested in another, and to draw from the same all the profit, utility and advantage which it may produce, provided it be without altering the substance of the thing." *Id.* at 383. See also 7 R. CLARK, WATER AND WATER RIGHTS § 310 (1967) [hereinafter cited as CLARK].

except for domestic uses and unimpaired in quality.⁴⁵ Although early pronouncements by the Arkansas Supreme Court spoke in terms of the natural flow theory, Arkansas later made a reasonable relaxation of the theory while preserving the superiority of water use for domestic purposes, including watering livestock, over other uses such as fishing, recreation, swimming, and navigation.⁴⁶ The Arkansas Supreme Court also ruled in 1954 that a riparian owner cannot remove water from the watershed and sell it commercially.⁴⁷ In 1957, Arkansas enacted legislation empowering the state under certain circumstances to allocate water along streams in times of shortage.⁴⁸

Arkansas' neighboring state of Louisiana seemingly adopted the riparian system for the entire state in an early provision of the Louisiana Civil Code.⁴⁹ However, in recent years the riparian doctrine in Louisiana has been diminished by state statutes authorizing the creation of public corporations that have exclusive control over the distribution of water within their territorial boundaries.⁵⁰

Under the western appropriation doctrine, water rights are derived from the usage of water for a beneficial purpose rather than from land ownership.⁵¹ Appropriative rights are quantifiable, and superiority of right to use water on an overappropriated stream is based upon priority in time.⁵² Technically, Oklahoma and Texas have been traditionally classified as "hybrid" water law jurisdictions, originally recognizing the riparian rights doctrine to a certain extent but subsequently converting to the western appropriation system while preserving existing riparian rights.⁵³ Both Oklahoma and Texas

- 45. RESTATEMENT (SECOND) OF TORTS §§ 209-12 (1979) (explaining the history of riparian rights and comparing and contrasting the natural flow theory with the reasonable use theory). See also Grimes, supra note 42, at 438-39.
- 46. Compare Meriwether Sand & Gravel Co. v. State, 181 Ark. 216, 226, 26 S.W.2d 57, 61 (1930); Taylor v. Rudy, 99 Ark. 128, 132, 137 S.W. 574, 575 (1911); and St. L. Sw. Ry. v. Mackey, 95 Ark. 297, 299, 129 S.W. 78, 79 (1910) with Nilsson v. Latimer, 281 Ark. 325, 664 S.W.2d 447, 450 (1984); Harris v. Brooks, 225 Ark. 436, 443-45, 283 S.W.2d 129, 133-34 (1955); and Thomas v. LaCotts, 222 Ark. 171, 177, 257 S.W.2d 936, 940 (1953).
 - 47. Harrell v. City of Conway, 224 Ark. 100, 104, 271 S.W.2d 924, 927 (1954).
- 48. 1957 Ark. Acts 81; 1969 Ark. Acts 180; Ark. Stat. Ann. § 21-1304 (Supp. 1983) (empowering the Arkansas Soil and Conservation Commission with the authority "to make allocations among persons taking water from streams during periods of shortage, to the extent and in the manner provided by law"). For regulations governing the allocation of water during shortages, see 7 Ark. Admin. Reg. 101 (1983-84).
- 49. LA. CIV. CODE art. 661 (1870) ("He whose estate borders on running water, may use it as it runs, for the purpose of watering his estate, or for other purposes."). For a discussion of water rights in Louisiana predicated upon article 661, see Comment, Acquisition of the Right to Use Water, supra note 42, at 562-63.
- 50. See Comment, Water Rights in Louisiana, supra note 42, at 509-10. See also NWC Summary-Digest of State Water Laws, supra note 42, at 353-54.
- 51. CLARK, *supra* note 44, at §§ 272-73; 1 W. HUTCHINS, WATER RIGHTS LAWS IN THE NINETEEN WESTERN STATES 491-502 (1971) [hereinafter cited as HUTCHINS, NINETEEN WESTERN STATES].
 - 52. 1 HUTCHINS, NINETEEN WESTERN STATES, supra note 51, at 508-10, 569-70.
- 53. D. GETCHES, WATER LAW 6 (1984); F. TRELEASE, CASES AND MATERIALS ON WATER LAW 12 (2d ed. 1974) [hereinafter cited as Trelease]. See also Ausness, Water Use Permits in a Riparian State: Problems and Proposals, 66 Ky. L.J. 191, 194 (1977).

later adopted permit systems as the means of acquiring appropriative rights.⁵⁴ For these reasons, the water laws of Oklahoma and Texas are the most complicated of the four signatory states.

One of the greatest challenges to the compact negotiators was reconciling these divergent water laws and dealing with certain problems attendant to them. The negotiations were particularly complicated on the apportionment of the water of Reach II, which involved all four states. Reach II consists of the portion of the Red River from Denison Dam to the point where it crosses the Arkansas-Louisiana state boundary and all of the tributaries that contribute to the flow of the river within this reach.⁵⁵ Oklahoma and Texas had fully appropriated the ordinary flow of the reach within their boundaries before the compact was approved.⁵⁶ By the very nature of their riparian systems, Arkansas and Louisiana had not defined or quantified water usage within their respective states, although they had conducted studies in an effort to establish present and future needs.⁵⁷

Not all of the problems during the negotiations stemmed from the problems of the upstream states' appropriation rights versus the downstream states' riparian rights. In the western portion of the Red River basin where water has always been a precious commodity, Texas and Oklahoma had some difficult compromises to make.58 This area is included in Reach I of the basin, the portion of the Red River and its tributaries from the New Mexico-Texas state boundary to Denison Dam.59 The Lugert-Altus Reservoir in Oklahoma, built in conjunction with the W. C. Austin Project developed by the United States Bureau of Reclamation in the 1940s, was central to this dispute. 60 The reservoir had the capability of impounding nearly the entire flow of two important tributaries of the Red River, the North Fork and Sweetwater Creek.61 The Lugert-Altus Irrigation District claimed all of the water of which it was capable of impounding with a priority date of 1949, based upon the date the reservoir was built.62 Texas refused to recognize that any additional impoundments of which the Irrigation District was capable would legally forestall development of uses in Texas of the water of these two streams.63 The resolution in September of 1976 of the longstanding dispute between Oklahoma and Texas over the Lugert-Altus Reservoir and the use of the water of the North Fork and Sweetwater Creek was a major breakthrough in completing the compact.64

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54. See 3 HUTCHINS, NINETEEN WESTERN STATES, supra note 51, at 423-40, 503-35 (1977).
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^{55.} Red River Compact, art. II, § 2.12(b), 94 Stat. 3307.

^{56.} Supplemental Interpretive Comments, supra note 21, at 14.

^{57.} Id.

^{58.} Hearings, Statement by Col. Laubscher, supra note 14, at 2.

^{59.} Red River Compact, art. II, § 2.12(a), 94 Stat. 3307.

^{60.} Supplemental Interpretive Comments, supra note 21, at 10.

^{61.} Id.

^{62.} Id.

^{63.} Id.

^{64.} Hearings, Statement by Col. Laubscher, supra note 14, at 2.

Arkansas also encountered difficulties in reconciling its reasonable use modification of the early riparian rights doctrine with the demands made by Louisiana in the apportionment of the water of Reach IV, the tributaries east of the Red River in Arkansas that cross the Arkansas-Louisiana state boundary.⁶⁵ From a policy standpoint, Arkansas objected to any specific, quantitative apportionment of the waters of these interstate streams, and particularly the Ouachita River system flowing from Arkansas into Louisiana.⁶⁶ Arkansas argued that an apportionment of the water of these interstate streams would give users in Louisiana assured rights that Arkansas was unable to grant its own citizens.⁶⁷ Since the major problem in this portion of the river basin was too much water, rather than too little, Arkansas maintained that the inclusion of specific apportionments of water between the two states served little useful purpose to either state.⁶⁸ A creative solution to this problem was ultimately found.

When deliberations on the Red River Compact commenced in 1956, a number of compact commissions elsewhere had apportioned the water of interstate streams based on present and projected conditions of development.⁶⁹ These commissions had recognized historic stream flows and existing beneficial uses, protected vested water rights obtained under state law, and estimated the future needs for the water in the basin.⁷⁰

Unfortunately, early attempts to utilize the present-usage/future-needs approach in the Red River basin were frustrating. Just as effective state water administration is dependent upon centralized water rights records that are complete and accurate, 11 such records are also important in the planning process attendant to the deliberations associated with the allocation of water in an interstate river basin. Oklahoma and Texas had reasonably complete water rights records dating from the enactment of their permit systems. The

- 65. Red River Compact, art. II, § 2.12(d), 94 Stat. 3307.
- 66. See Position Statement of State of Arkansas Regarding Red River Compact, Minutes of 48th Meeting of RRCNC, enclosure two, at 1-2, (Nov. 8, 1973) [hereinafter cited as Arkansas Position Statement of Nov. 1973]. The negotiators were also concerned with how a compact provision can be enforced in a riparian state that has not delegated authority to a state agency to issue water rights, a problem common both to Arkansas and Louisiana but which applied only to Arkansas since Louisiana is the last downstream state on the river. See Memorandum of Conference between Representatives of the States of Louisiana and Arkansas, at 2 (Dec. 10, 1959).
- 67. See Arkansas Position Statement of Nov. 1973, supra note 66, at 1-2. Arkansas reiterated its previous suggestion made in 1966 that the Ouachita River basin not be included in any compact apportioning the water of the Red River basin. Id. at 1. Arkansas considered the Ouachita as a part of the Lower Mississippi River system and pointed out that the Ouachita River system had been considered as a separate hydrologic unit in the formulation of comprehensive river basin plans. Id. Louisiana unequivocally objected to the deletion of the Ouachita basin from the proposed compact. Id. at 1-2.
 - 68. Id. at 2.
- 69. Assignment and Scope of Work of the RRCNC Eng'g Advisory Comm. presented to Meeting of Southwest Section, Am. Water Works Ass'n, at 4 (Oct. 20-21, 1959) [hereinafter cited as Assignment and Scope of Work of EAC].
 - 70. Id.
 - 71. NWC SUMMARY-DIGEST OF STATE WATER LAWS, supra note 42, at 16.

downstream riparian states, on the other hand, lacked essential information on present water usage. Moreover, since reasonableness of water use is determined in light of all the existing factors and circumstances, water rights arising under the riparian system defy precise measurement.⁷²

If present uses cannot be determined with a reasonable degree of accuracy, naturally the task of making supportable and realistic projections for future water needs is very difficult and, ultimately, quite conjectural.⁷³ As a result, the present-usage/future-needs approach was not very useful in deciding how to apportion the water. However, the Corps of Engineers' determinations of the drainage areas of the river and the hydrological and meteorological data supplied by the United States Geological Survey (USGS), the National Weather Service, and other governmental agencies were essential to intelligent apportionment decision making.⁷⁴

The Effect of the Compact on Intergovernmental Relations

The formulation and approval of the Red River Compact had important implications for intergovernmental relations at the local, state, and federal levels. The various legal entities authorized by the laws of the four signatory states include river authorities, drainage and levee districts, irrigation and watershed improvement districts, regional water distribution districts, and metropolitan water and power authorities.⁷⁵

Although not officially involved in the negotiations, representatives of local entities, such as the Red River Authority of Texas and the Lugert-Altus Irrigation District, often attended the negotiating sessions and actively conferred with the compact negotiators from their respective states. The negotiators encouraged input not only from various governmental entities but also from individuals and nongovernmental organizations, such as the Red River Valley Association. Public input throughout the deliberations was exceptionally strong. The negotiating commissioners understood the

^{72.} Id. at 17.

^{73.} Assignment and Scope of Work of EAC, supra note 69, at 5.

^{74.} *Id*. at 3.

^{75.} NWC SUMMARY-DIGEST OF STATE WATER LAWS, *supra* note 42, at 122, 349-51, 606-07, 706 (describing water-related legal entities authorized by the laws of Arkansas, Louisiana, Oklahoma, and Texas, respectively).

^{76.} The Red River Authority of Texas was created by the Texas legislature in 1959. See 1959 Tex. Gen. Laws 604, ch. 279. After it was established, representatives from the Red River Authority attended many meetings of the negotiators and their technical advisers. See, e.g., Tentative Minutes of RRCNC Eng'g Advisory Comm., at 1 (May 19-20, 1960). The legal counsel to the Lugert-Altus Irrigation District regularly conferred with the Oklahoma compact commissioner and the technical advisers concerning substantive provisions of the draft compact. See Letter from Robert B. Harbison to Guy N. Keith, Okla. Comm'r, at 1-4 (Apr. 4, 1972).

^{77.} See, e.g., Beckman Address to Red River Valley Ass'n, supra note 18, at 4.

^{78.} Meetings of the RRCNC were typically attended by representatives of those federal, state, and local agencies that had interests in certain agenda items before the RRCNC. On occasion, legislators of some of the states also were present, and members of the press observed the proceedings on an irregular basis. The amount of public interest and input is revealed by the attendance lists attached to the minutes of the 1st through 61st meetings of the RRCNC.

need to have the support of these groups when the compact was eventually presented to the respective state legislatures and the Congress for ratification.

The negotiators of the Red River Compact were particularly interested in one aspect of federal-interstate relations. From the earliest years of the deliberations, the negotiators squarely tackled what they perceived as a potential impediment to the future enforcement of the compact—the sovereign immunity of the United States to cases and controversies involving the construction or application of the compact. Because of the extensive federal presence in the Red River basin, the participation of federal officials in the drafting of the compact, and the role of the federal representative contemplated in the future administration of the compact, the negotiators were concerned that the courts might deem the United States to be an indispensable party in litigation between the signatory states arising under the compact. A vigorous exchange of views took place for several years between officials of the United States Department of Justice and the Legal Advisory Committee to the negotiating commissioners. A partial waiver of sovereign immunity was ultimately secured from the Congress.

From a broader perspective, the choice of the traditional interstate compact, rather than the federal-interstate compact, as the model for adjusting multijurisdictional problems of the Red River basin was a decision of major significance. The difference between these two types of compacts is subtle but important.⁸² The conventional interstate compact is an agreement be-

- 79. Letter from Henry C. Beckman, RRCNC Chairman, to Perry Morton, Assistant Att'y Gen., Lands Div., U.S. Dep't of Justice, at 2 (July 28, 1958). Chairman Beckman expressed the desire of the RRCNC to draft a compact that would avoid the impasse that occurred in litigation between Texas and New Mexico over the Rio Grande Compact when the Court ruled that the federal government was an indispensable party; the United States, of course, had not waived its sovereign immunity to suit. See also Texas v. New Mexico, 352 U.S. 991 (1957).
- 80. The Department of Justice did not agree with the suggestion that the mere making of a compact and approval of it by Congress would be construed as requiring the United States to be a party to litigation arising under the compact. See Letter from Perry Morton, Assistant Att'y Gen., Lands Div., U.S. Dep't of Justice, to Henry C. Beckman, RRCNC Chairman, at 2 (Sept. 30, 1958). Morton noted that the Supreme Court did not assign any reasons for its conclusion in Texas v. New Mexico that the United States was an indispensable party. Id. at 2-3. The Department of Justice had argued the indispensability of the federal government on two grounds: (1) the object of this litigation was to control the operation of drainage and irrigation works belonging to the federal government, and (2) the relief sought would interfere with the water rights of the Pueblo Indians, wards of the United States. Id. In contrast, the Supreme Court had held that the Secretary of Interior was not a necessary party in litigation to determine the relative rights of Nebraska and Wyoming to the water of the North Platte River. See Nebraska v. Wyoming, 295 U.S. 40, 43 (1935). Cf. Idaho ex rel. Evans v. Oregon, 462 U.S. 1017, 1023 (1983) (reflecting the refusal of the Supreme Court to follow the recommendation of the Special Master that an action by Idaho against Oregon and Washington over rights to the anadromous fish that migrate between the Pacific Ocean and spawning grounds of Idaho be dismissed without prejudice for failure to join the United States as an indispensable party).
- 81. See, e.g., Letter from Perry Morton, Assistant Att'y Gen., Lands Div., U.S. Dep't of Justice, to Henry C. Beckman, RRCNC Chairman, at 1-6 (Mar. 29, 1960).
- 82. Hearings, Statement by Col. Laubscher, supra note 14, at 4. See also Muys, Interstate Compacts and Regional Water Resources Planning and Management, 6 Nat. Resources Law.

tween two or more states on matters of mutual concern that are susceptible to cooperative treatment.⁸³ Some legal scholars assert that the consent of the Congress to any interstate compact dealing with water resources is mandated by the compact clause of the Constitution, but congressional consent does not make the United States a formal party to the agreement.⁸⁴ A federal representative ordinarily participates in the negotiations of a conventional interstate compact to ensure that federal interests are not impaired and to serve as a neutral facilitator of the negotiations.⁸⁵ Neither federal participation in the deliberations nor the consent of the Congress to the compact necessarily legally binds the United States to the provisions set forth in the compact.⁸⁶

The federal-interstate compact, on the other hand, is an agreement by two or more states and the federal government on matters of mutual interest in which the Congress joins the United States as a signatory party, contractually bound by the compact's provisions.⁸⁷ The first federal-interstate compact was the Delaware River Basin Compact approved by Delaware, New Jersey, New York, Pennsylvania, and the United States in 1961—seventeen years before completion of the Red River Compact.⁸⁸ The Susquehanna River Basin Compact, a similar federal-interstate compact, was adopted by New York, Pennsylvania, Maryland, and the United States in 1970—eight years preceding the signing ceremony for the Red River Compact at

^{153, 159-63 (1973) [}hereinafter cited as Muys]. Muys's article summarizes a 454-page study completed by him in 1971 for the National Water Commission. See National Water Commission, Interstate Water Compacts 105-88 (Legal Study No. 14, NTIS No. PB 202 998) [hereinafter cited as Muys, Interstate Water Compacts, to distinguish the lengthier study from the article in the Natural Resources Lawyer].

^{83.} Hearings, Statement by Col. Laubscher, supra note 14, at 5.

^{84.} Muys, *supra* note 82, at 174 ("there is a very strong presumption that *any* compact or agreement dealing with water resources is subject to the consent requirements of the compact clause") (emphasis in the original). The Supreme Court in 1894 suggested that congressional consent was necessary when interstate compacts or agreements contained provisions "which might affect subjects placed under the control of Congress, such as commerce and the navigation of public waters, which is included under the power to regulate commerce." Wharton v. Wise, 153 U.S. 155, 171 (1894). The limited role of the federal government in the administration of a conventional interstate water compact is discussed by Col. Laubscher of the U.S. Army Corps of Engineers and by Muys. *See Hearings*, Statement by Col. Laubscher, *supra* note 14, at 5-6, and Muys, *supra* note 82, at 159 (describing the role of the federal representative to the permanent compact commission as "little more than an honored observer").

^{85.} Muys, supra note 82, at 159.

^{86.} Id. at 160. Although not legally bound to the provisions set forth in a compact, federal officials may feel a moral obligation to refrain from actions that might interfere with compact implementation. See Goslin, Interstate River Compacts: Impact on Colorado, 6 Den. J. Int'l Law & Policy 415, 432 (1976).

^{87.} Muys, Interstate Water Compacts, supra note 82, at S-4. See also Comptroller Gen., U.S. Gen. Accounting Office, Report to Congress, Federal-Interstate Compact Commissions: Useful Mechanisms for Planning and Managing River Basin Operations 1 (CED-81-34 Feb. 20, 1981) [hereinafter cited as GAO Rep. on Federal-Interstate Compacts].

^{88.} Delaware River Basin Compact, Act of Sept. 27, 1961, Pub. L. No. 87-328, 75 Stat. 688 (1961). See also GAO Rep. on Federal-Interstate Compacts, supra note 87, at 1.

Denison Dam.⁸⁹ The model of the federal-interstate compact that emerged from these two agreements confers extremely broad powers upon the regional administrative agency created to administer the compact.⁹⁰

Some of the drafters of the Red River Compact were exposed to the theory of the federal-interstate compact in 1959.91 Certain provisions of the Delaware River Basin Compact were examined by several of the legal advisers to the Red River Compact Negotiation Commission for possible adaptation to the Red River Compact.92 In view of the many federal projects and extensive interests in the Red River basin, the failure of the negotiators to consider the federal-interstate compact as a device to meet their objectives is baffling.

The Goals of the Negotiators

Every effort was made to draft clear and unequivocal language that would preclude, insofar as possible, any chance of the courts having an opportunity to make a different construction of the terminology than that which was intended, possibly thwarting the objectives of the compact. ⁹³ As a supplement to the compact, interpretive comments were prepared by the RRCNC Legal Advisory Committee. ⁹⁴ Although the Supplemental Interpretive Comments do not attempt to cover every possibility arising under the compact, they nevertheless spell out the intent of the compact negotiators with regard to each article of the compact.

An official report of the RRCNC Engineering Advisory Committee, dated May 12, 1978, also supplements the text of the compact. This report graphically presents the boundaries of the basin, the five reaches of the river system, and the subbasins within each reach and lists the pertinent data concerning both existing and proposed reservoirs in the basin.⁹⁵ Another

- 89. Susquehanna River Basin Compact, Act of Dec. 24, 1970, Pub. L. No. 91-575, 84 Stat. 1509 (1970). See also GAO Rep. on Federal-Interstate Compacts, supra note 87, at 1.
 - 90. See Muys, supra note 82, at 160-62.
- 91. All of the commissioners received a copy of an address by Mitchell Wendell in 1959 to the Interstate Conference on Water Problems. See "Water Compacts—Problems and Progress," Address by Mitchell Wendell to Interstate Conference on Water Problems, under auspices of the Council of State Governments, at 6-8 (May 29, 1959) (discussing the need for a new federal-interstate arrangement in the water resources area and advancing the idea of a federal-interstate compact) and Letter from Henry C. Beckman, RRCNC Chairman, to RRCNC State Comm'rs, at 1 (Nov. 23, 1959). Several commissioners apparently attended the conference.
- 92. See Letter from Richard Huff, RRCNC Legal Advisory Comm. Chairman, to Homer Belanger, RRCNC Legal Adviser for Louisiana, at 1-3 (Jan. 15, 1962) (calling attention to language in the Delaware River Basin Compact concerning federal district court jurisdiction in certain interstate controversies arising under the compact and disagreeing with the sovereign immunity provision of the compact).
 - 93. See Beckman Letter to Red River Valley Ass'n (May 21, 1962), supra note 37, at 2.
 - 94. Supplemental Interpretive Comments, supra note 21.
- 95. Eng'g Advisory Comm., RRCNC, Rep. of the Eng'g Advisory Comm. to the Red River Compact Comm'n (May 12, 1978) [hereinafter cited as 1978 RRCNC Eng'g Rep.]. Though dated May 12, 1978, the report was not completed until sometime later. *See* Minutes of 61st Meeting of RRCNC, at 1-3 (Sept. 19, 1979).

report of the Engineering Advisory Committee completed in June, 1970 contains detailed stream flow and other hydrologic data and was used extensively during the negotiations.⁹⁶

Most water law compacts in existence when negotiations began on the Red River Compact were primarily single-purpose in their focus. ⁹⁷ Pollution control compacts in effect then were utilized primarily in the East, by virtue of its lengthier industrial history, ⁹⁸ and water allocation compacts were utilized predominantly in the West. ⁹⁹

The negotiators of the Red River Compact recognized the interrelationships between water quantity and water quality, the need for the maintenance of an adequate supply of water for navigation in the lower reaches of the basin, the impact of flood control and drainage on water utilization, and the importance of planning in the conservation, management, and future development of water resources in the basin. Although the greatest achievement of the compact is the equitable division of the waters of the basin among the four signatory states, the compact also seeks to advance multiple objectives and to avoid the jurisdictional and procedural problems experienced by other river basin compact commissions.¹⁰⁰

II. The Adjustment of Interstate Disputes From 1656 Until 1956

Colonial and Constitutional Mechanisms for Interstate Dispute Resolution

The intergovernmental relations problems created by competing uses of the water of the Red River system¹⁰¹ typify the long-standing questioning over the appropriate relationship between the individual states and the federal government, which dates to the birth of the United States.¹⁰² The Constitution included two important mechanisms for resolving interstate problems: (1) article I, section 10 authorizes a state with the consent of Congress to enter into any agreement or compact with another state;¹⁰³ (2) article III,

- 97. See Address by Wendell, supra note 91, at 4.
- 98. Id.
- 99. Id.
- 100. See supra notes 79-80.
- 101. See supra text accompanying notes 10, 38-40, 58-64, & 75-81.
- 102. Frankfurter & Landis, The Compact Clause—A Study in Interstate Adjustments, 34 YALE L.J. 685, 685 (1925).
- 103. U.S. Const. art. I. § 10, cl. 3: "No State shall, without the Consent of Congress, . . . enter into any Agreement or Compact with another State, or with a foreign power. . . ." The legislative power of the Congress is set forth in article I. The recognition in article I, section 10 of the authority of the states to enter into compacts is actually couched in negative terms, not only setting forth the role of Congress in such matters but also expressing a limitation upon the exercise of the "compacting authority" of the states. See Frankfurter & Landis, supra note 102, at 691 & n.25.

^{96.} Eng'g Advisory Comm., RRCNC, Rep. of the Eng'g Advisory Comm. to the Red River Compact Comm'n (June 1970) (containing detailed stream flow and other hydrologic data and water resources development and planning data) [hereinafter cited as 1970 RRCNC Eng'g Rep.]. See also 1978 RRCNC Eng'g Rep., supra note 95, at 2 (describing utilization of 1970 report during compact negotiations).

section 2 grants original jurisdiction to the Supreme Court of the United States over "[c]ontroversies between two or more states." These two constitutionally recognized methods for settling interstate disputes were patterned after two forms of adjustment for settling problems among the colonies. 105

For a hundred years preceding the American Revolution, the common practice among the colonies was to resolve a dispute over an interiurisdictional matter, such as a boundary problem, by appointing a joint commission to discuss the situation and negotiate a resolution of the problem. 106 Agreements reached by the colonies were then subject to approval by the Crown.¹⁰⁷ If a negotiated solution did not seem feasible or if negotiations stalemated, the colonies also had the option of appealing the controversy to the Crown. 108 The Crown, in turn, usually referred the controversy to a royal commission.¹⁰⁹ A decision by the royal commission could be appealed to the Privy Council.110 Thus, the settling of disputes among the colonies through agreements approved by the Crown and by "litigation" on appeal to the Privy Council were precursors of the compact clause requirement of the consent of Congress "as a prerequisite to the validity of [a]greements by the States" and of article III powers vested in the Supreme Court." In sum, "The framers [of the Constitution] . . . astutely created a mechanism of legal control over affairs that are projected beyond State lines and yet may not call for, nor be capable of, national treatment. They allowed interstate adjustments but duly safeguarded the national interest."112

104. U.S. Const. art. III, § 2:

The judicial Power shall extend to all Cases, in Law and Equity, arising under this Constitution, the Laws of the United States, and Treaties made, or which shall be made, under their Authority; . . . —to Controversies between two or more States;

In all Cases . . . in which a State shall be a Party, the Supreme Court shall have original Jurisdiction

105. Frankfurter & Landis, supra note 102, at 692-95.

106. Apparently the resolution of boundary disputes was a significant problem among the colonies and occurred with some frequency because of the "ill-surveyed territory" and the "vague and expansive" language of the colonial charters. *Id.* Boundary controversies existed between eleven states at the time the Constitution was adopted. Rhode Island v. Massachusetts, 37 U.S. (12 Pet.) 883, 893 (1838).

107. See Frankfurter & Landis, supra note 102, at 692-95 & n.29 (citing the opinion of Lord Mansfield in the second controversy between Massachusetts and Connecticut, which was quoted in South Australia v. Victoria, 12 C.L.R. 667, 704 (1911)).

108. Frankfurter & Landis, *supra* note 102, at 692-95 & nn.29 & 32. Frankfurter and Landis noted that the records of the Privy Council reflected the appeal in 1773 of a boundary dispute between New York and New Jersey.

109. Id. This procedure "bore the characteristics of a litigation." Id. In 1740, a dispute between Massachusetts and New Hampshire was settled by appeal to the Crown and referral, in turn, to the Royal Commission. Id. & n.30.

110. Id. However, as Frankfurter and Landis pointed out, "the Privy Council was not formally set apart through its Judicial Committee as a judicial organ until (1833). . . ." Id. & n.31.

111. Id. at 694.

112. Id. at 695.

The Resolution of Interstate Boundary Disputes: The Red River Experience

Historically, interstate compacts were used initially by the colonies and later by the states to resolve boundary disputes. Since rivers and lakes form the boundary between many states, the subject matter of compacts frequently involved interstate waters.¹¹³ The judicial power of the Supreme Court was also invoked in boundary controversies. Frequently, however, litigation either did not settle the boundary dispute or failed to settle the problem permanently.¹¹⁴ In fact, the Supreme Court on occasion encouraged the states to negotiate an agreement settling their boundary problems.¹¹⁵

The inability of litigation to resolve boundary problems perhaps is best illustrated by the virtually unending dispute over the correct boundary of the Red River, an issue that arose initially between the United States territory and the state of Texas and later between the states of Oklahoma and Texas. When federal legislation was enacted in 1890 "provid[ing] a temporary government for the Territory of Oklahoma" and "enlarg[ing] the jurisdiction of the United States Court in the Indian Territory," Congress acknowledged an existing controversy between the federal government and the state of Texas over the ownership of a tract of land lying between the North and South forks of the Red River east of the 100th meridian and designated by Texas as "Greer County, Texas."

In accordance with a congressional directive in the Act of 1890, the Attorney General of the United States filed an original action in equity in the Supreme Court to determine whether the North Fork or the South Fork of the Red River was the correct boundary. 117 Relying upon the Treaty of 1819 between the United States and Spain and interpreting the "Melish map" attached thereto, the Court held in 1896 that the boundary was along the south bank of the main channel of the Red River and of the South Fork of the Red River, commonly known as Prairie Dog Town Fork, until it intersected the 100th meridian of longitude astronomically determined. As a result of the Court's decision, approximately one and a half million acres of rich farming land once claimed by Texas were officially designated a part

^{113.} Id. at 696 & app. A. See also R. LEACH & R. SUGG, JR., THE ADMINISTRATION OF INTERSTATE COMPACTS 5 (1959) [hereinafter cited as LEACH & SUGG]; Muys, supra note 82, at 154-55.

^{114.} See Frankfurter & Landis, supra note 102, at 696. From 1832 to 1846, litigation between Rhode Island and Massachusetts over a boundary dispute was pending in the Supreme Court. Id. at 705 & n.87. A controversy between Missouri and Iowa initiated in 1848 and "decided" by the Court in 1850 was reopened forty years later for "final disposition." Id.

^{115.} Minnesota v. Wisconsin, 252 U.S. 273, 283 (1920); Washington v. Oregon, 214 U.S. 205, 217-18 (1909). See also Frankfurter & Landis, supra note 102, at 696 & n.42.

^{116.} Act of May 2, 1890, ch. 182, § 25, 26 Stat. 81, 92.

^{117.} See United States v. Texas, 143 U.S. 621, 646-47 (1892) (holding that the Supreme Court "has jurisdiction to determine the disputed question of boundary between the United States and Texas").

^{118.} United States v. Texas, 162 U.S. 1, 90 (1896).

of the United States territory, encompassing an area part of which later became the state of Oklahoma.¹¹⁹

The Court's decision in 1896 did not completely settle the location of the Red River boundary between Oklahoma and Texas. During the early 1900s rich oil and gas deposits were discovered in great quantities in the beds of the Red River adjacent to Wichita County, Texas. ¹²⁰ Conflicting claims to these deposits and the danger of armed conflict between the rival aspirants for the oil and gas prompted the state of Oklahoma to file an original action against Texas in the Supreme Court in 1919 over the ownership of the bed of part of the "boundary reach" of the river. ¹²¹ The United States intervened in this action as trustee of Indian allottees of property contiguous to the river and as owner in its own right of a large part of the bed and islands therein. ¹²² Texas counterclaimed against Oklahoma for an adjudication of a dispute over a strip of land along the western boundary of Oklahoma adjoining the Texas Panhandle. ¹²³

The Court enjoined Texas from further leasing, permitting, or licensing of any part of the bed of the Red River lying between the south bank of the river as it existed at the date of the ratification of the Treaty of 1819 and the 100th degree of west longitude and the southeastern corner of the state of Oklahoma.¹²⁴ The Court also appointed a receiver and empowered him to take possession of the controverted property and to conserve and control all oil and gas operations in the area.¹²⁵

On April 11, 1921, the Court held that its decision in 1896 in the celebrated "Greer County controversy" conclusively determined the boundary between Texas and what is now Oklahoma to be along the south bank of the river. 126 However, the Court then directed that evidence be taken and further hearings conducted to determine the *physical location* of the south bank. 127 The Court enunciated criteria for locating the bank and referred to three commissioners appointed by the Court the task of marking the boundary in accordance with these principles. 128 Although the Red River had been surveyed in 1874, the processes of avulsion, accretion, and erosion had physically altered the

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119. Id. at 91.
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^{120.} Oklahoma v. Texas, 256 U.S. 70, 84 (1921). See also G. Foreman, A History of Oklahoma 332 (1942) (also describing the Greer County case and subsequent litigation between Texas and Oklahoma over the Red River boundary).

^{121.} Oklahoma v. Texas, 256 U.S. 70, 70-75 (1921).

^{122.} Oklahoma v. Texas, 252 U.S. 372 (1920).

^{123.} FOREMAN, supra note 120, at 334.

^{124.} Oklahoma v. Texas, 252 U.S. 372 (1920).

^{125.} Id. at 373-76.

^{126.} Oklahoma v. Texas, 256 U.S. 70, 92-93 (1921). While the case was being litigated, possession of part of the river was taken and held by intimidation and force. Oklahoma v. Texas, 258 U.S. 574, 579-80 (1922). Armed conflicts between rival aspirants for the oil and gas were narrowly averted. *Id.* The Texas militia had been called to enforce orders of Texas courts, and a similar effort was made to summon the Oklahoma militia. Foreman, *supra* note 120, at 332-34.

^{127.} Oklahoma v. Texas, 256 U.S. 602, 608 (1921).

^{128.} Oklahoma v. Texas, 260 U.S. 606, 640 (1923).

relation of the river to the surveyed tracts, and the task of marking the boundary ultimately proved to be very time-consuming.¹²⁹

Meanwhile, the Court resolved the counterclaim in favor of Texas. The decision as to the counterclaim was based upon a determination by the Court that the 100th meridian in the strip along the Panhandle had been erroneously located and surveyed. As a result, more than twenty thousand acres of land claimed by Oklahoma passed to Texas.¹³⁰

Although the interstate boundary was eventually marked along the south bank of the Red River, the state of Oklahoma had no proprietary interest in either the floodplain or the other expanse of land designated as the south half of the river bed, both of which were held in the receivership.¹³¹ The determination by the Court that the boundary was along the south bank of the river only negated the claims by Texas and its grantees and lessees to a proprietary interest in the river bed and in the proceeds of the oil and gas removed from it.¹³² The floodplain area belonged to Texas and its grantees.¹³³ Since no part of the Red River within Oklahoma was navigable under the "navigability in fact" test, title to the bed of the river never passed from the United States to Oklahoma upon Oklahoma's admission into the Union.¹³⁴ The allottees and vendees of the United States, who acquired title to property that had once formed a reservation along the river for the Kiowa, Comanche, and Apache tribes, took title to the middle line of the stream bed, and the remainder of the bed belonged to the United States.¹³⁵

As the years passed, many of the bends and curves in the 539 miles of the crooked and winding river boundary between Oklahoma and Texas continued to be altered both by gradual forces and by avulsion. ¹³⁶ As a result of the natural alteration of the river in relation to past surveys of the boundary line, private quarrels erupted between Oklahoma families and Texas citizens over the river bed. ¹³⁷ The guidelines laid down by the Supreme Court in the 1920s have been utilized by the federal courts in resolving these private feuds. ¹³⁸

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129. Id. at 620.
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^{130.} See Foreman, supra note 120, at 334.

^{131.} Oklahoma v. Texas, 265 U.S. 505, 508 (1924).

^{132.} Oklahoma v. Texas, 258 U.S. 574, 582 (1922).

^{133.} Oklahoma v. Texas, 265 U.S. 505, 508 (1924).

^{134.} Oklahoma v. Texas, 258 U.S. 574, 586-91 (1922).

^{135.} Id. at 592-96.

^{136.} See Foreman, supra note 120, at 334. The distance of the Red River boundary between Oklahoma and Texas is only 321 miles when measured in a direct line. Id.

^{137.} See, e.g., Gipson, Families Feud over Red River Sand Flats, Tulsa Tribune, Jan. 9, 1984, at 1A, col. 2 (describing a ten-year-old feud over 900 acres of sand flats sandwiched between two ranches along the boundary stretch of the Red River).

^{138.} James v. Langford, 701 F.2d 123, 124 (10th Cir. 1983), cert. denied, 104 S.Ct. 702 (1984) (applying the 1923 Supreme Court decision fixing the interstate boundary and setting forth the standards to be applied in determining the location of the south bank of the river at any particular location). Although the federal district courts lack jurisdiction to determine the state line as the political boundary of two states in a private dispute, they do have jurisdiction to decide the location of the river bank and to resolve all disputed property ownership issues between the private parties. *Id.* at 126.

The location of the Red River boundary determined by the Supreme Court in the "Greer County" case in 1896 and the definition of the boundary enunciated in *Oklahoma v. Texas* in the 1920s were applied by the Court in the 1980s in an original action brought by Texas against Oklahoma over the effect of the construction of Denison Dam and Lake Texoma upon the interstate boundary adjacent to Grayson County, Texas. ¹³⁹ In the final analysis, the length of time consumed, the pages of testimony and exhibits entered into evidence, the expenses involved, and the number of decrees and orders entered by the Supreme Court in litigation involving the Red River boundary not only suggests the limitations of litigation in solving permanently interstate problems of this nature, but is surely unprecedented in this nation's history of boundary disputes. ¹⁴⁰

Early Experiences in Handling Interstate Problems: The Case for Compacts

Although interstate compacts had colonial antecedents, they had seldom been utilized during the 110 years from the birth of the nation to the dawn of the twentieth century.¹⁴¹ During that period, Congress established the

139. Texas v. Oklahoma, 457 U.S. 172, 172, 175 (1982) (concluding that the construction of Denison Dam and Texoma Reservoir did not alter the boundary between Texas and Oklahoma as it existed prior to such construction in any manner whatsoever).

140. The Red River bed litigation during the 1920s produced a record of nine printed volumes of more than 5,500 pages of testimony taken by a special master under orders of the Supreme Court. See Foreman, supra note 120, at 334. Nearly fifty decrees or orders of some nature were entered by the Court in the controversy between Oklahoma and Texas and the United States, as intervenor, which arose in the 1920s over the river bed: 252 U.S. 372 (1920); 253 U.S. 465 (1920); 254 U.S. 280 (1920); 254 U.S. 603 (1921); 254 U.S. 615 (1920); 256 U.S. 70 (1921); 256 U.S. 602 (1920); 257 U.S. 308 (1921); 257 U.S. 609 (1921); 257 U.S. 611 (1921); 257 U.S. 616 (1921); 257 U.S. 621 (1922); 258 U.S. 574 (1922); 258 U.S. 606 (1922); 259 U.S. 565 (1922); 260 U.S. 606 (1923); 260 U.S. 705 (1922); 260 U.S. 711 (1923); 261 U.S. 340 (1923); 261 U.S. 345 (1923); 261 U.S. 606 (1923); 262 U.S. 505 (1923); 262 U.S. 724 (1923); 264 U.S. 565 (1924); 265 U.S. 76 (1924); 265 U.S. 490 (1924); 265 U.S. 493 (1924); 265 U.S. 500 (1924); 265 U.S. 503 (1924); 266 U.S. 505 (1924); 266 U.S. 513 (1924); 265 U.S. 573 (1924); 266 U.S. 298 (1924); 266 U.S. 303 (1924); 266 U.S. 546 (1924); 266 U.S. 583 (1924); 267 U.S. 452 (1925); 267 U.S. 580 (1925); 268 U.S. 252 (1925); 269 U.S. 314 (1926); 269 U.S. 536 (1925); 269 U.S. 539 (1926); 272 U.S. 21 (1926); 273 U.S. 93 (1927); 274 U.S. 713 (1927); 276 U.S. 596 (1928).

141. Only twenty-one compacts became effective between 1789 and 1900; these compacts were used "only as last resorts to settle boundary and jurisdictional disputes between pairs of states." Leach & Sugg, supra note 113, at 5. During this time, the compact was regarded as simply an alternative to judicial resolution of a dispute rather than as an instrument for the positive exercise of power. Id. These twenty-one compacts neither created a permanent administrative agency to implement the compact nor included as many as three states as signatory parties. Id. By 1920 the total number of compacts entered as many as three states had edged up to 36. F. Zimmerman & M. Wendell, The Law and Use of Interstate Compacts ix (1976) [hereinafter cited as Zimmerman & Wendell]. During the two decades of 1920 to 1940, twenty compacts were concluded by the states, and one hundred additional compacts were negotiated between 1941 and 1975. Id. Many of the compacts concluded after the turn of the century were multistate in scope and established permanent interstate agencies to administer the compacts. Leach & Sugg, supra note 113, at 5-6. The compacts approved during the twentieth century added "a new dimension for state power." Id. at 6.

principle of a federal role in forming compacts in the natural resources area with the passage of the Weeks Act in 1911. This act gave the consent of Congress "to each of the several states . . . to enter into any agreement or compact . . . with any other state or states, for the purpose of conserving the forests and water supply" of the signatory states.¹⁴²

Nearly ten years later in an action brought by New York against New Jersey to enjoin the completion of a sewer system that would discharge sewage into New York Bay, the Supreme Court recognized its own inadequacy to afford relief in controversies involving interstate water problems. ¹⁴³ Just as the Court in cases involving boundary disputes had counseled the states to try to resolve their problems through interstate compact rather than by judicial decree, the Court in *New York v. New Jersey* advised the litigants that:

[T]he grave problem of sewage disposal presented by the large and growing populations living on the shores of New York Bay is one more likely to be wisely solved by co-operative study and by conference and mutual concession on the part of representatives of the States which are vitally interested than by proceedings in any court however constituted.¹⁴⁴

During the same period, the ratification of the New York Port Authority Compact of 1921 and the concomitant establishment of an administrative agency to oversee the implementation of its provisions expanded the traditional concept of an interstate compact. The New York Port Authority experience suggested the value of "imaginatively adapt[ing] . . . the compact idea" to solve "problems presented by the growing interdependence, social and economic, of groups of states forming distinct regions." ¹⁴⁵

142. Act of Mar. 1, 1911, ch. 186, 36 Stat. 961. The advance blanket consent given by the Weeks Act to a vague class of future compacts before they were actually formulated has been criticized as a "practical abandonment by Congress of its constitutional responsibility to review all interstate compacts in order to protect and promote the national interest." Muys, supra note 82, at 174. By giving consent in advance of the negotiation and completion of the compact, Congress foreclosed an opportunity to assess the impact of the compact on federal interests. Id. However, the 43rd Annual Governors' Conference advocated the enactment by Congress of general consent-in-advance legislation, which would authorize the states to negotiate compacts in unspecified broad fields of action. Leach & Sugg, supra note 113, at 10 n.8.

143. New York v. New Jersey, 256 U.S. 296, 313 (1921). See *infra* text accompanying note 263.

144. Id. Officials of New York, New Jersey, and Connecticut heeded the advice of the Court and negotiated the New York Harbor (Tri-State) Interstate Sanitation Compact of 1935. See S.J. Res. 159, 74th Cong., 1st Sess., 49 Stat. 932 (1935). The Tri-State Compact was formulated in recognition of the "grave menace to the health, welfare, and recreational facilities of the people living in [the area surrounding and adjacent to the Harbor of New York] occasioned by the serious pollution of the harbor, coastal and tidal waters attendant to the tremendous growth of population and development in the area." 49 Stat. 932. The New York Harbor litigation is examined in depth in part III. See infra text accompanying notes 230-239.

145. Frankfurter & Landis, supra note 102, at 729. See also LEACH & SUGG, supra note 113, at 6-7 (asserting that "[t]he most important single event in the use of the interstate compact

Legal scholars also began to raise serious questions about the advisability of attempting to resolve complex multijurisdictional disputes, such as interstate water controversies, in the courts or through congressional enactment of national legislation. As Felix Frankfurter and James M. Landis noted in their study of interstate compacts published in May of 1925, "litigation had added confusion, not settlement [of interstate water problems]" because the judicial process "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." Because of the range, the intricacy, and the technicality of the facts, most interstate water controversies simply are not amenable to judicial resolution and constitute a heavy burden on the Court's time, "therefore affect[ing] the quality of judgment which the Court is capable of exercising." Moreover, the political aspects of an interstate dispute "are not readily satisfied through litigation." ¹⁴⁸

Instead, Frankfurter and Landis wrote, interstate water problems are best handled through legislation that is "coterminous with the region requiring control" (e.g., in the case of an interstate stream or lake, the geographic unit is its drainage area, which, in all likelihood, encompasses parts of more than one state). ¹⁴⁹ National legislation enacted by the Congress did not seem to be a feasible alternative at this time to effectively address regional problems because national legislation would be difficult to formulate and could result in excessive federal control. Therefore, Frankfurter and Landis concluded, "[c]ollective legislative action through the instrumentality of compact by states constituting a region furnishes the answer." ¹⁵⁰

The Evolution of Interstate Water Compacts

Colorado pioneered the movement in the West to settle interstate disputes over waters primarily used for irrigation by the compact method.¹⁵¹ During the decade from 1920 to 1930, Colorado negotiated and concluded the Col-

agency was probably the establishment and success of the Port of New York Authority, based on a compact concluded in 1921"). For the contents of the compact, see Port of New York Authority Agreement of 1921, 42 Stat. 174, amended by 42 Stat. 822. For a detailed account of the development of the Port Authority, see generally E. BARD, THE PORT OF NEW YORK AUTHORITY 5-26 (1942).

^{146.} Frankfurter & Landis, supra note 102, at 701. For a discussion of some problems associated with the resolution of interstate water disputes, see Bannister, Interstate Rights in Interstate Streams in the Arid West, 36 HARV. L. REV. 960, 968-77 (1923).

^{147.} Frankfurter & Landis, supra note 102, at 705.

^{148.} Id. at 705-06.

^{149.} Id. at 702, 707.

^{150.} Id. at 708.

^{151.} Muys, *supra* note 82, at 155. Compacts generally were not used for any water-related purposes, other than boundary problems, navigation, and fishing rights, until 1922 when the Colorado River Compact was concluded. *Id.* For a discussion of Colorado's role as a pioneer in the utilization of compacts, see generally Comm. of the Irrigation Div. on Interstate Water Rights, Am. Soc'y of Civil Eng'rs, Final Report on Interstate Water Problems 1852 (1939) (Transactions Paper No. 2055) [hereinafter cited as 1939 ASCE Rep. on Interstate Water Problems].

orado River Compact with Arizona, California, Nevada, New Mexico, Utah, and Wyoming;¹⁵² the La Plata River Compact with New Mexico;¹⁵³ the South Platte River Compact with Nebraska;¹⁵⁴ and the "temporary" Rio Grande Compact with New Mexico and Texas.¹⁵⁵ The Colorado River Compact,

152. Colorado River Compact of 1922, Boulder Canyon Project Act, ch. 42, 45 Stat. 1057, 1064 (1928). Although the compact was signed by a duly authorized commissioner representing the state of Arizona, that state later declined to ratify the compact until 1944 because of its concern that the agreement would permit California to preempt most of the allocation of the water of the lower Colorado basin under Wyoming v. Colorado, 259 U.S. 419 (1922). Muys, INTERSTATE WATER COMPACTS, supra note 82, at 22. Since the states within the Colorado River basin could not initially agree among themselves upon the share of water each state was to receive, Congress made an apportionment that was forced upon the states through the enactment in 1928 of the Boulder Canyon Project Act, ch. 42, 45 Stat. 1057 (1928). See Ladd, Federal and Interstate Conflicts in Montana Water Law: Support for a State Water Plan, 42 MONT. L. Rev. 267, 283-86 (1981) (describing the genesis of the third legal method of allocating interstate waters among the states—congressional apportionment). See also C. MEYERS & A. TARLOCK, WATER RESOURCE MANAGEMENT 432-56 (2d ed. 1980) [hereinafter cited as Meyers & TARLOCK]. Just as Arizona had succeeded in delaying the enactment of the Boulder Canyon Act in Congress, Arizona fought the act in the courts by challenging its legality. MEYERS & TARLOCK, supra, at 438-44. See also Meyers, The Colorado River, 19 Stan. L. Rev. 1, 39-42, 43 (1966). In 1963 the Supreme Court upheld the congressional apportionment of the water among the lower basin states, stating that "[w]here Congress has so exercised its constitutional power over waters, courts have no power to substitute their own notions of an 'equitable apportionment' for the apportionment chosen by Congress." Arizona v. California, 373 U.S. 546, 579, decree entered 376 U.S. 340 (1964). For a thorough examination of the Court's decision, see Trelease, Arizona v. California: Allocation of Water to People, States, and Nation, 1963 SUP. Ct. Rev. 158. See also Clyde, The Colorado River Decision—1963, 8 Utah L. Rev. 299 (1964); Haber, Arizona v. California-A Brief Review, 4 NAT. RESOURCES J. 17 (1964); Sax, Problems of Federalism in Reclamation Law, 37 U. Colo. L. Rev. 49 (1964); Wilmer, Arizona v. California, A Statutory Construction Case, 6 Ariz. L. Rev. 40 (1964). The 1963 decision was not the final chapter in the original action brought to determine rights to the waters of the Colorado River. See Arizona v. California, 460 U.S. 605 (1983); 439 U.S. 419 (1979).

153. The La Plata River Compact was signed by the commissioners on Nov. 27, 1922, three days after the signing ceremony for the Colorado River Compact. The La Plata River Compact was approved by the Congress on Jan. 25, 1925, and promulgated by the President on Jan. 29, 1925. Act of Jan. 29, 1925, ch. 110, 43 Stat. 796. For an abbreviated history of the La Plata River Compact, see 1939 ASCE Rep. on Interstate Water Problems, supra note 151, at 1856-57. For a discussion of the Supreme Court decision upholding the validity and defining the effect of the La Plata River Compact, see infra text accompanying notes 268-285.

154. Although the South Platte River Compact was signed by the commissioners on Apr. 27, 1923, it was not approved until 1926. See Act of Mar. 8, 1926, ch. 46, 44 Stat. 195. For an abbreviated history of the compact, see 1939 ASCE Rep. on Interstate Water Problems, supra note 151, at 1856-57.

155. The problem of settling the respective claims of Colorado, New Mexico, and Texas to the interstate waters of the Rio Grande above Fort Quitman "'hung like a pall' over the water users of the upper Rio Grande basin in the three states for more than 40 yrs." 1939 ASCE REP. ON INTERSTATE WATER PROBLEMS, supra note 151, at 1857. A "temporary" compact, "designed as a truce to maintain the status quo on the upper river," was signed on Feb. 12, 1929, and approved on June 17, 1930. Id. Negotiations on a permanent compact were conducted without success during the five-year duration of the temporary compact. Id. at 1858. However, final agreement was not reached until Mar. 18, 1938. Id. at 1859. The permanent compact received federal approval the following year. Act of May 31, 1939, ch. 155, 53 Stat. 785.

providing for the apportionment of water between the upper and lower basins of the river, was the first interstate compact to include a large number of states as signatory parties.¹⁵⁶

Although legal authorities have disagreed over the necessity of obtaining the consent of Congress before undertaking negotiations of a compact,¹⁵⁷ the practice established with compacts involving interstate waters in the West was to secure congressional approval to begin negotiations and to include in the negotiations a federal representative designated by the President of the United States.¹⁵⁸ Typically the federal representative served as chairman of the negotiating commission without voting power.¹⁵⁹

Congress reaffirmed the principle of a federal role in compact negotiations with the passage of the Omnibus Flood Control Act of 1936.¹⁶⁰ This act authorized states to negotiate, subject to final approval by Congress,

compacts or agreements in connection with any project or operation authorized by this Act for flood control or the prevention of damage to life or property by reason of floods upon any stream

156. Under a compromise suggested by Herbert Hoover, the chairman of the negotiation commission, the water of the Colorado River was divided between the upper basin states of Colorado, New Mexico, Utah, and Wyoming and the lower basin states of Arizona, California, and Nevada because the states were unable to agree upon a state-by-state water allocation. See Colorado River Compact of 1922, art. II(f), (g), 45 Stat. 1057, 1064. See also Ladd, supra note 152, at 283 & n.85. The states within the upper basin later agreed upon a subdivision of the waters allocated to them. See Upper Colorado River Compact of 1948, Act of Apr. 6, 1949, ch. 48, 63 Stat. 31. As discussed in note 152 supra, the apportionment of water between the lower basin states was accomplished, in effect, by Congress through the Boulder Canyon Project Act of 1928. For additional background, see Frankfurter & Landis, supra note 102, at 702. See also Meyers & Tarlock, supra note 152, at 433.

157. 1939 ASCE Rep. on Interstate Water Problems, *supra* note 151, at 1853 ("There appears to be a disagreement between the authorities concerning the necessity for the compacting states first to obtain the consent of Congress before entering into negotiations.") The better view is that congressional consent to negotiate a compact is not constitutionally necessary. ZIMMERMAN & WENDELL, *supra* note 141, at 18; Muys, *supra* note 82, at 175.

158. See 1939 ASCE REP. ON INTERSTATE WATER PROBLEMS, supra note 151, at 1853. See also ZIMMERMAN & WENDELL, supra note 141, at 18-19 (surmising that the practice of including a federal representative in the negotiation of interstate water compacts was "undoubtedly a result of the peculiar interest of the federal government in navigable waters'" and suggesting that "water compacts negotiated without benefit of federal representation may have difficulty [obtaining the requisite congressional approval] in the national capital") and Muys, supra note 82, at 175 (maintaining that the practice of securing congressional blessing to negotiate a compact helps Congress "to implement the purpose of the compact clause" by placing Congress in a position "to guide the states by specifying any conditions to its ultimate consent and by providing any guidelines it may deem appropriate to facilitate negotiations"). The experiences of Louisiana and Texas in 1980 in their unsuccessful endeavors to secure congressional approval of the Caddo Lake Compact suggests the obvious political advantages of including federal representation from the outset. For background on the formulation of the Caddo Lake Compact between Texas and Louisiana, which was negotiated without any direct federal involvement, see infra notes 535-538 and accompanying text.

159. See 1939 ASCE Rep. on Interstate Water Problems, supra note 151, at 1853.

160. Omnibus Flood Control Act of 1936, ch. 688, § 1, 49 Stat. 1570 (codified at 33 U.S.C. § 701a (1982)).

or streams which lie in two or more such States, for the purpose of providing, in such manner and such proportion as may be agreed upon by such States and approved by the Secretary of War, funds for construction and maintenance, for the payment of damages, and for the purchase of rights-of-way, lands, and easements in connection with such project or operation.¹⁶¹

Several flood control and planning compacts were later negotiated as a result of the federal flood control programs initiated in the 1930s. 162

The need for greater utilization of river basin compacts was suggested by the Final Report of the Committee of the Irrigation Division on Interstate Water Rights of the American Society of Civil Engineers in 1939. ¹⁶³ Endeavoring to make their final report on interstate water problems as inclusive as possible, the ASCE committee surveyed attorneys general and state water engineers and other water officials of the forty-eight states concerning litigation over the use of the waters of interstate streams. ¹⁶⁴ The survey disclosed that more than 80 percent of the states had been involved in litigation between one or more states over interstate waters. ¹⁶⁵

The Federal Water Pollution Control Act passed by the Congress in 1948 also sanctioned the interstate compact as a useful device for coordinating and implementing programs for the improvement of the nation's waters. 166 This act reasserted the interest of Congress in a federal role in compact negotiations. The 1948 act gave congressional consent to two or more states to negotiate and enter into agreements or compacts for the prevention and abatement of water pollution, including the enforcement of the compacting states' respective water quality laws, and the establishment of joint agencies to implement the states' cooperative program. 167 No water pollution control compact or agreement would be legally binding upon any signatory state "unless and until it had been approved by the Congress." 168

The Water Pollution Control Act of 1948 vested federal authority relating to water pollution in the Surgeon General of the Public Health Service and in the Federal Works Administrator.¹⁶⁹ Although the thrust of the legislation was one of cooperation with the states and interstate agencies, the act was an important step toward federal intervention in environmental regulation.¹⁷⁰

Compacts addressing interstate water problems proliferated as the nation reached the middle of the twentieth century. When the impetus began in

^{161. 49} Stat. at 1571-72 (codified at 33 U.S.C. § 701d (1982)).

^{162.} See Muys, supra note 82, at 159 (citing compacts for the Red River of the North, Connecticut River, Merrimack River, Thames River in New England, and Wheeling Creek as examples of the handful of compacts that "emerged from the federal flood control program in the 1930's").

^{163.} See 1939 ASCE Rep. on Interstate Water Problems, supra note 151, at 1822-66.

^{164.} Id. at 1822-23.

^{165.} Id. at 1853-54.

^{166.} Federal Water Pollution Control Act of 1948, ch. 758, 62 Stat. 1155.

^{167.} Id. at § 2(c), 62 Stat. at 1156.

^{168.} Id.

^{169.} Id. at § 2(a), (b), 62 Stat. at 1155.

^{170.} The policy of Congress, as declared by the 1948 Act, was "to recognize, preserve, and

the late 1940s and early 1950s for the negotiation of a compact for the Red River system, existing water compacts could be grouped into three basic categories: water allocation compacts, pollution control compacts, and flood control and planning compacts.¹⁷¹ In addition, the completion and approval of the Upper Colorado River Basin Compact in 1948 had "sown the seeds" for the development of the federal-interstate compact.¹⁷² By the time congressionally authorized negotiations began in the spring of 1956 on the Red River Compact, fifteen water allocation compacts had been completed; five single-purpose pollution control compacts had been approved; and three planning and flood control compacts had been concluded.¹⁷³ Negotiations were also under way on several other water compacts.¹⁷⁴

protect the *primary* responsibilities and rights of the States in controlling water pollution." *Id.* (emphasis added). The Surgeon General was directed by Congress to encourage cooperative activities by the states for the prevention and abatement of pollution, to promote the enactment of uniform state laws relating to water pollution, and to foster the use of water pollution control compacts between the states. *Id.* The role of the federal government under the 1948 act was limited to providing (1) federal technical services to state and interstate agencies and industries and (2) financial aid to state, local, and interstate governmental entities. H.R. Rep. No. 1829, 80th Cong., 2d Sess. 1 (1948), *reprinted in* 1948 U.S. Code Cong. & Ad. News 2215, 2215.

^{171.} See Muys, supra note 82, at 156-59.

^{172.} Id. at 159-60.

^{173.} The interstate water allocation compacts included: Arkansas River Compact of 1948, Colorado-Kansas, Act of May 31, 1949, ch. 155, 63 Stat. 145; Bear River Compact of 1955, Act of Mar. 17, 1958, 72 Stat. 38; Belle Fourche River Compact of 1943, Act of Feb. 26, 1944, ch. 64, 58 Stat. 94; Canadian River Compact of 1950, Act of May 17, 1952, ch. 306, 66 Stat. 74; Colorado River Compact of 1922, Act of Dec. 21, 1928, ch. 42, 45 Stat. 1057, 1064; Costilla Creek Compact of 1944, Act of June 11, 1946, ch. 328, 60 Stat. 246; La Plata River Compact of 1922, Act of Jan. 29, 1925, ch. 110, 43 Stat. 796; Pecos River Compact of 1948, Act of June 9, 1949, ch. 184, 63 Stat. 159; Republican River Compact of 1942, Act of May 26, 1943, ch. 104, 57 Stat. 86; Rio Grande Compact of 1938, Act of May 31, 1939, ch. 155, 53 Stat. 785; Sabine River Compact of 1953, Act of Aug. 10, 1954, ch. 668, 68 Stat. 690, as amended, Act of Mar. 16, 1962, 76 Stat. 34; Snake River Compact of 1949, Act of Mar. 21, 1950, ch. 73, 64 Stat. 29; South Platte River Compact of 1923, Act of Mar. 8, 1926, ch. 46, 44 Stat. 195; Upper Colorado River Basin Compact of 1948, Act of Apr. 6, 1949, ch. 48, 63 Stat. 31; Yellowstone River Compact of 1950, Act of Oct. 30, 1951, ch. 629, 65 Stat. 663. The five single-purpose pollution control compacts were: New England Interstate Water Pollution Control Compact of 1947, Act of July 31, 1947, ch. 407, 61 Stat. 682; New York Harbor (Tri-State) Interstate Sanitation Compact of 1935, Act of Aug. 27, 1935, ch. 779, 49 Stat. 932; Ohio River Valley Water Sanitation Compact of 1940, Act of July 11, 1940, ch. 581, 54 Stat. 752; Potomac River Basin Compact of 1939, Act of July 11, 1940, ch. 577, 54 Stat. 748, as amended, Act of Sept. 25, 1970, Pub. L. No. 91-407, 84 Stat. 856 (1970); Tennessee River Basin Water Pollution Control Compact of 1955, Act of Aug. 23, 1958, Pub. L. No. 85-734, 72 Stat. 823. The flood control compacts were: Connecticut River Flood Control Compact of 1951, Act of June 6, 1953, ch. 103, 67 Stat. 45; Great Lakes Basin Compact of 1955, Act of July 24, 1968, Pub. L. No. 90-419, 82 Stat. 414; Red River of the North Compact of 1937, Act of Apr. 2, 1938, ch. 59, 52 Stat. 150. A compact between Massachusetts and New Hampshire with respect to flood control on the Merrimack River was ratified by Massachusetts and New Hampshire in 1937 but failed to receive the consent of Congress. See Massachusetts Act of May 29, 1937, 1937 Mass. Acts 476; New Hampshire Act of June 20, 1937, 1937 N.H. Laws 243; S.J. Res. 178, 75th Cong., 1st Sess. (1937); H.R.J. Res. 494, 75th Cong., 1st Sess. (1937); 81 Cong. Rec. 8393, 9669 (1937).

^{174.} Congressional consent to negotiate had been given for the following compacts, which

III. The Supreme Court's Role in Interstate Water Problems The Doctrine of Equitable Apportionment

There are two approaches for handling problems involving the use of the water of an interstate stream such as the Red River: the "cooperative" approach, illustrated by the interstate compact, and the "contentious" approach, exemplified by interstate litigation.¹⁷⁵ Part II traced the compact approach from its colonial antecedents through the evolution of interstate water compacts. Part III focuses upon the "contentious" approach.

The "contentious" approach entails the settlement of controversies either by an original action brought between the states in the Supreme Court or through Supreme Court review of lower federal court and state supreme court decisions in cases involving individuals or corporate entities. 176

Although the Supreme Court has long indicated that "original jurisdiction should be invoked sparingly," it was well established by the middle of the twentieth century that one state could invoke the original jurisdiction of the Supreme Court in an action against another state to divide equitably the water of an interstate stream, to curtail the pollution of common waterways, or to stop a neighboring state from constructing and maintaining an artificial drainage system flooding valuable property in the other.

In most of the original jurisdiction actions involving water resources, the basis of the standing of the complainant state is the doctrine of *parens* patriae.¹⁷⁸ Under this doctrine, a state can seek injunctive relief to protect the general comfort, health, or property rights of its inhabitants threatened by the proposed or continued action of another state.¹⁷⁹ That a state has

were later completed and approved: Arkansas River Basin Compact, Arkansas-Oklahoma, Act of June 28, 1955, ch. 192, 69 Stat. 184 (consent to negotiate), approved by Act of Nov. 13, 1973, Pub. L. No. 93-152, 87 Stat. 569; Arkansas River Basin Compact, Kansas-Oklahoma, Act of Aug. 11, 1955, ch. 778, 69 Stat. 631 (consent to negotiate), approved by Act of Nov. 7, 1966, Pub. L. No. 89-789, 80 Stat. 1409; Klamath River Basin Compact, Act of Aug. 9, 1955, ch. 676, 69 Stat. 613 (consent to negotiate), approved by Act of Aug. 30, 1957, Pub. L. No. 85-222, 71 Stat. 497; Merrimack River Flood Control Compact, Pub. Res. of June 8, 1936, 49 Stat. 1490, and Act of June 22, 1936, ch. 688, § 4, 49 Stat. 1570, 1571-72 (consent to negotiate), approved by Act of Apr. 23, 1957, Pub. L. No. 85-23, 71 Stat. 18; Thames River Flood Control Compact, Pub. Res. of June 8, 1936, 49 Stat. 1490, approved by Act of July 18, 1958, Pub. L. No. 85-526, 72 Stat. 364.

^{175.} DOCUMENTS ON THE USE AND CONTROL OF THE WATERS OF INTERSTATE AND INTERNAT'L STREAMS, H.R. DOC. No. 319, 90th Cong., 2d Sess. vi (T. Witmer ed., 2d ed. 1968) [hereinafter cited as WITMER, H.R. DOC. No. 319]. As the history of the Boulder Canyon Project Act of 1928 suggests, a third method for settling interstate disputes over an interstate stream is by congressional apportionment. See *supra* note 152 and accompanying text. The apportionment effectuated by the Boulder Canyon Project Act is the only example of the use of the "congressional apportionment" method to date. See MEYERS & TARLOCK, supra note 152, at 432. See also Ladd, supra note 152, at 268-69.

^{176.} See infra text accompanying notes 267-322.

^{177.} Utah v. United States, 394 U.S. 89, 95 (1969).

^{178.} See, e.g., North Dakota v. Minnesota, 263 U.S. 365, 375-76 (1923). See also 3 HUTCHINS, NINETEEN WESTERN STATES, supra note 54, at 66-75; Ladd, supra note 152, at 269.

^{179.} North Dakota v. Minnesota, 263 U.S. 365, 375-76 (1923).

no pecuniary interest in the controversy does not defeat the original jurisdiction of the Court. 180 Though a state can sue to protect its quasi-sovereign interests in the use of the natural resources within its jurisdiction, the eleventh amendment precludes a state from obtaining a decree for monetary damages predicated upon the enforcement of individual claims of its citizens against another state. 181

Winning a Supreme Court case involving an interstate water dispute is far more difficult than taking the case to the Court. The standards imposed by the Court for obtaining relief on the merits in an interstate water controversy are very difficult to meet. Before the Court will exercise "its extraordinary power under the Constitution to control the conduct of one State" at the behest of another, the threatened invasion of rights or the matter presented to the Court must be of "serious magnitude" and established by clear and convincing evidence. Is In addition, "the principle to be applied should be one which the Court is prepared deliberately to maintain against all considerations on the other side."

When compact negotiations over the apportionment of the water of the North Fork of the Red River stalemated in 1970, the litigation alternative was considered and rejected by the compact negotiators. Though the reasons for the decision to adhere to the cooperative approach are not reflected in the agency files, a number of factors may be offered to justify rejection of the litigious alternative.

The record of states in actions invoking the original jurisdiction of the Court to hear an interstate water controversy offers little encouragement to the pragmatist who seeks an expeditious, inexpensive, effective, and permanent solution to the interstate water problems of the state he represents. For example, between 1789 and 1956, when compact negotiations formally began on the Red River Compact, only three actions for the equitable apportionment of interstate waterways brought before the Court actually resulted in decrees dividing the waters. During the same time period, original

^{180.} Id.

^{181.} Id.

^{182.} Washington v. Oregon, 297 U.S. 517, 522, 524 (1936); Connecticut v. Massachusetts, 282 U.S. 660, 669 (1931); North Dakota v. Minnesota, 263 U.S. 365, 374 (1923); New York v. New Jersey, 256 U.S. 296, 309 (1921); Missouri v. Illinois, 200 U.S. 496, 521 (1906). Recently Justice O'Connor elaborated on the standard by which the Supreme Court reviews the proof in an action for equitable apportionment of an interstate stream. See Colorado v. New Mexico, 104 S.Ct. 2433, 2438-42, reh'g denied, 105 S.Ct. 19 (1984). Justice O'Connor said that a state can carry its burden of proof "only with specific evidence about how existing uses might be improved, or with clear evidence that a project is far less efficient than most other projects." Id. at 2440 (emphasis added). Justice Stevens sharply disagreed with the majority opinion's treatment of two questions of law in the case, as well as with its evaluation of the facts. Id. at 2443-50 (Stevens, J., dissenting).

^{183.} Missouri v. Illinois, 200 U.S. 496, 521 (1906).

^{184.} See infra notes 506-530 and accompanying text.

^{185.} Nebraska v. Wyoming, 325 U.S. 589 (1945); New Jersey v. New York, 283 U.S. 336 (1931); Wyoming v. Colorado, 259 U.S. 419 (1922). See also Ladd, supra note 152, at 270 & n.13.

actions by one state to enjoin another state from polluting shared waters were seldom brought. On the few occasions prior to 1956 when states had pursued legal actions to enjoin an alleged public nuisance arising from the degradation of water or the flooding of property, the complainant states' efforts were devoid of success on the merits.

Second, when a state seeking relief by way of an original action against another state is the lower downstream state on an interstate waterway, the effect of the Court's denial of relief usually benefits the upstream state. ¹⁸⁶ In addition to the expense of the litigation, the downstream state loses valuable time that could have been devoted to the negotiation of a cooperative solution to the interstate problem. Finally, even if the complainant state obtains the sought-after relief, frequently the decision by the Court is only a prelude to future litigation seeking to clarify the application of the Court's determinations to changing conditions on the river.

Before undertaking negotiations on the apportionment provisions of the Red River Compact, the negotiating commissioners reviewed a summary of the basic principles applicable to interstate water controversies enunciated by the Supreme Court during the first half of the twentieth century.¹⁸⁷ Primary among these principles is the doctrine of "equitable apportionment," ¹¹⁸⁸

186. See MEYERS & TARLOCK, supra note 152, at 401. See also Texas v. New Mexico, 462 U.S. 554 (1983) (recognizing that the continued impasse between New Mexico and Texas over the administration of the Pecos River Compact favored the upstream state).

187. See Progress Report of RRCNC Legal Advisory Comm., at 1 (Feb. 20-21, 1957) appended to Minutes of 5th Meeting of RRCNC (Feb. 20-21, 1957). At the fifth meeting, the legal advisers presented a synopsis of Supreme Court decisions since 1939 addressing interstate water problems and directed the attention of the negotiators to the 1939 ASCE Report on Interstate Water Problems. Id.

188. See infra notes 189-215 and accompanying text. Equitable apportionmet was initially defined by the Court as the doctrine of federal common law that governs disputes between states concerning their rights to use the water of an interstate stream. See Connecticut v. Massachusetts, 282 U.S. 660, 670-71 (1931). Accord, Colorado v. New Mexico, 459 U.S. 176, 183 (1982). However, the constitutional principle of the equal footing of the states does not imply an equal division of the water between two competing states. Kansas v. Colorado, 206 U.S. 46, 98 (1907). Accord, Colorado v. New Mexico, 459 U.S. 176, 191 (1982) (Burger, C.J., concurring); Wyoming v. Colorado, 259 U.S. 419, 465 (1923). Instead, the "measure of the reciprocal rights and obligations of the States [is] declared to be an equitable apportionment of the benefits of the river." Colorado v. Kansas, 320 U.S. 383, 385 (1943). More recently, the doctrine of equitable apportionment was recognized by the Court as "an appropriate mechanism for resolving allocative disputes" between states over the natural resource of an anadromous fish. Idaho ex rel. Evans v. Oregon, 462 U.S. 1017, 1024, 1027, 1029 (1983). The Court said that "[m]uch as in a water dispute, a State that overfishes a run downstream deprives an upstream State of the fish it otherwise would receive." Id. Since a dispute over the water flowing through the Columbia-Snake River system would be resolved by applying the doctrine of equitable apportionment, the Court saw no reason "to accord different treatment to a controversy over a similar natural resource of that system." Id. In extending the doctrine of equitable apportionment to a natural resource such as fish, the Court observed that the doctrine is rooted in "the same principle that animates many of the Court's Commerce Clause cases: a State may not preserve solely for its own inhabitants natural resources located within its borders." Id. at 1025.

which was first applied in the "federal general common law" in Kansas v. Colorado. 189

In 1901 the state of Kansas filed an action in the Supreme Court against Colorado over rights to the use of the water of the Arkansas River.¹⁹⁰ Under the riparian rights doctrine, Kansas asserted the right to the entire natural flow of the river,¹⁹¹ while alleging that its citizens and institutions had been injured by the depletion in the flow of the river because of extensive use of its waters for irrigation in Colorado.¹⁹² Colorado, a prior appropriation jurisdiction, claimed entitlement "as a sovereign and independent State" to the consumptive use for beneficial purposes of all water arising within its boundaries.¹⁹³

The Court concluded that no state has the exclusive right to the use of all the water of an interstate stream within its boundaries.¹⁹⁴ Even though the diminution in flow was somewhat detrimental to southwestern Kansas, "equality of right and equity between the two States forbids any interference with the present withdrawal of water in Colorado for purposes of irrigation." Nevertheless, the Court admonished that increased depletion in the future by Colorado could result in Kansas "justly say[ing] there is no longer an equitable division of benefits," thus permitting Kansas to "rightfully call for relief." ¹⁹⁶

- 189. Kansas v. Colorado, 206 U.S. 46, 98, 104-05, 117 (1907). Accord Colorado v. New Mexico, 459 U.S. 176, 186 (1982). See generally 2 Clark, supra note 44, at § 132; Research Project, Equitable Apportionment and the Supreme Court: What's So Equitable About Apportionment?, 7 Hamline L. Rev. 405, 410 (1984) (analyzing Kansas v. Colorado).
- 190. Kansas v. Colorado, 185 U.S. 125, 131 (1902) (overruling Colorado's demurrer to the bill of complaint).
- 191. *Id. See also* Kansas v. Colorado, 206 U.S. 46, 57-59 (1907). The Court determined that Kansas followed a modified version of the riparian rights doctrine, recognizing some elements of prior appropriation such as the right of appropriating stream water for irrigation purposes. 206 U.S. at 104-05.
 - 192. Kansas v. Colorado, 185 U.S. 125, 132-35, 142, 145-46 (1902); 206 U.S. 46, 49-52 (1907).
 - 193. Kansas v. Colorado, 185 U.S. 125, 143 (1902).
- 194. Kansas v. Colorado, 206 U.S. 46, 98, 117 (1907). Accord Colorado v. Kansas, 320 U.S. 383, 385 (1943); Wyoming v. Colorado, 259 U.S. 419, 466 (1923).
- 195. Kansas v. Colorado, 206 U.S. 46, 113-14 (1907). In declining to grant relief to Kansas, the Court balanced the harms and the benefits to both states and concluded that the great benefits to Colorado through the reclamation of thousands of acres of semiarid land into fertile fields outweighed the detriment to Kansas. *Id.* at 117. The Court examined 8,559 typewritten pages of testimony from 347 witnesses with 122 exhibits concerning, *inter alia*, the specific relationship of the established economies in the two states to the use of water in the river. *Id.* at 105-14. The Court has used a similar balancing process in other equitable apportionment decisions. *See, e.g.*, Colorado v. New Mexico, 104 S.Ct. 2433, 2437, 2442, *reh'g denied*, 105 S.Ct. 19 (1984); 459 U.S. 176, 186-88 (1982); Nebraska v. Wyoming, 325 U.S. 589, 618 (1945); Washington v. Oregon, 297 U.S. 517, 522-24 (1936); New Jersey v. New York, 283 U.S. 336, 343-45 (1931); Connecticut v. Massachusetts, 282 U.S. 660, 673-74 (1931). However, the Court has disagreed over the factors to be considered in the balancing of equities. *Compare, e.g.*, Colorado v. New Mexico, 459 U.S. 176, 188 (1982) (Marshall, J., speaking for the Court) with 459 U.S. at 191-96 (O'Connor, J., concurring). *Cf.* Idaho *ex rel.* Evans v. Oregon, 462 U.S. 1017, 1027-29 (1983).

196. Kansas v. Colorado, 206 U.S. 46, 117 (1907). Thirty-six years later, Kansas unsuc-

The principle of equitable apportionment of interstate waters was reaffirmed in *Wyoming v. Colorado*,¹⁹⁷ a controversy over the use of the water of the Laramie River. Since the state constitutions of both Colorado and Wyoming recognized the doctrine of prior appropriation, the Court used this doctrine as the *basis* of equitable apportionment.¹⁹⁸ Watershed transbasin diversions were also determined by the Court to be permissible when the practice is recognized by the law of both states.¹⁹⁹ However, each of the competing states has a duty to exercise water rights reasonably and "in a manner calculated to conserve the common supply."²⁰⁰

The Court decided in 1945 that a literal application of the priority rule was not required in resolving a dispute over the allocation of the water of the North Platte River among the states of Colorado, Wyoming, and Nebraska and the United States.²⁰¹ All three states involved in this litigation

cessfully attempted to show that Colorado had increased its consumptive use of the water of the Arkansas River by an annual average of between 300,000 and 400,000 acre-feet since the 1907 Supreme Court decision and that the alleged increase had "worked a serious detriment to the substantial interests of Kansas." Colorado v. Kansas, 320 U.S. 383, 395, 400 (1943) (holding that Kansas' allegations in this connection were not sustained by the evidence). As part of the balancing process, Kansas asked the Court to speculate on how much land would have been irrigated under a decision favorable to Kansas. *Id.* However, the Court was not persuaded by Kansas' efforts to demonstrate as part of its "damages" that 414,000 acres of land that were "susceptible of successful irrigation" would have been irrigated had Colorado not deprived Kansas of the water. *Id.* at 399.

197. 259 U.S. 419 (1922) (legal action by Wyoming seeking to prevent a *proposed* diversion by Colorado from the Laramie River).

198. Id. at 470. Priority of appropriation was also adopted by the Court in 1936 as the basis of division of water in a controversy between Washington and Oregon over the waters of the Walla Walla River and its tributaries. Washington v. Oregon, 297 U.S. 517, 526 (1936). However, in Washington v. Oregon, both states stipulated that "for purposes of this case the individual rights of the respective landowners and water owners concerned in both states are governed by the doctrine of prior appropriation." 297 U.S. at 521 (citing Wyoming v. Colorado, 259 U.S. 419, 471 (1922)).

199. Wyoming v. Colorado, 298 U.S. 573, 584 (1936); 259 U.S. 419, 466 (1922).

200. 259 U.S. 419, 484 (1922) (noting that both Wyoming and Colorado recognize that "conservation within practicable limits is essential" to prevent needless waste and to secure the maximum feasible use of water). Accord, Nebraska v. Wyoming, 325 U.S. 589, 618 (1945); Washington v. Oregon, 297 U.S. 517, 527 (1936). In Colorado v. New Mexico, the Court again concluded that it was entirely appropriate to consider the extent to which reasonable conservation measures by existing water users in the downstream state might offset the diversion proposed by the complainant upstream state and thereby minimize any injury to downstream users. Colorado v. New Mexico, 459 U.S. 176, 186 (1982) (remanding the case to the Special Master for additional findings).

Two years later, Justice O'Connor, writing for the Court in the same case, said that the extent to which reasonable conservation measures can adequately compensate for the reduction in water supply due to the proposed diversion and the extent to which the benefits from the diversion will outweigh the harms to existing users are relevant factors, the existence of which the complainant must show by clear and convincing evidence. Colorado v. New Mexico, 104 S.Ct. 2433, 2442 (1984). However, Justice O'Connor stressed that the evidentiary burden of the complainant "cannot be met with generalizations about unidentified conservation measures and unstudied speculation about future uses." *Id.* (dismissing Colorado's case for failure to carry its burden of proof on these factors). Justice Stevens sharply disagreed with the Court's

followed similar doctrines of prior appropriation.²⁰² In the view of the Court, superiority of right based upon priority of appropriation served as "a guiding principle" that might have to be tempered if its application would cause undue hardship.²⁰³ In apportioning the water of the North Platte River, the Court sought to protect the existing economies of the region by examining several factors, including

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 uses on downstream areas, [and] the damage to upstream areas as compared to the benefits to downstream areas if a limitation is imposed on the former. . . . ²⁰⁴

evaluation of the record in the case, maintaining that New Mexico should not be permitted to use its own "manifestly lax, indeed, virtually non-existent" records to establish its claim that "no water can be conserved." *Id.* at 2447-48 (Stevens, J., dissenting).

201. Nebraska v. Wyoming, 325 U.S. 589, 618 (1945). The dependable natural flow of the North Platte River during the irrigation season had long been overappropriated. *Id.* at 610. Nebraska initiated legal action against Wyoming in 1934 over the use of water of the river. Nebraska v. Wyoming, 293 U.S. 523 (1934). Colorado was impleaded as a defendant. 296 U.S. 553 (1935). Finally, the United States was granted leave to intervene. 304 U.S. 545 (1937).

202. Colorado and Wyoming had adopted the rule of prior appropriation in their respective state constitutions. Nebraska v. Wyoming, 325 U.S. 589, 599 (1945). On the other hand, Nebraska originally adhered to the common law doctrine of riparian rights. *Id.* In response to the demands for water for irrigation in the settlement of the arid portions of Nebraska, the state legislature later adopted the appropriation doctrine while continuing to recognize riparian rights that had previously vested. *Id.* The appropriation principle was later recognized in the Nebraska constitution of 1920. *Id.* Water rights based upon priority of use dominated in the regions of Nebraska concerned with the utilization of the water of the North Platte River. *Id.* at 600.

203. Id. at 618.

204. Id. The Court considered these factors as merely illustrative of "the nature of the problem of apportionment and the delicate adjustment of interests" which must be considered in making an informed judgment. Id. Accord, Colorado v. New Mexico, 459 U.S. 176, 183 (1982). In a more contemporary controversy involving the apportionment of water of an interstate river between a state seeking to make a future use of the water and a state in which present water users had developed an existing economy dependent upon the river system, the Court concluded that one factor that should be weighed is the extent to which reasonable conservation measures by existing appropriators in one state might offset any injury to themselves from a proposed diversion in the other state. Colorado v. New Mexico, 459 U.S. 176, 186, 188, 190 (1982). Although concurring in the decision to remand the case to the Special Master, Justice O'Connor criticized Justice Marshall's opinion for the Court, 459 U.S. at 193. Justice O'Connor warned that the Court has "gone dangerously far toward accepting [the] suggestion" proffered by Colorado that the Court assess " 'waste' and 'inefficiency' by a new yardstick-i.e., not by comparing the economic gain to [an existing water user] with the costs of achieving greater efficiency, but by comparing the 'inefficiency' of New Mexico's uses with the relative benefits to Colorado of a new use." Id. at 192-93. Both Justice Marshall and Justice O'Connor recognized the speculative and remote nature of the potential benefits from a proposed diversion. Id. at 187, 193. However, Justice O'Connor asserted that the Court, in a controversy between two prior appropriation states involving waters of a fully appropriated river, had "never undertaken [the] balancing task outside the concrete context of either two

Although the Court used the appropriation doctrine as a "guiding principle" in dividing the waters of an interstate stream in litigation between states that applied similar appropriation doctrines, the Court refused to use the riparian doctrine as a "dependable guide or just basis for the decision of controversies" between states that had mutually adopted the common law of riparian rights.²⁰⁵ In an action brought by Connecticut to enjoin Massachusetts from diverting water from the watershed of the Connecticut River to the Boston metropolitan area for municipal water supply, the Court said that disputes involving interstate waterways are to be settled on the basis of "equality of right." This does not require an equal division of the water of an interstate stream among the states through which it flows.²⁰⁷ Instead, the Court will determine what is an equitable apportionment of the use of the water based upon "the principles of right and equity" and "a consideration of the pertinent laws of the contending States and all other relevant facts."208 The burden on the state seeking injunctive relief is much greater than that generally placed upon private parties when similar equitable relief is sought.²⁰⁹ Connecticut's task was particularly difficult because the proposed diversion was to satisfy a demonstrable need for potable waterthe highest use of water.210

The Supreme Court again refused to apply the common law rules of riparian rights in an action brought by New Jersey to enjoin New York from diverting water from certain tributaries and the watershed of the Delaware River to increase New York City's water supply.²¹¹ Instead, the Court applied the clearly established doctrine of equitable apportionment.²¹² The Court reaffirmed that "[t]he removal of water to a different watershed obviously must be allowed at times unless states are to be deprived of the most bene-

established economies in the competing States dependent upon the water to be apportioned or of a proposed diversion in one State to satisfy a demonstrable need for a potable supply of drinking water." *Id.* at 193 (footnotes deleted). Justice O'Connor maintained that although the Court must not "blind itself to *compelling* evidence of waste by one State, . . . the Court should be moved to exercise its original jurisdiction to alter the status quo between States only where there is *clear and convincing evidence* . . . that one State's use is unreasonably wasteful." *Id.* at 195 (emphasis in original; citation deleted).

^{205.} New Jersey v. New York, 283 U.S. 336, 342-43 (1931); Connecticut v. Massachusetts, 282 U.S. 660, 669-70 (1931).

^{206.} Connecticut v. Massachusetts, 282 U.S. 660, 670 (1931).

^{207.} Id.

^{208.} Id. at 670-71.

^{209.} Id. at 669; North Dakota v. Minnesota, 263 U.S. 365, 374 (1923). The Court was reticent to exert its power in this context "unless the threatened invasion of rights is of serious magnitude and established by clear and convincing evidence." Id. Accord, Washington v. Oregon, 297 U.S. 517, 524 (1936).

^{210.} Connecticut v. Massachusetts, 282 U.S. 660, 673 (1931).

^{211.} New Jersey v. New York, 283 U.S. 336, 342-43 (1931). When this decision was rendered, the doctrine of equitable apportionment had been consistently applied by the Court for more than a quarter of a century. See id.

^{212.} Id.

ficial use on formal grounds."²¹³ Justice Oliver Wendell Holmes, Jr., also wrote:

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 the lower States could not be tolerated. And 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 be. The different traditions and practices in different parts of the country may lead to varying results, but the effort always is to secure an equitable apportionment without quibbling over formulas.²¹⁴

In the final analysis, the development by the Court of the doctrine of equitable apportionment enabled the Court to transcend some of the inherent problems of traditional state water laws, such as the inability of the appropriation system to be responsive to the changing balances among uses and users in a river basin and the assumption by the riparian approach that water surplus is the normal condition.²¹⁵

The Federal Common Law of Public Nuisance: Interstate Water Pollution

The decisions rendered by the Supreme Court during the years preceding the commencement of negotiations on the Red River Compact spoke in terms

- 213. Id. The 1931 decision did not settle the dispute among the basin states over the use of the water of the Delaware River system. See New Jersey v. New York, 347 U.S. 995 (1954); 345 U.S. 369 (1953); 283 U.S. 805 (1931). Ultimately, the basin states and the federal government negotiated and approved the Delaware River Basin Compact, an innovative federal-interstate compact to which the United States was bound as a signatory party. See Muys, supra note 82, at 160-63. See generally R. Martin, River Basin Administration and the Delaware (1960). The Delaware River Basin Commission later undertook a massive pollution control program for the highly polluted Delaware estuary; this pollution abatement program was the focus of a scholarly interdisciplinary analysis of the legal, economic, political, and scientific bases of environmental policy in America. See B. Ackerman, S. Rose-Ackerman, J. Sawyer, Jr., & D. Henderson, The Uncertain Search for Environmental Quality (1974).
 - 214. New Jersey v. New York, 283 U.S. 336, 342-43 (1931).
- 215. Wendell & Schwan, National Water Commission, Intergovernmental Relations in Water Resources Activities 515 (NTIS No. PB 210 358, 1972). The chronological approach of the appropriation system precludes its adaptation to the changing needs in a river basin. *Id.* The riparian system, in turn, has been criticized for inefficiency, lack of meaningful enforcement, and hostility to development. *See* C. Meyers, A Historical and Functional Analysis of the Appropriation System 38-39 (1971). Uncertainty is inherent under the reasonable use doctrine of riparian rights since the reasonableness of a particular use is subject to reexamination in view of new uses later initiated by other riparian landowners along the waterway.

of a federal common law of public nuisance when one state sought to enjoin another from polluting shared waters or from inundating the property of the other through the operation of an artificial drainage system. The federal common law enunciated by the Court during this period theoretically assured each state the right to be free from unreasonable interferences emanating from another state or its citizens.²¹⁶

The first significant legal action involving interstate water pollution was filed in the Supreme Court shortly after the beginning of the twentieth century.²¹⁷ In January of 1900, Missouri filed a bill in the Court to enjoin Illinois and the Sanitary District of Chicago, an Illinois corporation, from discharging sewage through an artificial channel connecting Lake Michigan with the Desplaines River, a tributary of the Illinois River, which in turn empties into the Mississippi River above Saint Louis.²¹⁸ Missouri claimed that sewage from the Chicago area polluted the water of the Mississippi River, rendering it unfit to drink and causing a higher incidence of typhoid fever and contagious diseases.²¹⁹ Illinois and the Sanitary District of Chicago countered by arguing that if such conditions existed in the Saint Louis area, they were caused by the discharge of sewage into the Mississippi by municipal subdivisions of Missouri and by other sources for which Illinois was not responsible.²²⁰

The Court, in an opinion written by Justice Holmes, determined that it had jurisdiction and authority to deal with a question of this nature between two states, which, if it arose between two independent sovereignties, might lead to war.²²¹ The Court observed that "a nuisance might be created by a State upon a navigable river like the Danube, which would amount to a casus belli for a [downstream] State, unless removed."²²² In the United States, when the states by their Union foreclosed the use of force to abate nuisances emanating from other states, they did not thereby agree to submit to whatever environmental harms might be inflicted upon them by neighboring states.²²³ Instead, they retained the right to make reasonable demands on the basis of their quasi-sovereign interests by an original action in the Supreme Court.²²⁴

Ausness, Water Rights Legislation in the East: A Program for Reform, 24 Wm. & MARY L. Rev. 547, 550 (1983).

^{216.} See, e.g., North Dakota v. Minnesota, 263 U.S. 365, 373-74 (1923); New York v. New Jersey, 256 U.S. 296, 301-02, 313 (1921); Georgia v. Tennessee Copper Co., 206 U.S. 230, 237-38 (1907); Missouri v. Illinois, 200 U.S. 496, 518, 520-21 (1906).

^{217.} Missouri v. Illinois, 180 U.S. 208 (1900).

^{218.} Id.

^{219.} Missouri v. Illinois, 200 U.S. 496, 517, 522-24 (1906).

^{220.} Id. at 525-26.

^{221.} Id. at 518.

^{222.} Id. at 520-21.

^{223.} Id. Accord, Georgia v. Tennessee Copper Co., 206 U.S. 230, 237-39 (1907) (original action filed by Georgia against corporation emitting noxious gases that were destroying forests, orchards, and crops in Georgia).

^{224.} Missouri v. Illinois, 200 U.S. 496, 520-21 (1906). Accord, Georgia v. Tennessee Copper Co., 206 U.S. 230, 237-39 (1907).

The Court approached the case of *Missouri v. Illinois* with great caution. Missouri was required to "clearly and fully" prove its allegations.²²⁵ The Court said that adjudication of the conflicting interests of Missouri and Illinois did not rest upon the law of a particular state. Instead, the Court would decide controversies of this nature according to "principles it must have power to declare."²²⁶ Although Missouri proved an increase in deaths from typhoid fever in Saint Louis, the data demonstrating the increase did not necessarily support Missouri's case.²²⁷ Illinois and the Sanitary District maintained that the water of the Missouri River, which also entered the Mississippi River above Saint Louis, was worse than that of the Illinois River and contributed a much larger proportion of the intake.²²⁸ In addition, contradictory evidence was introduced concerning the distance along a waterway that typhoid bacilli could survive. Ultimately, the Court decided that Missouri's case against Illinois and the Sanitary District fell far below the allegations, and the bill was dismissed without prejudice.²²⁹

Two years after the Supreme Court rendered its decision in *Missouri v. Illinois*, the state of New York brought an original action against New Jersey and the Passaic Valley Sewerage Commissioners to enjoin the execution of a project to convey the sewage of Passaic Valley through a sewage system which, in turn, discharged into New York Harbor.²³⁰ New York alleged that the sewage would be carried by the currents and tides into the Hudson and East rivers and would be deposited on the wharves and docks of New York City and on the bottom and shores of Upper New York Bay.²³¹ In addition, New York alleged that even though treated, the sewage would poison the fish and oysters in the waters, would damage vessels using the harbor, and would offend and injure persons living near the bay or using it for bathing or other purposes.²³²

Applying the standards enunciated in *Missouri v. Illinois*, the Court concluded that the evidence failed to show with requisite certainty that the additional sewage would create a public nuisance by creating offensive odors or unsightly surface deposits or by seriously contributing to existing pollution in the bay.²³³ Accordingly, the Court denied the request for injunctive relief and dismissed the complaint.

In resolving interstate water pollution questions according to the "principles it must have power to declare," the Court never articulated a doctrine comparable to the flexible, yet somewhat amorphous, doctrine of equitable apportionment fashioned by the Court in the interstate water allocation dis-

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225. Missouri v. Illinois, 200 U.S. 496, 521 (1906).
226. Id. at 519.
227. Id. at 522-23.
228. Id. at 525-26.
229. Id. at 526.
230. New York v. New Jersey, 256 U.S. 296, 296-98, 302-03 (1921).
231. Id. at 302-03.
232. Id.
233. Id. at 309-14.
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putes.²³⁴ Because of the correlation between water quality and water quantity in the uses to which contaminated water may be applied,²³⁵ the Court's denial of relief in *Missouri v. Illinois* and *New York v. New Jersey* allowed the degradation of interstate waters to continue and, in effect, was a water allocation decision. Even though some state supreme courts had long utilized conventional state water law doctrines to limit water pollution,²³⁶ the Court never considered expanding the equitable apportionment doctrine to address interstate water quality problems.

234. A number of scholars have criticized the doctrine of equitable apportionment. See, e.g., MEYERS & TARLOCK, supra note 152, at 400 (commenting that the doctrine consists of a "vague set of standards that are impossible to quantify"); R. HARRIS, W. JEFFERY & B. STEWART, JR., STANFORD ENVIRONMENTAL LAW SOCIETY, INTERSTATE ENVIRONMENTAL PROBLEMS: A GUIDE TO WATER POLLUTION AND WATER SCARCITY 111 (1974) [hereinafter cited as Interstate Environmental Problems] (criticizing the doctrine as "a grandiose term which means very little" since the Supreme Court "has no real standards for decision in this important area").

235. Legal scholars, ecologists, and environmental scientists have recognized that "more than occasionally" water quality and water quantity controversies "are one and the same." See, e.g., Rodgers, supra note 38, at 164-65 & n.10 (pointing out that "many pollution control technologies are consumptive—e.g., evaporation by a senior irrigation appropriator in order to reduce salinity"). More recently, the relationship between toxic chemicals and industrial wastes to the utilization of water has been explored by a number of authors. See, e.g., L. Regenstein, America the Poisoned 168 (1982) [hereinafter cited as Regenstein] quoting a 1980 Library of Congress report, which concludes that "damage to natural resources in the United States by toxic chemicals is substantial and enduring"). See also J. Fallows, The Water Lords 20-21 (1971) [hereinafter cited as Fallows] (discussing industrial pollution and environmental problems in the South as part of a study conducted for the Center for the Study of Responsive Law).

236. For pollution cases alleging an interference with riparian rights, see, e.g., Sandusky Portland Cement Co. v. Dixon Pure Ice Co., 221 F. 200, 204 (7th Cir.), cert. denied, 238 U.S. 630 (1915) (thermal pollution); Meriwether Sand & Gravel Co. v. Arkansas ex rel. Att'y Gen., 181 Ark. 216, 225-27, 26 S.W.2d 57, 61 (1930); Borough of Westville v. Whitney Home Builders, Inc., 40 N.J. Super. 62, 79-83, 122 A.2d 233, 242-43, 245 (1956). For cases discussing the application of appropriation principles in addressing water quality problems, see, e.g., Town of Antioch v. Williams Irrig. Dist., 188 Cal. 451, 456-58, 205 P. 688, 691 (1922); Phoenix Water Co. v. Fletcher, 23 Cal. 481, 486 (1863); Suffolk Gold Mining & Milling Co. v. San Miguel Consol. Mining & Milling Co., 9 Colo. App. 407, 418-20, 48 P. 828, 832-33 (1897), app. dismissed 24 Colo. 468, 471, 52 P. 1027, 1028 (1898). Theoretically, when a senior appropriator impairs water quality to the detriment of a junior appropriator, the junior appropriator has no remedy against the polluter since the senior appropriator could have taken all the water. Rodgers, supra note 38, at 170. However, a Colorado court has suggested that a senior appropriator who acquired title to only part (less than one-thirtieth) of the water of the stream has a duty to preserve water quality if he can do so by reasonable means. Suffolk Gold Mining and Milling Co., 9 Colo. App. at 418-20, 48 P. at 832-33, app. dismissed, 24 Colo. 468, 52 P. 1027 (1898). The Kansas Supreme Court has fashioned a "new tort" of "pollution," which is "indistinguishable from nuisance." See Rodgers, supra, at 165 (citing Rusch v. Phillips Pet. Co., 163 Kan. 11, 180 P.2d 270 (1947)). The Restatement (Second) of Torts, drafted under the guidance of Frank J. Trelease, a renowned water law expert, separates water pollution cases from the common law of riparian rights. RODGERS, supra, at 164. It provides that the "pollution of water by a riparian proprietor which creates a nuisance by causing harm to another person's interest in land or water is not the exercise of a riparian right." RESTATEMENT (SECOND) OF TORTS § 849(2) (Tent. Draft No. 17, 1971). Therefore, the doctrine of riparian rights may not be utilized in analyzing water pollution controversies between riparian owners. RODGERS, supra, Perhaps the inherent conflicts between the appropriation and riparian approaches of the states left the Court with little choice but to develop the equitable apportionment doctrine in water quantity disputes between riparian and appropriation jurisdictions. The widespread acceptance of the public nuisance theory in the American legal system made it easy for the Court to use traditional tort ideas,²³⁷ rather than to chart a new course in interstate water quality controversies. Since the litigants in the Mississippi River system and New York Harbor cases were all riparian rights jurisdictions, the Court could as easily have applied the reasonableness-of-use concept in the context of riparian rights, i.e., pollution of water is an unreasonable use of water that interferes with riparian rights.²³⁸ However, the interstate water pollution decisions during the first half of the twentieth century suggest the reticence of the Court "to become arbiter of environmental claims under its original jurisdiction."²³⁹

Unfortunately, the Court's excessive reliance upon traditional tort concepts in addressing interstate water pollution problems did little to discourage the use of "the great rivers" as the "sewers" of America. Even though state and local boards of health had been established since the 1870s and 1880s to enforce water purification requirements and to abate pollution, typhoid fever and other waterborne diseases were common in the United States. 240 State and local health laws were enforced unevenly and water supply purification bond issues were defeated by voters, sometimes even during outbreaks of typhoid fever. 241 Except during the Great Depression of the 1930s, efforts to install sewage treatment facilities at the state and local levels never approached the need to protect water supplies and control pollution, even after the link between water contamination and contagious diseases was better understood. 242

The inability of the states under the public nuisance doctrine to obtain relief from the degradation of interstate waters paralleled the limited success in state courts of efforts to utilize traditional tort theories of recovery to protect injured individuals and the public from "the damages of a society with a complex technology which has the propensity for a wide variety of

at 164. Instead, "the familiar doctrines of nuisance, trespass, or strict liability for abnormally dangerous activities" must be applied to water quality disputes. *Id.*

^{237.} Modern environmental law is rooted doctrinally in the principles of nuisance. See Rodgers, supra note 38, at 100. "[N]o common law doctrine . . . approaches nuisance in comprehensiveness or detail as a regulator of land use and of technological abuse." Id. Nuisance theory and case law is "the common law backbone of modern environmental and energy law."

^{238.} See CRIBBET, supra note 44, at 387 (discussing the problems encountered in applying the riparian "reasonableness" standard to activities which degrade water quality). See also Reitze, supra note 38, at five-31.

^{239.} Rodgers, *supra* note 38, at 153 (commenting upon the traditional role of the Supreme Court in interstate pollution controversies).

^{240.} See Reitze, supra note 38, at four-1.

^{241.} Id. at four-1.

^{242.} Id.

injuries."²⁴³ Environmental problems, of course, were a "natural target for control" under nuisance law because pollution interferes with the use and enjoyment of property.²⁴⁴ However, nuisance litigation frequently involved complex scientific issues involving causation, effect, and remedy, in addition to being cumbersome and expensive for the plaintiffs to pursue.²⁴⁵ "Judges [were] poorly equipped to deal in a competent fashion with issues . . . demand[ing] considerable scientific expertise and [were] probably even less able to devise and oversee an ongoing program of technological controls."²⁴⁶ Thus, environmentalists viewed the federal common law of public nuisance as a mixed blessing.²⁴⁷ Ultimately, the amelioration of pollution came to depend upon in-depth technical research, large public expenditures, and a balanced assessment of the economic impact and actual effect on public health of environmental regulation.²⁴⁸

The lack of success with traditional tort theories in addressing environmental problems eventually gave way to increased legislative activity in water quality at the federal level. The Rivers and Harbors Act of 1899,²⁴⁹ which provides the U.S. Army Corps of Engineers with surveillance authority over certain pollutants of navigable waters, was strengthened through judicial interpretation to become the most effective weapon in the federal government's arsenal for combatting serious water quality problems involving industrial pollution.²⁵⁰ The 1899 act was eventually buttressed by the enactment of the Federal Water Pollution Control Act of 1948 and its subsequent amendments,²⁵¹ even though for years congressmen from the Red River basin

^{243.} Id. at five-30.

^{244.} See J. DUKEMINIER & J. KRIER, PROPERTY 955 (1981) [hereinafter cited as DUKEMINIER & KRIER].

^{245.} Id. at 955-56. See also Reitze, supra note 38, at five-30.

^{246.} DUKEMINIER & KRIER, supra note 244, at 955-56.

^{247.} See Rodgers, supra note 38, at 153.

^{248.} Cf. Boomer v. Atlantic Cement Co., 26 N.Y.2d 219, 223, 257 N.E.2d 870, 871, 309 N.Y.S.2d 312, 314 (1970) (suggesting the need for the enormous powers of state and federal governments to control air pollution).

^{249.} Act of Mar. 3, 1899, ch. 425, 30 Stat. 1151 (codified as amended at 33 U.S.C. §§ 401-14 (1982)).

^{250.} See Reitze, supra note 38, at four-34. See also Rodgers, Industrial Water Pollution and the Refuse Act: A Second Chance for Water Quality, 119 U. PA. L. Rev. 761, 767-82, 792-819 (1971). Most of the judicial decisions that strengthened the act were rendered in the 1960s and early 1970s. See, e.g., United States v. Pennsylvania Indus. Chem. Co., 411 U.S. 655 (1973); United States v. Standard Oil Co., 384 U.S. 224 (1966); United States v. Republic Steel Corp., 362 U.S. 482 (1960), reh'g denied, 363 U.S. 858 (1961).

^{251.} See 33 U.S.C. §§ 1251-1376 (1982). The Federal Water Pollution Control Act of 1948 has been amended a number of times since its enactment. See Water Pollution Control Act Amendments of 1956, ch. 518, 70 Stat. 498; Federal Water Pollution Control Act Amendments of 1961, Pub. L. No. 87-88, 75 Stat. 204; Water Quality Act of 1965, Pub. L. No. 89-234, 79 Stat. 903; Clean Water Restoration Act of 1966, Pub. L. No. 89-753, 80 Stat. 1246; Water Quality Improvement Act of 1970, Pub. L. No. 91-224, 84 Stat. 91; Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, 86 Stat. 816 (major revisions); Act of Mar. 7, 1974, Pub. L. No. 93-251, 88 Stat. 20; Act of Jan. 2, 1975, Pub. L. No. 93-592, 88 Stat. 1925; Act of Dec. 27, 1977, Pub. L. No. 95-217, 91 Stat. 1566; Act of Oct. 21, 1980, Pub. L. No. 96-483, 94 Stat. 2360; Act of Dec. 29, 1981, Pub. L. No. 97-117, 95 Stat. 1626.

states of Oklahoma and Louisiana blocked legislative efforts to strengthen the federal water quality laws.²⁵²

The Federal Common Law of Public Nuisance: Interstate Flooding

A decision by the Supreme Court in 1923 applied the federal common law of public nuisance in the context of flooding.²⁵³ North Dakota in an original action sought to enjoin Minnesota from continuing to use a system of drainage ditches in a manner that was detrimental to North Dakota residents.²⁵⁴ The bill alleged that Minnesota, by constructing cutoff ditches and straightening the Mustinka River, had increased the speed and volume of water flow into Lake Traverse.²⁵⁵ This in turn allegedly raised the level of the lake, causing its outlet, the Bois de Sioux River, to overflow and substantially damage a valuable farming area lying on the west bank of that stream in North Dakota.²⁵⁶ North Dakota also sought a decree against Minnesota for damages of \$5,000 for itself and a million dollars for its inhabitants whose farms were damaged and whose crops were lost.²⁵⁷

Applying the eleventh amendment, the Court denied on jurisdictional grounds the prayer for money damages for the injuries incurred by the farmers of the Bois de Sioux River valley during the floods of 1915 and 1916.²⁵⁸ With regard to North Dakota's request for injunctive relief, Minnesota asserted that the damages sustained by the complainant state and its farmers were due to the unusually high rainfall in the successive years of 1914, 1915, and 1916, which caused the flooding.²⁵⁹

On the main issue of fact, the Court in North Dakota v. Minnesota found that Minnesota was not responsible for the floods, thereby making it unnecessary for the Court to consider evidence as to a practical remedy for a very real problem for the citizens of North Dakota.²⁶⁰ The Court noted that "the opinions and suggestions of the expert engineers [would thereby be left] for the consideration of the two States in a possible effort by either or both to remedy existing conditions in this basin." The Bois de Sioux River litigation later became a contributing factor in the negotiation of the

252. See Reitze, supra note 38, at four-34 to 35. Senator Robert Kerr of Oklahoma initially blocked passage of proposed water-quality legislation that was later enacted as the Water Pollution Control Act Amendments of 1956. Id. at four-34. Federal legislation designed to strengthen the basic water-pollution control act was passed by the United States Senate in 1963; however, in the House of Representatives, congressmen from Louisiana and Florida allegedly succumbed to pressure from the oil industry and kept a comparable bill in committee for two years. Id. at four-35. A serious federal effort to abate pollution finally came with the passage of the Water Quality Act of 1965. Id.

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253. North Dakota v. Minnesota, 263 U.S. 365, 373 (1923).
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^{254.} Id. at 366.

^{255.} Id. at 371.

^{256.} Id.

^{257.} Id. at 371-72.

^{258.} Id. at 375-76.

^{259.} Id. at 379-85.

^{260.} Id. at 386, 388.

^{261.} Id. at 388.

Red River of the North Compact, which was completed in 1937 and approved by Congress in 1938.²⁶²

In sum, the recurring tone sounded by the Court in the equitable apportionment cases and the public nuisance decisions was one of judicial caution. Justice Roberts, writing for the Court in 1943 in the case of *Colorado v. Kansas*, echoed the sentiments of the Court two decades earlier, when he offered this explanation for the Court's restraint:

[W]hile we have jurisdiction of such disputes, they involve the interests of quasi-sovereigns, present complicated and delicate questions, and, due to the possibility of future change of conditions, necessitate expert administration rather than judicial imposition of a hard and fast rule. Such controversies may appropriately be composed by negotiation and agreement, pursuant to the compact clause of the federal Constitution. We say of this case, as the court has said of interstate differences of like nature, that such mutual accommodation and agreement should, if possible, be the medium of settlement, instead of invocation of our adjudicatory power.²⁶³

The Court seemed to recognize that disputes involving the allocation, pollution, and control of interstate waters could not be effectively resolved by litigation.²⁶⁴ The Court apparently was neither able nor inclined to articulate and implement an effective policy to address interstate water controversies, particularly those involving efforts to ameliorate water pollution or to abate flooding conditions.²⁶⁵ The option of appointing a panel of scientific or technical advisers to compensate for the Court's lack of expertise in many interstate water disputes was shunned in favor of encouraging the cooperative resolution by the states of their interstate water problems.²⁶⁶

The Validity and Effect of an Interstate River Compact: Hinderlider and Beyond

Legal actions between individuals or private entities over water in an interstate stream "merely settle individual controversies and afford little, if anything, in the solution of the larger interstate problems." However, the Supreme Court's review on certiorari of the decision by the Colorado Su-

^{262.} See WITMER, H.R. Doc. No. 319, supra note 175, at 530.

^{263. 320} U.S. 383, 392 (1943) (footnotes deleted).

^{264.} Cf. Boomer v. Atlantic Cement Co., 26 N.Y.2d 219, 223, 257 N.E.2d 870, 871, 309 N.Y.S.2d 312, 314 (1970) (explaining the inadequacy of nuisance actions to ameliorate air pollution).

^{265.} Cf. id., 257 N.E.2d at 871, 309 N.Y.S.2d at 314.

^{266.} Cf. Interstate Environmental Problems, supra note 234, at 111 (criticizing the Court for shunning the advice of experts in water apportionment cases). The rationale of the Court in the public nuisance decisions involving interstate waters paralleled its reasoning in the equitable apportionment cases.

^{267. 1939} ASCE Rep. on Interstate Water Problems, supra note 151, at 1832.

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preme Court in the case of *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*²⁶⁸ was vital to the continued utilization of interstate water compacts.²⁶⁹ The *Hinderlider* case raised the question of the validity of an interstate compact and its effect upon the citizens and officials of the states involved.²⁷⁰ The fact that the signatory states to the compact were not parties to the action, and apparently could not be so joined, did not deprive the Court of jurisdiction to determine the validity and effect of the compact.²⁷¹

The Hinderlider case involved an action brought by the Ditch Company, a Colorado corporation, to restrain M. C. Hinderlider, the State Engineer of Colorado, and his staff from closing the head-gate of the La Plata River, the Cherry Creek Ditch, and other ditches in Colorado to permit New Mexico and Colorado to enjoy the entire flow of the La Plata River for alternating periods during a severe water shortage that occurred in the spring of 1928.²⁷² The actions taken by the State Engineer and his staff were authorized by the La Plata River Compact, which provided that the state engineers may rotate the use of the water whenever the flow of the river is so low that in their judgment "the greatest beneficial use of its waters may be secured by distributing all of its water successively to the lands in each State in alternating periods" in lieu of delivery of water in accordance with other provisions of the compact.²⁷³

The Ditch Company claimed that by reason of a 1898 Colorado court decree adjudicating the relative rights of all Colorado claimants to divert water from the La Plata River, the Ditch Company was entitled to all the water in the stream, except that necessary to fulfill higher priorities under the decree.²⁷⁴ If the Ditch Company were allowed to use all the water allocated to it by the decree, none would be available to New Mexico citizens who had claimed a portion of the water under New Mexico's appropriation laws.²⁷⁵

The Ditch Company objected to the admission of the La Plata River Compact into evidence at the trial, asserting that the compact was unconstitutional and void because it allegedly destroyed vested property rights of Colorado citizens in the water of the river in violation of the due process clauses of the fifth and fourteenth amendments of the United States Constitution and of the Colorado constitution.²⁷⁶ The second judgment of the trial court concluded that the La Plata River Compact did not constitute

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268. 304 U.S. 92 (1938).
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^{269.} See 1939 ASCE REP. ON INTERSTATE WATER PROBLEMS, supra note 151, at 1852.

^{270. 304} U.S. 92, 99-100 (1938).

^{271.} Id. at 110-11.

^{272.} Id. at 95-97. See also 1939 ASCE Rep. on Interstate Water Problems, supra note 151, at 1849-50.

^{273. 304} U.S. 92, 97 (1938) (quoting from a provision in the compact which is found at 43 Stat. 796).

^{274.} Id. at 98.

^{275.} Id.

^{276.} Id. at 99.

a defense to the actions of the Colorado water officials.²⁷⁷ The Supreme Court of Colorado affirmed the judgment.²⁷⁸

However, the Supreme Court of the United States, in a landmark decision, reversed the Colorado Supreme Court.²⁷⁹ The Supreme Court said:

Whether the apportionment of the water of an interstate stream be made by compact between the upper and lower States with the consent of Congress or by a decree of this Court, the apportionment is binding upon the citizens of each State and all water claimants, even where the State had granted the water rights before it entered into the compact.²⁸⁰

The Court held that the decree of January 12, 1898, in the state water proceeding did not award to the Ditch Company any right greater than Colorado's right to an equitable share of the water of the stream.²⁸¹ Therefore, the apportionment made by the compact simply could not have taken from the Ditch Company any vested right, in the absence of any vitiating infirmity or illegality in the negotiation and approval of the compact or in its application.²⁸² The Court acknowledged the latitude the duly authorized representatives of a state have in apportioning interstate waters by compact:

As the States had power to bind by compact their respective appropriators by division of the flow of the stream, they had power to reach that end either by providing for a continuous equal division of the water from time to time in the stream, or by providing for alternate periods of flow to the one State and to the other of all the water in the stream.²⁸³

The Court's decision in *Hinderlider*, coupled with the earlier completion and approval of the Colorado River Compact, set the stage for widespread utilization of compacts to address interstate water problems. The Colorado River Compact had generated widespread public discussion, which contributed to the education of water officials in the western states of the possibilities of the compact idea.²⁸⁴ *Hinderlider* judicially confirmed that the states, represented by individuals with expertise and knowledge of the water problems in their region, may divide the-waters of interstate streams and possibly avoid protracted litigation.²⁸⁵

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277. Id. at 100.
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^{278.} Hinderlider v. La Plata River & Cherry Creek Ditch Co., 101 Colo. 73, 74, 70 P.2d 849, 849-50 (1937) (citing La Plata River & Cherry Creek Ditch Co. v. Hinderlider, 93 Colo. 128, 25 P.2d 187, 188-89 (1933)).

^{279. 304} U.S. 92 (1938).

^{280.} Id. at 106.

^{281.} Id. at 108-09.

^{282.} Id.

^{283.} Id. at 108.

^{284.} See Frankfurter & Landis, supra note 102, at 702.

^{285.} See 1939 ASCE REP. ON INTERSTATE WATER PROBLEMS, supra note 151, at 1852.

A little over a decade after *Hinderlider*, the Supreme Court in *West Virginia ex rel. Dyer v. Sims* reinforced the binding effect of the interstate compact. Dyer v. Sims reaffirmed the power of the Court to interpret interstate compacts and responded to two important and previously unanswered questions about compacts: (1) Can a state delegate its police powers to an interstate administrative agency established by compact? (2) Can a state agree to appropriate monies from state revenues for the ongoing support of such bodies?²⁸⁷

The Ohio River Valley Water Sanitation Compact, a water pollution abatement and control compact approved by Congress in 1940, was at the center of the controversy in *Dyer v. Sims.*²⁸⁸ The Governor of West Virginia had executed this compact on June 30, 1948, following the ratification and approval of it by all eight signatory states and the Congress.²⁸⁹ The next year, the West Virginia legislature appropriated \$12,250 as the state's contribution to the annual budget of the interstate agency charged with administering the compact.²⁹⁰ However, Sims, the State Auditor of West Virginia, refused to issue a warrant upon the state treasury to pay West Virginia's share of the compact budget.²⁹¹ As a result, the West Virginia compact commissioners and certain state water officials brought a mandamus proceeding to compel the State Auditor to pay the monies appropriated by the West Virginia legislature for its annual share of compact administrative expenses.²⁹²

The Supreme Court of Appeals of West Virginia (the state's highest court) in a three to two decision, denied relief.²⁹³ In effect, the court ruled that the state had not legally entered into the compact because the *state* constitution made it impossible for West Virginia to assume the obligations placed upon the states by the agreement.²⁹⁴

In a technical sense, this opinion had limited significance since it directly affected only the parties before the court and the West Virginia state laws

286. 341 U.S. 22 (1951). For an excellent analysis of the decision and its impact on the utilization of interstate compacts, see Zimmerman & Wendell, *The Interstate Compact and Dyer v. Sims*, 51 COLUM. L. REV. 931-50 (1951) [hereinafter cited as Zimmerman & Wendell, *The Interstate Compact*, to distinguish the article from their book on interstate compacts, *supra* note 141].

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287. 341 U.S. 22, 26 (1951).
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293. Id. The West Virginia Supreme Court of Appeals adjudged that the state legislation authorizing West Virginia's participation in the compact was invalid as an improper delegation of police power to other states and the federal government; the court also said the legislation violated the debt limitation set forth in the West Virginia constitution by binding future legislatures to make appropriations for the continued activities of the compact administrative agency. Id. at 26. See also Zimmerman & Wendell, The Interstate Compact, supra note 286, at 933.

294. See J. Nowak, R. Rotunda & J. Young, Constitutional Law 298 (2d ed. 1983) [hereinafter cited as Nowak].

^{288.} Id. at 24.

^{289.} Id. at 25.

^{290.} Id.

^{291.} *Id*.

^{292.} Id.

at issue.²⁹⁵ However, the practical effect of the decision was to jeopardize a major undertaking to improve the quality of water in the Ohio River. The interests of all eight signatory states to the compact were affected.²⁹⁶ Because some of the signatory states had conditioned their ratification of the compact upon that of West Virginia, the nonparticipation of West Virginia as a result of the state court's decision threatened to unravel the entire compact.²⁹⁷

The significance of the West Virginia court's decision transcended the Ohio River valley. The obligations assumed by West Virginia under the compact were similar to those already assumed or contemplated by signatory states to other compacts.²⁹⁸ The reasoning employed by the West Virginia court arguably would be equally applicable to similar state legislative action in other jurisdictions.²⁹⁹ For example, briefs filed as *amici curiae* by six of the other Ohio River valley compacting states noted that of the thirty-eight states that had entered into congressionally approved compacts between 1934 and 1938, the state constitutions of twenty-one contained comparable language to West Virginia's debt limitation clause and provisions restricting or prohibiting the pledging of the credit of the state.³⁰⁰

The Supreme Court of the United States reversed the decision of the West Virginia court.³⁰¹ Although the justices were unanimous in the judgment to reverse the state court, they were not quite so consentient in their reasoning.

Departing at least in spirit from *Erie Railroad v. Tompkins*, Justice Frankfurter in his opinion for the Court said that though the highest state court is the ultimate tribunal in construing the meaning of its *state* constitution for *exclusively state purposes*, the Supreme Court is free to examine determinations of law by state courts when a compact places in issue the rights of other states and the federal government.³⁰² Just as the Supreme Court

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296. Id. at 932.
297. Id. at 932, 946-47.
298. Id. at 932.
299. Id. at 934.
300. Id. at 936.
301. 341 U.S. 22, 32 (1951).
302. Id. at 28-29. In Erie R.R. v. Tompkins, the Supreme Court declared:

Except in matters governed by the Federal Constitution or by acts of Congress, the law to be applied in any case is the law of the state. And whether the law of the state shall be declared by its Legislature in a statute or by its highest court in a decision is not a matter of federal concern. There is no federal general common law. Congress has no power to declare substantive rules of common law applicable in a state whether they be local in their nature or "general," be they commercial law or a part of the law of torts. And no clause in the Constitution purports to confer such a power upon the federal courts.
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295. See Zimmerman & Wendell, The Interstate Compact, supra note 286, at 934.

304 U.S. 64, 77-78 (1938) (emphasis added). In Hinderlider v. La Plata River & Cherry Creek Ditch Co., 304 U.S. 92, 110 (1938), decided the same day as *Erie*, the Court concluded that the apportionment of the water of an interstate stream between two states "is a question of 'federal common law' upon which neither the statutes nor the decisions of either State can be conclusive" (emphasis added). Justice Frankfurter relied upon Hinderlider in Dyer v. Sims, in asserting the power of the Court to examine the determination of the invalidity of the compact

has power to settle disputes between states when there is no compact, it has final authority to interpret the meaning and decide the validity of compacts.³⁰³ A state cannot be its own ultimate judge in a legal dispute with a sister state.³⁰⁴ The duty of the Supreme Court of the United States is to decide the nature and scope of obligations between states, whether they arise legislatively by means of compact or through the "federal common law" governing interstate controversies.³⁰⁵ Finally, when the states themselves are before the Supreme Court, the Court must analyze and decide every question essential to a determination of the controversy between them.³⁰⁶ This is true even though local legislation and questions of state authorization may be presented.³⁰⁷

Justice Frankfurter framed the issue in *Dyer v. Sims* as "whether the West Virginia Legislature had authority, under her Constitution, to enter into a compact which involves delegation of power to an interstate agency and an agreement to appropriate funds for the administrative expenses of the agency." With regard to the alleged improper delegation, Frankfurter said "[t]hat a legislature may delegate to an administrative body the power to make rules and decide particular cases is one of the axioms of modern government." West Virginia could point to no specific language in its state constitution that precluded a "reasonable and carefully limited delegation of power to an interstate agency" such as the Ohio River Valley Sanitation Compact Commission.³¹⁰

Turning to the question involving the appropriation of monies for the compact administrative agency, Frankfurter said that the compact was evidently drafted with great care to comply with the state debt limitation in view of the fact that the constitutions of many of the other compacting states also contained this section or similar restrictions.³¹¹ He also noted that although the states agreed to appropriate funds for administrative expenses, the annual budget of the compact commission must be approved by the

made by the highest court of West Virginia. 341 U.S. 22, 28 (1951). Although Justice Frankfurter made no attempt to reconcile either *Hinderlider v. La Plata River & Cherry Creek Ditch Co.* or the decision he wrote for the Court in *Dyer v. Sims* with *Erie R.R. v. Tompkins*, he apparently relied upon the exception in *Erie* for "matters governed by the Federal Constitution or by acts of Congress" for the authority the Court exercised in *Dyer v. Sims* in reversing the West Virginia decision. Interestingly, Justice Reed also made no mention of *Erie* in his concurring opinion in *Dyer v. Sims*, yet his reasoning seems to be built upon the doctrinal foundation laid by the Court in *Erie. See Zimmerman & Wendell, The Interstate Compact, supra* note 286, at 942. For a scholarly exposition and analysis of the *Erie* doctrine, see generally C. WRIGHT, FEDERAL COURTS §§ 55-60 (4th ed. 1983).

^{303. 341} U.S. 22, 28 (1951).

^{304.} Id.

^{305.} Id.

^{306.} Id. at 29.

^{307.} Id.

^{308.} Id. at 30.

^{309.} Id.

^{310.} Id. at 31.

^{311.} Id. at 32.

governors of the signatory states.³¹² Finally, the compact contained language restricting the compact commission from incurring obligations in excess of appropriations adequate to meet the same and from pledging the credit of any signatory states except pursuant to the authority of the legislature thereof.³¹³

Justice Reed, in a separate concurring opinion, took issue with the assertion of power by the Court to interpret the meaning of the state constitution of West Virginia.³¹⁴ He maintained that the Court "must accept the State court's interpretation of its own Constitution unless it is prepared to say that the interpretation is a palpable evasion to avoid a federal rule."³¹⁵ Justice Reed said that under the compact clause of the Constitution of the United States, the execution, validity, and meaning of federally approved interstate compacts present federal questions.³¹⁶ The Court's "interpretation of the meaning of the compact controls over a state's application of its own law through the Supremacy Clause and not by any implied federal power to construe state law."³¹⁷ Even though West Virginia adjudged the execution of the compact to be invalid, Justice Reed contended that the compact "may be enforced despite otherwise valid state restrictions on state action" because the United States Constitution provides the compact device for adjusting interstate relations.³¹⁸

Justice Jackson, also separately concurring, relied upon an estoppel theory. West Virginia had "induced" its sister states to enter into the compact with it and the Congress to consent to the compact. If interstate compacts in the United States are to have "vitality and integrity," West Virginia "may not raise an issue of *ultra vires*, decide it, and release [itself] . . . from an interstate obligation." In the final analysis, Justice Jackson said that "[t]he legal consequences which flow from the formal participation in a compact consented to by Congress is a federal question for this Court." Since West Virginia could not point to any provision in its state constitution clearly warning or putting on notice the Congress or the other states of any defect in the authority of West Virginia to enter into the compact, "West Virginia should be estopped from repudiating her act."

West Virginia ex rel. Dyer v. Sims strengthened the compact device. As two of the leading scholars of interstate compacts wrote shortly after the decision:

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312. Id.
313. Id.
314. Id. See also Zimmerman & Wendell, The Interstate Compact, supra note 286, at 942.
315. 341 U.S. 22, 33 (1951).
316. Id.
317. Id.
318. Id. at 34.
319. Id. at 35.
320. Id.
321. Id.
322. Id. at 36.
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The binding quality of the compact is strengthened, the flexibility of the device is broadened, yet the Court avoided both Scylla and Charybdis by refusing on the one hand to forge it into contractual chains or on the other hand to permit the ties to be lightly dissipated by the judicial wand using the magic formula of general reasoning.³²³

The cumulative effect of Dyer v. Sims, Hinderlider, and the Supreme Court decisions involving the allocation, pollution, and control of interstate waters was the elevation of the compact device as the preferred mode of adjusting interstate water disputes. The Supreme Court's decisions in the equitable apportionment and federal common law of nuisance cases encouraged the use of compacts to address cooperatively interstate water problems. The Hinderlider decision declared the binding effect of a water allocation compact upon a signatory state's citizens, including water claimants whose water rights antedated the negotiation and approval of the compact, and recognized the freedom of compact negotiators in allocating the flow of a stream. Dyer v. Sims confirmed the ability of the states to create an interstate agency to administer a water resources compact, delegate police powers to it, and devise a means of financing the activities contemplated by it. Consequently, when the impetus developed to negotiate a compact for the Red River basin, the utility of the compact device had been clearly established by both scholars and the Court; the validity, flexibility, and binding effect of the compact had been judicially confirmed; and the creation of a mechanism to implement the compact and financially support its programs had been upheld by the highest court in the land.

IV. Expansion of Federal Authority Over Water

Federal Regulatory Power Under the Commerce Clause

As explained earlier, the Final Report on Interstate Water Problems in 1939 of the American Society of Civil Engineers suggested the advantages of the compact in dealing with interstate water problems.³²⁴ The report also identified a major concern among advocates of the compact method: the lack of a line clearly demarcating the "ultimate application of Federal authority over navigable streams, or the regulation of the source of supply of such streams."³²⁵

There are many sources of federal power over water, the most important of which is the commerce clause. This clause is the basis of two facets of federal authority over water: the federal regulatory power and the navigational servitude.³²⁶

^{323.} Zimmerman & Wendell, The Interstate Compact, supra note 286, at 950.

^{324.} See 1939 ASCE Rep. on Interstate Water Problems, supra note 151, at 1854.

^{325.} See generally Hillhouse, The Federal Law of Water Resources Development, in Federal Environmental Law, supra note 38, at 844-926.

^{326.} Id. at 852-57.

The Supreme Court held in the early part of the nineteenth century that navigation is encompassed within the commerce clause of the Constitution of the United States.³²⁷ Moreover, "[f]lood protection, watershed development, [and] recovery of the cost of improvements through utilization of power are . . . parts of commerce control."³²⁸ National planning and control of navigable waters is also within the ambit of federal power.³²⁹ The responsibility of the federal government to prevent obstructions of navigation allows the licensing by the federal government of nonfederal development.³³⁰ Federal authority to regulate commerce by protecting or improving navigation not only applies to rivers currently navigable,³³¹ but also extends to rivers that historically have been navigable,³³² or which are capable of navigation with reasonable improvements.³³³

A Supreme Court decision upholding the power of the federal government to construct Denison Dam on the main stem of the Red River reinforced the idea introduced by the Court in 1849 that the power of the federal government to control floods along navigable rivers extends to their non-navigable tributaries as well.³³⁴ The Court acknowledged that "no part of

- 327. Gibbons v. Ogden, 22 U.S. (9 Wheat.) 1, 190 (1824), in which Chief Justice Marshall declared that "[a]ll America understands and has uniformly understood, the word 'commerce' to comprehend navigation."
 - 328. United States v. Appalachian Power Co., 311 U.S. 377, 426 (1940).
 - 329. Id.
 - 330. See Hillhouse, supra note 325, at 853.
- 331. The Daniel Ball, 77 U.S. (10 Wall.) 557, 563, 1000-01 (1870) (stating that: "Those rivers must be regarded as public navigable rivers in law which are navigable in fact; [a]nd they are navigable in fact when they are used, or are susceptible of being used, in their ordinary condition as highways of commerce.").
- 332. Economy Light & Power Co. v. United States, 256 U.S. 113, 123 (1921) (noting that the Desplaines River, which was the focus of this controversy, had not been used for more than a hundred years). *Accord*, Arizona v. California, 283 U.S. 423, 453-54 (1931); Montana Power Co. v. Federal Power Comm'n, 185 F.2d 491 (D.C. Cir. 1950), *cert. denied*, 340 U.S. 947 (1951).
- 333. United States v. Appalachian Power Co., 311 U.S. 377, 426 (1940). In the final analysis, navigability is primarily a matter for Congress to determine, but its decision is subject to judicial review. *Id.* at 407-08.
- 334. Oklahoma v. Atkinson, 313 U.S. 508, 525-26 (1941). The Court in Oklahoma v. Atkinson said:

There is no constitutional reason why Congress cannot, under the commerce power, treat the watersheds as a key to flood control on navigable streams and their tributaries. Nor is there a constitutional necessity for viewing each reservoir project in isolation from a comprehensive plan covering the entire basin of a particular river. We need no survey to know that the Mississippi is a navigable river. We need no survey to know that the tributaries are generous contributors to the floods of the Mississippi. . . . We have recently recognized that "Flood protection, watershed development, recovery of the cost of improvements through utilization of power are . . . parts of commerce control." And we now add that the power of flood control extends to the tributaries of navigable streams.

Id. at 525 (emphasis added and citations omitted). The quoted language from Oklahoma v. Atkinson arguably is dictum since the Court recognized that "part of the local benefits of flood control is frequently protection of navigation in the tributary itself" and that "in years

the [Red] River within Oklahoma is navigable."³³⁵ However, the Court viewed the Denison project as an integral part of a comprehensive flood-control program for the Mississippi River basin. As an alternative basis for its decision, the Court noted that the Denison project would "have at least an incidental effect in protecting or improving the navigability of portions of the Red River."³³⁷

By mid-twentieth century, federal authority over the waters of this nation was no longer dependent upon a waterway's "navigability." Instead, federal authority over water was as broad as the needs of commerce. Reference to the navigability of a stream added little, if anything, to the scope of federal regulatory power. Under traditional commerce clause analysis, a wide range of economic activities "affected" interstate commerce and thus were subject to congressional regulation irrespective of whether navigation was involved.

The Federal Navigational Servitude

Closely related to the regulatory power that Congress, under the commerce clause, exercises over water is the federal navigational servitude. The navigational servitude, which has also been characterized as the "superior navigation easement" or the "dominant servitude,"³⁴¹ appears to be rooted in the English common law right of the general public to use the kingdom's navigable waters for navigation and fishing.³⁴² In the United States, the protection of the public right of free passage in navigable waters became a

past 'the usual head of navigation' [of the Red River] was Lanesport, Arkansas, near the Oklahoma boundary." *Id.* at 522-23. The Supreme Court in 1899 had upheld the exercise of national control over nonnavigable stretches of navigable streams in order to protect the navigable capacity downstream. United States v. Rio Grande Dam & Irrig. Co., 174 U.S. 690, 703, 706, 708 (1899).

^{335.} Oklahoma v. Atkinson, 313 U.S. 508, 523 (1941).

^{336.} Id. at 525. The extension of federal power under the commerce clause to the nonnavigable tributaries of navigable streams was upheld again by the Court in 1960. See United States v. Grand River Dam Auth., 363 U.S. 229, 232 (1960).

^{337.} Oklahoma v. Atkinson, 313 U.S. 508, 523 (1941). For a narrow reading of this case, see Morreale, Federal Power in Western Waters: The Navigation Power and the Rule of No Compensation, 3 NAT. RESOURCES J. 1, 6-8 (1963) (treating the decision as involving a "once navigable stream").

^{338.} See Kaiser Aetna v. United States, 444 U.S. 164, 177 (1979).

^{339.} Id.

^{340.} Id. See also Sporhase v. Nebraska ex rel. Douglas, 458 U.S. 941 (1982) (concluding that groundwater is an article of commerce). See generally, Nowak, supra note 294, at 138-81, 266-306 (summarizing the history and development of the commerce clause and discussing, albeit limitedly, the significant role the interpretation of the commerce clause by the Supreme Court has played in shaping the concepts of federalism and the permissible uses of federal power throughout American history).

^{341.} See Morreale, supra note 337, at 2 & nn.6, 7 & n.33, 19-31 (examining the bases for the exercise of federal authority over western waters and demonstrating that the navigation power is not necessarily coextensive with the navigation servitude).

^{342.} Id. at 26-27 (examining in depth the right of the public under the law of England to free and unhindered passage in navigable waters and the power of the King, "as conservator

matter of national concern with the establishment of the federal government.³⁴³ Under the Constitution, the federal government, as guardian of the public right of access to navigable waters, has paramount responsibility to assure that these waters will remain "highways" for the purpose of navigation in interstate commerce.³⁴⁴ Because the flowing water of interstate streams is indispensable for public navigation, the Supreme Court has determined that interstate waterways are not to be privately owned.³⁴⁵ Consequently, in determining whether private property has been taken for public use without just compensation under the Constitution, the Supreme Court has held in many cases that compensation may not be required when the "taking" question involves the exercise of the public right of navigation over interstate waterways for commerce.³⁴⁶

The navigational servitude does not create a blanket exception to the "takings clause" of the fifth amendment.³⁴⁷ Instead, the navigational servitude is an expression of the rule that "certain private property may be taken in the exercise of the navigation power without the payment of compensation."³⁴⁸ More specifically, if the federal government, "acting in the interests of navigation, displaces private rights which depend upon the navigable water for their value, the holder of the subordinate right has no loss of which he can complain."³⁴⁹ The navigational servitude has evolved in the United States as a subarea of the law of eminent domain.

Statutory Limitations on Federal Authority in the Red River Basin

In the Oklahoma and Texas portions of the Red River basin, the threat of complete federal domination over the water of the river and its tributaries is not quite so ominous. Two separate pieces of legislation passed by Congress during the first half of the twentieth century diminish the authority of the federal government over part of the water of the Red River system.

First, the Act of June 28, 1938, did more than simply authorize the con-

and protector of navigation," to "reform and punish . . . nuisances" created by an interference with this paramount right of the public).

^{343.} See Hillhouse, supra note 325, at 855; Morreale, supra note 337, at 30-31.

^{344.} See, e.g., Federal Power Comm'n v. Niagara Mohawk Power Corp., 347 U.S. 239, 249 (1954); United States v. Chandler-Dunbar Co., 229 U.S. 53, 69 (1913).

^{345.} FPC v. Niagara Mohawk Power Corp., 347 U.S. 239, 249 (1954).

^{346.} United States v. Chandler-Dunbar Co., 229 U.S. 53 (1912).

^{347.} Kaiser Aetna v. United States, 444 U.S. 164, 177-79 (1979) (describing the navigational servitude as "an expression of the notion that the determination whether a taking has occurred must take into consideration the important public interest in the flow of interstate waters that in their natural condition are in fact capable of supporting public navigation" and citing United States v. Cress, 243 U.S. 316 (1913), as support for that definition of the navigational servitude). There is considerable disagreement over whether the navigational servitude extends to all "navigable waters of the United States." Compare Justice Rehnquist's opinion for the Court in Kaiser Aetna, 444 U.S. at 177-79, with Justice Blackmun's dissenting opinion, in which Justices Brennan and Marshall joined, id. at 182.

^{348.} See Morreale, supra note 337, at 2 & n.6.

^{349.} See Hillhouse, supra note 325, at 856.

struction of Denison Dam and Reservoir on the Red River and the Lugert-Altus Flood Control and Reclamation Reservoir on the North Fork in Oklahoma.350 Under this act, Congress also acknowledged the right of Oklahoma and Texas "to continue to exercise all existing proprietary or other supervisory rights and jurisdiction over the waters of all tributaries of the Red River within their respective borders above Denison Dam site . . . in the same manner and to the same extent" as provided by current or future laws of the respective states.351 Further, all such laws of Oklahoma and Texas and all rights created or recognized thereunder, including the right to impound or authorize the retardation or impoundment of water for flood control above Denison Dam and to divert the water for municipal purposes, domestic uses, irrigation, power generation, and other beneficial uses, remained unaffected by the Denison Dam authorizing legislation.352 All of these rights were expressly reserved to Oklahoma and Texas and their citizens and municipalities.353 Finally, the act expressly assured Oklahoma and Texas of their freedom to continue to use any water of the tributaries of the Red River within their borders above Denison Dam for any and all beneficial uses as was done by the states prior to the enactment of the authorizing legislation.354 During the negotiations of the Red River Compact, the abovedescribed language of the Act of June 28, 1938, was interpreted by one Oklahoma water official as assuring Oklahoma and Texas "full use of the waters in the Red River and its tributaries above Lake Texoma, even if the two states dried up the river."355

The second statutory provision that partially diminishes the authority of the federal government in the Oklahoma and Texas portions of the Red River basin is the O'Mahoney-Milliken Amendment to the Flood Control Act of 1944.³⁵⁶ The Senator who sponsored this amendment reportedly was

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350. Ch. 795, 52 Stat. 1215 (1938).
351. Id. § 4, Red River Basin, 52 Stat. 1219-20.
352. Id., 52 Stat. 1220.
353. Id.
354. Id.
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355. See Letter from Henry C. Beckman, RRCNC Chairman, to Richard Huff, Chairman, RRCNC Legal Advisory Comm., at 1 (Sept. 23, 1957).

356. Act of Dec. 22, 1944, ch. 664, § 1(b), 58 Stat. 887, 889 (codified at 33 U.S.C. § 701-1(b) (1982)). Although the O'Mahoney-Milliken Amendment has been codified in the United States Code, it is not a law of general application. Instead, it only applies to navigation and flood-control projects constructed in whole or in part pursuant to authorizations by Congress to which the amendment has been attached. Since section 1 of the Act of Dec. 22, 1944, has been incorporated in a number of subsequent flood-control acts, the amendment arguably has the practical effect of a law of general application. Moreover, the application of the amendment to projects authorized by these federal flood-control acts may be viewed as a strong policy statement by the Congress. Interview with James G. Dwen, Jr., attorney, Tulsa, Okla. (Sept. 14, 1984). [Mr. Dwen, who is now retired from service with the federal government, was for more than two decades legal counsel to the Tulsa District, Corps of Engineers, U.S. Army. The views expressed herein do not necessarily reflect the position of the Corps of Engineers with regard to this subject.] The O'Mahoney-Milliken Amendment actually has greater legal impact on the Arkansas River system and the operation of the McClellan-Kerr Navigation System than on projects in the Red River basin. *Id*. Of course, the Act of June 28, 1938,

concerned with the scope of federal power over navigable rivers and their tributaries and the manner in which this authority might be exercised in relation to irrigation. He wanted Congress to express a policy that the constitutional power of the federal government over navigation would not be exercised to its fullest extent.³⁵⁷ Thus, the O'Mahoney-Milliken Amendment was offered to allay the fears of reclamationists in the western states that the authorization and development of certain navigation projects might preclude future development of irrigation on the affected streams and their tributaries.³⁵⁸ The O'Mahoney-Milliken Amendment, as enacted by section 1 of the Flood Control Act of 1944, provides that:

The use for navigation, in connection with the operation and maintenance of ... works [of improvement for navigation or flood control] herein authorized for construction, of waters arising in States lying wholly or partly west of the ninety-eighth meridian shall be only such use as does not conflict with any beneficial consumptive use, present or future, in States lying wholly or partly west of the ninety-eighth meridian, of such waters for domestic, municipal, stock water, irrigation, mining, or industrial purposes.³⁵⁹

The amendment, which has spawned questions regarding the definition of "beneficial consumptive use," applies to certain navigation projects that have been built or modified pursuant to authorizations of Congress to which the amendment has been attached and which control or affect waters arising in the seventeen states located in whole or in part west of the ninety-eighth meridian. ³⁶⁰ Since the ninety-eighth meridian bisects the states of Oklahoma and Texas, some of the navigation projects constructed in the river basins of these two states fall within the ambit of the amendment. ³⁶¹ Language similar to section 1 of the Flood Control Act of 1944 has been applied to projects authorized by the flood control acts of 1950, 1954, 1965, 1966, and 1968. ³⁶² However, there do not appear to be any restrictions comparable to

authorizing the construction of Dension Dam, contains language that seems to accomplish the same objective as the O'Mahoney-Milliken Amendment, i.e., a limited and partial waiver of federal supremacy for certain navigation and flood-control projects located in states lying in whole or in part west of the ninety-eighth meridian. *Id*.

^{357.} See Gage, Legislative History and Purposes of O'Mahoney-Milliken Amendment to the Flood Control Act of 1944 and Other Public Laws, at C-9.

^{358.} Id. at C-6.

^{359.} Ch. 664, 58 Stat. 889 (codified at 33 U.S.C. § 701-1(b) (1982)).

^{360.} See Gage, supra note 357, at C-1, C-4, C-6, & C-8.

^{361.} See note 356 *supra*; Scoggins, "Water Rights for Navigation—Verdigris River on McClellan-Kerr Arkansas River Navigation System," Presentation on behalf of U.S. Army Corps of Eng'rs, Tulsa Dist., to the [Oklahoma] Governor's Waterway Advisory Team Meeting, at 1 (June 13, 1984).

^{362.} See Act of Aug. 13, 1968, Pub. L. No. 90-483, tit. II, § 202, 82 Stat. 739; Act of Nov. 7, 1966, Pub. L. No. 89-789, tit. II, § 202, 80 Stat. 1418; Act of Oct. 27, 1965, Pub. L. No. 89-298, tit. II, § 203, 79 Stat. 1074; Act of Sept. 3, 1954, ch. 1264, tit. II, § 202, 68

the Act of June 28, 1938 or the O'Mahoney-Milliken Amendment affecting the development by the federal government of the water of the Red River system lying downstream from Denison Dam and Reservoir in Arkansas and Louisiana.³⁶³

Other Sources of Federal Authority

Federal power to regulate water pursuant to the commerce clause and to protect and preserve the navigational servitude is buttressed by the authority of the United States in connection with the property power, the war powers, the power to tax and spend for the general welfare, treaty obligations, and the mandate to protect Indians.³⁶⁴ In addition to the U.S. Army Corps of Engineers, a number of federal agencies have extensive interests in the Red River basin. For example, the Fish and Wildlife Service of the Department of Interior is interested in several wildlife refuges and fish cultural stations, including the Hagerman National Wildlife Refuge in Grayson County, Texas: the Tishomingo National Wildlife Refuge in Johnston County, Oklahoma; and the Natchitoches Fish Cultural Station in Louisiana.365 The Bureau of Reclamation has also constructed a number of projects in Oklahoma and Texas.366 Although the Bureau of Indian Affairs has no land under its jurisdiction in Arkansas, Louisiana, or Texas situated within the drainage basin of the Red River, the BIA has reported that its jurisdiction in Oklahoma extends over about 2.2 million acres of Indian land in various ownership categories in the basins of both the Red and Arkansas rivers.³⁶⁷ Neither the Denison Dam authorizing legislation of 1938 nor the O'Mahoney-Milliken Amendment of 1944 appears to affect the interests in the Red River basin of federal agencies such as the Fish and Wildlife Service, the Bureau of Reclamation, the Bureau of Indian Affairs, and the Soil Convervation Service.368

Stat. 1256; Act of May 17, 1950, ch. 188, tit. II, § 202, 64 Stat. 170. The language that incorporates the O'Mahoney-Milliken Amendment typically stipulates:

The provisions of section 1 of the Act of December 22, 1944, (Public Law Numbered 534, Seventy-eighth Congress second session), shall govern with respect to projects authorized in this Act, and the procedures therein set forth with respect to plans, proposals, or reports for works of improvement for navigation or flood control and for irrigation and purposes incidental thereto shall apply as if herein set forth in full.

⁸² Stat. 739.

^{363.} Since Arkansas and Louisiana are east of the ninety-eighth meridian, the O'Mahoney-Milliken Amendment expressly is not applicable to navigation and flood-control projects built in that part of the Red River basin. The language of the Act of June 28, 1938, expressly applies to activities upstream from the site of the Denison Dam.

^{364.} See Hillhouse, supra note 325, at 857-61.

^{365.} See Statements of Interests of Dep't of Interior, supra note 11, at 6-7.

^{366.} Id. at 1-3.

^{367.} Id. at 8.

^{368.} The O'Mahoney-Milliken Amendment is expressly addressed to navigation and flood-control projects, and the 1938 Denison Dam authorizing legislation seems to operate in a comparable manner.

The exercise of federal authority pursuant to the commerce clause or other sources of power, coupled with the supremacy clause, preempts conflicting state water laws and overrides compacts to which the federal government is not bound as a signatory party.³⁶⁹ Consequently, the federal government has no legal obligation to ensure that federal programs in a river basin are coordinated to the maximum extent feasible with the states that are signatory parties to a conventional interstate river compact.³⁷⁰ As Jerome Muys observed in his comprehensive study of interstate water compacts for the National Water Commission: "The broad constitutional powers of the Federal Government over the development, use, and management of the nation's water resources inevitably make it the controlling force in the success or failure of cooperative state efforts to deal with regional water problems through interstate compact."³⁷¹

The exercise of federal authority in the Oklahoma and Texas portions of the Red River basin, of course, is limited in part by the Denison Dam authorizing legislation of 1938 and the policy expressed by the O'Mahoney-Milliken Amendment to the Flood Control Act of 1944 and subsequent acts. The congressional policies embodied in this legislation and the partial protection afforded by these two laws are subject to change, within constitutional limits, by future congressional action.³⁷² Given the success historically with which the Red River basin states have influenced federal legislation in the water resources area (discussed *supra* and *infra*), any modification of either law to the detriment of states' rights would, in all likelihood, be accomplished with great difficulty.

V. The Negotiation and Approval of the Red River Compact

The Impetus to Negotiate a Compact

Multistate interest in coordinating the use of the Red River system dates to the late 1940s. The Four-State Planning Board, composed of representatives of Arkansas, Louisiana, Oklahoma, and Texas, drafted a tentative program for the development of the Red River basin as early as 1945.³⁷³

^{369.} See Muys, supra note 82, at 107-09 (noting that the states for many years sought a legal mechanism "to make the United States a full partner in [interstate water] compact[s] in order to restrict its authority and general inclination to 'go it alone' in a Basin"). The Upper Colorado River Basin Compact of 1948 tried to change the pattern of federal involvement in compact negotiations. Id. at 159. The federal representative was accorded rights equivalent to those of the state commissioners. Id. at 160. However, the federal government was not legally bound as a signatory party to comply with the compact. Id.

^{370.} Id. at 159. Muys also concluded that "[t]he utility of a water apportionment compact is illusory unless federal and Indian rights are made subject to the compact allocations." Id. at 179.

^{371.} Id. at 159.

^{372.} See Gage, supra note 357, at C-15. See also infra note 564.

^{373.} See Minutes of Meeting of Representatives of Arkansas, Louisiana, Oklahoma, and Texas on Interstate Compact, at 1-2 (Mar. 3, 1950) [hereinafter cited as Minutes of 1950 Meeting].

Water conservation and development officials representing Arkansas, Louisiana, New Mexico, Oklahoma, and Texas "more or less agreed" at a meeting held in Oklahoma City in May, 1948 on the interstate river basin compact as a method of planning and developing river basins in the region. During approximately the same time period, a committee of the Oklahoma Society of Professional Engineers, working under the direction of Colonel Francis J. Wilson, former Tulsa District Engineer with the U.S. Army Corps of Engineers, conducted a study of interstate water allocation problems. The engineers' study recommended the utilization of a compact to allocate water and settle pollution problems in interstate river basins.

Prompted by the engineers' study, Governor Roy J. Turner of Oklahoma took the initiative and invited the governors of Arkansas, Louisiana, New Mexico, and Texas to send representatives to meet with Oklahoma officials to discuss the negotiation of an interstate river basin compact for the Red River.³⁷⁷ Based upon his familiarity with the successful operation of the Interstate Oil Compact Commission, Governor Turner expressed his "utmost confidence in the compact method as a most useful tool in settling interstate matters." ³⁷⁸

In response to Governor Turner's invitation, leading water officials representing Arkansas, Louisiana, Oklahoma, and Texas met on March 3, 1950, in Oklahoma City to discuss the feasibility of negotiating a compact for the

374. See Transcript of Meeting of Representatives of Arkansas, Louisiana, Oklahoma, and Texas on Interstate Compact, at 1 (Mar. 3, 1950) [hereinafter cited as Transcript of 1950 Meeting]. See also Minutes of 1950 Meeting, app. 1, supra note 373. In 1948, E.V. Spence, an Interstate Compact Commissioner for the state of Texas, called the attention of the governor of Texas to the necessity of negotiating compacts for the Canadian, Red, and Sabine rivers. See Transcript of 1950 Meeting, supra, at 5. An internal legal memorandum apparently prepared at the behest of Oklahoma water officials in August, 1948 concluded that the Oklahoma Planning and Resources Board was authorized to negotiate and enter into river basin compacts with other states. See Oklahoma Planning and Resources Bd. Internal Memorandum, at 4 (Aug. 6, 1948).

375. See Minutes of 1950 Meeting, supra note 373, at 2.

376. See Letter from Oklahoma Governor Roy J. Turner to the Governors of Arkansas, Louisiana, New Mexico, and Texas, at 1 (Feb. 18, 1950).

377. See Transcript of 1950 Meeting, supra note 374, at 1. See also Letter dated Feb. 18, 1950, supra note 376, at 1.

378. See Letter dated Feb. 18, 1950, supra note 376, at 1. The plummeting price of oil due to the glut in oil production, which occurred during the late 1920s following the discovery and development of extensive oil fields in Oklahoma and Texas, was the impetus for the negotiation of the Interstate Compact to Conserve Oil and Gas. See Leach, The Interstate Oil Compact: A Study in Success, 10 Okla. L. Rev. 274, 274-75 (1957). Another Oklahoma governor, E.W. Marland, took the initiative and convened a meeting of oil-producing states that eventually led to the completion of a draft compact in 1935. Id. at 275. The states of New Mexico, Kansas, Oklahoma, Illinois, Colorado, and Texas approved the compact that year. See Interstate Compact to Conserve Oil and Gas, Act of Aug. 27, 1935, ch. 781, 49 Stat. 939. The compact was approved by the Congress on Aug 27, 1935. Id. Initially, the compact was effective for only a two-year period. Id. at art. VIII, 49 Stat. at 941. However, in the two decades following initial approval of the compact, twenty additional oil-producing states joined the compact; four nonproducing states joined the compact as associate members; and Congress repeatedly renewed its approval of the agreement. See Leach, supra at 275.

Red River basin.³⁷⁹ Many facets of compact negotiation, ratification, and implementation were discussed at this meeting, and some attention was devoted to comprehensive water resources planning in the region.³⁸⁰ Colonel Wilson, under whose guidance the engineers' study had been undertaken, related to the group the history of interstate compacts.³⁸¹ Although westerners thought of compacts as means of allocating water, Colonel Wilson pointed out that interstate agreements have also been utilized as a means of settling pollution problems.³⁸² In Colonel Wilson's view, all relevant data pertaining to the Red River suggested the need for "a compact a little different than what has ever been written before."³⁸³ Noting that the Red River system encompasses literally thousands of square miles, Colonel Wilson urged the states to negotiate a compact that would address the overall conservation and development of water and soil resources in the basin, i.e., not only water supply but also flood control, reclamation study, and agricultural and other uses.³⁸⁴

Much of the discussion among the state water officials attending the March 3, 1950 meeting centered upon the interstate nature of the management of water resources in the Red River basin. Fort Supply and Lugert-Altus were cited as examples of two reservoirs which, though located in Oklahoma, have portions of their watersheds in Texas.³⁸⁵ The state in which the watershed is situated has little interest in promoting sound watershed management when the reservoir controlling the watershed is located in another state.³⁸⁶ In the opinion of several water officials, a compact comprehensively addressing the utilization of water in the river basin could alter this parochial attitude and could expedite the development of a definitive reservoir utilization policy.³⁸⁷

The Arkansas representative who attended the March, 1950 meeting indicated that some towns in Arkansas were experiencing a shortfall of industrial water.³⁸⁸ Although Arkansas previously had adhered to a policy of allowing Oklahoma and Kansas to retain all of the water that flowed through interstate rivers and tributaries in those states, Arkansas' policy was being reconsidered in view of (1) the clearly emerging national problem associated with the huge consumption of water and (2) the necessity of water for the

^{379.} See Minutes of 1950 Meeting, supra note 373, at 1; Transcript of 1950 Meeting, supra note 374, at 1. Although the Red River originates in New Mexico, that state elected not to send a representative to the Mar. 3, 1950, meeting.

^{380.} Minutes of 1950 Meeting, supra note 373, at 1; Transcript of 1950 Meeting, supra note 374, at 1.

^{381.} See Minutes of 1950 Meeting, supra note 373, at 2; Transcript of 1950 Meeting, supra note 374, at 1-3.

^{382.} See Minutes of 1950 Meeting, supra note 373, at 2; Transcript of 1950 Meeting, supra note 374, at 1-3.

^{383.} See Transcript of 1950 Meeting, supra note 374, at 3.

^{384.} Id.

^{385.} See Minutes of 1950 Meeting, supra note 373, at 3.

^{386.} Id.

^{387.} Id.

^{388.} Id. at 5.

support and expansion of Arkansas' economy.³⁸⁹ Louisiana's representative was primarily interested in the flood control problems on the Red River and wanted nothing done to alter the currently authorized flood control program for it.³⁹⁰ Most of the officials attending the meeting thought the negotiation and approval of an interstate compact apportioning the water of the Red River would enable each state to proceed more reliably with the development of its water resources.³⁹¹ The meeting concluded with Oklahoma requesting that each representative draft provisions desired by his state for inclusion in a compact.³⁹²

A draft of a proposed bill to grant the consent of Congress to the commencement of negotiations of a compact for the Red River was prepared by May of 1950.³⁹³ However, disagreement arose over the language pertaining to the appointment of a federal representative, ³⁹⁴ and little progress was made during the remainder of the year toward securing congressional consent to negotiate.

Oklahoma's interest in negotiating a compact for the Red River was renewed when Johnston Murray became governor of Oklahoma in 1951.³⁹⁵ Governor Murray, like former Governor Turner, was familiar with the Interstate Compact to Conserve Oil and Gas. In the area of oil and gas production, Governor Murray perceived the compact as "an effective block against federal encroachment on state Sovereignty... [and] an inspiration to many who are tired of federal intervention in every field imaginable." On July 1, 1951, Governor Murray officially appointed an Oklahoma compact commissioner for the Arkansas and Red rivers, 397 and he reaffirmed the appointment in 1952. 398

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389. Id.
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^{390.} Id. at 4.

^{391.} Id.

^{392.} Id. at 5. Apparently drafts of proposed compact provisions were prepared either immediately preceding or following the Mar. 3, 1950, meeting. See Draft of a Proposed Red River Compact, in files of Okla. Water Resources Bd., at 1-9 (undated).

^{393.} See Letter from L.R. Matthias, Executive Secretary, Red River Valley Ass'n, to Clarence Burch, Okla. Planning & Resources Bd. (OPRB) Chairman, and attachments (May 17, 1950).

^{394.} Id. The Executive Secretary of the Red River Valley Association wanted the "consent to negotiate" bill to specify that the President of the United States shall appoint as federal representative and chairman of the negotiation commission a member of the Corps of Engineers recommended by the Chief of Engineers. Id. The Chairman of the OPRB objected to this language, arguing that such language (1) ignored other federal agencies with jurisdiction over soil and water development and conservation, (2) failed to recognize that the Corps of Engineers does not have complete control over the river basin, and (3) would encourage "selfish maneuvering" by other federal agencies with interests in the Red River basin. See Letter from Clarence Burch, OPRB Chairman, to L.R. Matthias, Executive Secretary, Red River Valley Ass'n 1 (May 19, 1950).

^{395.} Johnston Murray was Governor of Oklahoma from January 8, 1951, to January 1955. See Okla. Dep't of Libraries, 1983 Directory of Oklahoma 564 (P. Lester ed.)

^{396.} See Leach, supra note 378, at 276.

^{397.} See Oklahoma Governor's Certificate of Appointment of Ira C. Husky [Director of the OPRB Div. of Water Resources] as Compact Comm'r of Oklahoma for Arkansas and Red Rivers (July 11, 1951).

^{398.} See Letter from Governor of Oklahoma to Carl Albert, Member, U.S. House of Rep-

Efforts to obtain congressional consent to negotiate a compact for the Red River dragged until September, 1952, when the Oklahoma compact commissioner noticed an advertisement by the Saint Louis and San Francisco Railway Company in a popular national business magazine.³⁹⁹ The railway company offered to deliver fifty million gallons of water per day, presumably from the Red River at a site four miles below Denison, Texas, to industry that was willing to locate in the vicinity of Lake Texoma.⁴⁰⁰ A withdrawal of this magnitude would take most, if not all, of the flow of the Red River at this point during extreme low-water periods.⁴⁰¹ Consequently, the Oklahoma compact commissioner wrote to the railway company, objecting to the offer and asserting Oklahoma's claim to a share of the water.⁴⁰² The railway company was also put on notice of the efforts to reach an agreement apportioning the water of the river among the states through which it flows.⁴⁰³

The railway advertisement and the concomitant threat of withdrawal of water to serve industries locating in Texas spurred Oklahoma officials to redouble their efforts to secure a compact dividing the water of the river. 404 In reaction to the Frisco advertisement, Governor Murray wrote to the governors of the other states in the basin, reiterating the strong interest of Oklahoma in negotiating a compact for the Red River. 405 Then Oklahoma officials began to find still other advertisements, published mostly in eastern papers and magazines, offering to deliver approximately all the low-water flow of the Red River below Denison Dam to industrial sites in Texas. 406 State water officials throughout the Red River basin were particularly sensitive to water use at this time because of a severe drought. 407 Louisiana was so badly stricken that New Orleans' municipal water intake was threat-

resentatives, at 1 (Jan. 24, 1952).

^{399.} See Letter from Ira C. Husky to J.E. Gilliland, Assistant to the President, St. L. & San Francisco Ry., 1 (Sept. 12, 1952). The advertisement apparently was placed by the railroad in the Aug. 3, 1952, issue of Business Week. Id.

^{400.} Id. See also Letter from J.E. Gilliland to Ira Husky (Sept. 22, 1952); Letter from Ira Husky to J.E. Gilliland (Sept. 25, 1952).

^{401.} See Letter of Sept. 12, 1952, supra note 399.

^{402.} Id.

^{403.} Id.

^{404.} See Letter from Ira C. Husky to N.R. Graham, Vice-Chairman of OPRB (Sept. 12, 1952). A member of the Texas Board of Water Engineers also thought that the Frisco railway ad suggested the need for a compact for the Red River. See Letter from A.P. Rollins to Ira C. Husky (Sept. 18, 1952).

^{405.} See Letters from the Governor of Oklahoma to Allan Shivers, Robert F. Kennon, Edwin L. Mechem, and Sidney S. McMath, governors of Texas, Louisiana, New Mexico, and Arkansas, respectively (Sept. 19, 1952).

^{406.} See Letter from N.R. Graham, Vice-Chairman of the OPRB, to Ira Husky (Oct. 16, 1952).

^{407.} See Letter from Governor of Oklahoma to G.W. McCullough, President, Okla. Soc'y of Professional Eng'rs (OSPE) (Oct. 21, 1952) (seeking the assistance of the OSPE in assessing Oklahoma's grave deficiency in municipal water supply and offering suggestions toward efficient water utilization in light of the protracted drought).

ened by the intrusion of sea water because of the low level of the Mississippi River. 408

During the same period, Texas became concerned about an application filed by the Lugert-Atlus Irrigation District in southwestern Oklahoma with the Oklahoma Planning and Resources Board for the impoundment and appropriation of water of the Salt Fork of the Red River for irrigation purposes. The Texas Board of Water Engineers requested that Oklahoma officials refrain from allocating any of the water of the Salt Fork. Since the Salt Fork is interstate in character, with a large portion of its watershed lying in Texas, the Texas Board of Water Engineers maintained that the interests of Oklahoma and Texas should be established by compact before any permits were granted. Oklahoma officials took Texas' request under advisement.

Meanwhile, response from the other governors to Governor Murray's letters expressing continued interest in negotiating a compact for the Red River was mixed.⁴¹³ Because of the apparent inertia of the states, the year 1952 ended without congressional consent for negotiations to officially begin.

In April of 1953, representatives of Arkansas, Louisiana, Oklahoma, and Texas met while attending a meeting of the Red River Valley Association in Shreveport and agreed on a draft of a proposed bill granting the consent of Congress for these states to conduct negotiations and enter into a compact for the Red River. Perhaps heeding Colonel Wilson's earlier advice to draft a compact broad in scope and reflective of a balanced approach to resource development, the proposed language not only authorized the drafting of a compact apportioning the water of the river but also approved the negotiation of provisions "concerning the interests of the respective states in the development of water resources of the Red River and its tributaries." After slightly modifying the language, Congressman Wright Patman

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^{408.} See Letter from N.R. Graham, OPRB Vice-Chairman, to Oklahoma Governor Johnston Murray (Oct. 24, 1952).

^{409.} See Letter from A.P. Rollins, Member of Texas Bd. of Water Eng'rs, to Ira C. Husky (Sept. 22, 1952).

^{410.} Id.

^{411.} *Id*.

^{412.} See Letter from Ira C. Husky to A.P. Rollins (Sept. 25, 1952).

^{413.} Louisiana responded affirmatively to Governor Murray's letter. See Letter from Louisiana Governor Robert F. Kennon to Oklahoma Governor Johnston Murray (Oct. 21, 1952). However, since only 5 percent of the watershed of the Red River is located in New Mexico, that state again declined to participate in any compact negotiations for the Red River system. See Letter from John H. Bliss, New Mexico State Eng'r, to Oklahoma Governor Johnston Murray (Oct. 31, 1952).

^{414.} See Letter from N.R. Graham, OPRB Vice-Chairman, to Oklahoma Governor Johnston Murray (Oct. 24, 1952). Graham also reported the willingness of Texas Governor Allan Shivers to propose a meeting of the Red River basin governors to discuss an interstate compact for the Red River. Id. Since Oklahoma had previously tried without success to ignite negotiations, Graham recommended that the next move should come from another state. Id. See also Letter from Texas Governor Allan Shivers to Oklahoma Governor Johnston Murray (Jan. 16, 1953).

^{415.} See Memorandum by Ira C. Husky to Files and attached proposed Red River Bill (Apr. 11, 1953).

of Texas introduced the bill in the United States House of Representatives on May 20, 1953.⁴¹⁶ The bill was referred to committee, and no further action was taken on it that year.⁴¹⁷

Requests for permits to appropriate water from the main stem of the Red River continued to be filed with both the Oklahoma Planning and Resources Board and the Texas Board of Water Engineers. Texas officials advised applicants that no permits would be issued for diversion of water from the main stem of the river until an interstate compact had been negotiated and a definite portion of the flow of the river had been allocated. Although rumors to the contrary were rampant among Texas farmers, Oklahoma officials also told permit applicants that their applications were being dated and filed subject to any compact that might be negotiated, with priority of right for purposes of an Oklahoma adjudication determined by the date of filing.

During the spring of 1953, the protracted drought in the Red River basin confronted the city of Dallas with a serious water shortage.⁴²¹ The Governor of Oklahoma gave his consent to the issuance of an emergency permit to Dallas for the diversion of water from the Red River in Cooke County, Texas, until the impounding reservoirs regularly used by Dallas for water supply were filled.⁴²² Although the permit contained language designed to protect Oklahoma and Texas in the event that a water compact was later reached, Oklahoma officials became concerned that Dallas might acquire "squatter's rights to Oklahoma's property [i.e., water]" when the diversion of water had not ceased by July of the following year.⁴²³

416. H.R. 5309, 83d Cong., 1st Sess. (1953).

417. The bill was referred to the House Committee on Interior and Insular Affairs. 1953-54 Cong. Index 4401. The language as modified was also very broad—consenting to the negotiation and entering into a compact "relating to the interests of such [s]tates in the development of the water resources of the Red River and its tributaries, and providing for an equitable apportionment among them of the waters of the Red River and its tributaries, and for matters incident thereto." H.R. 5309, 83d Cong., 1st Sess. 1 (1953).

418. See Letter from A.P. Rollins, Member of Texas Bd. of Water Eng'rs, to Ira C. Husky (Feb. 10, 1954); Letter from Ira C. Husky to A.P. Rollins (Feb. 18, 1954) (in reply).

419. See Letter dated Feb. 10, 1954, supra note 418, at 1.

420. Id. See also Letter dated Feb. 18, 1954, supra note 418, at 1.

421. See Letter from A.P. Rollins, Member of Texas Bd. of Water Eng'rs, to Wright Patman, Member, U.S. House of Representatives (Aug. 10, 1954).

422. Id. Permit No. 1670 was issued to Dallas by the Texas Board of Water Engineers on Apr. 30, 1953, authorizing the diversion of no more than 112,000 acre-feet of water annually at a rate of diversion not exceeding 155 cubic feet per second. See Letter from A.P. Rollins to N.R. Graham, OPRB Vice-Chairman (Aug. 5, 1954) (quoting language from the permit). The permit specifically provided that it was

to remain in effect only until there is stored in reservoirs on Elm Fork of the Trinity River and its tributaries to the credit of the City of Dallas, Texas, an amount of water equal to the original capacity of Lake Dallas; and is issued without prejudice to the rights of Oklahoma or Texas to waters of [the] Red River, as rights may be hereafter determined by compact.

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423. See Letter from Morton R. Harrison, OPRB Chairman, to Oklahoma Att'y Gen. Mac Q. Williamson (July 29, 1954).

Except for the emergency permit for Dallas, the Texas Board of Water Engineers generally declined to grant permits to applicants who sought to divert water from the Red River for domestic, municipal, and irrigation purposes in the absence of a compact definitively apportioning the water of the Red River among the interested states.⁴²⁴ The stymieing effect that the lack of a compact had upon potential individual and municipal investments in needed diversion works was outlined to Congressman Wright Patman in August of 1954.⁴²⁵ Patman again introduced his bill in March of 1955, and after amendment in committee, it received a "do pass" recommendation.⁴²⁶

On August 11, 1955, Congress approved the act granting the consent of Congress for the negotiation of an interstate compact "for an equitable apportionment... of the water of the Red River and its tributaries." In addition to incorporating amendments added by the House and Senate committees, the act stipulated that any compact negotiated and concluded pursuant thereto would not be binding or obligatory upon any signatory parties until ratified by the legislatures of each of the respective states and approved by the Congress. 428

Ironically, the protracted effort to secure congressional consent to negotiate a compact for the Red River, though politically pragmatic, was not constitutionally mandated. Although interstate compacts dealing with water resources are generally deemed to require the consent of Congress, consent "to negotiate" a compact is not constitutionally required. However, the

^{424.} See Letter dated Aug. 5, 1954, supra note 422.

^{425.} Id. "No individual or municipality can afford to invest any considerable sum in diversion works on such an indefinite basis."

^{426.} H.R. REP. No. 1444, 84th Cong., 1st Sess. 2 (1955) (discussing H.R. 5259). In the absence of studies showing the effect of the ambiguous language in H.R. 5259 upon federal interests and activities in the basin, the House Committee insisted that the compact be limited to the apportionment of the water of the river. *Id.* The comparable Senate bill was S. 2260, 84th Cong., 1st Sess. (1955).

^{427.} Act of Aug. 11, 1955, ch. 784, 69 Stat. 654.

^{428.} Id.

^{429.} Although there is scant historical documentation to shed light upon the scope and purpose of the compact clause, it was patterned after the language in the Articles of Confederation in an apparent effort to continue the previous pattern of cooperative adjustment of interjurisdictional disputes, subject to oversight by the Congress. See Muys, Interstate WATER COMPACTS, supra note 82, at 242. Certain types of interstate agreements are beyond the scope of the compact clause. For example, an interstate agreement or compact to which Congress has not consented would only violate the compact clause if it were a "combination tending to the increase of political power in the States, which may encroach upon or interfere with the supremacy of the United States." United States Steel Corp. v. Multistate Tax Comm'n, 434 U.S. 452, 471 (1978) (quoting Virginia v. Tennessee, 148 U.S. 503, 519 (1893)); New Hampshire v. Maine, 425 U.S. 363, 369 (1976). Accord, Northeast Bancorp, Inc. v. Federal Reserve Bd., 105 S.Ct. 2545, 2554-55 (1985). In view of the broad authority the federal government has over water resources, "there is a very strong presumption that any compact or agreement dealing with water resources is subject to the consent requirements of the compact clause." Muys, supra note 82, at 174 (emphasis in original) (also noting that there may be some categories of water resouce compacts that have no apparent effect upon national interests). However, the Constitution "makes no provision respecting the mode or form in which the consent of Congress [to an interstate compact] is to be signified." Green v. Biddle, 22 U.S. (8 Wheat.) 1, 86 (1823). The Supreme Court held that the fundamental issue is whether the "Congress by some positive act in

practice of first securing the consent of Congress to negotiate a compact prior to undertaking substantive negotiations "enables Congress to guide the states by specifying any conditions to its ultimate consent and by providing any guidelines it may deem appropriate to facilitate negotiations." 430

The years consumed by the process of obtaining congressional consent to negotiate could have been better devoted to substantive negotiations. The lack of advance congressional approval to negotiate could have been overcome by inclusion of a federal representative in the negotiations and the conscientious maintenance of open lines of communication with the Congress and the executive branch.⁴³¹ Unfortunately, the five-year effort that culminated in securing congressional authorization to undertake negotiations on a compact for the Red River foreshadowed the glacial speed of the formal negotiation process that was to ensue.

The Beckman Years: Charting a Course for the Negotiations

Shortly after approving the legislation in 1955 granting consent to negotiate a compact for the Red River basin, President Eisenhower appointed Henry C. Beckman, a regional engineer with the United States Geological Survey in Rolla, Missouri, as the chairman and nonvoting representative of the federal government to the Red River Compact Negotiation Commission. ⁴³² By the end of January, 1956, Oklahoma, Texas, Louisiana, and Arkansas had named their respective representatives to the negotiation commission. ⁴³³ Since the portion of the Red River basin lying within New Mexico

relation to [the interstate] agreement, [has] signified [its] consent [to the] validity [of the agreement]. Id.

^{430.} See Muys, supra note 82, at 175.

^{431.} Historically, "[e]xperience has shown that federal agencies can be quite successful in delaying Congressional consent to a proposed Compact if they have even minor objections to any of its provisions." Muys, Interstate Water Compacts, supra ntoe 82, at 276 (quoting from Calif. Assem. Comm. on Water, Report on the California-Nevada Interstate Compact, at 1, 8-10, 11-12 (undated)). However, as Muys points out, the participation of a federal representative in compact negotiations is not without its drawbacks:

The matter of coordination of federal agency views by the federal representative is . . . troublesome. In the Upper Colorado River Compact negotiations, coordination efforts produced only innocuous, well-wishing statements from the agencies, even though there were extensive and significant federal interests in the area. This suggests that a federal representative's coordinating efforts are probably going to be generally unsuccessful, even with the help of OMB personnel, as long as each federal representative must attack his assignment on an ad hoc basis with no clear policy at the Washington level to guide him on difficult matters in a constructive way. All that can result from his coordinating efforts, no matter how diligent, is a composite of uncertain, hesitant responses from the affected agencies, none of which wish to be accused of sacrificing any portion of the federal interest. There is little utility to anyone coordinating a host of non-commital [sic] views. Id. at 278-79.

^{432.} See Letter from Henry C. Beckman, RRCNC Chairman, to RRCNC State Comm'rs, at 1 (Jan. 23, 1956).

^{433.} See Letter dated Jan. 23, 1956, supra note 432, at 1-2.

was small and the flow of the streams infrequent, New Mexico declined to participate in the negotiations and to become a member of the compact.⁴³⁴

When the organizational meeting of the Red River Compact Negotiation Commission convened in New Orleans in March of 1956, all four participating states had varying degrees of experience in negotiating compacts for other river basins. Texas had signed the Rio Grande Compact with Colorado and New Mexico in 1938 and the Pecos River Compact with New Mexico in 1948; Oklahoma, Texas, and New Mexico had completed the Canadian River Compact in 1950; and Louisiana and Texas had approved the Sabine River Compact in 1953. In addition, progress had been made between Arkansas and Oklahoma and between Oklahoma and Kansas on the negotiation of compacts apportioning the waters of the Arkansas River and its tributaries within those two states. 436

Under the guidance of Chairman Beckman, the work of the Red River Compact Negotiation Commission proceeded methodically from the initial meeting of the negotiators in 1956 until Beckman's sudden death following the twenty-sixth meeting of the commission on December 14, 1962. During his tenure, Beckman encouraged the Red River Compact negotiators to avail themselves of the experience and expertise of other river basin compact commissions.⁴³⁷ The salient features of nine existing water apportionment compacts, including those for the Sabine, Rio Grande, Canadian, and Pecos rivers, and several stream pollution control compacts, were analyzed to help formulate a compact for the Red River basin.⁴³⁸ As new river basin compacts were approved, the Red River negotiators examined them for useful ideas.⁴³⁹

The negotiators recognized early in the deliberations that a lot of data would be needed before negotiations for a compact for the Red River system could be undertaken intelligently. The negotiation commission established an Engineering Advisory Committee and a Legal Advisory Committee to perform the critical information-gathering and processing function. Although the members of both committees were initially appointed to serve as technical advisers to the commissioners, much substantive decision making was actually accomplished by the two committees.⁴⁴⁰

^{434.} See Supplemental Interpretive Comments, supra note 21, at 468. Only 450 square miles of the watershed are located within New Mexico.

^{435.} See Water Allocation Compacts, supra note 173.

^{436.} See supra note 174.

^{437.} See 1967 RRCNC Draft Eng'g Report, supra note 13, at 3-4.

^{438.} See Letter from Francis B. Sessums, Chief, OPRB Water Resources Div., to RRCNC Comm'rs and Members, Legal and Eng'g Advisory Comm's., at 1 (July 20, 1956).

^{439.} See Letter from Henry C. Beckman, RRCNC Chairman, to RRCNC State Comm'rs, at 1 (July 8, 1957) (enclosing a copy of the "new" Klamath River Basin Compact, noting its unusual features, and commenting that the priorities of use set forth in the compact and that the powers given the compact administration over stream pollution are different from those in other compacts).

^{440.} See Minutes of 28th Meeting of RRCNC, at 1-2 (Nov. 7, 1963) (in which the chairman of the Legal Advisory Committee recommended that further legal work on the draft compact "should await receipt of work of the Engineering Advisory Committee on the apportionment

The Engineering Advisory Committee was composed of an engineering official from each of the participating states who had direct responsibility relating to water resources development in his state.⁴⁴¹ The committee was given a large assignment: (1) to update the surface water and monthly and annual discharge records for the gauging stations throughout the Red River basin; (2) to develop a map pinpointing locations of all stream gauging, chemical quality, and sediment stations within the basin; (3) to prepare a table summarizing discharge records for all stream gauging stations on the Red River and its major tributaries, particularly those near interstate crossings; and (4) to compile information concerning present and contemplated future uses of water for municipal, industrial, irrigation, power, and other purposes.⁴⁴²

The members of the Legal Advisory Committee were either assistant attorneys general or attorneys for a state governmental division with major responsibility in the use and control of water resources.⁴⁴³ The dual tasks of this committee were to study the legal and administrative features of a desirable compact and to serve as legal advisers to the commission. The legal advisers were asked to anticipate the problems that might be encountered in formulating a compact for the Red River system, focusing particularly upon the legal aspects of apportioning the water of the river and the development of legal mechanisms to improve water quality.⁴⁴⁴

The negotiators decided during the initial phases of the deliberations that water quality is as important as water quantity. A compact would be of little value if a state's equitable share of water was so polluted that it was unfit for use. 445 Therefore, the commissioners decided that a goal of the compact was to enhance the quality of water in the basin. Since the Federal Water Pollution Control Act of 1956 conferred blanket authority upon the states to begin negotiations to form compacts to control water pollution, 446 it was not necessary to secure specific congressional authorization in order to include pollution provisions in a compact for the Red River system.

Because the problems of natural contamination and man-made pollution of the waters of the river system merited particularly close attention, the commissioners established a subcommittee of the Engineering Advisory Committee on stream pollution control.⁴⁴⁷ This subcommittee was composed of a representative from each participating state who had important responsibilities pertaining to the control of stream pollution within his state.⁴⁴⁸

of water"). See, e.g., Minutes of 49th Meeting of RRCNC, supra note 25, at 1-3 (reflecting the important roles performed by the two advisory committees to the RRCNC).

^{441.} See Beckman Address to Red River Valley Ass'n, supra note 18, at 2.

^{442.} See Minutes of 2d Meeting of RRCNC, at 1-3 (May 2, 1956).

^{443.} See Beckman Address to Red River Valley Ass'n, supra note 18, at 3.

^{444.} See Minutes of 2d Meeting of RRCNC, supra note 442, at 3.

^{445.} See Beckman Address to Red River Valley Ass'n, supra note 18, at 3.

^{446.} See supra notes 166-168 and 251 and accompanying text.

^{447.} See Minutes of 4th Meeting of RRCNC, at 1, 3 (Dec. 18, 1956).

^{448.} See Beckman Address to Red River Valley Ass'n, supra note 18, at 3.

The subcommittee was assigned the task of investigating the presence of stream pollution in the basin and advising the commissioners as to the manner and extent to which the control of interstate stream pollution should be included in the contemplated compact. The agenda of the subcommittee included examining the effects of various methods of controlling natural pollution upon the flow characteristics of the main stem of the river and reviewing other compacts to ascertain how water quality problems had been addressed elsewhere.⁴⁴⁹

Two of the most complicated problems faced by the Subcommittee on Stream Pollution Control and later by the negotiation commission were (1) the scope of authority the permanent interstate administrative agency of the compact would have over stream pollution and (2) the extent to which the control of natural contamination of the river system should be addressed.⁴⁵⁰ When the subcommittee began its work in 1957, most river basin compacts only empowered their interstate administrative agencies to investigate stream pollution and to recommend the initiation of certain enforcement actions by other agencies. Only two compacts authorized their administrative entities to bring enforcement actions in the courts. Moreover, the dimensions of the second problem—the natural deterioration of the water in the upper basin of the river system created by the flow of water over and through salt-laden soils—were not fully understood.⁴⁵¹

A survey to determine the source, extent, and volume of chemical pollution in the Red River basin was undertaken in 1957 by the U.S. Public Health Service, representatives of which worked closely with the compact negotiators and their advisers throughout the negotiations.⁴⁵² In addition, the Army Corps of Engineers began examining the economic and engineering feasibility of reducing the chemical content of the river system by controlling sources of natural pollution.⁴⁵³

When the Eisenhower administration sought to limit the budget for the U.S. Public Health Service water quality study to \$85,000, the negotiating commission formally petitioned the Congress to make adequate funds avail-

^{449.} Id. See also Minutes of 4th Meeting of RRCNC, supra note 447, at 4.

^{450.} See Minutes of 5th Meeting of RRCNC, at 3 (Feb. 20-21, 1957).

^{451.} See Beckman Address to Red River Valley Ass'n, supra note 18, at 3.

^{452.} See, e.g., Minutes of 3d Meeting of RRCNC, at 1-3 (Oct. 17-18, 1956); Minutes of 7th Meeting of RRCNC, at 1-2 (Aug. 6-7, 1957) (during which a representative of the U.S. Public Health Service explained the objectives, nature, and scope of the water pollution survey being conducted in the Red River basin); Minutes of 9th Meeting of RRCNC, supra note 38, at 2-3; Minutes of 10th Meeting of RRCNC, at 3 (Apr. 8-9, 1958) (addressing the problems encountered by the U.S. Public Health Service in securing sufficient funding to continue the water quality study); Tentative Draft of Eng'g Advisory Comm. Rep., at 5 (Dec. 7, 1961).

^{453.} See Tentative Draft of Eng'g Advisory Comm. Rep., supra note 452, at 5. The role of the Corps of Engineers was to try to determine measures to alleviate the conditions identified by the Public Health Service study. Id. The ramifications of developing a solution to the problem of naturally occurring chloride and sulfate contamination in the Red River system transcended the basin. Id. Great quantities of water are contaminated by salt pollution associated with the Blaine formation, which extends from the Pecos River in New Mexico, around the Cap Rock escarpment in Texas, through Oklahoma, and northward into Kansas. Id.

able for the continuation of the survey and research.⁴⁵⁴ Salt contamination of Lake Texoma seriously undermined the potential of this major impoundment for industrial and municipal uses. The city of Denison, Texas, was unable to attract a food processing plant in 1958 because of the high mineral content of the water.⁴⁵⁵ Dallas newspapers editorialized for increased funding to complete the study; Dallas plumbing was "still paying the high price" of using the Red River as a source of domestic water during the droughts of the early 1950s.⁴⁵⁶ Congressman Sam Rayburn, the Speaker of the U.S. House of Representatives, joined a delegation from the Red River basin in urging that the budget be increased to \$400,000.⁴⁵⁷ Ultimately, adequate funding was secured to complete the project.

Meanwhile, the advisory committees to the negotiation commission vigorously tackled their assignments. The legal advisers provided the negotiating commissioners with synopses of major Supreme Court cases dealing with interstate water problems and summaries of the pollution laws of the four interested states. The authorizing legislation for Denison Dam was examined, and compact provisions addressing the operational status of Denison Dam became a point of contention between Louisiana and the upstream states of Oklahoma and Texas. The Legal Advisory Committee had a

454. See Editorial, Salty Red River, Dallas Morning News, Apr. 16, 1959; Minutes of 9th Meeting and attached resolution, supra note 38, at 4. Individual negotiators and other state officials also lobbied for adequate funding to support the completion of the study. See. e.g., Letter from Oklahoma Governor Raymond Gary to Arthur Flemming, Secretary, U.S. Dep't of Health, Education, and Welfare (HEW) (Sept. 12, 1958) (urging inclusion in the HEW budget of requisite funding for the Public Health pollution research program in the Red and Arkansas rivers); Letter from Francis Borelli, OWRB Executive Director, to J.T. Ellis, Jr., Admin. Assistant to Texas Governor Price Daniel, at 1-2 (Oct. 7, 1958) (encouraging Governor Daniel to write to HEW Secretary Arthur Flemming regarding increased funding in the HEW budget for the next biennium for the continuation of the Public Health Service pollution control study); Letter from Francis J. Borelli, OWRB Executive Director, to Calvin T. Watts, Assistant Director, Louisiana Dep't of Public Works 1 (Oct. 7, 1958) (requesting Watts to inform Louisiana Governor Huey Long of the urgent need for the completion of the Public Health Service study in the Red River basin and asking the Governor to contact HEW Secretary Arthur Flemming about increased funding for the continuation of the research program on water quality in the Arkansas and Red rivers).

455. More Funds Asked for Study of Red River Salt Pollution, Dallas Morning News, Apr. 14, 1959, at 3, § 1. The abatement of salt contamination of the water of Lake Texoma was vital to the maximum utilization of this body of water by both industry and municipalities. See Letter from Francis Borelli to J.T. Ellis, Jr., supra note 454, at 1.

456. See Editorial, supra note 454.

457. Id.

458. See Minutes of 4th Meeting of RRCNC, supra note 447, at 3; Minutes of 5th Meeting of RRCNC, supra note 450, at 3.

459. See Letter from Henry C. Beckman, RRCNC Chairman, to Richard Huff, Chairman, RRCNC Legal Advisory Comm., at 1 (Sept. 23, 1957); Minutes of 33d Meeting of RRCNC, at 2-3 (Jan. 25, 1965). Oklahoma and Texas objected to language in the draft provision apportioning the water of Reach I, the boundary reach above Lake Texoma, which stipulated that any diversion, impoundment, or use of these waters by Oklahoma and Texas "shall not be detrimental to the authorized purposes of Denison Reservoir." Id. The two upstream states argued that the proviso sought by Louisiana was in direct conflict with the 1938 authorizing

rough draft of the general features of the compact by the end of 1956.⁴⁶⁰ The draft was heavily revised, and proposed congressional consent legislation was written as well.

Copies of the rough draft, subsequent revisions, and proposed consent legislation were sent to the U.S. Department of Justice for review and comment. The initial draft of the compact included a broad waiver of the sovereign immunity of the United States and a suggestion that the federal government defray the expenses of the interstate entity to be set up to administer the compact. These provisions were strongly resisted by the Department of Justice. The language concerning the payment of compact expenses by the federal government was deleted, but the effort to secure a partial waiver of sovereign immunity became a major point of debate between the legal advisers and the Department of Justice throughout the remainder of the negotiations. Ultimately, the negotiators secured a partial waiver of the sovereign immunity of the United States in certain cases arising under the compact in which the federal government was determined to be an indispensable party. The substitute of the sovereign immunity of the United States in certain cases arising under the compact in which the federal government was determined to be an indispensable party.

legislation for Denison Dam and Reservoir. *Id.* Louisiana countered that the limitation "expressed Louisiana's belief that operation of projects as at present [1965] should be insured." *Id.* For an analysis of the 1938 Denison Dam authorizing legislation, see *supra* text accompanying notes 350-355, 363, and 372.

^{460.} See Minutes of 3d Meeting of RRCNC and app., Report of Legal Advisory Comm., supra note 452 (indicating that the Legal Advisory Committee distributed a copy of a revised form of "rough draft" compact at this meeting). See also Letter from Perry Morton, Assistant Att'y Gen., Lands Div., U.S. Dep't of Justice, to Henry C. Beckman, RRCNC Chairman, at 1-4 (Apr. 22, 1957) (commenting on the "Rough Draft of Red River Compact").

^{461.} See Letter from Perry Morton dated Apr. 22, 1957, supra note 460, at 4 (objecting to a number of provisions, including article VI, paragraph B, of the "Rough Draft," which was interpreted as a suggestion that the federal government pay the expenses of administering the compact).

^{462.} Id. at 2-3 (regarding as "indispensable" to any interstate compact a general exclusion of the rights and powers of the United States from the operation of the compact and questioning the draft language in which the states attempted by compact to prejudge the legal question of the compact commission's standing as a real party in interest "for the purposes of enforcing or preventing the violation of any law, rule, or regulation of any signatory state or of the United States, . . . relating to the use or pollution of any of the waters of the Red River System"). See also Minutes of 16th Meeting of RRCNC, at 2 (Sept. 25, 1959) (summarizing the remarks by Walter Kiechel, Jr., the U.S. Department of Justice representative at the meeting, who stated that "some provisions [in the draft compact] were very drastic and without precedent," "were not essential to the successful operation of the compact," and "could be accomplished better by other means than by writing them into the compact"). The Department of Justice particularly objected to provisions in the draft compact for joining the United States as a party defendant in a lawsuit and for serving notice on federal officers and agencies. Id. at 3 (reflecting Kiechel's comment that such provisions were "unduly and unnecessarily drastic"). When a revised draft of the compact and a draft of the proposed consent legislation were later forwarded to the Department of Justice following the sixteenth meeting, federal attorneys again warned that "many provisions are most inappropriate" and "undesirable, both from the point of the compacting states and the federal government." See Letter from Perry Morton, U.S. Dep't of Justice, to Henry C. Beckman, RRCNC Chairman, supra note 81, at 1.

^{463.} See Act of Dec. 22, 1980, Pub. L. No. 96-564, § 2, 94 Stat. 3305, 3319-20.

Many of the negotiators and technical advisers for the Red River Compact were also members of the negotiating committees for the Kansas-Oklahoma and Arkansas-Oklahoma compacts for the Arkansas River basin. Walter Kiechel, Jr., an attorney with the Lands Division of the Department of Justice, met with the negotiators and the technical advisers for all three contemplated compacts in an unprecedented joint session of the negotiating commissions in 1960 in an effort to resolve the differences between the federal government and the states over language that was common to the drafts of all three compacts and the proposed consent legislation.⁴⁶⁴

The technical advisers decided that a readily available federal forum was imperative to the effective enforcement of the pollution provisions of the compact. The enforcement procedures set forth in the Federal Water Pollution Control Act in effect at the time were quite weak in the opinions of a number of experts. The Constitution gave the Supreme Court original, but not exclusive, jurisdiction of suits by a state against another state or

464. See Minutes of 20th Meeting of RRCNC, at 3-7 (June 27-28, 1960). In expressing his views and those of the Department of Justice, Mr. Kiechel made the following points:

- Reiteration of inadvisability of specific provisions in the consent legislation which the compacting States require to be enacted by Congress before the Compact can become effective;
- If compacting States insist on specific provisions of consent legislation, the least of such, the less likelihood of Congress' declining to meet their terms;
- Consent to sue sovereign is cautiously granted, and if such consent is made
 a part of the consent legislation, it should be limited to the actual need, i.e.,
 to insure the enforceability of the compact;
- 4. Conferral of jurisdiction on United States district courts over pollution abatement suits brought by a signatory State against a polluter in another State is not appropriate in legislation consenting to a compact. Such jurisdiction, even though it may be desirable, should be obtained by amendment of the Judicial Code or a law of general application; and
- 5. Pointed out that, in consenting to recent compacts, Congress has invariably reserved the right to amend, alter, or repeal its consent, and that even though the exercise of such reservation may be unlikely, the Compact should not include provisions which would impliedly or otherwise negate the possibility of Congressional exercise of such power.

Id. at 6. During the discussion that followed Kiechel's formal remarks to the joint session of the three compact negotiating groups, Kiechel addressed the question of "whether Congressional consent to a compact in which the States had agreed upon criteria of regulation for a federal project superseded the original authorization act." Id. at 6-7. Kiechel answered negatively, explaining that "it would take affirmative action by Congress to amend the original authorization act [for the federal project]." Id. at 7. During the ensuing exchange of comments between Kiechel and some of the compact negotiators, attention was called to language in the existing Arkansas River Compact between Colorado and Kansas that made specific provision for the operation of the John Martin Reservoir. Id. Kiechel stressed that the Chief of Engineers, U.S. Army Corps of Engineers, "had been expressly authorized by Congress to operate that reservoir in accordance with the compact provisions." Id.

465. See Progress Reports of Eng'g Advisory Comm. and Legal Advisory Comm. appended to Minutes of 9th Meeting of RRCNC, supra note 38.

466. See, e.g., Reitze, supra note 38, at four-34.

its citizens.⁴⁶⁷ Federal statutory law in force during the negotiations conferred exclusive jurisdiction upon the Supreme Court in controversies between states.⁴⁶⁸ The Supreme Court's jurisdiction was nonexclusive in actions by a state against a citizen of another state; however, no statutory provision explicitly stipulated the jurisdiction of the federal district courts in such cases.⁴⁶⁹ The somewhat risky strategy adopted by the negotiators and their technical advisers during the early stages of the deliberations was the inclusion of a provision in the draft compact requiring specific and precise language concerning the waiver of sovereign immunity and jurisdiction of federal district courts to appear in the congressional consent legislation as a condition precedent to the interstate compact becoming effective.⁴⁷⁰

At the behest of the Department of Justice, the negotiators were successful in 1962 in getting Congress to enact legislation of general application that conferred jurisdiction upon the federal district courts of cases involving the pollution of interstate rivers where the pollution is an alleged violation of an interstate compact and the signatory states have consented to such jurisdiction in the compact.⁴⁷¹ The 1962 act also clarified the concurrent jurisdiction of the federal district courts in interstate pollution suits against a citizen of another state.⁴⁷² Because the negotiators feared that Congress might some day repeal the 1962 act, they retained the conditional language in the draft compact and ultimately secured passage of congressional consent legislation containing the desired language.⁴⁷³

- 467. U.S. Const., art III, § 2. See also S. Rep. No. 2211, supra note 40, at 3282.
- 468. 28 U.S.C. § 1251(a)(1) (1982). See also S. Rep. No. 2211, supra note 40, at 3282.
- 469. See 28 U.S.C § 1251(b)(3) (1982). See also S. Rep. No. 2211, supra note 40, at 3282.
- 470. See Letter from Perry Morton, U.S. Dep't of Justice, to Henry C. Beckman, RRCNC Chairman, supra note 81 (reiterating that by requiring the inclusion of specific and precise language in the congressional consent legislation as a condition precedent to an interstate compact becoming effective, the compacting states risked the problem of having to renegotiate and re-ratify the compact should Congress reject or modify the language in the proposed consent legislation).
- 471. See Act of Oct. 15, 1962, Pub. L. No. 87-830, 76 Stat. 957 (codified at 33 U.S.C. § 466g-1 (1982)).
 - 472. Id. See also S. Rep. No. 2211, supra note 40, at 3282-83.
- 473. See Minutes of 38th Meeting of RRCNC, supra note 38. Keichel continued to object to inclusion of this language in the compact, particularly in light of the fact that the RRCNC in 1962 had secured the enactment of federal legislation of general application containing the identical provisions found in the draft compact and proposed consent legislation. Id. In the event the federal law was repealed, the legal advisers wanted a mechanism for the signatory states to seek recourse against each other in litigation involving pollution of the water of the Red River system; they sought, in effect, to bind Congress with the Red River Compact and the consent legislation. Id. Dicta in controversies over boundary compacts in the early 1800s suggested that once Congress had granted its consent to a compact, it was precluded from revoking or modifying that consent. Rhode Island v. Massachusetts, 37 U.S (12 Pet.) 883, 894-95 (1838); Poole v. Fleeger, 36 U.S. (11 Pet.) 395, 396-97 (1837). The better view is that Congress may enact legislation that is inconsistent with an interstate compact to which it has previously given its consent. See Louisville Bridge Co. v. United States, 242 U.S. 409, 418 (1917); Pennsylvania v. Wheeling & Belmont Bridge Co. involved a situation in which Congress first

The engineering advisers completed their initial assignments in February of 1959 and distributed a 150-page bound volume of data concerning water supply and usage in the river basin.⁴⁷⁴ However, as the commissioners discussed criteria and examined various methods for apportioning the water among the states, they concluded that additional data was still needed.⁴⁷⁵ For example, preliminary apportionment discussions were held in 1959 between Louisiana and Arkansas concerning the Ouachita River and Bayou Bartholomew.⁴⁷⁶ These discussions, in turn, called attention to the need to consider the water requirements of the authorized Overton Waterway on the lower Red River and the proposed improvements for navigation on the Ouachita River.⁴⁷⁷ The compact negotiators and technical advisers met with federal officials from the Corps of Engineers, the Southwest Power Administration, the Federal Power Administration, the Soil Conservation Service, and the Bureau of Reclamation to assess the water requirements of existing and proposed water-related projects and activities of these agencies.⁴⁷⁸ Dis-

approved a compact that stipulated that the Ohio River should forever remain open for navigation; then Congress passed legislation authorizing the construction of a bridge across the river. 59 U.S (18 How.) at 429, 432-33. The congressional authorization was challenged as being incompatible with the prior compact. *Id.* at 432. In upholding the constitutionality of the bridge authorization, the Court said: "The question here is, whether or not the compact can operate as a restriction upon the power of Congress under the Constitution to regulate commerce among the several states. Clearly not. Otherwise Congress and two states would possess the power to modify and alter the Constitution itself." *Id. See* Muys, Interstate Water Compacts, *supra* note 82, at 292-93, for an analysis of *Pennsylvania v. Wheeling & Belmont Bridge Co. But see* Tobin v. United States, 306 F.2d 270, 272-74 (D.C. Cir. 1962), *cert. denied*, 371 U.S. 902 (1963) (in which the court of appeals in dictum found "not unpersuasive" the argument that congressional consent to a compact is irrevocable and any subsequent congressional action relative to the subject of the interstate compact had to be accomplished through direct legislative action pursuant to other constitutional powers). For a discussion of *Tobin*, see Muys, Interstate Water Compacts, *supra*, at 290-92.

474. See Minutes of 13th Meeting of RRCNC, at 2 (Feb. 11-12, 1959). In July of 1958, the Engineering Advisory Committee had distributed to the negotiating commissioners copies of (1) bar charts showing the availability of discharge records for the Red River and interstate tributaries, (2) tables of monthly and annual runoff for those streams, (3) a tabulation of water rights issued by Texas, (4) a map of the Red River basin with drainage areas and other information, and (5) an isohyetal map of the basin. See Minutes of 11th Meeting of RRCNC, at 2 (July 9-10, 1958).

475. See, e.g., Minutes of 11th Meeting of RRCNC, supra note 474, at 2; Memorandum of Conference between Representatives of States of Louisiana and Arkansas, at 1 (Dec. 10, 1959); Minutes of 27th Meeting of RRCNC, at 2 (Sept. 26, 1963). Information submitted by state and federal agencies was often scrutinized very carefully. For example, when Louisiana became apprehensive about certain basin areas of Texas that had been shown on preliminary maps as being "non-contributing," a compact negotiation meeting was held in Wichita Falls, Texas, and part of the group made a field trip to the questioned areas to resolve the concerns of Louisiana. See Tentative Draft of Proposed Report of RRCNC, Eng'g Advisory Comm., at 10 (Dec. 7, 1961).

476. See Minutes of 13th Meeting of RRCNC, supra note 474, at 3. 477. Id.

^{478.} See Tentative Minutes of RRCNC Eng'g Advisory Comm., at ii (May 19-20, 1960); Minutes of 20th Meeting of RRCNC, supra note 464, at 2 (reporting on results of similar conference held on June 27, 1960, with the Soil Conservation Service (SCS) to determine the effect of its watershed improvement projects on water supplies in the basin).

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cussions with the Corps of Engineers eventually led to the modification of the proposed Broken Bow Reservoir in Oklahoma to add storage for power development and releases for power generation.⁴⁷⁹ These releases would augment the natural low flows on Mountain Fork of the river system. This change, in turn, facilitated the negotiation of the apportionment of the water in Reach II of the basin.

Detailed written statements of interests were obtained from the Corps of Engineers, the Bureau of Reclamation, the Soil Conservation Service, the Southwest Power Administration, the Fish and Wildlife Service, the Bureau of Land Management, the USGS, and the Bureau of Indian Affairs. The time-consuming data collection process nearly became a self-defeating endeavor. In addition, there was a continual need to update the data as time passed and as development of the basin continued. The years devoted to collecting and assessing data nearly equaled the average of those required to negotiate the entire compacts for other river basins. The gathering of information almost seemed to become a mechanism to avoid the tough decision-making process before the commission.

During the Beckman years of the negotiations, disputes erupted between Oklahoma and Texas over the utilization of the water of the Salt Fork in the western portion of the basin. Local citizens, city officials, and private organizations in Altus, Oklahoma, had long been interested in developing the Mangum Project to augment the W. C. Austin Project on the Salt Fork in Oklahoma.⁴⁸³ In October of 1958, the Texas Water Board unanimously

479. See Minutes of 20th Meeting of RRCNC, supra note 464, at 3; Minutes of 21st Meeting of RRCNC, at 2-3 (Sept. 28-29, 1960); Tentative Draft of RRCNC Eng'g Advisory Comm. Report, supra note 475, at 17; Minutes of 24th Meeting of RRCNC, at 4 (Jan. 17-18, 1962). Since the negotiators anticipated construction in the future of several other reservoirs on tributaries of the Red River that will also augment low flows, they decided not to mention the Broken Bow Reservoir specifically in the compact as an important source of enlarged lowwater flow. Minutes of 24th Meeting, supra, at 4.

480. See Letter by Douglas G. Wright, Adm'r of Southwestern Power Admin., U.S. Dep't of Interior, to Henry C. Beckman, RRCNC Chairman (Oct. 7, 1957); Statement of the U.S. Dep't of Army, supra note 11; Statement of Dep't of Interior, supra note 11; Letter from John A. Short, River Basin Rep., U.S. Dep't of Agriculture (USDA), Soil Conservation Service (SCS), to Henry C. Beckman, RRCNC Chairman, at 1-3 (Mar. 6, 1959); Statement of Interests of U.S. Dep't of Interior in Areas Being Considered for Interstate Compact Negotiation, at 1-10 (July 31, 1959) [hereinafter cited as Statement of DOI Interests dated July 31, 1959]; Letter from Jerome Svore, Regional Program Director, U.S. Public Health Serv., U.S. Dep't of Health, Education & Welfare (HEW), to Henry C. Beckman, RRCNC Chairman (Nov. 12, 1959); Letter from A.A. Fischback, Jr., District Engineer, USGS, U.S. Dep't. of Interior, to Forrest Nelson, OWRB, at 1-2 (Jan. 5, 1960); U.S. Bureau of Reclamation: Revision of 1959 Data Submitted Through Southwest Field Committee to RRCNC, at 1-2 (May 1960); U.S. Corps of Eng'rs Projects Water Requirements for Navigation, Power, Water Supply, and Low Flow Releases (Apr. 20, 1962).

481. See Beckman Letter to Red River Valley Ass'n, supra note 37, at 2.

482. See Letter from Henry C. Beckman, RRCNC Chairman, to Okla. Comm'r Guy James, at 1 (Mar. 14, 1960).

483. See Letter from Mrs. Mattye Wilson Williams, Manager, Altus, Okla. Chamber of Commerce to M.G. Barclay, Area Engineer, U.S. Bureau of Reclamation (Oct. 29, 1958); Letter from James P. Garrett, Executive Director, The Mangum Project, Supplementing the W.C.

approved the water right permit application filed by the Green Belt Municipal and Industrial Water District of Texas to build a reservoir on the Salt Fork in Texas. 484 Construction of the reservoir in Texas would intercept about two-thirds of the total amount of water flowing into Oklahoma, thereby jeopardizing the development of the proposed lake near Mangum, Oklahoma. 485 Officials of the Bureau of Reclamation, the federal agency primarily involved in the Mangum and W. C. Austin projects, urged local interests in Altus, Oklahoma, to work through their representative to the Red River Compact negotiations to try to resolve the problem posed by the proposed reservoir in Texas. 486 Unfortunately, just as preliminary discussions between the Oklahoma and Texas representatives to the compact negotiations were about to get under way, both individuals left the negotiation commission. 487 Delay on the part of Texas in naming another commissioner then handicapped the work of the commission. 488

In sum, the six years during which Henry Beckman chaired the negotiations were devoted either to (1) the collection and evaluation of information or (2) consideration of the general features of the contemplated compact that were not dependent on the apportionment of the waters of the Red River system. The negotiators and their advisers labored over the organization, the composition, the range of authority, and the duties of the interstate entity that would administer the compact; a method of resolving tie votes by the administrative entity; investigations and findings of fact by the administrative body; methods of financing the work of the entity; waiver of the sovereign immunity of the United States in lawsuits arising under the compact; conferral of jurisdiction of certain interstate pollution cases upon the federal district courts; and the draft legislation by which Congress would consent to the compact.⁴⁸⁹ If anything, the legal advisers were too efficient and too meticulous. At times their work caused the negotiators to become bogged down in legal aspects of the compact that were not central to its

Austin Project to Develop the Waters of Salt Fork of Red River, to Francis Borelli, Director, OWRB (Apr. 3, 1959).

^{484.} See U.S. Bureau of Reclamation, Revision of 1959 Data, supra note 480, at 1-2. See also Texas Water Rep. (Oct. 9, 1958).

^{485.} See 5 Texas Water Rep., supra note 484; Letter from M.G. Barclay, Area Engineer, Bureau of Reclamation, to Mattye Wilson Williams, Manager, Altus, Okla. Chamber of Commerce, at 2 (Nov. 3, 1958).

^{486.} See Barclay Letter dated Nov. 3, 1958, supra note 485, at 2.

^{487.} Texas terminated the services of RRCNC representative John J. Ledbetter as of Dec. 31, 1958. See Minutes of 13th Meeting of RRCNC, supra note 474, at 1-2. Buster Cole, an attorney from Bonham, Tex., and Guy James of Oklahoma City were later seated as the new representatives of Texas and Oklahoma, respectively, to the RRCNC. See 16 Texas Water Rep., at 5 (Nov. 1959).

^{488.} See Minutes of 14th Meeting of RRCNC, at 2 (Mar. 31-Apr. 1, 1959). See also Letter from Henry C. Beckman, RRCNC Chairman, to Texas Governor Price Daniel (Apr. 3, 1959). Commissioner Ledbetter had been designated by former Texas Governor Allan Shivers, Id.

^{489.} See, e.g., Report by Henry C. Beckman, RRCNC Chairman, to the President of the United States, at 1-2 (July 16, 1959); Beckman Letter to Red River Valley Ass'n, supra note 37, at 1-2.

formulation.⁴⁹⁰ The preoccupation of the legal advisers with the issues involving sovereign immunity and federal district court jurisdiction of interstate pollution cases may have caused them to overlook the importance of the development of the federal-interstate compact model.⁴⁹¹ In any event, when Henry Beckman died in December, 1962, the negotiation of the apportionment provisions of the compact had hardly begun.

The Role of the Army Corps of Engineers

Approximately nine months after Beckman's death, the President of the United States appointed Major General Ellsworth Davis, United States Army Corps of Engineers, Vicksburg, Mississippi Division, as the new RRCNC chairman.⁴⁹² The primary focus of the commission from 1963 until 1978 was the negotiation and completion of the apportionment provisions of the compact. The many difficulties encountered during this process are described in the overview of the compact negotiations set forth earlier. A secondary goal was redrafting the pollution provisions, written during the Beckman years, in light of the recent amendments to the Federal Water Pollution Control Act.⁴⁹³ A third goal was the preparation of the Engineering Report and the Supplemental Interpretive Comments by the technical advisory committees.⁴⁹⁴

Unfortunately, Major General Davis was only the first in a series of six different officers of the Corps of Engineers who were to be named as federal representative and chair of the negotiation commission between 1963 and 1978.⁴⁹⁵ The frequent change of the federal representative was only part of a larger problem of turnover that frustrated the work of the negotiation

- 490. See, e.g., Letter from Perry Morton, U.S. Dep't of Justice, to Henry C. Beckman, RRCNC Chairman, supra note 460, at 3; Memorandum from Richard Huff, Chairman, RRCNC Legal Advisory Comm., to RRCNC Members (Mar. 17, 1959); Minutes of 16th Meeting of RRCNC, supra note 462, at 3. The RRCNC devoted many hours to a discussion of legal problems involving questions of "standing" and "fact-finding authority" of the permanent compact administrative agency, even though no substantive negotiations had begun. See Letter from Henry C. Beckman, RRCNC Chairman, to RRCNC Members, at 1-2 (Oct. 2, 1959).
- 491. See, e.g., Memorandum from Richard Huff, Chairman, RRCNC Legal Advisory Comm., to Homer Belanger, Louisiana Representative to RRCNC Legal Advisory Comm., at 1-2 (Jan. 15, 1962); Minutes of 24th Meeting of RRCNC, supra note 479, at 3.
- 492. See Minutes of 27th Meeting of RRCNC, supra note 475, at 1. Major General Davis treated the first meeting which he chaired as the initial meeting of the "reconstituted" RRCNC. Id.
 - 493. See Minutes of 38th Meeting of RRCNC, supra note 38, at 3.
- 494. See Letter from Fred Simpson, P.E., OWRB, to Glade Kirkpatrick (Aug. 19, 1969); Minutes of 42d Meeting of RRCNC (Nov. 19, 1969).
- 495. See Program of 60th Meeting of RRCNC and Red River Compact Signing Ceremony 2 (May 11-12, 1978). The other officers of the Corps of Engineers who were named federal representative and chairman were R.G. MacDonnell, A.P. Rollins, Jr., Charles C. Noble, F.P. Koisch, and R.C. Marshall, who presided over the signing ceremony at Denison Dam. *Id.* In addition, Fred Bayley III, another Corps official, served as acting chairman at the 56th, 57th, and 58th meetings of the RRCNC. See Minutes of 56th Meeting of RRCNC, at 1 (Apr. 28, 1977); Minutes of 57th Meeting of RRCNC, at 1 (June 29, 1977); Minutes of 59th Meeting of RRCNC, at 1 (Feb. 16, 1978).

commission. Texas was represented on the negotiation commission by eleven different individuals between August, 1955 and December, 1980.⁴⁹⁶ Oklahoma changed its representative five times, and Arkansas was represented by six different individuals.⁴⁹⁷ Louisiana was the only state that was able to maintain continuity of representation. Louisiana was represented by three different commissioners, the latter two having served on the Engineering Advisory Committee prior to becoming a commissioner.⁴⁹⁸ The technical advisory committees encountered similar problems with membership changes. The turnover of commissioners and technical advisers typically delayed commission work while the newly designated individuals were becoming oriented to the mission and progress of the negotiation commission.⁴⁹⁹

A draft of the Red River Compact was tentatively approved by the commission for review by state and federal agencies at its thirty-sixth meeting on February 21, 1966.⁵⁰⁰ However, the major turnover of representation to the commission and a change in negotiating posture on the part of some of the states caused the resurfacing of problems that had been plastered over by the draft agreement.⁵⁰¹

For example, when Winthrop Rockefeller was elected Governor of Arkansas, that state not only replaced its representative to the commission but also dramatically changed its negotiating posture. ⁵⁰² Arkansas adopted a "team approach," sending not only its negotiating commissioner but also Dr. Leslie Mack, the Governor's adviser on water resources, and several other state

496. Between 1956 and 1978, Texas was represented on the RRCNC by the following men: John J. Ledbetter, Durwood Manford (Acting), R.M. Dixon (Acting), Buster Cole, R. Leighton McKinney, W.R. Bryant, Ralph Elliott, Deskin Wells, Judge Otha Dent, and Fred Parkey. See Program of 60th Meeting of RRCNC, supra note 495, at 2. In addition, still another representative, Kenneth E. Nelson, was authorized to represent Texas at the 61st meeting of the RRCNC held after the signing ceremony and prior to congressional approval of the compact. See Minutes of 61st Meeting of RRCNC, at 1 (Sept. 19, 1979).

497. The Oklahoma representatives were Ira C. Husky, Francis J. Borelli, Guy H. James, Guy N. Keith, and Orville B. Saunders. See Program of 60th Meeting of RRCNC, supra note 495, at 2. The men who served as commissioners from Arkansas included Leonard N. White, Ewing Kinkead, W. Glenn Francis, A.J. Troxell, S. Keith Jackson, and John P. Saxton, Id. 498. Louisiana's commissioners were Calvin T. Watts, Daniel V. Cresap, and Arthur R.

Theis. *Id. See* Minutes of 42d Meeting of RRCNC, *supra* note 494, at 4 & enclosure 1; Letter from Louisiana Governor John J. McKeithen to Major General A.P. Rollins, Jr., RRCNC Chairman (Dec. 22, 1969); Minutes of 58th meeting of RRCNC, at 1 (Aug. 11, 1977); Minutes of 59th Meeting of RRCNC, *supra* note 495, app., attendance list.

499. See, e.g., Minutes of 13th Meeting of RRCNC, supra note 474, at 1, 4; Minutes of 14th Meeting of RRCNC, supra note 488, at 1-2. See also Minutes of 37th Meeting of RRCNC, at 3-4 (Sept. 15, 1966); Minutes of 38th Meeting of RRCNC, supra note 38, at 1, 5-6; Minutes of 39th Meeting of RRCNC, at 2-4 (June 23, 1967).

500. See Minutes of 36th Meeting of RRCNC, at 1 (Feb. 21, 1966).

501. See Minutes of 37th Meeting of RRCNC, supra note 499, at 1-4; Minutes of 38th Meeting of RRCNC, supra note 38, at 2-8; Minutes of 39th Meeting of RRCNC, supra note 499, at 1-4; Minutes of 40th Meeting of RRCNC, at 1-3 (Sept. 14, 1967); Letter from Guy N. Keith, OWRB, to John Bliss, Consulting Engineer (Jan. 4, 1968); Letter from John Bliss to Guy N. Keith, at 1 (Jan. 12, 1968).

502. See Minutes of 39th Meeting of RRCNC, supra note 499, at 2.

officials to the meetings of the commission and the advisory committees.⁵⁰³ Beginning with the Rockefeller administration, the Arkansas commissioner and advisers seemed to become more aggressive in asserting Arkansas' interests in a share of the water; some even accused Arkansas of being obstructionist.⁵⁰⁴

The vigilance on the part of Arkansas in protecting its interests continued in 1972 with the appointment of John Saxton as the Arkansas commissioner. The Arkansas' insistence upon language in the compact that would protect future development in the basin, including navigation to Index, Arkansas, threatened to unravel the agreement through the fifty-ninth meeting of the commission. In the end, Arkansas agreed to compromise language governing the use of the water in Reach II of the basin. The solution of the same strength of the s

During the period between 1963 and 1976, problems also intensified between Oklahoma and Texas over the use of the water in the western portion of Reach I, the part of the Red River system that extends from the New Mexico-Texas state boundary to Denison Dam. Oklahomans protested the continued development of dams and reservoirs by Texas on interstate streams flowing from Texas into Oklahoma. 507 Texas water officials refused to recognize any Oklahoma claims to water originating in Texas, maintaining that the water supply falling on Texas' soil was the property of Texas and its citizens and could be used for any purpose approved by Texas. 508 Oklahoma water officials countered that Oklahomans in the area of Altus, Oklahoma, had perfected water rights to the interstate streams based upon the appropriation doctrine and expected Texas to respect those rights. 509 There-

503. See Minutes of 35th Meeting of RRCNC, supra note 25, at 1; Minutes of 38th Meeting, supra note 38, at 1, 5-6; Minutes of 39th Meeting, supra note 499, at 3.

504. See, e.g., Minutes of 37th Meeting of RRCNC, supra note 499, at 3-4; Minutes of 39th Meeting of RRCNC, supra note 499, at 2. The aggressive posture of the Arkansas negotiating team later culminated in a formal statement to the RRCNC by the Arkansas representative in November, 1973 acknowledging that "some [feel Arkansas is] being obstructionist towards the negotiation of a compact and . . . unreasonable in [its] refusal to accept earlier proposals regarding the allocation of waters between Arkansas and Louisiana in Reach IV." Minutes of 48th Meeting of RRCNC, enclosure 2, supra note 66, at 1.

505. See Minutes of 45th Meeting of RRCNC, at 1 (Sept. 15, 1972); Minutes of 48th Meeting of RRCNC, enclosure 2, supra note 66, at 1; Minutes of 54th Meeting of RRCNC, at 2 & attached proposal (Sept. 1-2, 1976); Minutes of 55th Meeting of RRCNC, at 2-4 (Mar. 16, 1977); Minutes of 56th Meeting of RRCNC, supra note 495, at 2; Minutes of 58th Meeting of RRCNC, supra note 498, at 2-4.

506. See Red River Compact, art. V, § 5.05(c), 94 Stat. 3312.

507. See, e.g., Letter from Joe D. Carter, Chairman, Texas Water Comm'n, to Charles E. Engleman, Chairman, Foss Reservoir Master Conservancy Dist., Clinton, Okla. (May 31, 1963).

508. Id. However, the Supreme Court has held that the mere fact that a river originates in an upstream state does not automatically entitle the upstream state to a share of the river's waters. Colorado v. New Mexico, 459 U.S. 176, 181 n.8 (1982) (remanding case to the Special Master for additional specific findings). Accord, Colorado v. New Mexico, 104 S.Ct. 2433, 2442 (rejecting the notion that the mere fact that the Vermejo River originates in Colorado automatically entitles Colorado to a share of the river's waters and dismissing Colorado's case for failure to carry its burden of proof), reh'g denied, 105 S.Ct. 19 (1984).

509. See General Statement of 30th Meeting of RRCNC, at 4-5 (June 16, 1964).

fore, Oklahoma water officials asserted, no encroachments upon the "Oklahoma supply" in the interstate streams should be made for irrigation and recreation by Texans.⁵¹⁰

A number of proposals and counterproposals to apportion the water in this reach of the river system were made by Oklahoma and Texas. The possibility of modifying the Canadian River Compact to alleviate possible water shortages in the Texas Panhandle was considered and rejected by the compact negotiators.⁵¹¹ The suggestion of including in the compact a "sliding scale for development of irrigation" along the interstate tributaries originating in Texas was also rebuffed.⁵¹²

In April of 1965 the city of Altus, Oklahoma, threatened Texas with litigation over a proposed development by Texans on Sweetwater Creek.⁵¹³ Because of the portent of litigation, Texas delayed the presentation of its studies of water utilization on one of the tributaries of the river in this area.⁵¹⁴ Meanwhile, the Oklahoma representative to the RRCNC was accused of "forsaking" the Lugert-Altus Irrigation District and of "giving away three acre-feet of Oklahoma water for each acre-foot of water conceded by Texas."⁵¹⁵

510. Id.

- 511. See Draft Transcript of 34th Meeting of RRCNC, supra note 25, at 32-33. Because of the low rainfall pattern of the westernmost portions of Reach I of the watershed, Oklahomans were especially concerned about proposed developments by Texans on a number of tributaries in the Texas Panhandle that extend into Oklahoma, including Salt Fork, North Fork, Elm Fork, and Sweetwater Creek. Id. at 23-32. Oklahoma was primarily concerned with the reservoir capacities of proposed Texas developments on Sweetwater Creek and the North Fork of the Red River, each of which provides some of the water supply of the Lugert-Altus Reservoir Project in Oklahoma. Id. at 24-29. See also supra text accompanying notes 60-64, and infra text accompanying notes 566, 576-578. The idea of amending the Canadian River Compact was complicated by the fact that New Mexico is a party to that compact. Draft Transcript of 34th Meeting of RRCNC, supra note 25, at 33.
- 512. See Minutes of RRCNC Eng'g Advisory Comm. Meeting, at 2 (Mar. 30, 1970). Commissioner Guy Keith of Oklahoma advanced the sliding-scale proposal that Texas rejected on the basis that "this would take care of itself and should not be written into the compact."
- 513. See Draft Transcript of 34th Meeting of RRCNC, supra note 25, at 31. Historically, the Lugert-Altus Reservoir has experienced a sediment problem. Id. at 24. The U.S. Bureau of Reclamation reportedly estimated that without upstream development, Lugert-Altus Reservoir would lose 40,433 acre-feet of reservoir capacity due to silting between 1962 and 2012. Id. at 14. Texas maintained that the useful life of the Lugert-Altus Reservoir would be extended with the construction of one or both reservoirs proposed by Texas on the North Fork and Sweetwater Creek. Id. at 24-30. Oklahoma did not object to all upstream reservoir development in Texas since some upstream development would reduce the silting problem. Id. The disagreement was over the capacity of the upstream reservoirs on Sweetwater Creek and North Fork. Id. The application pending before the Texas Water Commission in April, 1965 was for a water permit for a project on Sweetwater Creek with 90,000 acre-feet of storage. Id. at 31. Oklahoma apparently was negotiating on the basis of 35,000 acre-feet of storage for the same project. Id.
 - 514. Id. at 30-31.
- 515. See Letter from Guy Keith, Oklahoma Comm'r, to Robert Harbison, Attorney for Lugert-Altus Irrigation Dist., at 1 (Mar. 4, 1970).

Legal counsel for the Irrigation District also vigorously protested development by Texas on the North Fork above the Lugert-Altus dam site. ⁵¹⁶ He pointed out that the original 1938 survey and report, upon which the Lugert-Altus project was based, clearly disclosed that the Bureau of Reclamation contemplated the utilization by the project of all of the water of the entire 2,560 square miles of watershed in Oklahoma and Texas of the North Fork above the dam site; moreover, the construction of the project was justified on the basis of 100-year benefits accruing to the region and the nation. ⁵¹⁷ The attorney for the Irrigation District argued that the western appropriation doctrine, public policy, and general welfare condemned upstream appropriators in Texas from taking water of an interstate stream and destroying the economic feasibility of a prior downstream appropriation in Oklahoma. ⁵¹⁸

In the view of Oklahomans, strictly recreational lakes or evaporation ponds built by Texans were "luxuries in a water short area."⁵¹⁹ Throughout this period, Texas water officials "unswervingly adhered" to the position that water originating in Texas belonged to Texans and was in no way dedicated to other states into which the waters might flow.⁵²⁰

When a Soil Conservation Service plan was proposed for the construction in Texas of the McClellan Creek Watershed Project, Oklahoma water officials were successful in getting the congressional delegation from Oklahoma to exercise a "hold" on the project pending the approval by Oklahoma of the plan.⁵²¹ Information assembled by Oklahoma water officials and the U.S.

516. See Letter from Robert Harbison, Attorney for Lugert-Altus Irrigation Dist., to Guy Keith, Oklahoma Comm'r, at 2-4 (Apr. 4, 1972).

517. Id. at 2. For additional background on the W.C. Austin Project and the Lugert-Altus Reservoir, see Letter from K.B. Shroeder, Planning Officer, U.S. Water Resources Council, to Fred Bayley III, RRCNC Acting Chairman, at 1 (July 7, 1977). Since the W.C. Austin Project was completed in 1949 and was justified for federal construction on the basis of 100-year benefits accruing to the region and the nation, Shroeder intimated that there should be no development that would adversely affect the project until 2049, long after the outstanding bonded indebtedness had been retired in 1990. See id. at 1.

518. See Letter from Robert Harbison dated Apr. 4, 1972, supra note 516, at 3-4. For an analysis of the doctrine of equitable apportionment and the Supreme Court's decisions in cases involving the allocation of waters of interstate streams, see supra text accompanying notes 188-215. Although the burden of proof on the complainant state is a difficult one to carry, available evidence of the economic development in this area suggests that Oklahoma should have prevailed in an original action against Texas for the equitable apportionment of the water of the North Fork and other tributaries upstream from the Lugert-Altus Reservoir in view of the weight the Court previously had attached to the protection of established water-dependent economies in semiarid regions. It should be noted that a legal statement similar to Harbison's position had been asserted by the Oklahoma commissioner during the negotiations with Texas. See, e.g., Letter from Guy Keith, Oklahoma Comm'r, to Ralph Elliott, Texas Comm'r, at 2 (Sept. 28, 1971).

519. Letter from Guy Keith, Oklahoma Comm'r, to Major General Charles C. Noble, Chairman, RRCNC (Feb. 22, 1972).

520. See Letter from Robert Harbison, supra note 516, at 1. But see Colorado v. New Mexico, 104 S.Ct. 2433, 2442, reh'g denied, 105 S.Ct. 19 (1984); 459 U.S. 176, 181 n.8 (1982). 521. See Letter from Guy Keith, Oklahoma Comm'r, to Gary Dage, Legislative Assistant

Department of the Interior, Bureau of Reclamation, indicated that development of the McClellan Creek Watershed Project would materially reduce yields of the water supply on the North Folk to Altus, Oklahoma and the Lugert-Altus Irrigation District, thereby impairing the ability of the Irrigation District to repay the costs of the W. C. Austin Project by some \$24,000 per year for the twenty years remaining under the contract with the federal government.⁵²² Oklahoma officials refused to release the hold until Texas agreed that any water impounded on the McClellan Creek would become part of the Texas allocation of such waters under any future compact for the Red River. Texas conceded, and Oklahoma gave its conditional approval to the McClellan project during the spring of 1970.⁵²³

Many alternatives for apportioning the water of Reach I continued to be proposed by Texas and Oklahoma. When no voluntary agreement seemed possible by the fall of 1970, Texas and Oklahoma began exploring a "friendly" suit to obtain an equitable apportionment of the water of the North Fork. 524 If the outcome of the friendly litigation was unfavorable to Oklahoma, then its state water officials planned to request financial relief from the federal government for the retirement of the outstanding bonded indebtedness of the W. C. Austin Project. If the findings were favorable to Oklahoma and unfavorable to Texas, then any reduction in Texas' requested share of the water of the North Fork could be made up from other streams in Reach I.525

When no agreement had been reached between Oklahoma and Texas by August, 1973, the attorney for the Lugert-Altus Irrigation District suggested that "the compact recognize that litigation would be required, and that, subsequent to the litigation, the water would be allocated in accordance with the decision of the court." The federal representative and chairman of the RRCNC at that time urged the two states to reach a voluntary agreement on the division of the water of the North Fork rather than recognize litigation in the compact. In addition, in November, 1973 the Legal Advisory

to U.S. Senator Fred Harris (Apr. 7, 1970); Letter from Guy Keith, Oklahoma Comm'r, to Oklahoma Governor Dewey F. Bartlett (Apr. 7, 1970); Letter from Guy Keith, Oklahoma Comm'r, to U.S. Senator Jennings Randolph, Chairman, U.S. Senate Public Works Comm., at 1-2 (July 21, 1970).

^{522.} See Letter from Guy Keith to Gary Dage, supra note 521. As previously discussed in the text accompanying notes 60-64 supra, Lugert-Altus Reservoir and the W.C. Austin Project was a concern of the U.S. Department of Interior's Bureau of Reclamation. The McClellan Creek Watershed Project was sponsored by the Soil Conservation Service within the U.S. Department of Agriculture. See Letter from Guy Keith to Senator Jennings Randolph, supra note 521, at 1.

^{523.} See Letter from Guy Keith to Governor Dewey F. Bartlett, supra note 521. See also Letter from Guy Keith to Senator Jennings Randolph, supra note 521, at 1-2.

^{524.} See Minutes of 43d Meeting of RRCNC, at 1-2 (Sept. 25, 1970).

^{525.} Id. See also Memorandum from Guy Keith, Oklahoma Comm'r, to Ralph Elliott, Texas Comm'r, and Robert Harbison, Attorney for Lugert-Altus Irrigation Dist., at 1-2 (Sept. 30, 1970).

^{526.} Minutes of 47th Meeting of RRCNC, at 1 (Aug. 3, 1973).

^{527.} Id. at 2.

Committee recommended that the negotiating states *not* recognize in the draft compact that litigation would be required to resolve the interstate differences over the North Fork.⁵²⁸ Although the commissioners from Texas and Oklahoma expressed optimism that the difficulties could be resolved, no solution was found until September, 1976.⁵²⁹ The presentation and approval at the fifty-fourth meeting of the RRCNC in September, 1976 of a new draft article apportioning the water of Reach I was a major breakthrough in the negotiations that permitted the compact negotiations to advance to their successful conclusion in 1978.⁵³⁰

The protracted negotiations were finally concluded with the signing of the compact by the negotiating commissioners on May 12, 1978, at Denison Dam on the Oklahoma-Texas border. The compact was then ratified by the legislatures of the four signatory states with no apparent difficulty. Louisiana enacted the compact into law the same year that it was signed, and the legislatures of Arkansas, Oklahoma, and Texas, which convened in odd-numbered years, approved the compact in 1979.⁵³¹

Congressional Consideration and Approval of the Compact

As ratified by the states, the compact was to become effective, binding, and obligatory when, and only when, the consent of the United States to the compact had been given by congressional enactment of legislation containing certain precise language relating to a partial waiver of sovereign immunity of the United States and the jurisdiction of the federal district courts in certain cases arising under the compact.⁵³²

The compact was officially reviewed by all interested federal agencies under the coordination of the Office of Management and Budget. Language concerning the partial waiver of the sovereign immunity of the federal government, which was contained in the ratification bills introduced by Senator Long of Louisiana and Congressman Hall of Texas on January 28, 1980, and April 29, 1980, respectively, proved to be somewhat troublesome to the Department of Justice and the Corps of Engineers. Accordingly, the Department of Justice recommended to the House Subcommittee on Admin-

528. See Minutes of 48th Meeting of RRCNC, supra note 66, at 1. The negotiators from Texas and Oklahoma went on record at this meeting expressing their optimism that the difficulties involved in the allocation of the water of the North Fork and Sweetwater Creek could be resolved. Id.

529. See Minutes of 54th Meeting of RRCNC, at 2 (Sept. 1-2, 1976). Only two years earlier, the chairman of the RRCNC Engineering Advisory Committee had listed these options for the negotiators: (1) omit the North Fork from the compact; (2) litigate and mutually press for an early decision; and (3) continue to work toward mutual agreement within the compact. See Minutes of 49th Meeting of RRCNC, supra note 25, at 1.

530. See *supra* text accompanying note 1. For a discussion of the final compact provisions governing the apportionment of water in Reach I, see *infra* text accompanying notes 566-578.

531. See *supra* note 7. For a description of the legislative calendars, see Minutes of 28th Meeting of RRCNC, *supra* note 440, at 1.

532. Red River Compact, art. XIII, § 13.02, 94 Stat. at 3319.

istrative Law and Governmental Relations of the House Judiciary Committee that the bill be amended to clarify the limited waiver of sovereign immunity.⁵³³

The House Subcommittee conducted a one-day hearing on the compact on November 13, 1980. Witnesses appearing at the hearing included a representative of the Corps of Engineers, an assistant attorney general of Texas, the general manager of the Red River Authority of Texas, the director of the Northeast Texas Municipal Water District, the RRCNC commissioners of Texas and Louisiana, and many others. 534 The House Subcommittee received statements from the Department of Interior and the U.S. Water Resources Council, both of which urged ratification of the compact.

While considering the Red River Compact, the House Subcommittee also heard testimony regarding the Caddo Lake Compact, which was proposed by Texas and Louisiana as an adjunct to the Red River Compact. The proposed Caddo Lake Compact, which was negotiated by the Red River Compact commissioners representing Louisiana and Texas, without any direct federal involvement, governs the use and apportionment of the water of the Caddo Lake, a natural lake on a Red River tributary known as Twelve Mile Bayou.535 Since the Red River Compact did not include a detailed apportionment of Caddo Lake itself, the Caddo Lake Compact was proposed as a "further refinement and definition of the intention of Louisiana and Texas to appropriate and protect waters of this lake."536 Both the Corps of Engineers and the Department of Justice urged that action be deferred on the Caddo Lake Compact until it had undergone full administration review, particularly in view of provisions in the compact that dealt with raising the spillway elevation.537 Citizen groups from the Caddo Lake area also expressed concern over the compact and urged that a full environmental impact study be undertaken prior to congressional ratification of the agreement.538 Ultimately, Congress deferred action on the Caddo Lake Compact.

^{533.} See Letter from Alan A. Parker, Assistant Att'y Gen., Office of Legislative Affairs, U.S. Dep't of Justice, to Hon. Peter Rodino, Jr., Chairman, Comm. on the Judiciary, U.S. House of Representatives, at 1-2 (Nov. 12, 1980) [hereinafter cited as DOJ Letter].

^{534.} See 126 Cong. Rec. H11386 (daily ed. Dec. 1, 1980).

^{535.} Id.

^{536.} Red River Compact and Caddo Lake Compact: Hearings on H.R. 7205 and H.R. 7206 Before the Subcomm. on Admin. Law & Governmental Relations of the House Comm. on the Judiciary, 96th Cong., 2d Sess. 1 (1980) (statement by Arthur Theis of Louisiana).

^{537.} See id. at 1-2 and Hearings, Statement by Col. Laubscher, supra note 14, at 8-9. The Caddo Lake Compact expressed the intention of the two signatory states to enlarge Caddo Lake by raising the spillway level two feet, a proposal that generated a number of concerns, including compliance with the National Environmental Policy Act (NEPA) and with the permit requirements of section 9 of the River and Harbors Act of 1899 and section 404 of the Clean Water Act. See DOJ Letter of Nov. 12, 1980, supra note 533, at 2; Hearings, Statement by Col. Laubscher, supra, at 9.

^{538.} See 126 Cong. Rec. H11386 (daily ed. Dec. 1, 1980). Another problem with the Caddo Lake Compact was the somewhat confusing and ambiguous language contained therein, which raised "serious questions as to whether or not the residents on the Texas side of Caddo Lake would receive fair market value for their property if it is taken by the raising of the spillway."

The consent bill for the Red River Compact was amended with the "technical clarification" proposed by the Department of Justice, and the amended bill was then passed by the Congress. The compact became effective when President Carter signed the consent legislation on December 22, 1980.⁵³⁹

VI. An Analysis of the Red River Compact

The Structure of the Compact

The Red River Compact consists of thirteen articles. Article I describes the multiple purposes the states ultimately seek to advance with the compact, which are:

- (a) To promote interstate comity and remove causes of controversy between each of the affected states by governing the use, control and distribution of the interstate water of the Red River and its tributaries;
- (b) To provide an equitable apportionment among the Signatory States of the water of the Red River and its tributaries;
- (c) To promote an active program for the control and alleviation of natural deterioration and pollution of the water of the Red River Basin and to provide for enforcement of the laws related thereto;
- (d) To provide the means for an active program for the conservation of water, protection of lives and property from floods, improvement of water quality, development of navigation and regulation of flows in the Red River Basin; and
- (e) To provide a basis for state or joint state planning and action by ascertaining and identifying each state's share in the interstate water of the Red River Basin and the apportionment thereof.⁵⁴⁰

Article II contains several important substantive provisions governing the use of water and the implementation of the compact. In addition, article II divides the Red River system into five major subdivisions—or "reaches"—for purposes of allocating the water among the signatory states. Fourteen key terms are defined in article III. The apportionment of the water of the five reaches of the river is delineated in articles IV through VIII.

Article IX sets forth the provisions for the administration of the compact by an interstate agency known as the "Red River Compact Commission" (RRCC). The powers and duties of the Commission are described in article X. The dual problems of controlling pollution and alleviating the natural deterioration of the water of the basin are addressed by article XI.

Id. For a discussion of the federal navigational servitude and the rule of no compensation, see Morreale, supra note 337, at 19-63.

^{539.} See supra note 8.

^{540.} Red River Compact, art. I, 94 Stat. 3305-06.

Procedures for terminating or amending the compact and the legal effect of termination upon existing water rights are provided in article XII. The thirteenth and final article specifies the conditions for the ratification and effective date of the compact.

General Compact Provisions Governing the Use of Water

The general provisions set forth in article II governing the use of water by the signatory states apply in the absence of more specific provisions delineated elsewhere in the compact. Foremost among the general provisions is the freedom of each state to use the water allocated to it in any manner it deems "beneficial." The autonomy of each signatory state to control the internal administration of its share of water is thus preserved. The right of a signatory state to freely administer its water rights and uses is limited only by the apportionment of the water made by the compact, the actual availability of water within the basin, and the authority of the federal government over water. Subject to these constraints, each state may maintain its existing water law system or modify its water rights laws as the state deems appropriate. Even though other provisions of the compact require an upstream state to take certain affirmative steps during periods of water shortages to assure water deliveries to downstream states, no attempt is made to dictate to an upstream state how this will be accomplished.⁵⁴²

The autonomy of each state is buttressed by several other provisions, one of which appears to preserve the status quo relative to water rights existing within each state as of December 22, 1980. The compact stipulates that its provisions shall be construed neither to alter, impair, or increase water rights recognized under state laws on the effective date of the compact, nor to validate or prejudice these rights.⁵⁴³

Each state also remains free to construct conservation storage capacity for the impoundment of water allocated to it by the compact. Moreover, if any storage capacity recognized or authorized by the compact is rendered unusable due to any cause, including sedimentation, the lost storage capacity may be replaced by the state within the same geographical area.⁵⁴⁴

The authority of a state to regulate the quality of water within its jurisdiction parallels its right to regulate the appropriation, use, and control of these waters. Therefore, a signatory state may regulate the quality of water within its boundaries so long as the regulations are not inconsistent with

^{541.} Id., art. II, § 2.01, 94 Stat. 3306. "Beneficial use" is a concept particularly associated with the appropriation doctrine. See generally 1 HUTCHINS, NINETEEN WESTERN STATES, supra note 51, at 493-503. The compact is silent upon what legal ramifications ensue if a state does not designate which uses are "beneficial" for purposes of the compact. Moreover, it is not clear whether the riparian rights concept of "reasonable use" is coextensive with the concept of "beneficial use" in the event a riparian rights state fails to determine formally which uses are beneficial.

^{542.} Supplemental Interpretive Comments, supra note 21, at 5-6.

^{543.} Red River Compact, art. II, § 2.14, 94 Stat. 3307.

^{544.} Id. § 2.05(a), (b), 94 Stat. 3306.

the obligations of the state under the compact or under federal water quality laws. A state may impose additional restrictions to reduce or abate the degradation of water within its jurisdiction if the more stringent water quality regulations do not alter the apportionment of water made by the compact.⁵⁴⁵

In computing the delivery of water in the various reaches of the river system, water consumed for livestock or domestic purposes is not included within the total amount apportioned among the member states. The exemption does not extend to the impoundment of water for livestock or domestic purposes in excess of 200 acre-feet. 546 Thus, as a practical matter, commercial feedlot operations and rural or urban water distribution systems are not exempted.547 The exemption for livestock and domestic usage was adopted because the laws of Oklahoma and Texas in effect at the time the compact was approved exempted water used for livestock and domestic purposes from their systems of state water rights administration. 548 The determination of whether a particular use qualifies as "livestock or domestic" is made by reference to the laws of the state in which the use is occurring. This procedure recognizes existing practices in some of the signatory states and allows flexibility in state water rights administration.⁵⁴⁹ Since a 200 acrefeet "cap" is imposed on impoundments covered by the exemption, the lack of uniformity that may ensue should not seriously undermine the apportionment of water made by the compact.

The compact affirms the freedom of each signatory state to use the bed and banks of the Red River system to convey stored water, imported or exported water, and water apportioned by the compact.⁵⁵⁰ The right to use imported water is vested in the state importing the water into the Red River basin.⁵⁵¹ Should the need for an accounting arise, transmission losses must be deducted at the point of removal of any stored water conveyed through the channels of the river system.⁵⁵² The cumulative effect of these provisions is an implied authorization of the importation and exportation of water to and from the Red River basin.⁵⁵³ Any exportation of water, of course, would

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545. Id. § 2.10(a), (b), 94 Stat. 3306-07.
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^{546.} Id. § 2.08, 94 Stat. 3306.

^{547.} Supplemental Interpretive Comments, supra note 21, at 6-7.

^{548.} Id. at 6.

^{549.} Red River Compact, art. II, § 2.08, 94 Stat. 3306. See also Supplemental Interpretive Comments, supra note 21, at 7.

^{550.} Red River Compact, art. II, § 2.05(d), 94 Stat. 3306. See also Supplemental Interpretive Comments, supra note 21, at 6.

^{551.} Red River Compact, art. II, § 2.09, 94 Stat. 3306. This provision was probably added because case law in some riparian rights jurisdictions indicates that all waters that flow into a natural stream "become part of that stream, and subject to the same natural rights as the rest of the water." See Cribber, supra note 44, at 386 (discussing Druley v. Adam, 102 Ill. 117 (1882)).

^{552.} Red River Compact, art. II, § 2.03, 94 Stat. 3306.

^{553.} See Supplemental Interpretive Comments, supra note 21, at 6. A major concern in this region is the depletion of the Ogallala Aquifer, the principle source of water for irrigation in the high plains of west Texas and Oklahoma. Banks, Six-State High Plains—Ogallala Aquifer Area Regional Studies, in Federal Reserve Bank of Kansas City, Western Water Re-

be subject to the amount of water apportioned to each state and the availability of water within the system. Finally, the compact contemplates the execution of a specific importation or exportation agreement by a signatory state prior to the actual transfer of water.⁵⁵⁴

As a general rule, an accounting of the delivery and utilization of the water of interstate streams is necessary only upon the demand of an affected state. ⁵⁵⁵ Because of the financial burden placed upon the affected states, the drafters of the compact did not envision that accounting would be undertaken as a routine matter. ⁵⁵⁶

The compact neither waives the immunity of any signatory state under the eleventh amendment of the Constitution of the United States nor grants the consent of any signatory state to be sued by its own citizens.⁵⁵⁷ The sovereign immunity of each compacting state is therefore preserved.

Since the Red River Compact is an interstate compact rather than a federal-interstate compact, it does not impair or affect the powers, rights, or obligations of the United States, or those claiming under its authority, in, over, and to the water of the Red River basin. Thus, the interests of the federal government and the rights of the Indians who receive federal protection are not included in the apportionment of water made by the compact. The use of water by the federal government in connection with a specific federal project, of course, must be in compliance with the federal authorizing act. Water consumed by a federal project will be charged against the share of the state deriving the benefits from it. The determination of which state derives benefits from some projects may be difficult to make, and the compact offers no guidance on this matter.

The omission of federal and Indian rights from the apportionment of water in the river system and the failure to bind the federal government as signatory party to the compact are two of the major weaknesses of the Red River Compact. The federal government has no legal obligation under the compact to ensure that federal activities and projects in the basin are coordinated to the fullest extent possible with the conservation and development programs of the signatory states. Although the Congress is free to

SOURCES: COMING PROBLEMS AND THE POLICY ALTERNATIVES 49-52 (Symposium Sept. 27-28, 1979) [hereinafter cited as Western Water Resources]. Also, the prospects of interstate, interbasin transfers of water from the Arkansas, White and Red rivers to the semiarid high plains states is an area of great concern to some Arkansans. See, e.g., Editorial, Foiling the Water Rustlers, Ark. Gazette, Aug. 5, 1984, at 14B, col. 1. There were 146 interbasin transfers in the western portion of the nation as of 1965, transferring more than 18 million acre-feet per year. See Schad, Western Water Resources: Means to Augment the Supply, in Western Water Resources, supra, at 119. See generally U.S. Army Corps of Eng'rs, Six-State High Plains Aquifer Regional Resources Study: Water Transfer Elements (1982).

^{554.} See Supplemental Interpretive Comments, supra note 21, at 6.

^{555.} Red River Compact, art. II, § 2.11, 94 Stat. 3307.

^{556.} See Supplemental Interpretive Comments, supra note 21, at 7.

^{557.} Red River Compact, art. II, § 2.10(c), 94 Stat. 3306-07.

^{558.} Id. § 2.07, 94 Stat. 3306.

^{559.} Id. § 2.02. See Supplemental Interpretive Comments, supra note 21, at 6.

preempt the provisions of the compact, federal officials may feel a moral obligation to recognize and leave intact the apportionment of water made by the compact.⁵⁶⁰

The failure of the compact negotiators to bind the federal government to the terms of the compact is ameliorated slightly by the Denison Dam authorizing legislation of 1938 and the O'Mahoney-Milliken Amendment to the flood control acts of 1944 and subsequent years. As explained in part IV, the 1938 legislation tries to preserve the status quo with regard to Oklahoma and Texas water usage and water rights in existence above the site of Denison Dam prior to the construction of the dam and reservoir. Fersumably, any federal interests and any rights of Indians existing in the water of the Red River system above Denison Dam prior to the construction of the impoundment are also recognized.

As discussed previously, the O'Mahoney-Milliken Amendment affords limited protection to Oklahoma and Texas, both of which are bisected by the ninety-eighth meridian. This amendment provides that the use by the federal government of water for navigation in federal projects covered by the amendment shall not conflict with any beneficial consumptive use, present or future, of such waters for domestic, municipal, stock water, irrigation, mining, or industrial purposes in states lying wholly or partially west of the ninety-eighth meridian. 563

Many other federal interests and activities, such as those of the United States Fish and Wildlife Service, are not affected by the O'Mahoney-Milliken Amendment, and the downstream states of Arkansas and Louisiana do not receive comparable protection. Finally, the Congress is free within constitutional limits to modify or repeal in whole or in part both the O'Mahoney-Milliken Amendment and the special protection afforded by the 1938 legislation authorizing the construction of Denison Dam. 564 In view of the political muscle exercised by representatives of the Red River basin states in past years, any attempt to modify these two laws or to preempt the ap-

^{560.} See Goslin, supra note 86, at 432.

^{561.} See Act of June 28, 1938, ch. 795, 52 Stat. 1215, 1215-20 (1938). See also supra text accompanying notes 350-355, 368, 372.

^{562.} Act of Dec. 22, 1944, ch. 665, 58 Stat. 887, 889 (1944) (codified at 33 U.S.C. § 701-1 (1982)). See also *supra* text accompanying notes 356-363.

^{563.} See generally Gage, supra note 357, app. C, C-1 to C-15. See also Scoggins, supra note 361, at 1.

^{564.} Federal authority over the nation's waters is discussed in part IV. For a discussion of federal power in relation to the O'Mahoney-Milliken Amendment, see generally Gage, supra note 357, at C-15, C-16. Cf. Choate v. Trapp, 224 U.S. 665, 671, 674, 677 (1912) (explaining in the context of an attempted repeal by Congress of the tax exemption [which was deemed a property right by the Court] in the patents for Indian allotments under the Curtis Act the "broad distinction . . . between the power [of Congress] to abrogate a statute and the authority to destroy rights acquired under such law"); Letter from Perry Morton, U.S. Dep't of Justice, to Henry C. Beckman, RRCNC Chairman, supra note 81, at 5 (discussing the legal ability of Congress to withdraw its consent to an interstate compact and interpreting Choate v. Trapp as holding "that a subsequent congressional revision could not impair vested rights obtained as a result of Federal statute").

portionment of water made by the compact would be met with intense resistance.

The Apportionment of Water to the Signatory States

Articles IV through VIII of the Red River Compact delineate the apportionment of the water of each of the five reaches of the river system. Four of the five reaches are then further divided into subbasins, which either consist of interstate or intrastate streams. The rules, including any special provisions, governing the use of water within each subbasin are prescribed in detail. The signatory states are allowed the full use of intrastate tributaries. On interstate streams, the primary basis of apportioning the water is the percentage-of-flow method, modified to reflect factors unique to each subbasin or reach. The flow of water in interstate streams is generally apportioned 60 percent to the upstream state and 40 percent to the downstream state. Although the percentage-of-flow method superficially appears simple to implement, it is one of the most difficult and expensive to administer.⁵⁶⁵

Reach I—Red River System from the New Mexico-Texas State Boundary to Denison Dam

The water of the Red River and its tributaries above Denison Dam is apportioned to Oklahoma and Texas. Each state, of course, has the free and unrestricted use of intrastate streams within the reach. The 60-40 method apportions the waters of the interstate streams, which include the North Fork, Salt Fork, Sweetwater Creek, Elm Creek, and the Washita River, among others. Since rainfall in this reach is irregular and the flows are primarily flood flows, an annual basis of accounting was chosen. Ser

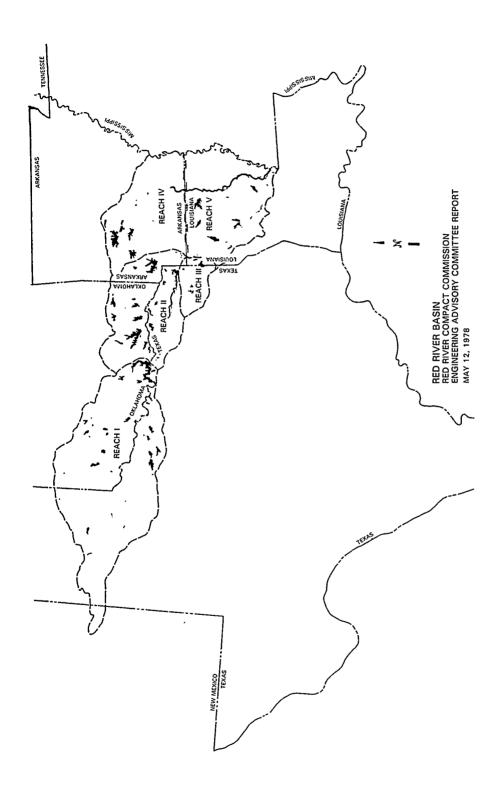
The water of the main stem of the Red River and Lake Texoma was equally divided between Oklahoma and Texas, each state receiving an allocation of 200,000 acre-feet of the storage of the lake.⁵⁶⁸ This apportionment includes the water uses and allocations in existence when the compact was

^{565.} See, e.g., Letter from Norman G. Flagg, Area Eng'rs, U.S. Dep't of the Interior, Bureau of Reclamation, to Forrest Nelson, Executive Director, OWRB, at 1 (Oct. 17, 1969) (cautioning Nelson of the expense and difficulty Flagg anticipated in policing the delivery of water in Reach II of the Red River under the percentage-of-flow apportionment set forth in the draft compact at that time. Compact administration in the interstate boundary reaches of the Red River would be the most difficult.). During the course of their deliberations, the compact negotiators considered a number of methods that had been used in making water apportionments in the compacts for river basins west of the Mississippi River: (1) percentage of available flow, (2) priority of existing uses, (3) lump-sum volume, (4) inflow-outflow delivery schedule, and (5) limitation of conservation storage capacity. See Minutes of 19th Meeting of RRCNC, at 2-3 (Apr. 19-20, 1960). Although each method has inherent advantages and disadvantages that are either enhanced or exacerbated when applied to specific river basins, the apportionment method expressed as a limitation on storage capacity is the easiest to administer. Id.

^{566.} Red River Compact, art. IV, § 4.01(a), 94 Stat. 3308-09.

^{567.} Id. § 4.01(b), 94 Stat. 3309. See also Supplemental Interpretive Comments, supra note 21, at 9-10.

^{568.} Red River Compact, art. IV, § 4.04(b)(1), 94 Stat. 3309.



approved. Additional quantities of flow from the main stem of the river into Lake Texoma are apportioned 50-50 between the two states. The compact specifically affirms the right of Oklahoma and Texas to construct storage or other facilities for the conservation and use of water on the Red River above Denison Dam. The directs attention to the Denison Dam authorizing legislation of 1938, which permits total upstream development by Oklahoma and Texas of the inflows into Lake Texoma.

Arkansas and Louisiana cannot require Oklahoma and Texas to release water from Lake Texoma to fulfill their needs.⁵⁷¹ However, power releases from Denison Dam that are not earmarked for a particular use constitute "undesignated flow" and must be passed by the upstream states during periods of low flow for the benefit of the downstream states.⁵⁷²

Hydrological data assembled by the Engineering Advisory Committee and used by the compact negotiators indicate that Oklahoma actually contributed "significantly more than fifty percent" of the water flowing into this portion of the main stem of the Red River and Lake Texoma.⁵⁷³ Logically, Oklahoma would seem to be entitled to more than the 50 percent allocation. The compact negotiators from Oklahoma, however, consented to the equal division for two reasons. First, Oklahoma's relative contribution to these inflows, in all likelihood, was expected to decline in future years as impoundment capabilities are expanded within the state.⁵⁷⁴ Second, the equal division facilitated a compromise with Texas over the use of the water of the North Fork of the Red River, Sweetwater Creek, and other tributaries of the North Fork within Texas above the Lugert-Altus Reservoir.⁵⁷⁵

The 60-40 split of water between Texas and Oklahoma in subbasin one of Reach I could have a major depletion effect upon the ultimate inflow of Lake Altus and the delivery of water from the Lugert-Altus Reservoir to the W. C. Austin Project.⁵⁷⁶ This, in turn, could adversely affect the ability of the water users to repay the costs of the project. Under a compromise, Texas agreed to limit development on the main stem of the North Fork and along any of its tributaries located within Texas above the Lugert-

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569. Id. § 4.04(b)(2), 94 Stat. 3309.

570. Id. § 4.05(a), 94 Stat. 3309.

571. See Supplemental Interpretive Comments, supra note 21, at 11.

572. Id. at 10.

574. Id. 575. Id.
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576. See Letter from Guy R. Martin, Assistant Secretary, U.S. Dep't of the Interior, to Hon. Edward M. Kennedy, Chairman, Comm. on the Judiciary, U.S. Senate (Aug. 19, 1980), reprinted in S. Rep. No. 964, 96th Cong., 2d Sess. 4 (1980). Studies differed concerning the magnitude of the depletion effect. A study by the Water and Power Resources Service of the Bureau of Reclamation indicated that during the period 1945 to 1968, there would have been an average annual reduction of 3,800 acre-feet to Lake Altus if the 60-40 percentage division had been in effect between Texas and Oklahoma. Id. A study completed by the Oklahoma Water Resources Board found that the reduction during the same time frame could have been as high as 6,700 acre-feet annually. Id. Both studies assumed full development by Texas of its entitlement under the compact. Id.

Altus Reservoir to projects for domestic, municipal, and industrial water supply until imported water sufficient to meet the municipal and irrigation needs of western Oklahoma becomes available, or until January 1, 2000, whichever occurs first.⁵⁷⁷ Therefore, if sufficient water is imported to western Oklahoma prior to the year 2000, Texas is free to pursue full development, including recreation and pleasure uses, of the 60 percent of water of these interstate tributaries allocated to it as the upstream state.⁵⁷⁸ The "sunset" date of January 1, 2000, was selected because the repayment requirements of the water users of the W. C. Austin Project will have ended by then.

Reach II—Red River System from Denison Dam to the Arkansas-Louisiana Border

Reach II includes the Red River and its tributaries from Denison Dam to the point where the river system crosses the Arkansas-Louisiana boundary and all tributaries that contribute to the flow of the river within the reach. In apportioning the water of Reach II, the compact negotiators divided the reach into five subbasins. For many of the reasons elaborated in part I, this portion of the river basin—the reach involving all four states—was the most complex and the most difficult to apportion.

Although rainfall in Reach II is heavier than in Reach I, many reservoirs dot the portion lying within Oklahoma and Texas. Various other impoundments were either authorized for construction or in various stages of construction at the time the compact was being formulated and reviewed. The primary task of the negotiators was to meet the demands of Louisiana for the maintenance of certain minimum flows at the Arkansas-Louisiana state line without mandating the release of water stored in upstream reservoirs to fulfill Louisiana's requirements.⁵⁷⁹ A correlative problem was the protection of Arkansas' interests in providing for possible future water needs for navigation and other purposes on the main stem of the Red River in Arkansas.

The division of the reach into five subbasins enabled the negotiators to arrive at a consensus upon the apportionment of the water. The criterion of last downstream major dam site—either completed, authorized, or proposed as of December 22, 1980—was used to separate upstream subbasins from downstream subbasins. The last downstream major reservoirs were then described in detail in the compact to minimize possible future disagreements among the signatory states. However, data in the compact and in the Report of the Engineering Advisory Committee concerning reservoir capacity and location, while providing valuable background information, does not alter subbasin definitions or modify the apportionment of the water. Data concerning reservoirs authorized but not yet completed was

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577. Red River Compact, art. IV, § 4.05(b), 94 Stat. 3309.
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^{578.} See Supplemental Interpretive Comments, supra note 21, at 10.

^{579.} Id. at 14.

^{580.} Id.

^{581.} Id. at 15. See also 1978 RRCNC Eng'g Rep., supra note 95, at ii.

included in the compact and the engineering report to provide approximate information in facilitating compact administration until work on the proposed reservoirs is actually concluded.

The water in the four subbasins upstream from the last downstream major dams is divided between the interested states. Subbasins one and two consist of intrastate tributaries lying wholly within Oklahoma and Texas, respectively. Each state is apportioned the water of its respective subbasin of intrastate streams and is given the unrestricted use of the intrastate streams located therein.⁵⁸²

Subbasin three, which is divided between Oklahoma and Arkansas, includes the Little River and its interstate tributaries located above Millwood Dam in southwestern Arkansas. Low flows historically have been a significant concern in this area and are expected to present problems in future years. The 60-40 division of runoff was adopted between Oklahoma and Arkansas for the portion of the subbasin situated below the specified last downstream major dams in Oklahoma and upstream from Millwood Dam. Reservoirs constructed in Oklahoma below the specified last downstream major dams, therefore, are required to pass on 40 percent of the runoff, a requirement that may prove critical during low-flow periods. The negotiators decided that, as a general rule, accounting on an annual basis would be sufficient in this subbasin. However, a shorter accounting period may be invoked by the states if necessary to assure Arkansas its share of low flows. Ses

Subbasin four consists of interstate streams of interest to Texas and Arkansas. However, the subbasin lies completely within Texas, which has fully appropriated the available low flows. Although Texas is given the free and unrestricted use of the water of this subbasin, Arkansas receives important benefits of its water, particularly from the water stored in Wright Patman Reservoir located on the Sulphur River about five miles above the Texas-Arkansas boundary. Lake Wright Patman operates under permits issued by the state of Texas; however, it serves as a common supply of municipal and industrial water for the Texarkana metropolitan areas of both Arkansas and Texas. The presence of Lake Wright Patman guarantees a low flow to Arkansas that is greater than the historical low flows without the reservoir in place. Under the federal authorizing legislation for the reservoir, a minimum release of 10 cubic feet per second is guaranteed; in addition, releases up to 96 cubic feet per second are made for the benefit of downstream fish and wildlife. Ser

Subbasin five, which is equally divided among the four signatory states, includes the portion of the main stem of the Red River and its tributaries

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582. See Red River Compact, art. V, §§ 5.01, 5.02, 94 Stat. 3309-10.
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^{583.} See Supplemental Interpretive Comments, supra note 21, at 15.

^{584.} Red River Compact, art. V, § 5.03(a), (b), 94 Stat. 3310.

^{585.} Id. § 5.03(c), 94 Stat. 3311.

^{586.} See Supplemental Interpretive Comments, supra note 21, at 16.

^{587.} Id.

from Denison Dam down to the Arkansas-Louisiana boundary that lie below the last downstream major dams of the other four subbasins previously described. In subbasin five, the upstream states agree to cooperate in assuring a reliable flow to Louisiana and, under certain circumstances, to Arkansas. The upstream states' pledge of cooperation is keyed to the level of flows at the Arkansas-Louisiana boundary line. For purposes of this analysis, "high flows" are defined as exceeding 3,000 cubic feet per second at the Arkansas-Louisiana state line; "intermediate flows" refer to flows less than 3,000 cubic feet per second but greater than 1,000 cubic feet per second; and "low flows" indicate flows of 1,000 cubic feet per second or less. From the day record-keeping was first begun at the Arkansas-Louisiana boundary, flows of less than 3,000 cubic feet per second have occurred less than 5 percent of the time and low flows have been recorded even more rarely. 590

The compact negotiators chose "weekly runoff" as the basis of apportionment of water within subbasin five in order to assure the downstream states a relatively continual flow and a portion of the low flows. During periods of high flows, the signatory states have equal rights to apply the runoff originating in this subbasin and undesignated water flowing into the subbasin.⁵⁹¹ However, no state is entitled to more than 25 percent of the water in excess of 3,000 cubic feet per second.⁵⁹² According to the Supplemental Interpretive Comments of the Legal Advisory Committee, the compact is intended to allow all states the free use of whatever amount of water they can apply to beneficial uses unless the water in excess of 3,000 cubic feet per second cannot satisfy their competing uses. In that event, each state "will honor the other's right to twenty-five percent of the excess flow." ⁵⁹³

During periods of intermediate flow in subbasin five, the upstream states must allow 40 percent of the total runoff originating in the portion of the subbasin located within each state and 40 percent of the undesignated water flowing into the subbasin to pass to the downstream states in order to maintain the flow of the main stem of the Red River at the Arkansas-Louisiana boundary line.⁵⁹⁴ Finally, on those rare occasions when low flows occur at the Arkansas-Louisiana line, the upstream states are required to pass 100 percent of their runoff within this subbasin and all undesignated releases as necessary to assure maintenance of a minimum flow of 1,000 cubic feet per second at the boundary between Arkansas and Louisiana.⁵⁹⁵

Historic records suggest that efforts to assure minimum flows at the Arkansas-Louisiana boundary will have a corresponding effect in assuring min-

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588. Id.
589. Id. at 16-17.
590. Id. at 17.
591. Red River Compact, art. V, § 5.05(b)(1), 94 Stat. 3311.
592. Id.
593. See Supplemental Interpretive Comments, supra note 21, at 17.
594. Red River Compact, art. V, § 5.05(b)(2), 94 Stat. 3311.
595. Id. § 5.05(b)(3), 94 Stat. 3310-11.
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imum flows at the Arkansas-Oklahoma boundary.⁵⁹⁶ Nevertheless, the compact addresses the situation during which inflows from the Little River watershed might create a flow of 3,000 cubic feet per second at the Arkansas-Louisiana boundary while virtually no water was entering upstream to provide a minimum flow of 526 cubic feet per second on the Red River at Index, Arkansas, near the Arkansas-Oklahoma boundary.⁵⁹⁷ In this unusual event, another provision of the compact may be invoked "at the request of Arkansas" under very stringent conditions after Arkansas has ceased diversions above Index, Arkansas, to govern the diversion of water by the states for the protection of Arkansas' interests in the main stem of the Red River.⁵⁹⁸

Small reservoirs with a conservation storage capacity of 1,000 acre-feet or less which were completed or authorized as of December 22, 1980, are exempt from the compact's requirements in subbasin five relative to the maintenance of minimum flows to the downstream states.⁵⁹⁹ This small reservoir exemption was necessitated by the lack of release capabilities on many of the existing dams and because the right to operate these reservoirs may be deemed a vested property right under the laws of Oklahoma and Texas.600 The amount of water involved in this exemption should have only a minor effect on the flow of the river at the downstream state boundaries. The exemption is lost if the right to store water in or use water from an existing reservoir is canceled after December 22, 1980. However, a signatory state may authorize a change in purpose or place of water use from a small reservoir without losing the exemption as long as the quantity of the authorized use and storage is not increased. Exemptions from the provisions governing the use of the water of subbasin five do not apply to direct diversions from the Red River to off-channel reservoirs or lands. 601

Reach III-Tributaries West of the Red River

Reach III consists of the tributaries west of the Red River that cross the Texas-Arkansas boundary, the Arkansas-Louisiana boundary, or the Texas-Louisiana boundary. It includes four topographic subbasins, one of which consists of intrastate streams in Louisiana to which Louisiana has free and unrestricted use. Of the three remaining subbasins, two involve interstate streams between Arkansas and Texas and between Arkansas and Louisiana. The water of these interstate streams is apportioned using the 60-40 method

^{596.} See Supplemental Interpretive Comments, supra note 21, at 17-18.

^{597.} Id. at 18. See Red River Compact, art. V, § 5.05(c), 94 Stat. 3312.

^{598.} Red River Compact, art. V, § 5.05(c), 94 Stat. 3312. This provision can be invoked only at the request of Arkansas (1) only after Arkansas has curtailed all of its diversions from the Red River in Arkansas above Index, Arkansas, and (2) only if the provisions relative to intermediate and low flows in subbasin five at the Arkansas-Louisiana state line have not limited diversions in the subbasin. *Id.* Under no circumstances does any state guarantee to maintain a minimum low flow to a downstream state. *Id.*, § 5.05(d).

^{599.} Id., § 5.06(a).

^{600.} See Supplemental Interpretive Comments, supra note 21, at 18.

^{601.} Red River Compact, art. V, § 5.06(b), (c), 94 Stat. 3312.

with 60 percent of the runoff allocated to the upstream state of origin and a minimum of 40 percent being passed to the downstream state.⁶⁰²

However, the 60-40 method was not feasible for the apportionment of the water of subbasin three, which includes the interstate streams between Texas and Louisiana, because Caddo Lake is located on the state boundary line. Texas and Louisiana were given the unrestricted right to use 50 percent of the conservation storage capacity of Caddo Lake, provided there is no reduction in supplies for existing uses of water from Caddo Lake as of the "date of [the] compact." The apportionment of subbasin three reflects the desire of Texas to protect authorized and completed reservoirs and the eagerness of Louisiana to assure an adequate supply of water to the Shreve-port metropolitan area. The compact protects the yield of Caddo Lake, exempting only existing upstream water rights and impoundments completed, proposed, or authorized on December 22, 1980.

Because of the possibility that Caddo Lake would be enlarged in the future, Texas and Louisiana received equal shares of the conservation storage capacity of any enlargement of the reservoir. 606 The compact recognizes, however, that Texas and Louisiana are free after December 22, 1980, to negotiate for the release of each state's share of storage space on mutually agreeable terms. This provision reflects the bi-state effort to secure approval of a separate compact, entitled the Caddo Lake Compact, governing the use of the water of this lake. Except for the general compact provision exempting domestic and livestock uses, Texas' share of water in subbasin three allows no new diversions that would decrease runoff in this subbasin below an amount equal to that available with the full operation of the completed, proposed, and authorized impoundments and water rights existing on the date of the compact. 607 Any depletion exceeding this amount is to be balanced against Texas' share of water in conservation storage in Caddo Lake. 608

Reach IV—Tributaries East of the Red River in Arkansas

The tributaries east of the Red River in Arkansas which cross the Arkansas-Louisiana boundary form Reach IV. As explained earlier, the task

^{602.} Id., art. VI, §§ 6.01(b), 6.02(b), 94 Stat. 3312-13. The intrastate streams to which Louisiana has free and unrestricted use are included within subbasin four. Id. § 6.04, 94 Stat. 3313. 603. See Supplemental Interpretive Comments, supra note 21, at 20.

^{604.} Red River Compact, art. VI, § 6.03(b)(2), 94 Stat. 3313. Note that this provision is geared to "existing uses of water from Caddo Lake, on date of Compact." Id. (emphasis supplied). It is not clear whether "date of Compact" refers to May 12, 1978, the date on which the compact was officially executed at Denison Dam, or to Dec. 22, 1980, the date on which the compact became legally effective. Other provisions of the compact refer to "the effective date of the Compact," i.e., Dec. 22, 1980. See, e.g., id. §§ 5.06(a), 6.03(b)(1), 94 Stat. 3312-13 (emphasis added).

^{605.} See Supplemental Interpretive Comments, supra note 21, at 20.

^{606.} See Red River Compact, art. VI, § 6.03(b)(3), 94 Stat. 3313. As discussed earlier, Texas and Louisiana had negotiated a separate compact apportioning the water of Caddo Lake. See supra text accompanying notes 535-538. Approval of the Caddo Lake Compact was deferred by Congress for a number of reasons. See supra notes 535-538 and accompanying text.

^{607.} See Supplemental Interpretive Comments, supra note 21, at 21. 608. Id.

of reconciling Arkansas' "reasonable use" theory of the riparian doctrine with the demands made by Louisiana for constant maintenance of minimum flows complicated the negotiations of this portion of the river basin. The reach was divided into two subbasins, one consisting of intrastate streams and the other containing interstate streams. Arkansas was given the unrestricted use of the water of the intrastate streams. The 60-40 division was applied in subbasin two, which consists of the interstate streams. Therefore, Arkansas must allow an amount of water equal to 40 percent of the weekly runoff originating below or flowing from the last downstream major dam site on each interstate stream to enter Louisiana. Comparable language applies to interstate streams in the subbasin for which last downstream dam sites were not designated at the time the compact was completed.

"Weekly runoff" again was used to assure Louisiana a relatively constant flow of water. While Arkansas does not guarantee the maintenance of a minimum flow to Louisiana in this reach, the problem of assuring Louisiana an equitable stream flow during periods of extreme low flows was specifically addressed. In the event that the use of water in Arkansas in four interstate streams—the Ouachita River, Bayou Bartholomew, Boeuf River, and Bayou Macon—reduces the flow at the Arkansas-Louisiana boundary to certain specified levels, Arkansas "pledges to take affirmative steps to regulate the diversions of runoff" in a manner that would permit an equitable apportionment of the runoff to enter Louisiana as otherwise set forth in the compact.⁶¹¹

Reach V-Portion of Red River System Lying Wholly in Louisiana

The fifth reach of the river is composed of the main stem of the Red River and all of its tributaries lying entirely within Louisiana. Following the principles applied to other intrastate streams, Louisiana is given the free and unrestricted use of the water in this reach.⁶¹²

Enhancement of Water Quality in the Basin

The negotiators encountered great difficulty in arriving at a consensus on the compact provisions dealing with the pollution and natural deterioration of the water of the Red River basin. The Red River Valley Association, one of the most influential organizations in the basin, supported a compact apportioning the water of the river but opposed the creation of a strong regional valley authority. 613 Of more importance, however, the evolution of

^{609.} Red River Compact, art. VII, § 7.02(b), 94 Stat. 3314.

^{610.} Id.

^{611.} Id. § 7.03(b), 94 Stat. 3314-15. The pledge by Arkansas to take "affirmative steps" is triggered when the use of water in Arkansas reduces the flow at the Arkansas-Louisiana state line to the following amounts: "(1) Ouachita River—780 cfs; (2) Bayou Bartholomew—80 cfs; (3) Boeuf River—40 cfs; (4) Bayou Macon—40 cfs." Id. Since Arkansas does not guarantee to maintain a minimum low flow to Louisiana in Reach IV, this pledge of affirmative action appears difficult to enforce.

^{612.} Id., art. VIII, § 8.01, 94 Stat. 3315.

^{613.} Red River Valley Ass'n 1959 Platform, at 4, 6 (adopted at 33d Annual Meeting, Apr.

federal water quality laws between 1956 and 1978 reinforced the natural inclination of the negotiators to give primacy to the role of the states in the control of pollution.

Although the Federal Water Pollution Control Act of 1948 was amended a number of times while the compact was being negotiated, the basic policy of the act continued to recognize the federal role as supplemental to the "primary responsibilities and rights of the states in preventing and controlling water pollution." The water pollution legislation passed by Congress in 1956 established a very weak conference procedure for the abatement of pollution of interstate waters. Since President Eisenhower opposed federal involvement in pollution control, the conference procedure was never used to its capacity during his administration. Moreover, the enforcement conference was invoked only on a limited basis in the early 1960s during the Kennedy administration.

The major thrust toward a serious federal water quality program came with the 1965 amendments to the Federal Water Pollution Control Act.⁶¹⁸ The 1965 water quality legislation created a new program that required development by the states of water quality standards for all interstate streams and the establishment of a plan for the implementation of the standards by June 30, 1967.⁶¹⁹ The promulgation of federal standards was authorized in the event a state failed to set standards or developed standards which were inadequate.⁶²⁰

In view of the standards-setting approach taken by the 1965 legislation, interstate river basin compact commissions logically would have been ideal governmental entities to establish water quality standards on interstate streams where compacts existed.⁶²¹ The idea of an interstate pollution control au-

^{8, 1958).} The Red River Valley Association particularly abhorred the precedent established by the creation of the Tennessee Valley Authority (TVA). In the view of the Association, regional valley authorities, such as the TVA, were "undesirable and unnecessary" and threatened to "transcend state and local governments" and "become super-states very quickly." Id. at 4. The Association not only supported in principle the completion of the compact for the Red River, but also offered its assistance to expedite the negotiations and secure the "early approval" of the Red River Compact in the legislatures of the participating states and in Congress. Id. at 6. The Association noted that "[t]he people of the Valley are already formulating plans for the use of this water and are dependent upon its firm allocation." Id.

^{614.} See Muys, Interstate Water Compacts, supra note 82, at 60-61.

^{615.} See Reitze, supra note 38, at four-34.

^{616.} Id.

^{617.} Id. at four-35.

^{618.} Id.

^{619.} See Muys, Interstate Water Compacts, supra note 82, at 61.

^{620.} Id

^{621.} Id. See also Hines, Nor Any Drop to Drink: Public Regulation of Water Quality, Part II: Interstate Arrangements for Pollution Control, 52 IOWA L. REV. 432, 432 (1966). Professor William Hines explained in his article on interstate arrangements for pollution control:

Pollutants introduced into water become completely vagrant and follow the natural flow of the watercourse. As a rule, the meanderings of watercourses show little respect for the sanctity of state boundaries. Conditions of water pollution, therefore, frequently assume a configuration that bears little resemblance to the

thority with regional jurisdiction to regulate an entire river basin is appealing for several reasons: (1) increased administrative efficiency; (2) promotion of consistency in the establishment and enforcement of water quality standards for the river; (3) ability to develop long-range water quality policies based upon existing and proposed development in the basin; and (4) a greater degree of compliance by offenders with abatement orders as a result of more uniformity in the enforcement of pollution regulations.⁶²²

Unfortunately, the 1965 amendments to the Federal Water Pollution Control Act spoke in terms of each state developing and implementing water quality standards. Therefore, federal officials initially ruled that a river basin compact commission—the logical "super-state organization" to handle pollution matters within a river basin—could not legally carry out the standards-setting function. Later this interpretation was modified to allow interstate compact commissions to establish the standards if the affected states formally designated the compact commission as their agent for these purposes. 624

The central theme of the pollution provisions finally adopted by the negotiators of the Red River Compact is the affirmation that the primary duty and responsibility in the water quality area lies with each signatory state. The drafters of the compact neither intended for the Red River Compact Commission to displace any state water quality control agency nor to usurp the authority of such an agency.⁶²⁵ Instead, the compact negotiators sought to "provide a vehicle for the amicable solution of potential interstate pollution problems."

As mentioned in part V, the negotiators examined several methods of pollution control enforcement, ranging from no direct enforcement by the compact commission to different models of direct enforcement. The scope of powers of other water pollution control compacts examined by the negotiators was quite varied. The Ohio River Valley Water Sanitation Compact granted the interstate commission established to administer its provisions

political geography of any of the states affected. Great acumen is not required to realize that little success is likely to accrue to attempts to regulate pollution of interstate waters unless the control effort has a scope of planning and an enforcement authority roughly congruent with the dimensions of the problem. The vesting of regulatory power in some form of supra-state organization seems essential to effective handling of pollution situations, the causes and effects of which overflow state lines.

Id. at 432.

^{622.} Id. at 433.

^{623.} See Muys, Interstate Water Compacts, supra note 82, at 61.

^{624.} Id. at 61-62. Jerome Muys noted in his scholarly report on interstate compacts for the National Water Commission in 1971: "[T]he upshot was that the federal quality standards program, which seemed to provide an opportunity for the interstate [compact] commissions to make a significant contribution on the very kind of problem for which they were created, had the unfortunate result of generally by-passing those agencies." Id. at 62.

^{625.} See Supplemental Interpretive Comments, supra note 21, at 29. See also Beckman Letter to Red River Valley Ass'n, supra note 37, at 1.

^{626.} Supplement Interpretive Comments, supra note 21, at 29.

broad standards-setting and enforcement authority; it basically followed the pattern of the New York Harbor Interstate Sanitation Compact of 1935.⁶²⁷ At the other end of the spectrum, the Potomac River Sanitation Compact and the New England Interstate Water Pollution Control Compact were essentially given recommendatory authority only.⁶²⁸ The Klamath River Basin Compact of 1957 adopted a blend of these two approaches.⁶²⁹

The Red River Compact finally approved by the negotiators in 1978 sets forth the dual objectives of promoting an active program for the control and alleviation of natural deterioration and pollution of the water and enforcing the laws related thereto. The signatory states acknowledge that the reduction of naturally occurring salinity within the river basin and the enhancement of water quality "may" require cooperative action by all of them. 630 However, the authority over water quality vested in the Red River Compact Commission, though exceeding that in some other compacts, is rather anemic.

The Red River Compact Commission only has power to "recommend reasonable water quality objectives to the states." There are no criteria to determine "reasonableness" nor are the states mandated to utilize or enforce these water-quality objectives. The Red River Compact Commission may "cooperate" with the federal government, the governments of the signatory states, and other entities in devising and implementing programs for controlling pollution and abating the natural contamination of the water of the basin. Since it is dependent upon the state governments for financial support and its authority is carefully circumscribed, the Red River Compact Commission practically may be reduced to "cooperating" by sharing professional expertise and information, rather than through the joint sponsorship of an expensive multiyear major construction program for the abatement of contamination of the water.

An earlier draft of the Red River Compact included language that clearly authorized and encouraged the Red River Compact Commission to apply

^{627.} See Muys, Interstate Water Compacts, supra note 82, at 57. Both compacts include provisions requiring concurrence by a majority of the compact commissioners of the affected states before an enforcement order may be issued. Id. This voting requirement, in effect, amounts to a veto power over enforcement, thereby undermining the compact commission's enforcement authority. Id.

^{628.} Id.

^{629.} Id. at 57-58. The Klamath River Compact empowers the compact commission with the authority to set water quality standards which, if violated and a complaint is made by an aggrieved state, are the basis for recommended improvement measures by the compact commission. Id. at 58. If the recommendations are not followed, the commission may take enforcement action against the polluters. Id.

^{630.} Red River Compact, art XI, § 11.02, 94 Stat. 3317. The negotiators also said that while "there is no serious manmade interstate pollution problem in the Red River Basin at present [May 12, 1978], they recognize their obligation to maintain the adequacy of the basin's water quality by all available means." See Supplemental Interpretive Comments, supra note 21, at 29.

^{631.} Red River Compact, art. XI, § 11.04, 94 Stat. 3317-18. 632. Id.

for and receive funds for research, experiments, demonstrations, studies, and training projects relating to water pollution control in the Red River system.⁶³³ However, this language was dropped from the final version of the compact. The failure to include a provision expressly authorizing the Red River Compact Commission to seek financial assistance from sources other than the state governments, coupled with certain limitations on financial obligations which the commission may assume, seriously undermine the ability of the Red River Compact Commission to become an effective force in the improvement of water quality in the basin.

For example, since the Red River Compact Commission has become operational, the commissioners have been exploring ways to finance the Red River Chloride Control Project proposed by the Corps of Engineers for the abatement of the major sources of chloride contamination in the basin.⁶³⁴ At the fourth annual meeting of the Red River Compact Commission, held on April 25, 1984, the chairman of the Legal Advisory Committee reported the consensus of the legal advisers that the Red River Compact Commission lacked the power to be a sponsoring agency of the proposed project.⁶³⁵ The legal advisers concluded that nowhere in the compact is there a delegation of power from the states to the Red River Compact Commission to enter into contracts for the construction of the types of structures and facilities entailed by the proposed project.⁶³⁶ Therefore, the Red River Compact Commission could not legally enter into a cost-sharing agreement with the Corps

633. See Rough Draft of Red River Compact, art. V, § B, ¶¶ 5-6, app. to Memorandum from Richard Huff, Chairman, RRCNC Legal Advisory Committee, to the RRCNC Members and Technical Advisers, at 12 (July 18, 1957). The Apr. 24, 1957 draft of the compact authorized the permanent commission, which was to be established to administer the compact, to engage in research investigations, experiments, demonstrations, studies, and training programs relating to water quality in the Red River basin; to construct treatment works to prevent the discharge of untreated or inadequately treated sewage or other waste into any waters of the system; to apply for and receive any and all assistance, information, research, surveys, grants, allotments or allocations of funds which may be available to interstate agencies under any state or federal statute; and to cooperate or undertake joint activities with state or federal agencies. Id.

634. See Minutes of 2d Annual Meeting of RRCC, at 4 (Apr. 27, 1982). The resolution was proposed by Texas, whose representative commented that Texas and Oklahoma "have lived up to their part of a bargain with the federal government to 'virtually eliminate' man-made salt pollution in the Red River Basin and that it now is time for Congress to do its part." Id. The estimated costs of the projects totaled \$150 million to \$215 million in federal funds. Id. At the third annual meeting of the RRCC the following year, Major General Hugh Robinson, Southwestern Division Engineer with the Corps of Engineers, discussed with the commissioners the position of the Reagan administration on cost sharing in general and specifically in relation to the Red River Chloride Control Project. See Minutes of 3d Annual Meeting of RRCC, at 1-2 (Apr. 26, 1983). Following the conclusion of General Robinson's presentation, the commission referred to its Legal Advisory Committee the question of what legal authority, if any, the commission may have to enter into an agreement with the Corps of Engineers on the Red River Chloride Project. Id. at 1. The report of the Corps of Engineers on the Red River Chloride Project was also referred to the RRCC Engineering Advisory Committee for review and comment. Id. at 2.

- 635. See Draft Minutes of 4th Annual Meeting of RRCC, at 3 (Apr. 25, 1984).
- 636. See Draft Verbatim Transcript of 4th Annual Meeting of RRCC, at 14 (Apr. 25, 1984).

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of Engineers. In the opinion of the legal advisers, the Red River Compact Commission is limited to serving only as a coordinating vehicle between the states and the federal government with regard to such projects.⁶³⁷

Each signatory state is required to maintain current records of waste discharges into the basin, including the type and quality of these discharges, and to furnish these records to the Red River Compact Commission upon request.⁶³⁸ The Red River Compact Commission is authorized to utilize the provisions of the Federal Water Pollution Control Act in the event that all attempts to reach a cooperative solution to an interstate pollution problem fail.⁶³⁹

Red River Compact Commission involvement in a formal action to abate pollution is triggered upon the receipt of a complaint from the governor of a signatory state alleging two jurisdictional matters: (1) that the interstate water of the basin in which the state has an interest is being materially and adversely affected by pollution, and (2) that the state in which the pollution originates has failed after reasonable notice to take appropriate abatement measures. ⁶⁴⁰ The Red River Compact Commission must then make appropriate findings and transmit these to the governor of the state from which the pollution emanates, requesting that appropriate corrective action be taken. ⁶⁴¹

The Red River Compact Commission may not take any action with respect to pollution that adversely affects only the state in which it originates.⁶⁴² The commission may initiate legal action in its own name against the person or entity responsible for an interstate pollution problem. Before bringing a legal action, however, the Red River Compact Commission must give sixty days' advance notification to the governor of the state in which the pollution source is located so that the state may have an opportunity to initiate action in its own name.⁶⁴³ In addition, any signatory state that is materially and adversely affected by pollution emanating from another member state may institute legal action against any individual, business entity, association, political subdivision, officer, or agent of the other state in accordance with applicable federal statutes.⁶⁴⁴ The right of a signatory state to bring a legal action is without prejudice to other remedies available to the Red River Compact Commission or another signatory state.

As discussed *supra* in part V, the ability of a member state to secure relief from interstate water pollution originating in another signatory state was facilitated by the enactment by Congress in 1962 of legislation of general

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637. Id. at 14-15. See also Draft Minutes of 4th Annual Meeting of RRCC, supra note 635, at 3.
638. Red River Compact, art. XI, § 11.05, 94 Stat. 3318.
639. See Supplemental Interpretive Comments, supra note 21, at 29. See also Red River Compact, art. XI, § 11.07, 94 Stat. 3318.
640. Red River Compact, art. XI, § 11.06, 94 Stat. 3318.
641. Id.
642. Id.
643. Id., § 11.07.
644. Id., § 11.08.
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application conferring jurisdiction upon the federal district courts in certain pollution cases arising under the compact,⁶⁴⁵ and by the inclusion of similar language in the Red River Compact consent legislation passed by Congress in 1980. To the extent the federal government is an indispensable party to litigation brought by one or more of the signatory states involving the pollution of the river system, the consent legislation also partially waives the sovereign immunity of the United States under certain conditions.⁶⁴⁶

The role the Red River Compact Commission itself will play in interstate pollution controversies will depend upon its ability to obtain the professional expertise required for the investigation of a problem and the financial resources necessary to defray the expenses of litigation. As explored in greater depth *infra*, the Red River Compact Commission appears to be at the mercy of the states for most, if not all, of its financial support. Thus, the commissioners will have to proceed cautiously and with great sensitivity to the political ramifications of their decisions lest they offend their primary sources of financial and other support. The dependence upon the support of the states, in all likelihood, will seriously undermine, if not cripple, the ability of the Red River Compact Commission to effectively address pollution problems.

Administration of the Compact

Article IX of the Red River Compact creates a nine-member interstate administrative agency, the Red River Compact Commission (RRCC), to administer the terms of the compact. The RRCC is composed of two representatives from each of the four signatory states, who are designated or appointed in accordance with the laws of each state, and one commissioner representing the federal government.⁶⁴⁷ The federal commissioner, who is appointed by the President of the United States, is the ex officio chairman of the Red River Compact Commission.⁶⁴⁸

Each state commissioner has one vote. However, if only one representative

645. See *supra* text accompanying notes 39-41. The consent legislation passed by Congress in 1980 contains similar, though broader, language:

The United States District Courts shall have original jurisdiction (concurrent with that of the Supreme Court of the United States, and concurrent with that of any other Federal or state court, in matters in which the Supreme Court, or other court has original jurisdiction) of any case or controversy involving the application or construction of this Compact; that said jurisdiction shall include, but not be limited to, suits between Signatory States; and that the venue of such case or controversy may be in any judicial district in which the acts complained of (or any portion thereof) occur.

Act of Dec. 22, 1980, Pub. L. No. 96-564, § 4, 94 Stat. 3305, 3320 (emphasis supplied). The 1962 legislation was restricted to controversies involving the construction or application of interstate compacts which in whole or in part relate to interstate water pollution. 33 U.S.C. § 466g-1(a)(1) (1982).

646. See Act of Dec. 22, 1980, Pub. L. No. 96-564, § 2, 94 Stat. 3319-20.

647. Red River Compact, art. IX, § 9.01, 94 Stat. 3315.

648. Id.

from a state attends a meeting, he is authorized to vote on behalf of the absent commissioner from his state.⁶⁴⁹ Representatives from three states constitute a quorum. Failure by the President to appoint a federal commissioner will not prevent the RRCC from operating. Instead, the eight state representatives are empowered to elect a chairman of the commission.⁶⁵⁰ Even though the RRCC became operational on February 18, 1981, no federal representative has ever been appointed by the President.⁶⁵¹

Any action taken by the RRCC concerning the administration of the compact or any action requiring compliance with specific terms of the compact requires six concurring votes.⁶⁵² The commission is also authorized upon the receipt of six concurring votes to utilize the applicable federal statutes to institute legal action in its own name against the person or entity responsible for an interstate pollution problem.⁶⁵³ If an action proposed by the RRCC affects existing water rights in a state and that action is not expressly provided for in the compact, eight concurring votes are required.⁶⁵⁴ The requirement of unanimity on certain extraordinary actions, in effect, gives each state a veto power over the proposed action.

Any actions taken by the RRCC cannot augment its powers without the risk of running afoul of the compact clause of the Constitution. The assumption by an interstate compact commission of powers over water resources in addition to those enumerated in a compact previously approved by Congress is, in effect, a new compact among the states requiring independent approval and consent of Congress.⁶⁵⁵

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649. Id. § 9.03.
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^{650.} Id. § 9.01.

^{651.} See Minutes of 1st Annual Meeting of RRCC, at 1 (Feb. 18, 1981); Minutes of 2d Annual Meeting of RRCC, supra note 634, at 1; Minutes of 3d Annual Meeting of RRCC, supra note 634, at 2-3; Draft Minutes of 4th Annual Meeting of RRCC, supra note 635, at 5, 6-7. John Saxton, a commissioner from Arkansas and director of the Arkansas Soil and Water Conservation Commission, was elected at the first meeting of the Red River Compact Commission as interim chairman pending the appointment of a federal chairman. Mr. Saxton was reelected by the commission to this position during the annual metings held in 1982, 1983, and 1984. Saxton resigned in 1985, and a new chairman has yet to be elected. Chairman Saxton reported at the Fourth Annual Meeting of the RRCC that he had requested United States Congressman John Paul Hammerschmidt of Arkansas to amend any legislation that is appropriate and likely to pass during 1984 by including a provision that would enable a commissioned officer of the United States Army to serve as federal chairman of the compact commission without jeopardizing his military commission. Id. at 5. The lack of a federal representative to the RRCC exacerbates one of the fundamental weaknesses of a conventional interstate water compact such as the Red River Compact, i.e., the failure to obligate the federal government as a signatory party to the agreement. Any moral commitment that federal officials may feel toward the cooperative implementation of the compact's provisions is undermined by the lack of a federal representative to the permanent commission, which is now into its fourth year of operation.

^{652.} Red River Compact, art. IX, § 9.03, 94 Stat. 3315.

^{653.} Id., art. XI, § 11.07, 94 Stat. 3318.

^{654.} Id., art. IX, § 9.03, 94 Stat. 3315.

^{655.} See Letter from Perry Morton, Assistant Att'y Gen., Lands Div., U.S. Dep't of Justice, to Henry C. Beckman, RRCNC Chairman, at 3 (Apr. 22, 1957). Some of the legal advisers

The composition and voting requirements of the RRCC avoid the problem of tie votes, which has hamstrung other commissions such as the Pecos River Compact Commission, when an equal number of states are signatory parties to a conventional interstate compact. The negotiators developed this voting mechanism in response to proposals made during the early years of compact deliberations for a complicated arbitration provision. The model of vesting the federal chairman of the commission with the power to break a tie vote apparently was never considered. As a practical matter, the requirement of a three-fourths majority vote of all Red River Compact commissioners on most actions should force the commissioners of three of the four states to reach consensus in their decision making, thereby reducing the likelihood of friction which in turn leads to litigation. One drawback of this voting formula, however, is that the decision-making process may become protracted as the commissioners endeavor to reach the agreement necessary to support the adoption of a proposed action.

Financial Support of the Commission

One of the principal drawbacks of the Red River Compact, like the situation historically with most interstate river basin compacts, is the inability of the RRCC independently to finance and undertake programs designed to implement the multiple objectives of the compact. Although the commission

at one juncture early in the negotiations apparently suggested that a water compact may constitutionally provide for future augmentation of the powers of the compact commission, either by an act of the commission itself or by supplemental agreement among the compacting states without reference to Congress for approval. *Id.* The position taken by the U.S. Department of Justice with regard to this suggestion was that "either bestowal by the states or assumption by the Commission of powers in addition to those enumerated in a compact previously approved by Congress is, in effect, a new compact among the states, requiring independent approval and consent of Congress under article I, section 10, clause 3 of the Constitution of the United States." *Id.* For a discussion of the congressional consent requirement in general, see Muys, *supra* note 82, at 174-75.

^{656.} Pursuant to the terms of the Pecos River Compact, which was approved by Congress in 1949, an interstate administrative agency known as the Pecos River Commission was created. See Pecos River Compact, Act of June 9, 1949, ch. 184, art. V, 63 Stat. 159, 162. Under the terms of the compact, the commission consists of one commissioner representing each of the two signatory states of New Mexico and Texas and a nonvoting federal commissioner who serves as chairman of the commission. Id. at art. V(a). Since there are only two voting members of the commission, all actions require unanimity for adoption. There is no procedure set forth in the compact for breaking a tie vote. See Texas v. New Mexico, 462 U.S. 554, 560, 563-64 (1983). The Supreme Court in 1983 refused to adopt a Special Master's recommendation that either the federal representative or some third party be given a vote on the commission and be empowered to participate in all commission deliberations. Id. at 564. The Court said that "[t]o provide a third, tie-breaking vote on regular Commission business would be to fundamentally alter the structure of the Commission." Id. at 564-65. Acknowledging that the "structural likelihood of impasse on the Pecos River Commission is a serious matter," the Court urged the two states to amend their compact to provide for some mutually acceptable method for resolving "paralyzing impasses" such as this. Id. at 565. For an interesting chronicle of the Pecos River Compact controversy, see Comment, Texas v. New Mexico: The Pecos River Compact Litigation, 20 NAT. RESOURCES J. 395-410 (1980).

is empowered to establish an office, employ personnel, contract for technical expertise, and acquire property, the express language of the Red River Compact mandates the total dependence of the commission on the legislatures and governors of the signatory states for funding.⁶⁵⁷ The expenses and salaries of the compact commissioners are to be paid by their respective governments.⁶⁵⁸ The costs of installing and maintaining additional stream flow-gauging stations are to be equitably apportioned among the states involved in the reach of the stream in which the gauging stations are located.⁶⁵⁹ All other expenses are to be borne equally by the signatory states and paid from the Red River Compact Commission Fund, which is maintained by equal payments of each signatory state into the fund.⁶⁶⁰ There is no express agreement among the signatory states to maintain funding of the commission at a prescribed level, but the approval of the compact arguably reflects the implicit agreement of the signatory states to provide adequate funding for its proper implementation.

The Red River Compact does not contain any language expressly authorizing the commission to obtain financial assistance from the federal government or other nonstate sources. However, it can be argued that the power of the Red River Compact Commission to "[a]cquire, use and dispose of ... personal property as it may consider necessary," coupled with its mandate to "[p]erform all other functions required of it by the Compact and do all things necessary, proper and convenient in the performance of its duties thereunder," authorizes the commission to seek funding from outside sources and to accept gifts of money from private individuals and entities.⁶⁶¹

The Supplemental Interpretive Comments of the Legal Advisory Committee indicate that the compact provisions concerning financial matters "are not intended to prevent the Red River Compact Commission from taking advantage of any financial assistance that might be available in the future." The legal advisers suggest, for example, that the terms of the compact would neither preclude the commission from taking advantage of federal financial assistance to pay for the installation of additional stream flow-gauging stations through a cooperative program with the USGS, nor prevent the commission from sharing stream gauge operating expenses with the USGS. 663

The Red River Compact Commission lacks the authority to generate revenue through taxation. The compact is silent as to the ability of the commission to impose user fees, a revenue-generating mechanism that is limited by the failure to join the federal government as a signatory party to the

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657. See Red River Compact, art. X, §§ 10.01(b)-(d), 10.02(g), 94 Stat. 3316-17; art. IX, § 9.04, 94 Stat. 3315.
658. Id. § 9.04(a), 94 Stat. 3315.
659. Id. § 9.04(b), 94 Stat. 3315.
660. Id. § 9.04(c), 94 Stat. 3315-16.
661. Id., art. X, §§ 10.01(d), 10.02(c), 94 Stat. 3316-17.
662. See Supplemental Interpretive Comments, supra note 21, at 25.
663. Id.
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compact. The RRCC must avoid incurring any obligation in excess of the unencumbered balance of its funds and must not pledge the credit of any of the signatory states. 664 The latter restrictions parallel the provisions in the Ohio River Valley Water Sanitation Compact litigated in West Virginia ex rel. Dyer v. Sims. 665 They also reflect similar constraints set forth in the laws of some of the signatory states. 666

Powers and Duties of the Commission

The compact grants the Red River Compact Commission the authority the negotiators thought necessary for the flexible implementation of its provisions and the fulfillment of its objectives. Some of the more routine "housekeeping" provisions include the authority to adopt rules and regulations for the operation and enforcement of the compact; establish and maintain an office; print and distribute proceedings and reports; obtain information from state and federal agencies; and enter into contracts with state or federal agencies for the gathering of factual data, record-keeping, and preparation of reports. The commission may either employ or secure by contractual arrangements the engineering, legal, clerical, and other support it deems necessary for exercising its responsibilities. 667 In addition, the commission may acquire, use, and dispose of real and personal property as necessary to implement the compact. Since the commission lacks the power of eminent domain, the acquisition of real property would be accomplished presumably by voluntary transfer. Moreover, the ability to purchase property is dependent upon the financial support which the commission receives from the signatory states.

The compact contains a lengthy provision empowering the RRCC to conduct investigations, make studies, hold hearings, and prepare findings, recommendations, or reports relative to its implementation.⁶⁶³ The powers vested in the commission include the authority to make an official finding that a signatory state is or is not in violation of any provision of the compact.⁶⁶⁹ Although it may file official certified copies of its determinations with appropriate state and federal officials and agencies, the making of findings, recommendations, or reports by the RRCC is not a condition precedent to the initiation of a legal action by a signatory state for the protection of any right accorded by the compact or the enforcement of the provisions of the compact.⁶⁷⁰

The Red River Compact Commission must see that stream, reservoir, and other gauging stations are established, maintained, and operated as necessary

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664. Red River Compact, art. X, § 10.02(g), 94 Stat. 3317.
665. 341 U.S. 22 (1951).
666. Ark. Const. art. 16, § 1, cl. 1; Okla. Const. art. 10, §§ 5, 23, 25, 26.
667. Red River Compact, art. X, § 10.01(c), 94 Stat. 3316.
668. Id., § 10.01(g), 94 Stat. 3316.
669. Id.
670. Id.
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for the proper administration of the compact.⁶⁷¹ It must ensure that information on stream flows, water quality, water storage, and other similar data is collected, analyzed, and reported as necessary for the proper implementation of the compact.⁶⁷² The commission must also make available to a signatory state or the federal government, without subpoena, the testimony of any officers or employees of the Red River Compact Commission having knowledge of any facts relevant to any action arising under the compact.⁶⁷³

The other responsibilities of the RRCC relate to the preparation of a budget and annual report. The commission is required to prepare and submit to the governor of each state a budget covering anticipated expenses for the next fiscal biennium.⁶⁷⁴ In addition, the commission must prepare an annual report and transmit it to the governor of each signatory state and the President of the United States describing the activities of the commission for the preceding year and accounting for funds received and expended.⁶⁷⁵

Conclusion

The negotiators of the Red River Compact heeded the advice of both the legal scholars of their day and the Supreme Court in the major interstate water pollution and apportionment cases prior to 1950. The near quarter of a century devoted to the negotiation of the Red River Compact may be unprecedented in the annals of interstate water compacts, but the compact approach nonetheless is preferable to litigation as a mode of adjusting interstate conflicts over competing uses of water. The American legal system simply is not equipped institutionally to address the complex and multifaceted problems the negotiators had to consider in their deliberations for a compact for the Red River basin.

Many of the accomplishments of the Red River Negotiation Commission are not reflected within the pages of the Red River Compact. These include:

- (1) the inventory of water supply, water needs, water usage, and information concerning existing projects and proposed developments within the basin, which was completed by the technical advisers as a prelude to the negotiation of the apportionment provisions of the compact;
- (2) the modification by the Corps of Engineers of a federally sponsored reservoir to facilitate the process of making apportionment decisions;
- (3) the support of the activities of the U.S. Public Health Service and the Corps of Engineers in surveying the quality of water within the river system and researching and developing means by which chloride contamination may be controlled effectively; and
- (4) securing the enactment of federal legislation conferring jurisdiction on the federal district courts in certain cases arising under an interstate water

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671. Id. § 10.02(a), 94 Stat. 3316-17.
672. Id. § 10.02(b), 94 Stat. 3317.
673. Id. § 10.02(h).
674. Id. § 10.02(d).
675. Id. § 10.02(e).
676. See generally MEYERS & TARLOCK, supra note 152, at 419.
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compact that involve the pollution of the river system that is the subject of the compact.

The five principal purposes set forth in article I of the Red River Compact suggest that it is aimed at a comprehensive approach to water problems. However, the Red River Compact Commission that was established to administer the compact was not endowed with the powers necessary to accomplish all of these objectives, particularly those involving flood control, enhancement of water quality, and river basin planning.

Professor John E. Cribbet once observed: "Law has never pumped a single gallon of water but a rational system of legal rights is essential to proper allocation of the available supply. And as the demand comes closer to the supply the role of law becomes more and more apparent." One should add that the role of law also becomes more and more *important*.

The most important accomplishment of the Red River Compact is the apportionment of the water, except that in which the federal government and the Indians retain interests, among the four signatory states. Establishment of legally binding rights to an equitable share of water available in the Red River basin is essential so that each state can plan the development of water uses within its boundaries with assurance that its investments in water-dependent programs and projects will not be jeopardized by competing uses in other states or by protracted litigation. Unfortunately, the primary basis of apportionment—the percentage-of-flow method—will be difficult to administer.⁶⁷⁸

The consent of the United States Congress to the Red River Compact transformed it into "a law of the United States." A major consequence of congressional consent is that no court, in the absence of infirmities that vitiate the compact or federal legislation that preempts it in whole or in part, may order relief inconsistent with the express terms of the compact. Any action taken by the states to modify the provisions of the Red River Compact or to augment the powers of the Red River Compact Commission, requires the unanimous approval of all the signatory states, ratification by their respective legislatures, and the consent of the Congress.

Even more important, the unanimous consent of the four signatory states is required to terminate the Red River Compact.⁶⁸¹ Therefore, no state is free to walk away from the compact even if released by two of the remaining states. In the rare event that the compact is terminated, all rights established under it shall continue unimpaired.⁶⁸² By requiring continuation of rights created under the compact in the event it is terminated, the compact ef-

^{677.} Cribbet, supra note 44, at 368.

^{678.} See supra note 565 and accompanying text.

^{679.} Texas v. New Mexico, 462 U.S. 554, 564 (1983); Cuyler v. Adams, 449 U.S. 433, 438 (1981); Pennsylvania v. Wheeling & Belmont Bridge Co., 54 U.S. (13 How.) 518, 566 (1852).

^{680.} Texas v. New Mexico, 462 U.S. 554, 564 (1983).

^{681.} Red River Compact, art. XII, § 12.01, 94 Stat. 3318. See also Supplemental Interpretive Comments, supra note 21, at 30; Hearings, Statement by Col. Laubscher, supra note 14, at 8.

^{682.} Red River Compact, art. XII, § 12.01, 94 Stat. 3318.

fectively binds the states to the compact's allocation of water unless amended by all of the signatory states with the consent of the Congress or unless preempted by federal legislation. Thus, any vested rights that may have inured during the life of the compact are protected.⁶⁸³ On the other hand, if the detailed apportionment provisions of the compact should prove inflexible in addressing the divergent conditions of the basin, the compact cannot be easily changed.

The existence of the Red River Compact, of course, does not foreclose the possibility that litigation will be required to resolve a dispute between the signatory states. As Justice Frankfurter commented in West Virginia ex rel. Dyer v. Sims, "a compact is after all a legal document. Though the circumstances of its drafting are likely to assure great care and deliberation, all avoidance of disputes as to scope and meaning is not within [the] human gift." 684

In retrospect, it is remarkable that the states persevered for nearly a quarter of a century in the goal of completing a compact for the Red River basin. The individuals who represented their states as negotiating commissioners or technical advisers apparently comprehended the importance of their undertaking. As writers more eloquent than this author have observed, water is a limited resource that must be conserved and managed properly because it is basic to the survival of the human race.685 Next to water, all other nonhuman resources pale in value. Water cannot be "used"-either consumed or contaminated—with the same mentality that has characterized the use of other natural resources, that is, once it is depleted or spoiled, something else will be invented or adapted to take its place.686 Yet the nation's supply of fresh water has been squandered and contaminated so rapidly and so extensively that many experts predict that in a few years a crisis far worse than the energy crisis of the 1970s will ensue, namely, the lack of clean, usable water for domestic, agricultural, industrial, and recreational purposes.687

The formulation and approval of the Red River Compact is a major step in the direction of assuring a sufficient water supply to the states within the river basin and of providing a legal mechanism, albeit somewhat limited in power, for the improvement of water quality within the river system. The inventory of water supply, which was completed during the negotiations, and the apportionment of water made by the compact provide a firm foundation for the basinwide planning and management of water usage. Each

^{683.} See Supplemental Interpretive Comments, supra note 21, at 30.

^{684. 341} U.S. 22, 28 (1951).

^{685.} See Fallows, supra note 235, at 14-15 (asserting that in the late 1960s and early 1970s the South was being polluted at a faster rate than any other region of the nation). 686. Id.

^{687.} See Regenstein, supra note 235, at 168. See also M. Brown, Laying Waste: The Poisoning of America by Toxic Chemicals 334-35 (1980); Interstate Environmental Problems, supra note 234, at 34, n.142.

signatory state has a better understanding of its water rights within the basin and may proceed accordingly.

The Red River Compact Commission provides a vehicle for intergovernmental cooperation within the basin and the avoidance or early resolution of interstate conflicts over the river. In a region ever mindful of states' rights, the commission does not pose the threat of becoming a regional supergovernment. The success of the commission in accomplishing the objectives of the compact will ultimately depend upon the degree to which financial, administrative, and political support of the member governments is forthcoming and the vision of the individuals who are appointed by the states to serve as compact commissioners and technical advisers. The mission of the commission is a vital one for there is no natural or artificial resource more precious than water.

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