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History of the Rio Grande Reservoirs in New Mexico: Legislation and Litigation**

ABSTRACT

Nearly all of the dams and reservoirs on the Rio Grande and its tributaries in New Mexico were constructed by the federal government and were therefore authorized by acts of Congress. These congressional authorizations determine what and how much water can be stored, the purposes for which water can be stored, and when and how it must be released. Water may be stored for a variety of purposes such as flood control, conservation storage (storing the natural flow of the river for later use, usually municipal or agricultural), power production, sediment control, fish and wildlife benefits, or recreation. The effect of reservoir operations derived from acts of Congress is to control and manage the flow of rivers.

When rivers cross state or other jurisdictional boundaries, the states are very mindful of the language in the congressional authorization. Simply put, an upstream state will want flexibility to store and use as much water as possible and, except for protection from extreme flood events, a downstream state will seek to guard against water being held that would otherwise flow downstream. When interstate compact obligations, ecological considerations, Indian and non-Indian water rights, and international treaties are thrown into the mix, a significant area of law develops concerning the reservoirs that is vital to each state and its inhabitants as well as to national interests. This article summarizes the federal acts and the negotiations among the affected states and other interests when the Rio Grande reservoirs in New Mexico were authorized, highlighting other important legal developments that have affected the operation of the dams.

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I. INTRODUCTION

Because the operation of dam and reservoir projects along the Rio Grande involves different agencies and varied bodies of law, examination of legislative authorizations and their history is important to an understanding of current operations and future management potential. Projects for the building of federal dam and reservoir facilities along the Rio Grande were authorized by acts of Congress in the early and mid-twentieth century. These acts determine the purposes for which water can be stored, how much water can be stored, when it must be released, and other aspects of reservoir operations. Water may be stored for a variety of purposes such as flood control, conservation storage (storing the natural flow of the river for later use, usually municipal or agricultural), power production, sediment control, fish and wildlife benefits, or recreation. The effect of reservoir operations derived from acts of Congress is to control and manage the flow of rivers. Two federal agencies are primarily responsible for construction and operation of federal dams and reservoirs on the Rio Grande in New Mexico: the U.S. Army Corps of Engineers (Corps) and the U.S. Bureau of Reclamation (Reclamation).

The oldest federal reservoir in New Mexico is Elephant Butte, authorized in 1905. Elephant Butte was one of the first dams in the country built by Reclamation. Caballo Reservoir is operated in tandem with Elephant Butte.

El Vado Reservoir, originally constructed with non-federal funds but also operated by Reclamation, has a fascinating history. It is the reservoir used to store water for the Middle Rio Grande Conservancy District and the prior and paramount water for the Six Middle Rio Grande Pueblos. El Vado is not addressed in this article but is covered in detail in several other articles in this edition of the *Natural Resources Journal*.

Operations of Corps projects along the Rio Grande (Jemez, Abiquiu, Cochiti, and Galisteo reservoirs) are controlled by the 1948 Flood Control Act, which authorized the reservoirs, and the subsequent 1960 Flood Control Act, which modified its earlier counterpart. Additionally, the Rio Grande Compact and state water law both play an important role. Unlike the Corps projects, operation of Heron Reservoir, owned and operated by Reclamation, is controlled by both contract and the 1962 Act, which authorized construction of San Juan-Chama Project facilities.

This article describes the legislative authorizations for the reservoirs and provides background information on the history and debates leading to the congressional acts. The article also covers many of the legal and operational issues that have arisen since the projects were built and concludes with a summary of some of the litigation that has occurred regarding the reservoirs and the Rio Grande Compact.

II. ELEPHANT BUTTE RESERVOIR

A. History

Although what is known as Elephant Butte Dam was not authorized by Congress until 1905 as part of the Rio Grande Reclamation Project,¹ such a dam had been considered by both the federal government and by private parties since the 1880s. The need for the dam was driven by U.S.-Mexico relations, a dramatic increase in irrigated land in Colorado that created water shortages, and the serious drought conditions that occurred in the 1890s.

Pueblo Indians and later Spanish settlers along the Rio Grande had cultivated thousands of acres of land for centuries prior to the United States' conquest of New Mexico. The negotiation of the Treaty of Guadalupe Hidalgo in 1848, which ended the Mexican War, and later the Gadsden Purchase, established the Rio Grande as an international boundary without giving thought to how the use of its water would be the subject of future conflicts.

In 1851, settlement of the San Luis Valley in Colorado began. By 1890, the acreage under cultivation in Colorado that was served by the flow of the Rio Grande had grown to 300,000 acres. This use diminished the flows for New Mexican farmers and created serious problems for long-established irrigators in the Juarez-El Paso region as well as in the Mesilla Valley. Texan and Mexican farmers began to argue over the inadequate flows and the arguments approached violence. In 1888, the El Paso city councilors asked respected army engineer Anson Mills to draw up a solution to the problem and Mills went to Washington to garner support for a plan to reach an agreement with Mexico.²

Meanwhile, a private entity called the Rio Grande Dam and Irrigation Company was taking affirmative steps toward impounding the waters of the lower Rio Grande. Nathan E. Boyd, Director-General of the company, addressed the Senate in 1901 and described the events that led to the company's establishment.

Thousands of acres of the land in the Rio Grande Valley in southern New Mexico have been irrigated since the Spaniards first founded colonies in that part of "New Spain" over three hundred years ago, and since annexation to the United States

1. Act of February 25, 1905, Pub. L. No. 58-108 ch. 798, 33 Stat. 814 (authorizing what is referred to as the Rio Grande Project, consisting of two reservoirs, Elephant Butte and Caballo, and five diversion dams).

2. NORRIS HUNDLEY, JR., *DIVIDING THE WATERS, A CENTURY OF CONTROVERSY BETWEEN THE UNITED STATES AND MEXICO* (1966).

a large area of the irrigable lands of the valley has been cultivated by American citizens. Flourishing towns have grown up, and the Mesilla Valley, the principal subdivision of the Rio Grande Valley, is now recognized as one of the finest fruit and vine growing sections of the United States. But owing to the torrential character of the Rio Grande it has heretofore been difficult to adequately irrigate more than a relatively small portion of the highly fertile lands along the river.

From time to time during the past twenty years and more various means of raising capital for the construction of a great storage dam to impound the flood waters of the river have been proposed by citizens of the Territory. Government aid has again and again been sought and investment of private capital solicited, but without avail. At one time the Federal Government appeared seriously to entertain plans, recommended by the Irrigation Bureau, for the construction of a series of storage dams. Reservoir sites on the Rio Grande were surveyed by Government engineers, who reported favorably on the proposition, and these sites were duly reserved, but nothing came of it, and ultimately they were thrown open for public appropriation (act of 1891) for reservoir purposes.³

The Rio Grande Dam and Irrigation Company was incorporated under the laws of New Mexico in 1893, but most of the capital for the company was raised in England.⁴ The company was organized to store, sell, and distribute water for irrigation through canals owned by the company and also for municipal and domestic use.⁵ The company proposed building a dam at the geographic landmark known as Elephant Butte, in Sierra County, New Mexico, about one hundred miles upstream of El Paso, Texas. On February 1, 1895, then Secretary of the Interior Hoke Smith approved the company's application for a right of way for the dam.⁶

Before Boyd's plans for a dam at Elephant Butte were developed, the plan for an international dam much closer to El Paso was evolving. In a December 10, 1888 letter, Col. Anson Mills of the Major Tenth Cavalry

3. S. DOC. NO. 56-104, at 3. The Act of March 3, 1891, ch. 561, 26 Stat. 1095, to which Boyd referred, stated that "[t]he right of way through the public lands and reservations of the United States is hereby granted to any canal ditch company, irrigation or drainage district formed for the purpose of irrigation or drainage, and duly organized under the laws of any state or territory." 26 Stat. 1101.

4. S. DOC. NO. 56-104, *supra* note 3.

5. EQUITABLE DISTRIBUTION OF THE WATERS OF THE RIO GRANDE, S. DOC. NO. 55-229, at 8 (1898) [hereinafter S. DOC. NO. 55-229].

6. *Id.* at 12.

wrote to the Secretary of State and outlined his general scheme for an "international dam" on the river "for the control of the annual floods and the preservation of the national boundary to the Gulf, and for other purposes."⁷ Mills believed his proposed purposes could be accomplished through the storage of significant amounts of water in an international dam. For example, the dam would "restrain the tidal flow by storing the water, and thus protect the constantly changing national boundary...."⁸ Additionally, the stored water could be used for power development. Mills stated that "El Paso, being now a city of over 11,000 population, and having every prospect of being a large manufacturing city at no distant day — there being no place within 500 miles likely to compete with it — the subject of water power ought also to enter into the problem...."⁹

With these many purposes in mind, Mills suggested that a dam of stones and cement be built.

The gates at the 50-foot level would give an available reserve of water of 10 feet over the entire surface of the lake — over 2,000,000,000 cubic yards — which would be exhausted during the long season of little flow for the purposes of irrigation and other needs, as well as maintaining a constant stream in the river beds so arranged as to exhaust the reserve about the period of annual flood, which would be checked and held in reserve for the next season of little flow....¹⁰

Col. Mills also felt that the major problem of the distribution of Rio Grande water between the United States and Mexico could be solved by an international dam. Several years later, when the government fought plans for a dam at Elephant Butte, Nathan Boyd accused Col. Mills of orchestrating the Mexican issue to make an international dam seem necessary.

It is well known in El Paso that the promoters of the international dam scheme instigated the filing of the Mexican claims against the United States; that they sent their own agents among the Mexican farmers, on the Mexican side of the river, to work up the claims in question, and that Gen. Anson Mills has urged the Mexican Government to press its claims at Washington.¹¹

7. INTERNATIONAL DAM IN RIO GRANDE RIVER, NEAR EL PASO, TEX., H.R. DOC. NO. 54-125, at 1 (1896) [hereinafter H.R. DOC. NO. 54-125].

8. *Id.* at 3.

9. *Id.* at 4.

10. *Id.*

11. A REPORT FROM THE SECRETARY OF STATE, WITH ACCOMPANYING PAPERS, IN REGARD TO THE EQUITABLE DISTRIBUTION OF THE WATERS OF THE RIO GRANDE, S. DOC. NO. 57-154, at 87 (1903) [hereinafter S. DOC. NO. 57-154].

Nathan Boyd also stated that Col. Mills had changed the meaning of the famous Harmon opinion.¹² Attorney-General Harmon's opinion denied Mexico any right in the waters "of that part of the Rio Grande lying entirely within the United States...."¹³ Indeed, Mills (who was honored as a brigadier general) was accused by Boyd of single-handedly changing State Department policy.

As far as can be ascertained from the documents that have been published, Gen. Anson Mills first inaugurated his novel scheme for building a storage dam at El Paso at the expense of the United States Government in 1888. As early as 1880 [sic] the then Secretary of State had instructed the American minister to Mexico to call to the attention of the Mexican Government "the action of the Mexican population on the western shore of the river (Rio Grande) in diverting the small quantity of water that finds its way down during the dry season, thereby totally depriving the agriculturists of the eastern or Texan shore (in the El Paso Valley) of the means of irrigating their crops." (Vol. 1, Wharton's International Digest, sec. 20, p. 63).

But the diplomatic efforts of our minister, Mr. Morgan, were in vain, and the Mexican farmers still "divert the small quantity of water...during the dry season."

However, when Gen. Anson Mills took the matter up in 1888 the question at issue between the two Governments assumed a very different aspect. Under his patriotic and fostering care the Mexicans soon learned of their "great losses," of their sacred rights under the Guadalupe Hidalgo and Gadsden treaties, and of the obligations of this Government in the premises. With Gen. Anson Mill's advent on the scene the international dam scheme came into existence....¹⁴

These ancient intrigues are by themselves, of course, fascinating. But they are also important in the context of considering the purposes, as declared by Congress, of what ultimately would become the Elephant Butte dam. Specifically, Mexico's claim to waters of the Rio Grande remained one of the dominant reasons for constructing this dam.

B. Conflict and Litigation

Mexico's claim could not be ignored. Matters reached a head in 1896 when the Secretary of the Interior imposed an embargo on develop-

12. *Id.* at 57.

13. 21 Op. Att'y Gen. 274 (1898).

14. S. DOC. NO. 57-154, *supra* note 11, at 76 (first alteration in original).

ment of the Rio Grande's water supplies anywhere on the public domain in Colorado or New Mexico.¹⁵ In 1888, the fiftieth Congress passed a resolution requesting that the President appoint a commission to study the international boundary and equitable distribution of the Rio Grande.¹⁶ The commission was appointed, and Col. Anson Mills was the commissioner for the United States. Then, in 1890, Congress passed a resolution requesting the President to enter into negotiations with Mexico.¹⁷ The negotiations were aimed specifically at the problems of water shortages along the border and confusion as to the boundary due to annual flooding. The possibility of a dam was to be considered.¹⁸

In a June 22, 1896 letter, Andrus Horticasitas, representative of Mexico in the negotiations, vigorously protested the building of a dam at Elephant Butte because it was against Mexican interests.

If the proposed Boyd dam is built, the international dam which the inhabitants of Ciudad Juarez have petitioned for as the only remedy for their already desperate situation will be rendered useless, as there is no doubt that the accumulation of the waters...at the former dam will not leave even a small quantity for the second dam....¹⁹

In response to the developing conflict between the plans for two separate dams on the Rio Grande, and the increasingly urgent problem with Mexico,²⁰ on November 17, 1896, Col. Mills wrote a letter to the Secretary of State asking him to request the Secretary of the Interior to cancel or withdraw the grant for the Elephant Butte dam.

That the probable flow of water in the river here is likely to be ample for the supply of the proposed international reservoir after deductions are made for all the small reservoirs that are likely to be constructed for storage in Colorado and the probable increase of canals in Colorado and New Mexico, but that the flow will not be sufficient to supply the proposed international reservoir here and allow for the supply of the proposed reservoir at...Elephant Butte...or any other similar

15. Douglas R. Littlefield, *The History of the Rio Grande Compact of 1938*, in THE RIO GRANDE COMPACT: IT'S THE LAW 1, 5 (WRRRI Conf. Proceedings 1999).

16. H.R. Res. 112, 50th Cong., 1st Sess. (1888).

17. H.R. DOC. NO. 54-125, *supra* note 7, at 6.

18. *Id.*

19. S. DOC. NO. 55-229, *supra* note 5, at 3.

20. *Id.* at 13.

reservoirs in New Mexico, and but one of these schemes can be successfully carried out.²¹

Col. Mills was also concerned that the Elephant Butte dam would be located a great distance from the Mexico border. He stated that "in this arid climate it is utterly impracticable to carry water in this vicinity, and consequently [the dam] could be of no benefit to agricultural interests here, notwithstanding the statements in their (the Rio Grande Dam and Irrigation Company's) prospectus that they propose to provide water not only...in Texas, but on the Mexican side...."²²

During this time it was becoming increasingly apparent that there would be but one dam on the lower Rio Grande. And, contrary to what Col. Mills believed, a November 1896 report by Civil Engineer W.W. Follett stated that such a dam "would be very desirable for the storage of water for Mexico, El Paso and the Mesilla Valley."²³ In other words, such a dam, even at Elephant Butte, could be made large enough so as to be practical for storing water for all three areas. The location of a dam at El Paso was, however, becoming clearly favored, and during the late 1890s negotiations of a treaty between the United States and Mexico began.²⁴ One problem was, of course, stopping construction of the dam at Elephant Butte.

It is not necessary to describe in detail all the steps that the U.S. government took to stop a privately built Elephant Butte dam. It should be noted, however, that because the Secretary of the Interior's approval of the Rio Grande Dam and Irrigation Company's right of way could not be revoked,²⁵ the United States had to use an alternate means of attack. Thus, Congress passed the Act of September 19, 1890,²⁶ as amended July 13, 1892.²⁷ Section seven of the Act provides "that it shall not be lawful to build any wharf, pier, dolphin, boom, dam, weir, breakwater, bulkhead, jetty, or structure of any kind...in any navigable waters of the United States... without permission of the Secretary of War...."²⁸

21. *Id.* The remainder of the International Commission on the Subject of the Equitable Distribution of the Waters of the Rio Grande, of which Col. Mills was the United States Commissioner, clearly shared the opinion that the river could not support both a reservoir near El Paso and a reservoir at Elephant Butte and that one must give way to the other. *See id.* at 39.

22. *Id.* at 12.

23. *Id.* at 107-08.

24. S. DOC. NO. 55-229, *supra* note 5, at 178-200.

25. *Id.* at 24.

26. River and Harbors Appropriations Act of September 19, 1890, 26 Stat. 426 (1890) (not passed into law until 1892; *see infra* note 27 and accompanying text).

27. River and Harbors Appropriations Act of July 13, 1892, 27 Stat. 88-100 (1892).

28. *Id.*

As to the questionable navigability of the Rio Grande, a February 11, 1897 report by John M. Wilson, Brigadier General, Chief of Engineers, stated,

(1) That at certain periods of the year the Rio Grande at and above El Paso is navigable in fact and can be used in commerce for floating logs and flatboats.

(2) That a dam at Elephant Butte which would entirely stop the flow of water at El Paso would necessarily injuriously modify the capacity of the channel of the river in that part of its course, many miles below El Paso, where it forms the international boundary between the United States and Mexico and where it is actually navigated.²⁹

Pursuant to the statute, on May 24, 1897, the United States filed a complaint against the Rio Grande Dam and Irrigation Company seeking to stop construction of the dam. Both the district court and the supreme court of New Mexico held that the Rio Grande was not navigable within the limits of the territory of New Mexico and thus the statute did not apply.³⁰ But on appeal, the U.S. Supreme Court reversed and remanded, ordering an inquiry into the question of "whether the intended acts of the defendants in the construction of a dam and in appropriating the waters of the Rio Grande will substantially diminish the navigability of that stream within the limits of present navigability...."³¹

On remand, the New Mexico District Court ruled that the building of a dam would not diminish the navigability of the Rio Grande.³² However, this order also was reversed by the U.S. Supreme Court on a finding that the trial court had not given the government sufficient time to prepare its case.³³ The case was again remanded so that further evidence could be submitted.

In 1909, the Supreme Court heard this matter yet a third time,³⁴ but by then its decision permanently enjoining a privately built dam was moot. The federal government had finally succeeded by filing an April 1903 supplemental complaint acknowledging that although the defendants had acquired a right to construct a dam under the requirements of a March 3, 1891 Act of Congress,³⁵ the Act also provided "that if any section of said canal, or ditch, shall not be completed within five years after the location of

29. S. DOC. NO. 55-229, *supra* note 5, at 27-28.

30. *United States v. Rio Grande Dam & Irrigation Co.*, 9 N.M. 292 (Terr. 1898).

31. *United States v. Rio Grande Dam & Irrigation Co.*, 174 U.S. 690, 708, 710 (1899).

32. *United States v. Rio Grande Dam & Irrigation Co.*, 10 N.M. 617 (Terr. 1900).

33. *United States v. Rio Grande Dam & Irrigation Co.*, 184 U.S. 416, 424, 425 (1901).

34. *Rio Grande Dam & Irrigation Co. v. United States*, 215 U.S. 266 (1909).

35. Act of March 3, 1891, 26 Stat. 1095; *see also supra* note 3 and accompanying text.

said section, the rights herein granted shall be forfeited as to any uncompleted section...."³⁶ Because the five-year period had long since ended, the injunction was granted.³⁷

C. Plans for a Reclamation Project

During this protracted litigation, the Reclamation Act of 1902 was passed,³⁸ creating a federal entity that would eventually build the dam. In March of 1903, the Reclamation Service of the U.S. Geological Survey, Department of the Interior began investigations on the Rio Grande.³⁹

As plans for a government-built dam on the Rio Grande developed, the claim by Mexico remained an overriding concern and all discussions spoke in terms of the storage of large quantities of water. In 1903, the Second Annual Report of the Reclamation Service addressed this issue.

Any project to store water on the Rio Grande must take cognizance of the claims of Mexico to certain uses of the water before conclusions can be reached as to what may be done toward reclamation. Extensive surveys must be made to ascertain the opportunities and cost of water storage. For this purpose reservoir sites have been surveyed on the main stream and irrigable lands examined. These examinations have not progressed to a point where definite conclusions can be given, but they indicate that water storage may be feasible, provided suitable arrangements can be made with claimants to water rights.⁴⁰

At all of the surveyed sites, the Reclamation Service took into consideration this need for a large capacity. The international dam site a short distance from El Paso was thought to be capable of forming "a reservoir about 15 miles in length and 4 miles in greatest width, covering 26,000 acres, and having a capacity of about 540,000 acre-feet."⁴¹ The site that had been proposed by the Rio Grande Dam and Irrigation Company, just below Elephant Butte, would result in a dam 89 feet high with "the capacity to store 230,000 acre-feet of water."⁴²

The Reclamation Report, however, clearly favored a third site a short distance below the Elephant Butte project site because of the

36. Act of March 3, 1891, 26 Stat. 1102.

37. *Rio Grande Dam & Irrigation Co. v. United States*, 215 U.S. 266, 270 (1909).

38. Act of June 17, 1902, 32 Stat. 388 (codified at 43 U.S.C. § 391 (2000)).

39. F.H. NEWELL, SECOND ANNUAL REPORT OF THE RECLAMATION SERVICE, H.R. DOC. NO. 44 (1902-03).

40. *Id.* at 62.

41. *Id.* at 376.

42. *Id.* at 377.

possibility that this site could support a much higher dam with a far greater capacity. The Report found that "such a dam would form a reservoir nearly 40 miles in length."⁴³

The proposed reservoir...has a much larger capacity than any other on the river, and is ample to store the floods of wet years, and to hold them to reinforce the supply in times of extreme drought. It is the only [proposed] reservoir with a capacity large enough to utilize the entire flow of the drainage. It is situated sufficiently low in the basin to intercept, practically, all the waters....⁴⁴

The Report did mention, however, that "[t]he extremely large capacity here proposed is intended largely for the solution of the sediment problem...."⁴⁵ But it went on to state that "[i]t is possible that considerable power can be developed by the construction of an irrigating canal in such a manner as to concentrate the surplus fall at points where it may be utilized for this purpose...."⁴⁶

The *Third Annual Report of the Reclamation Service*⁴⁷ reiterated the criteria for choosing between the sites at El Paso, Texas and Engle,⁴⁸ New Mexico, near Elephant Butte. Additionally, a report by W.M. Reed of the Reclamation Service outlined these factors:

- (1) While the floods on the river are enormous, they do not come with any regularity, and the total flow in some years is less than one-tenth of the total flow in other years.
- (2) Any reservoir constructed on the river will stop all the silt that comes down the river in suspension. Hence a small reservoir will accumulate as many acre-feet of mud per year as a large one, until it is filled with mud.
- (3) All the water that comes down the river is needed for irrigation, and none should be wasted.⁴⁹

The Reclamation Service therefore considered it imperative that the reservoir

43. *Id.* at 378.

44. *Id.* at 379.

45. *Id.*

46. *Id.* at 378-79.

47. F.H. NEWELL, *THIRD ANNUAL REPORT OF THE RECLAMATION SERVICE*, H.R. DOC. NO. 28 (1903-04) [hereinafter H.R. DOC. NO. 28].

48. The Reclamation Service and Congress for many years referred to what was ultimately called Elephant Butte Dam as the Engle Dam, possibly to avoid any confusion or association with the Rio Grande Dam and Irrigation Company's attempted project.

49. H.R. DOC. NO. 28, *supra* note 47, at 398.

[s]hould be as large and as deep as possible, and should have capacity for carrying a supply of water over from year to year to equalize the yearly inequalities, a surplus capacity for mud accumulations, and a surface for evaporation that is as small as possible in comparison with the quantity of water in storage.⁵⁰

In spite of the wishes of Col. Mills, the Engle site was becoming a clear favorite, as evidenced by the *Third Annual Report*.

[T]he Engle reservoir will waste no water by overflow and a minimum amount by evaporation, and at the same time will furnish enough water for irrigation to supply Mesilla Valley, give a flow to the old Mexican canal equal to that which was used from it years ago for irrigation, and have enough left-over to allow Texas to participate in the benefits.⁵¹

In the seasons of 1903 and 1904, a detailed survey of the site was made that included borings to determine the depth and character of the bedrock and topographic surveys of irrigable lands in the Mesilla Valley.

D. Congressional Authorization and Construction

The Engle Dam was finally authorized in 1905 as part of the Rio Grande Reclamation Project. Entitled "An Act relating to the construction of a dam and reservoir on the Rio Grande, in New Mexico, for the impounding of the flood waters of said river for purposes of irrigation," the Act, in its entirety, states,

Be it enacted by the Senate and House of Representatives of the United States of America in Congress Assembled, That the provisions of the Reclamation Act approved June seventeenth, nineteen hundred and two, shall be extended for the purposes of this Act to the portion of the State of Texas bordering upon the Rio Grande which can be irrigated from a dam to be constructed near Engle, in the Territory of New Mexico, on the Rio Grande to store the flood waters of that river, and if there shall be ascertained to be sufficient land in New Mexico and in Texas which can be supplied with the stored water at a cost which shall render the project feasible and return to the reclamation fund the cost of the enterprise, then the Secretary of the Interior may proceed with the work of constructing a dam on the Rio Grande as part of the

50. *Id.*

51. *Id.* at 419.

general system of irrigation, should all other conditions as regards feasibility be found satisfactory.⁵²

It should be noted that the version of this Act originally considered was much longer and placed far greater emphasis on the problem of Mexico's claim to water. For example, House Bill 17939 included a section stating

[t]hat the Secretary of the Interior is authorized and instructed to communicate to the Secretary of State his findings with reference to the amount of land which has in past times been irrigated continuously in the valley in Mexico at and immediately below the city of El Paso from the waters of the Rio Grande, and thereupon the Secretary of State is authorized to take such steps as will bring about an understanding or treaty with Mexico by which the Republic of Mexico shall accept the amount of water to be allotted from the said reservoir in full liquidation and settlement of all claims made by Mexico or by the citizens thereof on account of the alleged diversion of the waters of the Rio Grande.⁵³

This provision was the result of Mexico's longstanding prior appropriation claim on behalf of its citizens to "waters alleged to have been taken and used by the citizens of the United States in Colorado and New Mexico on the headwaters of the Rio Grande...in alleged violation of article 8 of the treaty of peace of Guadalupe Hidalgo, proclaimed July 4, 1848...."⁵⁴

A January 26, 1905 House Report on House Bill 17939 made it clear that any dam should be built for two equally important purposes, namely, the irrigation of American lands and the resolution of Mexico's claim.

For years there have been conflicting claims between the citizens of New Mexico and Texas in reference to the use of the waters of the Rio Grande, and there are also pending claims, nominally of a very large amount in behalf of the citizens of Mexico. There is no doubt that a considerable amount of land in Mexico was formerly irrigated to some extent by the waters of the Rio Grande, and that the use of the water farther up the stream has been injurious to this land.

52. Act of February 25, 1905, Pub. L. No. 58-108 ch. 798, 33 Stat. 814. The apportionment of Rio Grande Project water between Texas and New Mexico was legislated in the 1905 Act when Congress mandated that the Reclamation Service divide the waters based on surveys of irrigable lands in New Mexico and Texas. Following those studies, the Reclamation Service established that the equitable apportionment of Rio Grande Projects waters would be based on supplies for 88,000 acres in southern New Mexico and 67,000 acres in western Texas. *See* Littlefield, *supra* note 15, at 2.

53. 39 CONG. REC. 1902 (1905).

54. *Id.* at 1901.

Various schemes have been suggested for constructing dams on the river, but none have seemed to be entirely feasible or to meet all the conditions. The engineers connected with the Geological Survey in charge of the work under the reclamation act...after careful examination have devised a scheme which we regard as highly beneficial. A dam will be constructed at the mouth of a canyon in New Mexico which will store a very large amount of water, with the additional advantage that it will flood practically no land of any value. This dam will irrigate 185,000 acres of land that is now of small or little value. As an additional advantage it will be possible to irrigate the land in Mexico formerly receiving water from the Rio Grande, and it will settle claims that have long been pending upon an equitable basis.⁵⁵

Although the 1905 Act as adopted omitted reference to the Mexican claims, these claims were addressed by the Convention with Mexico signed May 21, 1906.⁵⁶ Article I of this treaty provided,

After the completion of the proposed storage dam near Engle, New Mexico, and the distributing system auxiliary thereto, and as soon as water shall be available in said system for the purpose, the United States shall deliver to Mexico a total of 60,000 acre-feet of water annually in the bed of the Rio Grande at the point where the head works of the Acequia Madre, known as the Old Mexican Canal, now exist above the city of Juarez, Mexico.⁵⁷

This treaty and the 1905 Act were supplemented by the Act of March 4, 1907, which provided \$1,000,000 toward the expense of dam construction.⁵⁸ This Act further provided that "the balance of the cost of said irrigation project...shall be allotted by the Secretary of the Interior...from the reclamation fund and collected from the settlers and owners of the land benefited...."⁵⁹

In a 1910 letter, the Secretary of the Interior urged that the Engle Dam project be constructed as quickly as possible.⁶⁰ At the urging of the

55. HOUSE COMMITTEE ON FOREIGN AFFAIRS, DAM AND RESERVOIR ON THE RIO GRANDE IN NEW MEXICO, H.R. REP. NO. 3990, at 2 (1905).

56. Convention Between the United States and Mexico, Equitable Distribution of the Waters of the Rio Grande, art. 1, U.S.-Mex., May 21, 1906, 34 Stat. 2953.

57. *Id.* at 2953-54.

58. Act of March 4, 1907, 34 Stat. 1357.

59. *Id.*

60. WATERS OF THE RIO GRANDE AND ITS TRIBUTARIES, H.R. DOC. NO. 39, at 16 (1911) [hereinafter H.R. DOC. NO. 39].

Secretary, condemnation suits to acquire title for the reservoir site were hastened.⁶¹

By 1911, the Engle Dam was under construction.⁶² And, while the Reclamation Service did not forget that this project was one "in which the citizens of the Republic of Mexico are interested, and the faith of this Government is pledged by solemn treaty,"⁶³ it did not ignore the dam's other potential benefits and purposes. The Reclamation Service, as early as 1911, believed that the dam could "afford opportunity for developing a large amount of power which can be used to augment the water supply of southern New Mexico by pumping from underground."⁶⁴ Thus, six power gates were incorporated into the structure; however, as will be seen, the construction of the power plant was to be left to a later date.

Elephant Butte Dam, as it was formally named, was completed on May 13, 1916.⁶⁵ In an address at the dam's dedication on October 19, 1916, Arthur P. Davis, Director and Chief Engineer of the Reclamation Service, reviewed the reasons for its size and great storage capacity.

There were evidences in the records—which were of considerable extent—that some years only about 200,000 acre-feet of water were discharged in this river and that in other years more than 2,000,000 acre-feet were discharged. Sometimes a series of those dry years occurred together, and at other times more than one of those wet years occurred in a series; and, looking over the ground and having studied that water supply, I made up my mind that the full utilization of this water supply could not be obtained without a reservoir of immense dimensions—one large enough, first, to hold the waters of those great years when 2,000,000 acre-feet were discharged, and to provide for evaporation and hold that water here until a dry year should come. Then, in addition to the great capacity necessary for that purpose, it would be necessary to provide for the entire time storage of the large amount of sediment that passes down this river.⁶⁶

61. *Id.* at 18.

62. F.H. NEWELL, ELEVENTH ANNUAL REPORT OF THE RECLAMATION SERVICE, H.R. DOC. NO. 948, at 44–45 (1911–12) [hereinafter H.R. DOC. NO. 948].

63. H.R. DOC. NO. 39, *supra* note 60, at 18.

64. H.R. DOC. NO. 948, *supra* note 62, at 20.

65. A.P. DAVIS, FIFTEENTH ANNUAL REPORT OF THE RECLAMATION SERVICE, H.R. DOC. NO. 7188 (1915–16).

66. *Address of Arthur P. Davis, Director and Chief Engineer of the Reclamation Service, at the Dedication of the Elephant Butte Dam, N. Mex., October 19, 1919*, 7 RECLAMATION REC. 554 (1916).

The dam still had one overriding purpose, however. It was to be "an international project...the greatest of the irrigation projects on the Rio Grande."⁶⁷

E. Post-Construction Developments

1. *Caballo Dam*

One of the major developments that allowed for a change in the original purposes of Elephant Butte Dam was the construction of Caballo Dam, completed in 1938.⁶⁸ Authorization to construct Caballo Dam was found under the same 1905 Act that allowed Elephant Butte Dam.⁶⁹ Caballo Dam was discussed in annexes to the Convention between the United States and Mexico for the Rectification of the Rio Grande⁷⁰ as "a flood retention dam...twenty-two miles below Elephant Butte on the Rio Grande, creating reservoir storage of one hundred thousand acre-feet."⁷¹ This projected storage capacity of Caballo was increased to 350,000 acre-feet when it was realized that a higher dam would also allow for the development of power at Elephant Butte.⁷²

[The high dam] will...provide an afterbay for the Elephant Butte Dam...which stores water for the Rio Grande Federal reclamation project in New Mexico and Texas. Through provision of the afterbay, additional storage will be provided for the Rio Grande project and it will be possible to install hydro-electric generation equipment at the Elephant Butte Dam.⁷³

In January 1938, Public Works Administrator Harold L. Ickes announced an allotment of an additional \$900,000 to Reclamation for construction of the higher dam.⁷⁴ Subsequent contracts with the water users stated that revenue generated from the sale of power produced at Elephant Butte would be used to return the \$900,000 to the U.S. Treasury.⁷⁵

67. 50 CONG. REC. 114 (1913).

68. U.S. DEPT. OF INTERIOR, FEDERAL RECLAMATION AND RELATED LAWS ANNOTATED THROUGH 1942, vol. 1, at 98 (1972).

69. *Id.*

70. Act of Feb. 1, 1933, 48 Stat. 1628.

71. *Id.* at 1629.

72. Elwood Mead, *Reclamation Under the New Deal*, 25 RECLAMATION ERA 1, 5 (1935).

73. Bureau of Reclamation, *Caballo Dam on Rio Grande to be Constructed*, 26 RECLAMATION ERA 10 (1936).

74. *Id.*

75. W.S. CONE & J.R. RITTER, POWER DEVELOPMENT AT ELEPHANT BUTTE AND CABALLO DAMS—RIO GRANDE PROJECT (1936) (report prepared and used by Reclamation).

2. Public Recreation Facilities

A second major development relating to both Caballo and Elephant Butte reservoirs was an Act to provide for the establishment and administration of basic public recreation facilities.⁷⁶ Unlike other federal projects, "where storage reservoirs have been created, the development of recreation facilities was not authorized at the time the Rio Grande project came into being."⁷⁷ However, the increasing use of these reservoirs for fishing, boating, and waterskiing suggested that such facilities were necessary.⁷⁸ Thus, the Act authorized the Secretary of the Interior to "investigate, plan, construct, operate, and maintain" facilities at these sites and "to provide for the public use and enjoyment of such...facilities...in such manner as is consistent with the primary purpose of such project."⁷⁹ The Act also authorized the appropriation of \$607,000 to carry out its provisions.⁸⁰

It is important to note that language was added to the original bill "to assure water users of the Rio Grande Project that the development of recreation facilities at the reservoir sites will in no way influence or threaten the allocation of water for irrigation use..."⁸¹ The amended language of the Act stated,

The construction of recreation facilities at or near Elephant Butte and Caballo Reservoirs, as herein authorized, shall not provide in any manner whatsoever a basis for the allocation of water for recreation use or for the allocation of reservoir capacity for recreation use; and the priority for irrigation use of water stored in Elephant Butte and Caballo Reservoirs and the priority of use for irrigation purposes of the capacities of such reservoirs shall not be affected in any manner by the provision for recreation facilities as authorized herein.⁸²

3. Storage for Recreational Use

It would not be long before the question of storage for recreational use at Elephant Butte would be addressed. In a lawsuit that began in 1975,

76. Act of July 25, 1962, Pub. L. No. 87-542, 76 Stat. 171.

77. COMM. ON INTERIOR & INSULAR AFFAIRS, ESTABLISHMENT OF RECREATIONAL FACILITIES AT ELEPHANT BUTTE AND CABALLO RESERVOIR AREAS, NEW MEXICO, S. REP. NO. 87-775, at 2 (1961).

78. *Id.*

79. Act of July 25, 1962, Pub. L. No. 87-542, 76 Stat. 171.

80. *Id.*

81. COMM. ON INTERIOR & INSULAR AFFAIRS, *supra* note 77. See also PROVIDING FOR THE ESTABLISHMENT AND ADMINISTRATION OF BASIC PUBLIC RECREATION FACILITIES AT THE ELEPHANT BUTTE AND CABALLO RESERVOIR AREAS, NEW MEXICO, H.R. REP. NO. 1832, at 4 (1962).

82. Act of July 25, 1962, Pub. L. No. 87-542, 76 Stat. 171.

the Jicarilla Apache Tribe sought to obtain adjudication of the Navajo River and an injunction prohibiting alleged illegal diversions. Although the Tribe's original complaint was dismissed by District Court Judge H. Vearle Payne in 1977 for lack of jurisdiction, because an adjudication of the San Juan was pending in state court, the Tenth Circuit Court of Appeals upheld only the dismissal on the issue of the Navajo River adjudication and remanded for a trial on the issue of the alleged illegal diversion from the Navajo River.⁸³ On remand, the Tribe amended its complaint to obtain a declaration that a water storage agreement between Reclamation and Albuquerque authorizing storage at Elephant Butte Reservoir was void and contrary to law, thus bringing municipal storage into contention.⁸⁴

By contract, Albuquerque was entitled to receive 17,700 acre-feet of San Juan-Chama Project water per year through 1981, increasing to 48,200 acre-feet per year thereafter.⁸⁵ However, water could not be diverted unless actual use occurred, because "[u]nder terms of the contract no water will be distributed unless it is put to beneficial use on [Albuquerque's] side of the divide."⁸⁶ Because Albuquerque was required by this contract to pay Reclamation its share of construction costs based on its allocated acre-feet regardless of actual use of that water, Albuquerque had an incentive to make use of its entire allocation and took the position that "[u]nder no circumstances should the city's water be allowed to flow down the Colorado to be used in other states."⁸⁷ However, Albuquerque projected that in 1982 it would have an excess of 1,121,900 acre-feet annually and would not need the entire 48,200 acre-feet until the year 2025.⁸⁸ The assumption was that Albuquerque planned to use this stored water to offset the effects of its groundwater pumping on the river.⁸⁹ Therefore, during the pendency of the Tribe's appeal, the city of Albuquerque and Reclamation

83. *Jicarilla Apache Tribe v. United States*, 601 F.2d 1116, 1136 (10th Cir. 1979).

84. *Jicarilla Apache Tribe v. United States*, 657 F.2d 1126, 1131 (10th Cir. 1981).

85. *Id.* at 1132.

86. *Id.* (citing 1970 Report to the City Commission from the Albuquerque Resources Committee).

87. *Id.*

88. *Id.* at 1133.

89. See *Navajo Irrigation-San Juan-Chama Diversion: Hearings on S. 3648 Before the Subcomm. on Irrigation and Reclamation of the S. Comm. on Interior and Insular Affairs*, 85th Cong., at 63 (1958) [hereinafter *Hearings on S. 3648*] (Plan of Development presented as a portion of statements made by Mr. Floyd E. Dominy, Associate Commissioner, Bureau of Reclamation, and N.B. Bennett, Jr., Chief, Division of Project Development, Bureau of Reclamation) ("The proposed plan assumes that delivery will be through recharge of the ground-water aquifer and that the city's existing pumping system will be expanded to utilize the supplemental water as it is required. The State engineer has assumed jurisdiction over ground-water withdrawals in the Rio Grande Basin and has established regulations that recognize the interrelationship of surface and ground waters in the basin.").

signed a contract that allowed Albuquerque to store its San Juan-Chama Project water at Elephant Butte Reservoir.⁹⁰

As a response to this contract, on remand, the Tribe amended its complaint to request a declaration that the contract between Reclamation and the city of Albuquerque allowing storage of San Juan-Chama water at Elephant Butte was void and contrary to law.

On remand, the trial was limited to three issues:

- (a) Whether storage by Albuquerque of San Juan-Chama water in Elephant Butte would constitute a beneficial use;
- (b) Whether the agreement for storage by the City was authorized by Congress; and
- (c) Whether the City was required to obtain a permit from the New Mexico State Engineer for such storage.⁹¹

The district court entered a judgment declaring the contract invalid, finding for the City of Albuquerque on issue "a" and for the Tribe on issues "b" and "c" and, importantly, finding against Albuquerque on all three issues in relation to storage for recreational purposes.⁹² The city appealed and the same issues were presented to the Tenth Circuit Court of Appeals. On the first issue, Albuquerque argued that the stored water would be put to several beneficial uses: sales to and exchanges with other beneficial users, increasing the head of water available for power generation, municipal use, and recreation.⁹³ The appeals court first noted that "state law governs the distribution of water from federal projects unless Congress expresses a different approach."⁹⁴ Therefore, Albuquerque's proposed storage must constitute a beneficial use under New Mexico law. After noting that an estimated 93 percent of stored water would be lost to evaporation,⁹⁵ Tenth Circuit Judge William E. Doyle held that storage of San Juan-Chama water at Elephant Butte for resale, future municipal use, and electrical power did not constitute a beneficial use under New Mexico's prior appropriation system.⁹⁶ "In sum, it is essential that there shall have been a beneficial use which is more than speculative."⁹⁷ The court did not pass on whether storage for recreational use constituted a beneficial use under New Mexico law.⁹⁸

90. *Jicarilla Apache Tribe v. United States*, 657 F.2d 1126, 1131 (10th Cir. 1981).

91. *Id.*

92. *Id.* at 1132.

93. *Id.* at 1133.

94. *Id.* (citing *California v. United States*, 438 U.S. 645 (1978)).

95. *Id.*

96. *Id.* at 1144.

97. *Id.* at 1135.

98. *Id.* at 1136-37.

After finding that Albuquerque's storage probably did not constitute a beneficial use under New Mexico law, the court asked whether Congress had authorized such a storage agreement, thereby overcoming the presumption that state law governs the distribution of federal project water. The court, in response to Albuquerque's assertion that a contractor may put water to any use recognized as beneficial under state law, held that where Congress has specified the uses to which project waters are to be put, a person entitled to receive water must apply that water to an authorized use.⁹⁹ The court held that indeed "the Secretary of the Interior may not, consistent with the Reclamation Act, knowingly release water to an individual or entity for a use which is not recognized as beneficial under state law, unless such use is specifically authorized by a Congressional directive."¹⁰⁰ After noting that the City of Albuquerque did not put forth evidence of any congressional directives that would override state law, the court held that Albuquerque could not store its San Juan-Chama Project water at Elephant Butte Reservoir for purposes of future sale, power generation, or municipal use under federal law. Similarly, Albuquerque could not store San Juan-Chama Project water for recreational use, because even if such storage were arguably a beneficial use under New Mexico law, the storage would be "out of harmony with the entire basic philosophy" of the Project.¹⁰¹

In reaching this conclusion, the court examined the San Juan-Chama Project authorizing statutes. The Colorado River Storage Project Act provides for "the reclamation of arid and semi-arid land, for the control of floods, and for the generation of hydroelectric power..."¹⁰² The primary purposes of the Project, according to the court, included municipal use, domestic use, industrial use, and irrigation.¹⁰³ However, "[t]he Secretary is authorized and directed...to provide for the public use and enjoyment of [recreation facilities]...by such means as are consistent with the primary purposes" of the projects.¹⁰⁴ "Although these provisions are general, there is an expression of congressional intent evident: S. 620 states that storage of water is to be only for beneficial consumptive use; storage solely for recreation fails to meet the guidelines."¹⁰⁵ By implication, therefore, the court found that recreation could not be a primary purpose of the Project. The court dismissed Albuquerque's argument:

99. *Id.* at 1139.

100. *Id.* at 1137.

101. *Id.* at 1138.

102. *Id.* at 1139.

103. *Id.*

104. *Id.*

105. *Id.*

The appellants argue that a contract purchaser of water may use such water for any purpose recognized as beneficial under state law. We, however, disagree with this. As discussed previously, Congress has placed limitations on permissible uses of project water and has established priorities among uses since the very inception of federal reclamation law. These directives are binding on the Secretary and on those seeking to obtain project water. Where, as here, Congress has specified the uses to which project waters are to be put, a person entitled to receive water must apply that water to an authorized use.¹⁰⁶

Further,

[t]he language of s 620a was not intended to prohibit storage of project water by contract purchasers after delivery. However, such storage must be pursuant to authorized uses of project water. We have expressed our viewpoint previously that relevant federal law does not prohibit storage so long as it is not *solely* for recreational purposes.¹⁰⁷

Therefore, the court found that Albuquerque could not store San Juan-Chama Project water at Elephant Butte because not only was such storage not a beneficial use under New Mexico law, but Congress had not authorized such storage.

In response to the *Jicarilla* case, Congress passed the Act of 1981, which included a Senate amendment authorizing the storage of San Juan-Chama Project water at Elephant Butte.¹⁰⁸ South Dakota Senator James Abdnor proposed the amendment, stating:

This amendment adds a new section 5, permitting, at no Federal cost, the public owners of certain water in New Mexico, such as the city of Albuquerque, to store that water in two reservoirs in New Mexico. This applies only to water from the San Juan-Chama project, permitting its storage, if that storage can be accomplished without detrimental effects on the operation of the Federal storage projects. I am confident that substantial storage space can be made available. This is a technical change necessitated because of an interpretation that storage in the reservoir was never specifically authorized.¹⁰⁹

106. *Id.* at 1139-40.

107. *Id.* at 1144 (emphasis added).

108. Act of Dec. 29, 1981, Pub. L. No. 97-140, § 5(c), 95 Stat. 1717.

109. 127 CONG. REC. 31,957 (1981) (statement of Sen. Abdnor).

Senator Pete Domenici echoed Senator Abdnor and added, "This section authorizes such storage, when the storage does not interfere with the authorized purposes of the projects, such as flood control."¹¹⁰ Section 5(a) of the Act states,

The proviso of section 2 of Public Law 84-485...shall not be construed to prohibit the storage of San Juan-Chama project water acquired by contract with the Secretary of the Interior pursuant to Public Law 87-483 in any reservoir, including the storage of water for recreation and other beneficial purposes by any party contracting with the Secretary for project water.¹¹¹

Further, "[t]he Secretary of the Interior is authorized to enter into agreements with entities which have contracted...for storage of such water in Elephant Butte Reservoir. The Secretary of the Interior is hereby authorized to release San Juan-Chama project water to contracting entities for such storage."¹¹² Thus, Albuquerque may store San Juan-Chama Project water at Elephant Butte but must pay for increases in operation and maintenance costs resulting from storage that is not offset by increased power revenues. The Senate amended the bill to include this payment provision as a revenue generating provision for the federal government.¹¹³

F. Conclusion

Both the plans for a privately owned dam at Elephant Butte and for Col. Mills' International Dam contemplated structures that would serve many purposes and would have very large storage capacities. The purposes of flood control, irrigation, settlement of the dispute with Mexico, and eventually power production were explicitly included in the authorized uses of the dams. For many years, recreational storage was an open question. However, after the *Jicarilla* case, congressional action decisively answered the question. The City of Albuquerque may now store San Juan-Chama Project water at Elephant Butte for recreation purposes.¹¹⁴

The question then arises of storage of water for municipal and industrial uses. The 1906 Convention with Mexico specifically provides for the equitable distribution of the Rio Grande for irrigation purposes.

110. *Id.* (statement of Sen. Domenici).

111. Act of Dec. 29, 1981, Pub. L. No. 97-140, § 5(a), 95 Stat. 1717.

112. *Id.* § 5(c).

113. 127 CONG. REC. 97th Cong. (Dec. 16, 1981) (statement of Sen. Abdnor).

114. Act of Dec. 29, 1981, Pub. L. No. 97-140, § 5(a), 95 Stat. 1717 (It should be noted that section 5(a) applies to all reservoirs, and therefore, project water may be stored at any reservoir.). Section 5(b) authorizes the Secretary to contract for storage in Abiquiu. *Id.* § 5(b).

Authorized storage for the Rio Grande Project does not expressly include municipal and industrial use. At one point, El Paso became interested, but it was too late:

On several occasions between 1925 and 1929, the Project Director advised El Paso that water rights on 8,000 acres of undeveloped lands could be claimed by assuming a proportionate share of project construction costs. However, during this period city councils repeatedly refused to consider the Rio Grande as a water source because of its expense. Finally, the council which was elected in 1928 did take an interest in purchasing rights to streamflow. But their action came too late, as a Project Limits Board had already ruled that the United States share of Elephant Butte storage was fully appropriated.¹¹⁵

The issues surrounding the conversion of water rights from agriculture to municipal and industrial use are still in play. (See section VI.C, "Litigation Involving Project Facilities.")

III. THE FLOOD CONTROL ACTS OF 1948 AND 1960: JEMEZ, ABIQUIU, GALISTEO, AND COCHITI DAMS (THE MIDDLE RIO GRANDE PROJECT)

A. Brief Overview

The 1948¹¹⁶ and 1960¹¹⁷ Flood Control Acts provide the legislative underpinnings for the Corps operation of the Jemez, Abiqui, Cochiti, and Galisteo dams and reservoirs. The plain language of the Acts and their legislative history show that Congress acted in response to a need for flood control in the Middle Rio Grande Valley (the Valley) and the authority to store water in the four reservoirs is primarily to serve that purpose. The policy basis for limiting the authorized use of the dams to flood and sediment control was to ensure delivery of water to Texas as mandated by the Rio Grande Compact (Compact).¹¹⁸ The 1960 Act provided that with the advice and consent of the Rio Grande Compact Commission the Corps could modify dam operations, thereby opening a potential for storage of Rio Grande water for uses other than flood and sediment control. Because

115. J.C. Day, *Urban Water Management of an International River: The Case of El Paso-Juarez*, 15 NAT. RESOURCES J. 453, 457 (1975) (citations omitted).

116. Flood Control Act of 1948, Pub. L. No. 81-858, 62 Stat. 1175, 1179.

117. Flood Control Act of 1960, Pub. L. No. 86-645, 74 Stat. 480, 493.

118. Colorado, New Mexico, and Texas are the states that are party to the Rio Grande Compact. Rio Grande Compact, 53 Stat. 785 (1939), *reprinted in* NMSA § 72-15-23 (1978).

water from San Juan-Chama diversion is imported, storage of that water is excluded from Compact delivery requirements and the flood control limitation.

B. The 1948 Flood Control Act: Chiflo, Abiquiu, and Jemez Reservoirs

1. Background

At various times of the year and under certain conditions throughout the 1930s and 1940s, the Rio Grande Valley was in danger of severe flooding.¹¹⁹ Heavy mountain snowfall combined with sudden warming and spring rains in the river's watershed created a significant potential for heavy flooding. A severe flood in 1941 submerged the town of San Marcial under ten feet of water and mud.¹²⁰ The town, a major railroad point in New Mexico, disappeared after the flood.¹²¹

In 1925, the Middle Rio Grande Conservancy District (MRGCD) was formed in part as an effort to protect the Valley against flooding.¹²² Between 1925 and 1936, the MRGCD spent over \$10,000,000 in dam construction (El Vado), levees, and other flood protection devices. Yet, by 1936 and throughout the 1940s, the danger of flooding increased and the potential flood severity was worse than it was in 1925.¹²³ According to John Patrick Murphy, the executive secretary of the Middle Rio Grande Flood Control Association, "An exhaustive study by the most highly qualified engineers in our Government positively states that, a flood in the middle Rio Grande Valley is inevitable if the present rapidly worsening conditions are allowed to continue."¹²⁴

The problem of farmland waterlogging as a result of further deterioration of the drainage system in the Valley probably would have bankrupted the MRGCD. Hubert Ball, Chief Engineer of the MRGCD, testified before the Senate Committee: "Any further deterioration, in my opinion, within a short time will bankrupt the district and will allow it to go backward to the point where it would be comparable to the 1929 conditions or prior to that, even."¹²⁵ Thus, the Albuquerque Chamber of

119. For numerous statements regarding the history of flooding in the Middle Rio Grande Valley, see generally *Flood Controls and Improvement of Rivers and Harbors of the Comm. on Pub. Works: Hearing on H.R. 6419 Before the S. Subcomm., 80th Cong., 2d Sess., at 292 (1948)* [hereinafter *Hearing on H.R. 6419*].

120. *Hearings before the Comm. on Pub. Works, House of Rep. on H.R. 5472, 81st Cong., 1st Sess., 319 (1949)* [hereinafter *Hearings on H.R. 5472*].

121. *Hearing on H.R. 6419, supra* note 119, at 291.

122. *Id.* at 297.

123. *Id.* at 298-99.

124. *Hearings on H.R. 5472, supra* note 120, at 338.

125. *Hearing on H.R. 6419, supra* note 119, at 319.

Commerce for many years advocated for a flood control plan.¹²⁶ Additionally, members of the District and the cities and towns of the Valley looked to the Federal Government for help. Attorney Tibo Chavez from downstream Belen pled his town's flood problem to the Congress: "I am sure I can prove to you the need for this project....In 1941, approximately 7 years ago, the town of Belen was almost wiped out. If the river had broken in at the time about 6 miles north of Belen, the town would have been wiped out."¹²⁷

In the Flood Control Act of 1948, Congress approved most of the provisions of a solution to the Valley's flood problems contained in a 1941 Corps¹²⁸ Report (Corps Report).¹²⁹ The Corps Report called for the construction of three dams: Chiflo on the Rio Grande, several miles south of the Colorado border; Chamita on the Rio Chama; and Jemez on the Jemez River. Chiflo Dam was proposed mainly for direct flood control, while Chamita and Jemez dams were for both flood and sediment control.

The 1948 Act provided for the development of a comprehensive plan (Comprehensive Plan) coordinated by the Corps, the Bureau of Reclamation, the Department of Agriculture, and other federal agencies to provide flood control and drainage of the Valley, rehabilitation of the MRGCD, power development, recreational development, fish and wildlife development, watershed improvement, improvement of Indian lands, and other collateral improvements.¹³⁰ Despite the array of issues addressed by the Comprehensive Plan, its overarching purpose was flood control.¹³¹

2. *The Hearings on the 1948 Act*

Congressional hearings on the 1948 Act exhibit direct congressional intent concerning the use of the Corps' dams for flood control.¹³² Testimony revealed that no one who resided or did business in the flood plain of the Rio Grande (including much of downtown Albuquerque) could purchase flood damage insurance: "[T]oday the danger of flood is so great that not one penny of flood insurance can be purchased by a holder of property in

126. *Id.* at 322.

127. *Id.* at 324-45.

128. H.R. DOC. NO. 81-243, at 59 (1949).

129. Flood Control Act of 1941, Pub. L. No. 77-228, § 4, 55 Stat. 638.

130. *Hearings before the Committee on Public Works, U.S. Senate, Investigating N.M. Projects*, 81st Cong., 2d Sess., 156 (1950).

131. Here, as elsewhere, flood control includes not only control of floodwaters, but also retention of silt.

132. Most of the Hearings before the Committee on Public Works, *supra* notes 119, 120, 130 and accompanying text, and various Hearings before the Appropriations Committee deal with this concern.

Albuquerque or any place in the middle Rio Grande Valley."¹³³ Project urgency was stressed because the continued aggradation of the river bed due to silt buildup kept increasing the flood plain, thereby increasing the potential severity of a flood.

There is an urgent need for continued appropriations to permit early completion of the project. During recent years there has been a gradual building up of the stream bed of the Rio Grande in New Mexico by the deposition of large quantities of sediment carried by floodwaters and each succeeding flood has aggravated the condition to the extent that a major flood could be disastrous.¹³⁴

New Mexico Senator Dennis Chavez told the Subcommittee of the Committee on Public Works that the people of New Mexico had made significant investment trying to control the flooding of the river.

Our people have spent millions of dollars in trying to lick these problems. They were successful for a time, but the accumulations of silt progressively raised the river bed several feet..., and the problems of holding back both the silt and floodwaters have become too large for them to handle.¹³⁵

The possibility of a flood was even thought to threaten the national defense:

SENATOR CHAVEZ: Would a flood in the Rio Grande be a hazard to the activities at Los Alamos and Sandia Base? [These installations had already been characterized as important defense projects.]

COLONEL GEE: A serious flood on the Rio Grande would have serious effects, indirect effects, upon the entire life at Los Alamos....¹³⁶

The purpose of the testimony was to gain an increase in the appropriations for the Comprehensive Plan for the Valley.¹³⁷

Congressional authorization was needed to get the "flood control projects" moving. New Mexico Senator Clinton P. Anderson felt that time was of the essence in obtaining this authorization.

I think the hazard is such that we ought not to go through another season. I do not say the flood will come this winter, and I cannot guarantee the flood will come next spring....But

133. *Hearing on H.R. 6419, supra* note 119, at 289.

134. *Hearings before the S. Comm. on Pub. Works, supra* note 130, at 139.

135. *Hearings on H.R. 5472, supra* note 120, at 307-08.

136. *Id.* at 324.

137. The 1948 Act only authorized \$3.5 million toward the completion of the plan. An additional \$38 million was needed.

I think in view of the importance of the work that is going on in these two great centers (Los Alamos and Sandia) it is unwise to delay the completion of this project. The situation is such that, if we should wait and then get caught by a bad flood, we would be a long time catching up with some of the work that is under contemplation.¹³⁸

The Senate Committee Report on the 1948 Act stated that the Rio Grande Comprehensive Plan benefits included "the development of water resources and flood control to promote economic welfare."¹³⁹ It also stated that flood and sediment control are essential for protection of the valley lands.¹⁴⁰ The Conference report echoed the same goal: "The plan would reduce flood damages."¹⁴¹

The impact of silt buildup and aggradation of the river was a major concern. Colonel Gee from the Corps stated that a great deal of silt comes from the Jemez and Chama tributaries into the Rio Grande and contributes greatly to the aggradation of the Rio Grande riverbed.¹⁴² This buildup of the bed of the river naturally increased the flood risk and was a significant factor in the increased severity of possible floods. The need for dams on the Jemez and Chama was influenced primarily by this consideration. Accordingly, when justifying the dams during the 1957 appropriations hearings, Abiquiu was characterized as a dam for flood protection, retention of sediments, and release of clear water for degradation.¹⁴³

3. *The Rio Grande Compact*

The planning for the Rio Grande reservoir projects involved a consensus process between the relevant federal agencies and, most importantly, the three Rio Grande Compact states, Colorado, New Mexico, and Texas. Agreement between the states was necessary before any action was taken. From the very beginning, the three states have had final say on the construction and purpose of the dams.

The Rio Grande Compact governs the interaction of Colorado, New Mexico, and Texas with respect to the waters of the Rio Grande—it is the interstate "law of the river." (The Compact is discussed in more detail in section VI of this article.) It remains true that any use of Rio Grande water must be within the terms of the Compact, which includes the operation of

138. *Hearings on H.R. 5472, supra* note 120, at 314.

139. S. REP. NO. 80-1568, at 21-22 (1949).

140. *Id.*

141. H.R. REP. NO. 80-2382, at 11 (1949).

142. *Hearings Before the S. Comm. on Pub. Works, supra* note 130, at 143.

143. *See Hearings Before a Subcomm. of the S. Comm. on Appropriations on H.R. 11319, 84th Cong. 1466 (2d Sess. 1956) [hereinafter Hearings on H.R. 11319].*

any of the reservoirs within the Rio Grande watershed. The Hearings reflected this understanding:

SENATOR CHAVEZ: Inasmuch as the Rio Grande is an interstate stream, Colorado, New Mexico, and Texas are involved in water rights or any problem that might come from the Rio Grande.¹⁴⁴

Therefore, any possible change in use of any of the reservoirs must be examined closely against the terms of the Compact. Any possible violation of the Compact will trigger Colorado and Texas to take such actions as they deem necessary to protect their interests in the river.

SENATOR CHAVEZ [referring to the use of reservoirs for irrigation]: But, Mr. Nelson, of course it is strictly understood that nothing of that type [irrigation] will be done if it in any way interferes with the water the people of the Mesilla Valley and in Texas are entitled to under the Compact?

MR. NELSON: That is correct. At all times all of the reservoirs must be operated in accordance with the Compact.¹⁴⁵

Colorado and Texas were in support of any project in New Mexico that alleviated the flooding problems in the state, as long as their rights to the river water were not affected. These two states supported projects constructed strictly for flood control but did not support projects that could possibly be used to reduce the flow of the river.¹⁴⁶ Representatives of Colorado and Texas opposed anything in the Comprehensive Plan that could then or in the future hurt their states' water positions and were particularly wary of excessive reservoir capacity.

[T]he program of construction recommended by these Federal agencies includes excessively large reservoirs which are not needed for flood control and rehabilitation of the middle Rio Grande Valley and which would be susceptible of and invite methods of operation adverse to the interests of Texas and the other States party to the Rio Grande compact.¹⁴⁷

Because of the lack of need for at least 60 percent of the amount of storage capacity allocated to flood control, and because unduly large upstream reservoirs would be susceptible of and would invite methods of operation adverse to the interests of all three States party to the Rio Grande

144. *Hearing on H.R. 6419, supra* note 119, at 283.

145. *Hearings before the S. Comm. on Pub. Works, supra* note 130.

146. *Id.* at 156-61, 223-39.

147. *Hearings before the S. Comm. on Pub. Works, supra* note 130, at 235 (letter from J.B. Quaid, Rio Grande Compact Commissioner for Texas, to the Governor of Texas).

compact, I recommend the authorization for flood-control storage in New Mexico above the confluence of Rio Chama and Rio Grande be limited....¹⁴⁸
[T]he desired benefits can be obtained by a project materially reduced in scope....¹⁴⁹

In his testimony before Congress, Raymond Hill, one of the prime architects of the Rio Grande Compact and the representative of Texas, described the process of negotiation and agreement between the three states leading up to the 1948 Middle Rio Grande Flood Control Act. He stated that although the Corps Report resulted in a joint bill introduced by New Mexico Senators Chavez and Hatch, Colorado's and Texas's consent was vital.

[The] bill was objected to so vigorously by spokesmen for Colorado and Texas that its passage became doubtful. Accordingly, spokesmen for the State of New Mexico then requested that some compromise be reached. Extended discussions were carried on in May, 1948, resulting in a draft of a substitute bill incorporating the agreement reached by spokesmen for the three states....Senators Chavez and Hatch then withdrew their original bill and presented the agreed-upon substitute. This bill was recommended favorably by the Senate Public Works Committee and passed the Congress in substantially the form agreed upon by the states and the federal agencies concerned.¹⁵⁰

Similarly, Louis A. Scott, the Rio Grande Compact Commissioner for Texas, related that "a compromise agreement was reached in June, 1948, by the three states....The compromise agreement so made was written into the Flood Control Act of 1948."¹⁵¹ Scott went on to state that

negotiations leading up to the legislation contained in the Flood Control Act of 1948...were participated in by representatives of Colorado, New Mexico, and Texas, the signatory states to the Rio Grande Compact, and by the Corps of Engineers. The law as enacted was approved by all of these parties before the Act was introduced in Congress.¹⁵²

It is clear that Texas and Colorado were outspoken in their desire that no reservoir in New Mexico impair their ability to get their full share of Rio Grande flows. Thus, the 1948 Act is the result of an agreement

148. H.R. DOC. NO. 81-653, at 49-50 (1950).

149. *Id.* at 26.

150. *Hearings on H.R. 11319, supra* note 143, at 811.

151. *Id.* at 805.

152. *Id.* at 806.

between the three states that the reservoirs constructed by the Corps be used only for flood and sediment control.

4. *New Mexico's Debit Status*

One of the reasons Colorado and Texas refused to give New Mexico any leeway in the Comprehensive Plan was because of New Mexico's huge debt of water to Texas. Control over the river in the Valley area was poor, and there was significant non-consumptive use of water in the area that for many years caused New Mexico to fall short of its delivery requirements to Texas under the Compact. In fact, at the time of the negotiations, New Mexico was close to bankrupting its water supply under the terms of the Compact and in several years might not have had any water to use.¹⁵³

Colorado was in favor of the modified Comprehensive Plan as it would benefit all three states. Royce Tipton, an engineer and technical consultant for Colorado, testified:

MR. TIPTON: [Colorado is] vitally interested in this project because of New Mexico's situation under the compact.... New Mexico has progressively gone in the hole under the contract. That situation is not healthy to any of the three States.¹⁵⁴

Tipton supported the Comprehensive Plan as it would help alleviate New Mexico's debt under the Compact in part by retaining silt in the reservoirs so as to halt the aggradation of the river bed. In support, Colorado stated that "the control of silt is quite important in order that the Middle Rio Grande area may remain in a healthy condition."¹⁵⁵ This comment and the language of the statute are in keeping with the notion that the Jemez and Chamita Reservoirs were for flood and sediment control:

At all times when New Mexico shall have accrued debits as defined by the Rio Grande Compact, all reservoirs constructed as a part of the project shall be operated solely for flood control...at all times all project works shall be operated in conformity with the Rio Grande Compact as it is administered by the Rio Grande Compact Commission.¹⁵⁶

Raymond Hill summed things up well when he stated:

It was recognized by the negotiators, of whom I was one, that there were differences of opinion with respect to the application of certain provisions of the compact. It was further recognized by the negotiators that so long as New Mexico

153. *Hearing on H.R. 6419, supra* note 119, at 317.

154. *Hearings Before the S. Comm. on Pub. Works, supra* note 130, at 157.

155. *Id.*

156. H.R. DOC. No. 81-243, *supra* note 128.

had accrued debits, the interests of both Colorado and Texas would be jeopardized if any storage capacity were provided in New Mexico that could be used for conservation or for regulation beyond that required solely for flood control.¹⁵⁷

5. Chiflo Reservoir

Debates over the proposed Chiflo project illustrate Compact concerns¹⁵⁸ and the policy reasons for limiting the purposes of the dams to flood and sediment control when New Mexico is in deficit to Texas. These Compact concerns created opposition to the Chiflo Dam by Colorado and Texas, resulting in the deletion of Chiflo from the original Comprehensive Plan approved by Congress. (Chiflo would have been located on the mainstem of the Rio Grande in the gorge that is now designated as a Wild and Scenic River.) The governor of Colorado, in his comments on the Corps Report, stated,

The amount of flood-control capacity recommended is considerably in excess of that reasonably required, is uneconomical, and, provided, would constitute a threat to the proper operation of the San Luis Valley project...it is recommended that, except for the Chiflo reservoir, the units of the proposed plan be authorized....¹⁵⁹

Likewise, the governor of Texas opposed the Chiflo dam, saying, "Texas interests desire much less reservoir capacity and far greater improved channel capacity....Future events might well lead to the reallocation of storage behind the dam....[The] State of Texas will concur in the authorization of the project, provided...that no dam be constructed at the Chiflo site."¹⁶⁰ Finally, Senator Chavez from New Mexico specifically recognized that "[t]he Rio Grande is an interstate stream; Colorado, New Mexico, and Texas are involved in water rights or any problem that might come from the Rio Grande."¹⁶¹ Thus, as a result of interaction and consensus between Colorado, Texas, and New Mexico, the Chiflo project was dropped and the Rio Grande Plan was submitted to Congress.

6. Abiquiu Reservoir

The original 1948 Comprehensive Plan called for the construction of a high dam called Chamita on the Rio Chama.¹⁶² However, the Corps of

157. *Hearings on H.R. 11319, supra* note 143, at 811.

158. See *infra* Part III.B.6 (discussing an uncontrolled outlet at Abiquiu Reservoir).

159. H.R. DOC. NO. 81-243, *supra* note 128, at xv-xvii.

160. *Id.* at xii.

161. *Id.*

162. *Id.* at xvi.

Engineers proposed to change the original concept of the single high dam at Chamita to a two dam approach of a smaller dam at Chamita and a high dam at Abiquiu, further upstream on the Rio Chama (32 miles north of its confluence with the Rio Grande). The total capacity of these two reservoirs would be 1,511,000 acre-feet¹⁶³ and would result in a savings of over \$8,000,000.¹⁶⁴

This alternative Comprehensive Plan ran into problems due to opposition by Colorado and Texas because together the two dams had more storage capacity than the originally proposed dam.¹⁶⁵ In 1956, at hearings before the Senate Subcommittee of the Committee on Appropriations, Texas informed the Corps that its opposition would be withdrawn if the storage capacities were reduced:

The position of Texas has been and is that the plan as proposed by the Corps is not authorized by any act of the Congress, and that it violates the provisions of the Rio Grande Compact and is contrary to the Flood Control Act of 1948. Texas informed the Corps that no objection would be made to the revised plans provided the Abiquiu Dam would be constructed with an uncontrolled outlet so as to limit storage to approximately 562,000 acre-feet.¹⁶⁶

Texas and Colorado interpreted the authorization under the 1948 Act to allow a limited storage capacity of 700,000 acre-feet. Texas, and to a lesser extent Colorado, wanted to prevent Abiquiu from retaining any water that they felt should otherwise flow freely down the stream.¹⁶⁷

Louis A. Scott, the Rio Grande Compact Commissioner for Texas, made the point clearly when he said, "anything that prevents or interferes with the normal flow of water of the Rio Grande into the Elephant Butte reservoir results in serious harm and detriment not only to the landowners but to the entire economy of the area."¹⁶⁸

Texas fought against a controlled spillway in favor of an uncontrolled spillway¹⁶⁹ because under the uncontrolled approach the total capacity of the originally proposed Chamita reservoir was 700,000 acre-feet. The Act makes express mention of non-construction of spillway gates, the

163. *Hearings on H.R. 11319, supra note 143, at 807.*

164. *Dept. of the Army Appropriations for 1954: Hearings Before the Subcomm. of the H. Comm. on Appropriations, Civil Functions, 83d Cong., 1st Sess., at 302 (1953).*

165. *See Hearings on H.R. 11319, supra note 143, at 804.*

166. *Id.* at 805.

167. *Id.* at 1463, 1464.

168. *Id.*

169. An uncontrolled spillway is an outlet over which no human being has control and that would prevent any official of the federal government or a state or any other entity from interfering with the free flow of water.

effect of which is to limit storage to 700,000 acre-feet.¹⁷⁰ The engineers repeatedly testified in regard to the uncontrolled outlet that, "from a purely functional standpoint, it is not necessary to the operation of this project."¹⁷¹ Further, adding both an uncontrolled outlet and controlled outlet would increase the costs of the project by \$1,000,000.¹⁷² Scott testified that the terms of the agreement between the three states were that

spillway gates were not to be installed until New Mexico was out of debt to Texas for water under the terms of the Rio Grande Compact, and that at the time this agreement was made, New Mexico owed a large amount of water to Texas and this debt has continued up to the present time....¹⁷³

Additionally, the Governor of Texas, Allen Shivers, asserted that the Flood Control Act of 1948 provided that "construction of the spillway gate structure at Chamita Dam shall be deferred so long as New Mexico has accrued debits as defined by the Rio Grande Compact and until New Mexico shall consistently accrue credits pursuant to the Rio Grande Compact."¹⁷⁴ The El Paso Chamber of Commerce added,

[we hereby protest] the construction of the Abiquiu and Chamita dams unless the Abiquiu dam is provided with an uncontrolled outlet as requested and approved by representatives of the State of Texas, and that the storage capacity of both dams be limited to 700,000 acre-feet of water as authorized by the Flood Control Act of 1948. The construction of two dams capable of storing approximately 1,500,000 acre feet of water with controlled outlets cannot result in anything but a deprivation of water that otherwise would be available for the Rio Grande Federal Reclamation Project and the City of El Paso.¹⁷⁵

Moreover, the Chamber of Commerce stated that the dam on the Chama River under the Flood Control Act of 1948 was to "impound approximately 700,000 acre-feet of water and not be provided with spillway gates so long as New Mexico shall have accrued debits as defined by the Rio Grande Compact and until New Mexico shall consistently accrue credits pursuant to the Compact."¹⁷⁶

170. See *Hearings on H.R. 11319*, *supra* note 143, at 804-05.

171. *Id.*

172. *Id.*

173. *Id.*

174. *Id.*

175. *Id.* at 810.

176. *Id.* at 809.

Colorado had a major interest in what was happening in New Mexico at this time because it had a large project of its own under consideration (the Wagon Wheel Gap project, which was never built) and did not want to hurt its chances for success. Colorado was also concerned because, as a signatory to the Rio Grande Compact, it wanted to maintain good relations with both New Mexico and Texas.¹⁷⁷ Dan Thornton, the Governor of Colorado, supported Texas in the opposition and pointed out that Colorado would not oppose the proposed Chamita dam and reservoir project if,

at all times when New Mexico shall have accrued debits as defined by the Rio Grande Compact, all reservoirs constructed as part of the project shall be operated solely for flood control except as otherwise required by the Rio Grande Compact, and at all times all project works shall be operated in conformity with the Rio Grande Compact as it is administered by the Rio Grande Compact Commission.¹⁷⁸

A compromise agreement was made and written into the Flood Control Act of 1948 that expressly notes no construction of spillway gates, the effect of which is to limit storage to 700,000 acre-feet.¹⁷⁹ The justification set forth before the Appropriations Committee of the U.S. Senate mentions only flood and sediment control benefits for the Abiquiu Dam: "Abiquiu Dam provides for (1) storage of floodwaters of Rio Chama, thereby furnishing flood protection for... (2) retention of sediments which are a great detriment to the Rio Grande Valley; and (3) release of clear water necessary for degradation of the Rio Grande Channel."¹⁸⁰ Finally, after debate and compromise, Abiquiu Reservoir was constructed in 1963.¹⁸¹

7. Jemez Reservoir

Jemez Reservoir was the first dam constructed under the 1948 Act. It was authorized strictly for flood and sediment control and was interpreted as such by the appropriations committee:

MR. RABAUT [Rep. from Mich.]: This is all flood control.
COL. POTTER [Corps of Engineers]: It is flood control....

177. See generally *Hearings Before the S. Comm. on Pub. Works*, *supra* note 130, at 156–61.

178. *Hearings on H.R. 11319*, *supra* note 143, at 809.

179. *Id.* at 804–05.

180. *Id.* at 1466.

181. BUREAU OF RECLAMATION, U.S. ARMY CORPS OF ENG'RS, & N.M. INTERSTATE STREAM COMM'N, FINAL ENVIRONMENTAL IMPACT STATEMENT (FEIS) UPPER RIO GRANDE BASIN WATER, ch. 3, at 16 (Apr. 2007), available at <http://www.spa.usace.army.mil/urgwops/finaleis.asp> (follow "FEIS Volume 1 - Individual Chapters and Appendices" hyperlink; then follow "URGWOPS FEIS Chapter 3" hyperlink).

MR. FORD [Gerald Ford, Rep. from Michigan]: This is entirely a flood control project?

COL. POTTER: Flood control and sediment control, sir.¹⁸²

The benefits anticipated from the reservoir were flood control benefits. Again, part of the justification was national defense:

MR. FORD: Where will the flood control benefit materialize – in what locality?

COL. POTTER: Largely to Albuquerque....

MR. FORD: The justifications state that floods in the area would adversely affect the Atomic Energy Commission and military installations.¹⁸³

Without additional authorization, Jemez is to be used strictly for flood and sediment control.

The dam on the Jemez was completed in 1953. The authorization for flood and sediment control was largely to protect Albuquerque and the agricultural lands near Albuquerque on the Rio Grande.¹⁸⁴ The dam is located 2.8 miles upstream of the confluence with the Rio Grande on the Jemez River, about 22 miles north of Albuquerque, and includes a levee designed to protect the old Santa Ana Pueblo tribal grounds near the upper part of the reservoir against inundation during periods of high water levels in the reservoir.¹⁸⁵

C. THE 1960 FLOOD CONTROL ACT: COCHITI AND GALISTEO RESERVOIRS

1. Background

Congress authorized Cochiti and Galisteo reservoirs in 1960¹⁸⁶ as a modification to the Comprehensive Plan of 1948.¹⁸⁷ A new Corps Report recommended these additions for several reasons. First, because the Chiflo project was dropped from the authorization in 1948, the Comprehensive Plan lacked sufficient flood control. In addition, the rapid growth in the Albuquerque area made conditions such that, even if Chiflo were to be constructed, Albuquerque would not receive the necessary amount of flood protection.¹⁸⁸ The Corps felt that Cochiti and Galisteo could be built in lieu

182. *Dept. of the Army Appropriations for 1952: Hearings Before the Subcomm. of the H. Comm. on Appropriations, Civil Functions, 82d Cong., 1st Sess., at 491–93 (1951).*

183. *Id.* at 493–94.

184. *Id.*

185. *Id.* at 492.

186. *See Flood Control Act of 1960, Pub. L. No. 86-645, 74 Stat. 480, 493.*

187. S. DOC. NO. 86-94, at ix (1960).

188. *See id.*

of the low Chamita Dam and Chiflo and would provide the necessary protection for Albuquerque, providing flood control closer to Albuquerque, a major advantage over Chamita Dam.¹⁸⁹

The 1960 Act added Cochiti and Galisteo to the Comprehensive Plan initiated in 1948. The 1960 Act outlines operations of these reservoirs: "Cochiti Reservoir, Galisteo Reservoir, and all other reservoirs constructed by the Corps of Engineers as part of the Middle Rio Grande project will be operated solely for flood and sediment control as described below...."¹⁹⁰ "[T]he storage of water in and the release of water from all reservoirs constructed by the Corps of Engineers as part of the Middle Rio Grande project will be done as the interests of flood and sediment control may dictate...."¹⁹¹ The Senate committee report on Cochiti and Galisteo reservoirs supported the Act, stating, "The two reservoirs proposed at this time will serve to control floods in the valley and prevent sedimentation of the channels."¹⁹²

Texas was not in support of additional reservoirs, although the more flood control New Mexico had over the Rio Grande, the more New Mexico was expected to be able to meet its water delivery requirements to Texas under the Compact. Regardless, the Rio Grande Compact Commissioner for Texas "did not see how any additional reservoirs could be operated without breach of the provisions of the Compact and the accumulation of greater and greater debits by Colorado and New Mexico."¹⁹³ Rather than more storage, Texas favored bigger channel capacity.

Significantly, the 1960 Act drops the language restricting the reservoirs to flood control so long as New Mexico is in a debit position and provides simply that all reservoirs shall be operated "solely for flood control and sediment control."¹⁹⁴ The Act does not seem to allow New Mexico to use the reservoirs for non-flood and sediment control purposes even when it is in a credit position. However, the change in language in the 1960 Act limiting the reservoir purposes to "flood control and sediment control" is part of the Reservoir Regulation Plan, which allows departures with the advice and consent of the Rio Grande Compact Commission. Vince Taylor, legal advisor for the Texas contingent of the Rio Grande Compact Commission, stated,

189. *See id.*

190. Flood Control Act of 1960, Pub. L. No. 86-645, 74 Stat. 480, 493.

191. *Id.*

192. S. REF. NO. 86-1524, at 152 (1960).

193. S. DOC. NO. 86-94, *supra* note 187, at 55.

194. Flood Control Act of 1960, Pub. L. No. 86-645, 74 Stat. 480, 493.

Under PL 858, 80th Congress, [Flood Control Act of 1948] New Mexico was restricted in storage, limited solely for flood control, "at all times when New Mexico shall have accrued debits as defined in the Rio Grande Compact" ((d) p. 9), thus implying that when New Mexico is in credit status this restriction does not apply. But, under PL 86-645, (July 14, 1960), p. 14, (a), (c), and (d), puts back the restriction of "solely for flood control and sediment control," and (d) places on the three commissioners "advice and consent" authority and responsibility. Hence, my commissioner from Texas would have a "say" about storage of San Juan water or any water in Abiquiu, even though New Mexico is in credit status.¹⁹⁵

Consequently, the Rio Grande Compact Commissioners' 1974 Resolution gave consent to

the storage of imported San Juan-Chama project water in Abiquiu Reservoir for release on demand of the owners thereof so long as Rio Grande water has prior right to usage of the capacity of the channel of Rio Chama and this San Juan-Chama project water may not be released so as to interfere with the passage of Rio Grande water in the channels of the Rio Chama or Rio Grande; and provided further, that water accounting for San Juan-Chama project water stored and discharged from Abiquiu Reservoir will be established by the Rio Grande Compact Commission.¹⁹⁶

The authority to consent to such departures is consistent with a reasonable reading of the 1960 Act.

When asked, Steve Reynolds, who attended the legislative hearings, declined comment on whether the Reservoir Regulation Plan authorized the commissioners to consent to departures from the "solely for flood control" limitation. Steve Reynolds was the State Engineer of New Mexico for 35 years, serving in this capacity from 1955 to 1990. At the time of the negotiations leading to agreement on the final language of the Reservoir Regulation Plan, Reynolds proposed that the Compact Commission adopt a resolution that would have allowed "conservation storage" at any time when "New Mexico shall consistently accrue credits pursuant to the Rio

195. Letter to Paul L. Bloom, Gen. Counsel, N. M. Office of the State Eng'rs, from Vince Taylor, Assistant Attorney Gen. and Legal Advisor to Tex. Rio Grande Compact Comm'n, Attorney Gen. of Tex. (May 1, 1973) (on file with author).

196. Minutes from the 35th Annual Meeting of the Rio Grande Compact Commission 10 (Mar. 28, 1974 & May 3, 1974) (on file with author).

Grande Compact[.]”¹⁹⁷ with the advice and consent of the Compact Commission as provided in the “departure” section (d) of the Reservoir Regulation Plan. His proposal assumed that the Reservoir Regulation Plan would allow departures from the “solely for flood control” limitation with the advice and consent of the Commission so as to allow conservation storage.

2. *The Reservoir Regulation Plan*

At the insistence of Texas and Colorado, the 1960 Act contains a Reservoir Regulation Plan (Plan) that was agreed to and drafted by the three Rio Grande Compact states.¹⁹⁸ At its February 19, 1960 meeting in Santa Fe, New Mexico, the Compact Commission resolved that it “supports and urges the enactment of legislation which shall authorize the construction and operation of the reservoirs...and which shall incorporate the aforesaid Reservoir Regulation Plan in the authorizing legislation.”¹⁹⁹ Importantly, the Plan represents an operation and regulation agreement among the Compact states.

The construction of flood control dams on the Rio Grande and its tributaries in New Mexico was, for many years, a controversial matter among the States of Colorado, New Mexico, and Texas. This controversy was apparently resolved by the recent adoption of an agreement covering the operation of Cochiti, and other middle Rio Grande flood control reservoirs. This agreement has been approved by Colorado, New Mexico and Texas, and by the Corps of Engineers.²⁰⁰

Although the federal government ratified the Plan, it was the three Compact states that made decisions about the operation and regulation of the reservoirs. Senator Lyndon B. Johnson’s statement before the Senate Public Works Committee makes the point:

Mr. Chairman, I submit a reservoir regulation plan....[T]he plan...was agreed to by all parties concerned, including the states of Colorado, New Mexico, and Texas, the Corps of Engineers, the Middle Rio Grande District, the Bureau of Reclamation, and other interested federal and state agencies. It is further recommended that this language of the Reservoir

197. Letter from S.E. Reynolds, Comm’r for N.M., Rio Grande Compact Comm’n, to Louis A. Scott, Comm’r for Tex., Rio Grande Compact Comm’n (Jan. 22, 1959) (on file with author).

198. Only when the states reached a consensus did they support the legislation.

199. *Hearings on H.R. 7634 and S. 1902 Before a Subcomm. of the S. Comm. on Public Works*, 86th Cong., 2d Sess., at 497 (1959) [hereinafter *Hearings on H.R. 7634 & S. 1902*].

200. *Id.* at 491.

Regulation Plan be written into the authorizing legislation for the construction of these dams.²⁰¹

Additionally, Steve Reynolds, in testimony before the Subcommittee of the Senate Public Works Committee, stated that

New Mexico recognizes the necessity for adopting procedures for the operation of reservoirs constructed as part of the middle Rio Grande project that will protect the interests of water users in Colorado, Texas, and New Mexico, and approves the regulation plan set forth in the district engineer's report. I wish to take this opportunity to express the great appreciation of the State of New Mexico for the very excellent cooperation of the States of Texas and Colorado and the district engineer of the Albuquerque district in formulating this plan. I would also point out that the regulation plan has been approved by the Rio Grande compact commissioners and by the official representatives of each of the three States....

The States of Colorado and Texas have requested that the provisions of the reservoir regulation plan be set forth in any legislation authorizing the construction of the Cochiti and Galisteo reservoirs.²⁰²

Pursuant to the Plan, Cochiti, Galisteo, and the other dams were to be operated together as a total unit. The Commission was to supervise any changes to the stated Plan in the operation of the reservoirs that would be pivotal to any proposed use of the reservoirs for alternate purposes. The downstream users would carefully scrutinize any possible deviation of reservoir use as illustrated by the statement of the Elephant Butte Irrigation District. "[P]roper operation of these dams and reservoirs will be a matter of vital concern to the District."²⁰³

The Plan, as agreed upon by the three states and as contained in the 1960 Act, provides that "[a]ll reservoirs of the Middle Rio Grande Project will be operated at all times in the manner described above in conformity with the Rio Grande compact, and no departure from the foregoing operation schedule will be made except with the advice and consent of the Rio Grande compact commission...."²⁰⁴

The Compact Commission decided to except fish and recreational uses from restrictions, so long as the water is non-native San Juan-Chama water. "[T]he foregoing regulations shall not apply to storage capacity

201. *Hearings on H.R. 11319, supra* note 161, at 348.

202. *Hearings on H.R. 7634 & S. 1902, supra* note 199, at 495.

203. *Id.*

204. Flood Control Act of 1960, Pub. L. No. 86-645, 74 Stat. 480, 493.

which may be allocated to permanent pools for recreation and fish and wildlife obligation; provided that the water required to fill and maintain such pools is obtained from sources entirely outside the drainage basin of the Rio Grande."²⁰⁵ Louis Scott, the Rio Grande Compact Commissioner for Texas, testified in the Senate Hearings on the San Juan-Chama Project, stating,

I first wish to say that Texas recognizes that all waters of the San Juan River allocated to New Mexico under the upper Colorado River Basin compact are New Mexico waters, and Texas, therefore, asserts no claim to them.

The primary concern of Texas is that the authorizing legislation provides that in the operation of the San Juan-Chama project, and in the interchange and commingling of the waters of the San Juan River and Rio Grande, Texas shall not be deprived of any water to which she is entitled under the Rio Grande compact.²⁰⁶

3. *Permanent Pool at Cochiti*

As noted above, the primary justifications for Cochiti and Galisteo were flood control and to assist New Mexico with its Compact obligations.²⁰⁷ Although the second Corps Report recommended that Cochiti Dam be operated purely for flood control, it recognized the possibility of recreational uses of the reservoir: "Although permanent pools would not be maintained at either of the reservoirs under the presently proposed plan of operation, under certain conditions flood flows would be stored in the Cochiti Reservoir for varying periods of time, thereby allowing some use of the site for water associated recreational activities."²⁰⁸ However, the Corps did not contemplate use of Cochiti for the storage of Albuquerque's San Juan-Chama Project water. "The city of Albuquerque has made application for 57,000 acre-feet annually of the water which would be imported for the...San Juan-Chama Project. The use of Cochiti Reservoir for storage of this water is not contemplated."²⁰⁹

The State of New Mexico and others saw Cochiti as a possible recreational site and felt that the plan for Cochiti could be modified to incorporate a permanent lake of 50,000 acre-feet of water at the dam with

205. *Id.*

206. *Navajo Irrigation and San Juan and Chama Rivers Diversion: Hearing Before the Subcomm. on Irrigation and Reclamation of the S. Comm. on Interior and Insular Affairs, 85th Cong., 2d Sess., at 149 (1958).*

207. *See Hearings on H.R. 7634 & S. 1902, supra note 199, at 491.*

208. S. DOC. NO. 86-94, *supra* note 187, at 65.

209. *Id.* at 66.

no harm to its flood control operations. The City of Albuquerque formally resolved that

Whereas the project when built is contemplated for purely flood control purposes; and

...

Whereas it is the desire of the City Commission of the City of Albuquerque that more recreational facilities be made available in this area:...

...

recommend to the Federal agencies and Congress that the Cochiti Dam project be so modified as to incorporate a permanent lake of 50,000 acre-feet of water,...to be used for recreational facilities.²¹⁰

The New Mexico Department of Game and Fish expressed the same sentiments: "[T]his department is keenly interested in the establishment of a recreational pool in Cochiti Reservoir...."²¹¹ The Regional Director of the Bureau of Sport, Fisheries and Wildlife thought that the inclusion of a permanent pool was worthwhile: "[T]he benefits from this use would more than justify the costs involved and the benefits would be largely of national significance due to nonresident tourist use and relief of fishing use of overtaxed national forests in New Mexico."²¹²

In 1964, the State of New Mexico went back to Congress and amended the 1960 Act to obtain the initial water necessary to fill the pool and sufficient water to offset the evaporation loss from the pool in subsequent years. "[S]ubdivision (e) of [the 1960 authorizing legislation]...is hereby supplemented to authorize...approximately fifty thousand acre-feet of water for the initial filling of a permanent pool...and thereafter sufficient water annually to offset evaporation...from water diverted into the Rio Grande Basin by [the San Juan-Chama diversion channel]...."²¹³ The Reservoir Regulation Plan of the 1960 Act contains a provision granting the requests of those wanting a recreational pool at the Cochiti site: "The foregoing regulations shall not apply to storage capacity which may be allocated to permanent pools for recreation and fish and wildlife propagation" and "[p]rovided, [t]hat the water required to fill and maintain such pools is obtained from sources entirely outside the drainage basin of the Rio Grande."²¹⁴ This resulted in an annual reduction in the city of

210. *Hearings on H.R. 7634 & S. 1902, supra* note 199, at 493.

211. *Id.*

212. *Id.* at 496.

213. Act of Mar. 26, 1964, Pub. L. No. 88-293, 78 Stat. 171-72 (Cochiti Reservoir and water for recreational purposes) (emphasis omitted).

214. Flood Control Act of 1960, Pub. L. No. 86-645, 74 Stat. 480, 493-94.

Albuquerque's allotment of San Juan-Chama water in the amount of 5,000 acre-feet per year.

4. *Seepage and the Pueblo of Cochiti*

The Corps completed the dam at Cochiti approximately one mile upriver from the Pueblo of Cochiti (Pueblo); this permanent pool presented serious problems to the Pueblo. Subsequent to completion of the filling of the permanent pool in December 1975, the Pueblo's lands began to be adversely affected by high ground water. In a Senate hearing, Senator Bingaman noted that "[i]n 1976, the corps—without any requests from the pueblo—built the dam on an easement through the Rio Grande that it purchased from the Cochiti Pueblo for less than \$150,000."²¹⁵ Senator Bingaman stated,

The pueblo's only agricultural land, about 800 acres lying directly below the dam, has been rendered virtually useless because of water storage and extensive seepage from under the dam. The resulting high water table has left standing ponds and marshes on much of this acreage and has waterlogged the rest.²¹⁶

Senator Pete Domenici added, "I have been there and seen this waterlogged land. What used to be good farmland now is often soggy. It is land that often serves best as a resting spot of migrating ducks, not the growing of crops."²¹⁷

In 1980, the Pueblo submitted claims for damage to its farmland for the years 1976 through 1979.²¹⁸ On November 29, 1985, the Pueblo filed suit in U.S. District Court against the United States alleging that "negligent design, construction, maintenance and operation of the Cochiti Dam had caused the underground water table under [the Pueblo's] land to rise, destroying crops, and rendering some land unusable."²¹⁹ The Pueblo asserted that the flood damage occurred when the water was impounded for purposes other than flood control.²²⁰ The relief sought included (1) \$3,000,000 in compensation for damage to the land, (2) compensation to individual plaintiffs in various amounts for crop damage for the years 1976 and 1984, and (3) an injunction requiring the Corps to rectify the water seepage problems.²²¹ The United States asserted numerous defenses, but the

215. 133 CONG. REC. S16195 (daily ed. Nov. 12, 1987) (statement of Sen. Bingaman).

216. *Id.*

217. *Id.*

218. Darrell R. Reikenberg, *Cochiti Lake Chronology* (on file with author).

219. *Pueblo de Cochiti v. United States*, 647 F. Supp. 538, 539 (D.N.M. 1986).

220. *See* Reikenberg, *supra* note 218.

221. *Id.*; *see Pueblo de Cochiti*, 647 F. Supp. at 538.

court stayed the case and negotiations were initiated between the Albuquerque District and the Pueblo.²²² Ultimately the Court dismissed the case as a result of legislation.²²³

In December 1987, New Mexico Senators Bingaman and Domenici and Senator Inouye from Hawaii introduced Amendment 1179 to H.R. 2700, which was subsequently included by the Senate in the 1988 Appropriations Bill.²²⁴ That legislation proposed a settlement with the Pueblos:

The Secretary of the Army, because of the Federal trust relationship that links the United States and Indian people, is directed to expend within available funds not to exceed \$50,000 to plan and not to exceed \$700,000 to design and engineer appropriate works to alleviate high ground water problems on agricultural lands owned by Cochiti Pueblo, New Mexico, directly downriver from Cochiti Dam.²²⁵

It is important to note that these funds were solely for planning and design purposes. Any actual construction would require congressional approval. Senator Domenici stated clearly, "It is estimated that the structural fix will cost about \$5 million, and will eliminate the standing water problem from as many as 800 acres. This amendment does not authorize such construction. It says: Go and develop a solution, then bring it back to Congress for our consideration."²²⁶

In March 1988, the Pueblo and the Albuquerque District of the Corps of Engineers initiated discussions that resulted in a plan of design agreement to resolve the high groundwater problem.²²⁷ Then, in 1992, Congress passed a bill authorizing settlement with the Pueblo.²²⁸ The bill states that "the Secretary of the Army is authorized and directed to construct the underground drainage system necessary to correct the high ground water problem at the Pueblo" and "upon completion...the Secretary of the Interior...shall be responsible for its maintenance, repair, and replacement..."²²⁹ The Pueblo's lawsuit against the federal government was pending at the time Congress passed this legislation. Senators Bingaman and Domenici and Representative Bill Richardson²³⁰ strongly urged passage of the bill. "It is essential for us to move quickly to see that the terms of this agreement are met and the people of Cochiti have the use of their

222. Reikenberg, *supra* note 218, at 2.

223. *Id.*

224. See Act of December 22, 1987, Pub. L. No. 100-202, 101 Stat. 1329.

225. 133 CONG. REC. S16195 (daily ed. Nov. 12, 1987) (statement of Sen. Bingaman).

226. *Id.*

227. Reikenberg, *supra* note 218.

228. H.R. 4437, 102d Cong. (1992) (enacted).

229. *Id.*

230. 138 CONG. REC. E616 (daily ed. Mar. 11, 1992).

traditional agricultural lands restored. This legislation ensures that outcome."²³¹ The Pueblo and the federal government eventually negotiated a settlement and the Corps constructed the drainage system.²³²

The seepage imbroglio damaged not only the Pueblo's good farmland but its spiritual center as well and gave rise to the Pueblo's opposition to additional uses of Cochiti reservoir. In the worldview of the Pueblo de Cochiti, religion and spirituality are intertwined with the land and traditional farming is a way of life. When the Federal Energy Regulatory Commission (FERC) granted a developer a preliminary permit for a feasibility study regarding a major hydroelectric facility at Cochiti dam, the Pueblo protested and filed a motion with FERC to cancel the permit.²³³ Consequently, in 1989 and 1990 the House and the Senate passed bills stating that "no license shall be issued by the [FERC] for the development of hydroelectric power at the Army Corps of Engineers' Cochiti Dam located on the Pueblo de Cochiti..."²³⁴ In the Senate, Bingaman, Domenici, and Inouye introduced the bill. Senator Inouye stated:

The pueblo believes...that the threat to its traditional way of life from hydroelectric development may present an even greater threat than the seepage problem that is now being successfully addressed. The pueblo has been advised that any development of the dam for electric power will involve further interference with a sacred rock located near the outlet works of the dam. The pueblo strongly believe[s] that further interference with the rock will be a desecration that will seriously and adversely affect its traditional religious practices... This [Amendment] is a fair resolution of a serious potential threat to native American religious freedom.²³⁵

Senator Domenici added the following:

In the years since Cochiti Dam was completed in 1975, the pueblo has suffered greatly from its presence. A natural shrine, sacred to the Cochiti traditional religion, and that of other pueblos, was defaced during construction. Water seepage from under the dam flooded all the pueblo crop lands, making traditional farming impossible. Recurring proposals for an unwanted hydropower facility have caused further disruption of life. Any feasible development of the dam for hydroelectric power would involve further desecration of the sacred natural shrine located near the outlet works of the

231. 138 CONG. REC. S1916 (daily ed. Feb. 20, 1992) (statement of Sen. Bingaman).

232. Riekenberg, *supra* note 218.

233. 136 CONG. REC. S17710 (daily ed. Oct. 2, 1990) (statement of Sen. Inouye).

234. H.R. 2006, 101st Cong. (1989); H.R. 3618, 101st Cong. (1990).

235. 136 CONG. REC. S17710-04 (daily ed. Oct. 27, 1990) (statement of Sen. Inouye).

dam....As Congress has previously recognized, the pueblo has already been egregiously harmed by hardships resulting from the dam.²³⁶

Thus, the faulty dam construction and resulting rising water table that damaged the Pueblo's farmland and spiritual practice also hurt prospects for additional uses of Cochiti Reservoir.

D. Subsequent Developments at Jemez Reservoir

In 1952, the Corps of Engineers testified that they were going to acquire 6,700 acres of land at \$2.01 per acre on which to build the Jemez Dam and Reservoir.²³⁷ Although the dam and reservoir were constructed on land originally owned by the U.S. Department of the Interior and the Army Corps of Engineers, Congress transferred the lands in 1978 and 1986, respectively, to the Pueblo of Santa Ana, preserving the right of the Corps of Engineers to upgrade and maintain the dam and reservoir.²³⁸ Thus, the United States does not own any property at the project. A Tenth Circuit opinion, *Pueblo of Santa Ana v. United States*,²³⁹ held that the Corps of Engineers did not have the right to use rocks and fill materials from the surrounding lands of Santa Ana Pueblo for modification of the dam and spillway in the late 1980s. The case includes an interesting summary of the complex history of land ownership at the site where the dam and reservoir are located and of the trust relationship between the United States and the Pueblo.

The initial capacity allocations for the project "were 73,000 acre-feet for flood control and 44,000 acre-feet for sediment deposition."²⁴⁰ At the time the dam was constructed, the Rio Grande, downstream from the Jemez River confluence, was an aggrading channel, meaning that sediment was accumulating, raising the riverbed higher than the surrounding valley floor. For this reason, sediment retention was viewed as a major function of the dam. To improve sediment retention, in 1979, the Interstate Stream Commission (ISC) and the Corps of Engineers established a 2,000 acre-foot sediment retention pool.²⁴¹ The pool was created by using water exchanged

236. 138 CONG. REC. S998 (daily ed. Jan. 30, 1992) (statement of Sen. Domenici).

237. *Id.* at 491.

238. See Lands in trust Pueblo of Santa Ana Indians, Pub. L. No. 95-498, 92 Stat. 1672 (1978); Pueblo of Santa Ana, Pub. L. No. 99-575, 100 Stat. 3243 (1986).

239. 214 F.3d 1338 (10th Cir. 2000).

240. U.S. ARMY CORPS OF ENG'RS, ALBUQUERQUE DIST., FINAL ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED CONSTRUCTION OF A LOW-HEAD WEIR, RIO JEMEZ, THE PUEBLO OF SANTA ANA, NEW MEXICO 1 (2003), available at <http://www.spa.usace.army.mil/fonsi/Jemez%20Weir%20Final/JemezWeirFinalEA.pdf>.

241. *Id.* at 4.

from the San Juan-Chama Project.²⁴² In 1986, this pool of water was expanded to 24,425 acre-feet to further improve the sediment trapping capability of the reservoir.²⁴³ The water for this expansion was again obtained through the exchange of San Juan-Chama water leased from the City of Albuquerque by the Interstate Stream Commission. Native water would be captured in the Rio Jemez and replaced by releases of San Juan-Chama water to the Rio Grande. Since it was placed into operation, the reservoir has retained almost 20,000 acre-feet of sediment.²⁴⁴

After the expanded pool was created, the Rio Grande below the confluence became a degrading reach of river. The lack of sediment was cited as part of the reason for the decline of the endangered silvery minnow in the Middle Rio Grande Valley. Therefore, the sediment pool Memorandum of Understanding was allowed to expire at the end of 2000. The reservoir was drawn down by 12,000 acre-feet in part to satisfy an agreed order resolving plaintiff's Motion for Preliminary Injunction in *Rio Grande Silvery Minnow v. Martinez*.²⁴⁵ In the agreed Order, the Jemez Canyon Reservoir sediment pool was identified as one of the sources of supplemental water for maintaining continuous flows in the Rio Grande. The reservoir was completely evacuated in October 2001 and it is now operated as a dry reservoir.²⁴⁶

Although operated as a dry reservoir, Jemez is still utilized for flood control. The Jemez River, when flowing, is passed through the dam. When the passage of inflow through the reservoir will exceed the channel capacity of the Rio Grande downstream (7,000 cubic feet per second), the Corps initiates flood control storage.²⁴⁷ Floodwaters are stored only until downstream conditions again permit the release of the floodwaters.

In 2001, 2002, and 2003, the reservoir was used to store and provide conservation water to promote the recovery of the silvery minnow in the Middle Rio Grande. These actions were approved by the Rio Grande Compact Commission in April of 2001 and authorized by the Conservation Water Agreement signed by Santa Ana Pueblo, the Corps of Engineers, and the New Mexico Interstate Stream Commission in July 2001.²⁴⁸

242. *Id.*

243. *Id.*

244. *See id.*

245. Agreed Order Resolving Plaintiffs' Motion for Preliminary Injunction, *Rio Grande Silvery Minnow v. Martinez*, No. 99-1320, slip op. at 4 (D.N.M. Aug. 2, 2000).

246. Interview with Mark Yuska, Chief of the Reservoir-Control Branch, U.S. Army Corps of Eng'rs, in Albuquerque, N.M. (June 1, 2007).

247. *See* U.S. ARMY CORPS OF ENG'RS, *supra* note 240.

248. *See id.*

E. Conclusions

Congress authorized funding for the Corps projects along the Rio Grande, including Jemez, Abiquiu, Cochiti, and Galisteo reservoirs, for the purpose of flood and sediment control. This limitation was due to the continued and concerted opposition of Texas, with the concurrence of Colorado. Texas insisted upon this limitation to avoid any possible threat to its Rio Grande water supply. Therefore, the operation of all of these reservoirs is connected closely with the terms of the Rio Grande Compact. Any proposed operational change or additional use of any of these reservoirs must be scrutinized carefully with the Compact and the Reservoir Regulation Plan in mind.

IV. EXPANDED STORAGE AT ABIQUIU AND THE WILD AND SCENIC RIVERS ACT

A number of legislative developments occurred in the 1980s pertaining to operations at Abiquiu reservoir. Congress, in 1981, legislatively overrode the Tenth Circuit's holding in *Jicarilla Apache Tribe v. United States*²⁴⁹ that the City of Albuquerque could not store its San Juan-Chama Project (SJCP) water in Elephant Butte for purposes of creating a recreational pool there. Public Law 97-140 authorized storage of SJCP water in any reservoir and, as part of the same measure, authorized the Secretary of the Army to enter into storage agreements with contractors for SJCP water.²⁵⁰ The authorization allows for up to 200,000 acre-feet of SJCP water to be stored in Abiquiu.²⁵¹

In 1986, the U.S. Weather Service, as a result of better forecasting techniques and more extensive runoff records, increased the calculated size

249. 657 F.2d 1126 (10th Cir. 1981). *See supra* Part II.E.3 (discussing the case in more detail).

250. Act of Dec. 29, 1981, Pub. L. No. 97-140, 95 Stat. 1717 (Section 5(a) of Pub. L. No. 97-140 provides that "[t]he proviso of Section 2 of Public Law 84-485 shall not be construed to prohibit the storage of San Juan-Chama project water acquired by contract with the Secretary of the Interior pursuant to Public Law 86-483 in any reservoir, including storage of water for recreation and other beneficial purposes by any party contracting with the Secretary for project water.").

251. *Id.* The storage easement for SJC water is limited to below the elevation 6,293.5 feet and lies mainly within the flood and sediment pools. Approximately 180,000 acre-feet of storage space is available, of which 170,000 acre-feet is contracted by the City of Albuquerque. DEP'T OF ARMY, ALBUQUERQUE DIST., CORPS OF ENG'RS, ABIQUIU DAM AND RESERVOIR WATER CONTROL MANUAL, at A (app. A to RIO GRANDE BASIN MASTER WATER CONTROL MANUAL) (1995) (pertinent sections on file with author).

of the probable maximum flood on the Rio Grande.²⁵² Consequently, the Corps modified Abiquiu Dam to safely accommodate the larger probable maximum flood by raising the dam and widening the spillway. This safety work created a potential for greater storage while ensuring safe flood control operations in the event of the probable maximum flood.²⁵³ After the debate in Congress over its capacity, the spillway crest as constructed at Abiquiu can hold up to 1.2 million acre-feet.²⁵⁴ The difference between the spillway capacity and the authorized storage has never been used and is designated for structure protection.

The increased capacity at Abiquiu and the potential for conservation storage beyond the existing authorizations became the subject of much debate in 1987, when New Mexico Senators Bingaman and Domenici and Congressmen Richardson and Lujan introduced a measure to amend the Wild and Scenic Rivers Act²⁵⁵ to designate a 30.75-mile segment of the Rio Chama from El Vado Reservoir downstream to elevation 6,283.5 feet above mean sea level as a wild and scenic river; the downstream nine miles would be administered as a scenic river, while the upstream 22 miles (the spectacular Chama Canyon) would be administered as a wild river.²⁵⁶ The last four miles of the downstream segment to be designated by the bill were below the elevation of the spillway crest of Abiquiu Dam and within the reservoir and were thus subject to inundation if and when the reservoir filled and spilled.²⁵⁷ The proposed measure also vested management authority for the 1.7 mile segment of the river (running from 6,283.5 feet above mean sea level to 6,235 feet mean sea level) with the Bureau of Land Management (BLM) and the Forest Service.²⁵⁸ This segment of the Rio Chama lies within the authorized flood and sediment control pool, which was already being controlled for flood protection by the Corps of Engineers.²⁵⁹

The last five miles of the Rio Chama, immediately upstream from Abiquiu Reservoir, were described as the "heart and soul" of the bill by those supporting it.²⁶⁰ These supporters included environmentalists, river

252. *Rio Chama River, New Mexico: Hearing on S. 850 Before the Subcomm. on Pub. Lands, Nat'l Parks & Forests, of the S. Comm. on Energy & Natural Resources, pt. I, 100th Cong. 14 (1987) [hereinafter *Rio Chama Hearings Part I*] (testimony of Lt. Col. Kent Genser, Commander, Albuquerque Dist., U.S. Army Corps of Eng'rs).*

253. *Id.*

254. DEP'T OF ARMY, *supra* note 251.

255. See Wild and Scenic Rivers Act, Pub. L. No. 90-542, 82 Stat. 906 (1968).

256. *Rio Chama Hearings Part I, supra* note 252, at 3-4.

257. *Id.* at 60 (statement of S.E. Reynolds, New Mexico State Engineer).

258. *Id.* at 16-17 (testimony of Lieutenant Colonel Kent Genser).

259. *Id.* at 17 (Testimony of Lieutenant Colonel Kent Genser).

260. See, e.g., *id.* at 143-44 (statement of Phillip Wallin, Vice President, Trust for Public Lands).

recreationists, and adjacent landowners who shared the desire to protect these last five miles and the surrounding land from further expansion of Abiquiu Reservoir.²⁶¹ Designation of this segment of the river as wild and scenic would permanently preclude any use of the Reservoir for any purpose not authorized at the time, including conservation storage.²⁶²

It is important to note the context in which the bill was proposed and the hearings took place. At the time, the system was filled to the brim and the concern was too much water. The rain and snow pack was more than had been seen in New Mexico for perhaps hundreds of years, and the system was so full that Elephant Butte had spilled.²⁶³ The previous severe drought was not recent enough to carry significant weight in many people's memories.²⁶⁴ A bill that would permanently restrict the use of Abiquiu's excess storage capacity was likely to be much more acceptable at that time than it would be today, given such developments as endangered species listings on the Rio Grande, the current drought conditions, and more advanced predictions indicating that current dry conditions are much closer to normal, while the wet years of the 1980s were an anomaly.²⁶⁵

However, **several parties to the hearings did recognize that the climatologic picture at the time should not be taken for granted in passing legislation that would prohibit increased storage at Abiquiu in the future.** After all, drought had crippled New Mexico in the past and would likely do so again, with more extreme effects on an ever-expanding population.²⁶⁶ The City of Albuquerque, the State of New Mexico, and the Corps of Engineers all expressed concern regarding any designation of the lower five miles that would preclude the expansion of uses for Abiquiu reservoir.

It was New Mexico State Engineer Steve Reynolds' position that any designation below elevation 6,307 feet would interfere with the existing authorizations at Abiquiu.

The currently authorized purposes of Abiquiu Reservoir include 555,000 acre-feet for sediment and flood control and 200,000 acre-feet for the storage of San Juan-Chama Project water for a total of 755,000 acre feet. Abiquiu Reservoir is capable of storing that amount of water at elevation 6307. That elevation is a distance of about 1.4 miles upstream of

261. See generally *id.*

262. See *id.* at 62 (testimony of S.E. Reynolds).

263. *Id.* at 42-43 (testimony of Lieutenant Colonel Kent Gonser).

264. *Id.*

265. *Id.*

266. See *id.* at 63 (statement of S.E. Reynolds).

elevation 6283.5, the termination of the wild and scenic river to be designated by Section 1 of the bill.²⁶⁷

Thus, Reynolds read Public Law 97-140 as providing 200,000 acre-feet of space for SJCP water *in addition to* the flood and sediment control space. However, while the legislative history is unclear on this point, the Corps has taken a different position in its operations of the Reservoir. According to the Corps and others, the legislation authorizes the storage of 200,000 acre-feet of SJCP water *within* the flood control space, therefore requiring evacuation of SJCP water in the event that the space is needed for flood control.²⁶⁸

Regardless, the State did not want to be locked into the then-current authorizations at Abiquiu. Therefore, Reynolds proposed the following amendment to the bill in order to keep the wild and scenic designation from encroaching on future uses for the Reservoir: "Nothing in this act shall be construed to be incompatible with the operation of Abiquiu Dam for regulation of river flow for flood and sediment control and water storage for beneficial uses of water."²⁶⁹

The Corps also had concerns regarding the section of the bill that would have vested management authority for the segment between elevations 6,283.5 feet and 6,235 feet with the BLM and the Forest Service. Lieutenant Colonel Kent Gonser testified that,

[i]n operating Abiquiu Reservoir for its currently congressionally authorized purpose of flood control, it would be unwise to have two different agencies, each with a mandate for managing the river under the Wild and Scenic Rivers Act, administering a river which is being controlled for flood protection by a third agency. Abiquiu Reservoir, in order to function as it was intended, needs to be controlled by one agency, the Corps of Engineers, operating within the existing laws and regulations in coordination with all interested parties....²⁷⁰

In addition to the issues pertaining to management and control of the flood pool, the Corps echoed the State's concern that "designation of the last four miles...would adversely affect the potential for added water supply."²⁷¹

The City of Albuquerque also had a large stake in the outcome of the hearings, as Abiquiu was already authorized to store the City's SJCP

267. *Id.* at 61.

268. *Id.* at 174-77 ("Authorizations for Storage at Abiquiu Dam, New Mexico," Exhibit B to statement of Phillip Wallin, Vice President, Trust for Public Lands).

269. *Id.* at 64 (statement of S.E. Reynolds, New Mexico State Engineer).

270. *Id.* at 17.

271. *Id.* at 18.

water and had the potential for expanded storage for City water supplies. The City acknowledged that it did not have any immediate need for storage at Abiquiu and that the cost of such storage space, at the time, outweighed the need.²⁷² However, the lack of current need did not mean that there would never be such a need. Thus, those representing the City implored the legislators to recognize the need to preserve the possibility for additional storage at Abiquiu along with preserving the wild and scenic character of the Rio Chama.

The State and the City ultimately got their wish. The final Act does not apply a wild or scenic designation to the stretch of the river downstream of elevation 6,353 feet. However, it does provide that the segment running from elevation 6,353 feet to 6,283.5 feet is to be afforded the protections "under the Wild and Scenic Rivers Act for rivers listed for study for potential addition to the national wild and scenic rivers system...."²⁷³ These protections apply "until Congress determines otherwise."²⁷⁴ Further, the Corps' worries over management within the flood pool by multiple agencies were not heeded. The final Act provides that the segment of the Rio Chama from elevation 6,283.5 feet downstream to 6,235 feet will be managed jointly by the Corps, the BLM, and the Forest Service.²⁷⁵ The Act does require, however, that neither the management of the first segment as a river under study for potential wild and scenic designation, nor the joint management of the lower segment shall interfere with either the provisions of Public Law 97-140 or any authorized purposes prior to 1988.²⁷⁶

The hearings on the wild and scenic designation of this segment of the Rio Chama are included in the legislative history of Public Law 100-522, authorizing native storage at Abiquiu. Several witnesses at the hearings pointed out that in the near future the City would be putting its SJCP water to full use, and therefore the authorized storage space for such water would not be utilized.²⁷⁷ One way to use this capacity would be to authorize native storage in the unused SJCP space. Although such native storage is not directly mentioned in the hearings, presumably it arose out of a compromise that would allow any unused SJCP space to store native flows. Allowance of native water storage at Abiquiu would likely have assuaged some of the fears of designation opponents that increased conservation storage would be forever precluded as a result of the designation.

272. *Rio Chama River, New Mexico: Hearing Before the Subcomm. on Public Lands, National Parks and Forests of the S. Comm. on Energy and Natural Resources*, 100th Cong. pt. 2, at 73-78 (1987) (letter from L.A. Larranaga, Director, Public Works Dept., City of Albuquerque).

273. *Rio Chama River Act of 1988*, Pub. L. No. 100-633, § 2, 102 Stat. 3320.

274. *Id.*

275. *Id.* § 3(a).

276. *Id.* §§ 2, 3(a)(3).

277. *Rio Chama Hearings Part I*, *supra* note 252, at 18.

In 1984, Los Alamos County obtained a license from FERC to construct, operate, and maintain a hydroelectric power facility at Abiquiu. The Corps included terms in its agreement with Los Alamos County that the time and quantity of releases would be determined by the Corps in order to insure that hydropower would not interfere with Abiquiu's primary purposes. In practical operation, the power plant at Abiquiu is a run-of-the-river facility that only generates power when water is released to serve other purposes.

Finally, beginning in the 1990s, Abiquiu became the subject of much discussion with regard to the endangered Rio Grande silvery minnow and as temporary storage during the prolonged drought that struck the region in the latter part of the 1990s. The complex sequence of litigation, negotiation, interim storage agreements, and Abiquiu's role in a partial settlement are more fully detailed in several other articles in this edition of the *Natural Resources Journal*.

V. THE SAN JUAN-CHAMA DIVERSION

A. History

"[T]he possibility of diverting San Juan River basin waters [across the Continental Divide] into the Rio Chama, a tributary of the Rio Grande," was considered as early as the 1920s.²⁷⁸ Surveys of each of these rivers began in 1933 with what "is known as the Bunger Survey"²⁷⁹ and "resumed in 1936 as part of the Rio Grande Joint Investigations[,] sponsored and coordinated by the Natural Resources Committee."²⁸⁰ The Joint Investigations' primary purpose "was to determine the...facts needed [to] arriv[e] at an equitable" agreement between "Colorado, New Mexico, and Texas on an...allocation of the Rio Grande."²⁸¹ The Investigations thus "established the basis for recognizing, in the Rio Grande Compact, the possibility of a trans-mountain diversion...."²⁸²

Article IX of the Rio Grande Compact²⁸³ provides for such a diversion:

Colorado agrees with New Mexico that in the event the United States or the State of New Mexico decides to construct

278. DEP'T OF INTERIOR, PLAN FOR DEVELOPMENT OF THE SAN JUAN-CHAMA PROJECT 6 (1955).

279. *Id.*

280. *Id.*

281. *Id.*

282. *Id.*

283. Act giving the consent and approval of Congress to the Rio Grande compact signed at Santa Fe, New Mexico, on March 18, 1938, Pub. L. No. 76-96, 53 Stat. 785 (1939).

the necessary works for diverting the waters of the San Juan River, or any of its tributaries, into the Rio Grande, Colorado hereby consents to the construction of said works and the diversion of waters from the San Juan River, or the tributaries thereof, into the Rio Grande in New Mexico, provided the present and prospective uses of water in Colorado by other diversions from the San Juan River, or its tributaries, are protected.²⁸⁴

The Compact further states that,

in the event water from another drainage basin shall be imported into the Rio Grande Basin by the United States or Colorado or New Mexico, or any of them jointly, the State having the right to the use of such water shall be given proper credit therefor[e] in the application of the schedules.²⁸⁵

Once Colorado consented to the construction of a diversion project, the next consideration was the amount to be diverted. This amount fluctuated over time as new information was obtained. The Rio Grande Joint Investigations Report concluded that 350,000 acre-feet of water could be diverted from the San Juan River. However, subsequent investigations, "based upon more reliable stream flow records, resulted in reduced estimates of the quantity of water [that] could be diverted to the Rio Grande basin."²⁸⁶ The 1946 Colorado River Basin Report, issued by Reclamation during the negotiation of the Upper Colorado River Basin Compact, established 300,000 acre-feet as the quantity of water to be considered for the trans-mountain diversion.²⁸⁷ The negotiations of the Upper Colorado River Basin Compact²⁸⁸ resulted in a specific provision allowing delivery of San Juan River water to New Mexico to enable New Mexico to make full use of the water apportioned to it.²⁸⁹ Further studies took into account

284. *Id.* at 790.

285. *Id.*

286. DEP'T OF INTERIOR, *supra* note 278, at 6.

287. *Id.*

288. Act to Grant the Consent of the United States to the Upper Colorado River Basin Compact, Pub. L. No. 81-37, 63 Stat. 31 (1949).

289. *Id.* The Compact provides that,

Subject to the provisions of this Compact, the consumptive use of the waters of the San Juan River and its tributaries is hereby apportioned between the States of Colorado and New Mexico as follows:

The State of Colorado agrees to deliver to the State of New Mexico from the San Juan River and its tributaries which rise in the State of Colorado a quantity of water which shall be sufficient, together with water originating in the San Juan Basin in the State of New Mexico, to enable the State of New Mexico to make full use of the water apportioned to the State of New Mexico by Article III of this Compact, subject, however, to the following:

allowances for decreed water rights and bypasses to maintain a live stream for fishing, recreation, and sanitary purposes, thus reducing the divertible amount to approximately 235,000 acre-feet annually.²⁹⁰

In 1955, the eighty-third Congress considered legislation to authorize the Secretary of the Interior to construct, operate, and maintain the Colorado River Storage Project and participating projects. The San Juan-Chama and Navajo Irrigation Projects were included as participating projects. Authorization for both projects would have been subject to limitations that would have eliminated "regulatory storage on the Rio Chama to insure that the project would not interfere with the delivery of Rio Chama flows, which, under the provisions of the Rio Grande Compact, belong to the downstream users."²⁹¹ Congress ultimately determined that additional studies were necessary before authorization could be given for the two projects.

(a) A first and prior right shall be recognized as to:

(1) All uses of water made in either State at the time of the signing of the Compact; and

(2) All uses of water contemplated by projects authorized, at the time of this signing of this Compact, under the laws of the United States of America whether or not such projects are eventually constructed by the United States of America or by some other entity.

(b) The State of Colorado assents to diversions and storage of water in the State of Colorado for use in the State of New Mexico, subject to compliance with Article IX of this Compact.

(c) The uses of the waters of the San Juan River and any of its tributaries within either State which are dependent upon a common source of water and which are not covered by (a) hereof, shall in times of water shortages be reduced in such quantity that the resulting consumptive use in each State will bear the same proportionate relation to the consumptive use made in each State during times of average water supply as determined by the Commission; provided, that any preferential uses of water to which Indians are entitled under Article XIX shall be excluded in determining the amount of curtailment to be made under this paragraph.

(d) The curtailment of water use by either State in order to make deliveries at Lee Ferry as required by Article IV of this Compact shall be independent of any and all conditions imposed by this Article and shall be made by each State, as and when required, without regard to any provision of this Article.

(e) All consumptive use of the waters of the San Juan River and its tributaries shall be charged under the apportionment of Article III hereof to the State in which the use is made; provided, that consumptive use incident to the diversion, impounding or conveyance of water in one State for use in the other shall be charged to the latter State.

Id. at 40-41.

290. DEPT OF INTERIOR, *supra* note 278, at 7.

291. *Id.* at 8.

The Colorado River Storage Project Act was passed in 1956, absent provisions for the San Juan-Chama Project.²⁹² The Act authorized the construction and operation of dams, reservoirs, and related works for the following purposes:

In order to initiate the comprehensive development of the water resources of the Upper Colorado River Basin, for the purposes, among others, of regulating the flows of the Colorado River, storing water for beneficial consumptive use, making it possible for the States of the Upper Basin to utilize, consistently with the provisions of the Colorado River Compact, the apportionments made to and among them in the Colorado River Compact and the Upper Colorado River Basin Compact, respectively, providing for the reclamation of arid and semi-arid land, for the control of floods, and for the generation of hydroelectric power....²⁹³

The Act also provided that priority should be given to the completion of a planning report on the San Juan-Chama Project. It further provided that, with reference to the San Juan-Chama Project,

storage for control and regulation of water imported from the San Juan River shall (1) be limited to a single off-stream dam and reservoir on a tributary of the Chama River, (2) be used solely for control and regulation and no power facilities shall be established, installed or operated thereat, and (3) be operated at all times by the Bureau of Reclamation of the Department of the Interior in strict compliance with the Rio Grande Compact as administered by the Rio Grande Compact Commission.²⁹⁴

It was not until 1962 that the Act was amended to include the San Juan-Chama as a participating project.

B. Authorization for the San Juan-Chama Project

In the meantime, plans for the San Juan-Chama Project were more fully developed and articulated. From the outset, the Project was considered a multi-purpose endeavor.

The plan would provide an adequate supply of water to satisfy the rapidly growing municipal and industrial require-

292. An Act to Authorize the Secretary of the Interior to Construct, Operate, and Maintain the Colorado River Storage Project and Participating Projects, and for Other Purposes, Pub. L. No. 37, 70 Stat. 105 (1956).

293. *Id.* at 105-06.

294. *Id.*

ments of the Albuquerque metropolitan area, the population center of the Rio Grande basin. It would also supplement the now deficient supplies of some 225,455 acres of irrigable land in the project area, replace depletions occurring in the basin from water consuming conservation practices and other watershed improvement programs and from groundwater pumping. Even without an allocation of water to fish and wildlife purposes, the plan would result in improvement of the recreation and wildlife resources in the Rio Grande basin....²⁹⁵

Along with the Navajo Irrigation Project, the San Juan-Chama Project was also favored for the water it would provide "for the development of oil and gas, coal, uranium, and the many other minerals and resources that are found in...New Mexico...."²⁹⁶

As plans progressed, however, it became clear that the amount of initial diversion would have to be adjusted.

[B]ecause of uncertainty about ultimate requirements in both the Rio Grande and San Juan Basins, and because it is anticipated that a number of years must pass before financing is available for the construction of a full 235,000 acre-foot diversion project, it is not desirable at this time to make final decisions fully allocating the San Juan waters between the two basins.²⁹⁷

Therefore, New Mexico asked for congressional authorization to construct an initial stage having an average annual diversion of not to exceed 110,000 acre-feet to be used for municipal and industrial supplies, tributary irrigation units in northern New Mexico, and supplemental irrigation.²⁹⁸ The municipal and industrial water was, of course, intended primarily for Albuquerque, which was to receive 57,300 acre-feet annually.²⁹⁹

In 1958, Congress considered a bill authorizing the Navajo Irrigation Project and the initial stage of the San Juan-Chama Project.³⁰⁰ For several complicated reasons, including California's objection to both projects, the bill did not pass.³⁰¹ Representatives of that state felt the projects would demand more than New Mexico's entitlement to Colorado River systems water. Additionally, not all interested parties were convinced that

295. DEP'T OF INTERIOR, *supra* note 278, at 29.

296. *Hearings on S. 3648, supra* note 89, at 2 (statement of Clinton P. Anderson, Member, Subcomm. on Irrigation and Reclamation).

297. *Id.* at 19 (letter of December 12, 1956 from John Simms, Governor of New Mexico).

298. *Id.*

299. *Id.* at 7.

300. *See generally Hearings on S. 3648, supra* note 89.

301. *See generally id.* at 153-87.

the Navajo or San Juan-Chama Projects would not adversely affect the proposed Animas-La Plata project in Colorado.³⁰²

Finally, the State of Texas could not be ignored because of its entitlement under the Rio Grande Compact. Congressional documents indicate that Texas did not oppose the San Juan-Chama Project. In fact, negotiations with Texas representatives appear to have been amicable.³⁰³ R.M. Dixon, Chairman of the Texas Board of Water Engineers, testified that Texas was "in the happy position of saying [it did] not oppose the project."³⁰⁴ Texas did insist, however, that the authorizing legislation include certain conditions and provisions. Mr. Dixon detailed these conditions in 1957 as follows:

2. All works of the project shall be constructed so as to permit compliance physically with all provisions of the Rio Grande compact, and all such works shall be operated at all times in conformity with the Rio Grande compact.

3. In event the quantity of imported water should be insufficient to satisfy the full allocation of such water, diversions shall be curtailed in proportion to the amount of water actually imported in any calendar year whenever New Mexico shall have an accrued debit as defined in the Rio Grande compact.

4. (a) Details of project operation essential to the accounting of diverted San Juan River and Rio Grande flows shall be cooperatively developed through the joint efforts of the Rio Grande Compact Commission, the agencies of the affected States, including the State of Texas, and the various project entities. In this connection such actions shall include agreements on a system of gaging devices and measurements program to secure data necessary to determine the present effects of tributary irrigation, as well as present river channel losses.

(b) In the study of hydrologic relationships, three primary reaches shall be involved, namely, (1) the Rio Grande from the Colorado-New Mexico State line to the Otowi gaging station, (2) the combined reach of the Rio Chama and the Rio Grande from El Vado Dam to the Otowi gaging station, and (3) the Rio Grande proper from the Otowi gaging station to Elephant Butte Dam. Secondary reaches shall be established

302. See generally *Navajo Irrigation-San Juan-Chama Diversion, N.M.: Hearings on S. 72 Before the Subcomm. on Irrigation and Reclamation of the S. Comm. on Interior and Insular Affairs, 86th Cong. (1959)* [hereinafter *Hearings on S. 72*] (proposal of four bills similar to session proceeding, however with minor changes).

303. See *Hearings on S. 3648, supra* note 89, at 144-51.

304. *Id.* at 145.

where necessary within the primary reaches and shall include the tributaries on which project development with its attendant exchange of water would occur.

(c) Equations shall be developed representing mathematically the flows at key stations within each reach and multiple or simple correlations shall be run reflecting present conditions for both the primary and secondary reaches established. Similarly, relationships shall be established for "with" project conditions in order that proper losses can be charged and both San Juan-Chama and Rio Grande water users be assured of proper water delivery.

(d) The system of gages and the procedures for establishing streamflow relationships shall be reviewed with the affected States, including the State of Texas, and concerned project interests.

(e) After project construction, continued measurements and continued checking of the relationships shall be made to insure application of proper loss factors and use of proper replacement quantities in project operation.³⁰⁵

As both House and Senate bills were again being considered in 1960,³⁰⁶ new arguments were added as to why the San Juan-Chama Project should be authorized as quickly as possible. For instance, the growing need for water in Albuquerque, "defense installations[,]...and new industrial...uses" were cited.³⁰⁷ The same bill also considered a number of compelling arguments for the Navajo Project.

Finally, in June of 1962, an act authorizing the construction and maintenance of the Navajo Indian Irrigation Project and the initial stage of the San Juan-Chama Project was passed.³⁰⁸ The Act that became law was not so different from the earlier versions; it approved project purposes such as "furnishing water for the irrigation of irrigable and arable lands and for municipal, domestic, and industrial uses, providing recreation and fish and wildlife benefits, and controlling silt, and for other beneficial purposes...."³⁰⁹ Whereas the proposed Act stated that the initial stage of the San

305. *Id.* (testimony of R.M. Dixon, Chairman of the Texas Board of Water Engineers).

306. *Bills to Authorize the Secretary of the Interior to Construct, Operate, and Maintain the Navajo Indian Irrigation Project and the Initial Stage of the San Juan-Chama Project as Participating Projects of the Colorado River Storage Project, and for Other Purposes: Hearing on H.R. 2352, H.R. 2494, and S. 72 Before the Subcomm. on Irrigation and Reclamation of the Comm. on Interior and Insular Affairs, 86th Cong. 1 (1960).*

307. *San Juan-Chama Reclamation Project and Navajo Indian Irrigation Project: Hearings on H.R. 2352, H.R. 2494, and S. 72 Before the Subcomm. on Irrigation and Reclamation of the House Comm. on Interior and Insular Affairs, 86th Cong., 2d Sess. 13 (1960)* (statement of Congressman Joseph H. Montoya).

308. Act of June 13, 1962, Pub. L. No. 87-483, 76 Stat. 96.

309. 43 U.S.C. § 615(ii) (2000).

Juan-Chama Project was to have an annual diversion of one hundred and ten thousand acre-feet of water,³¹⁰ the enacted section provided that

the Secretary shall so operate the initial stage of the project authorized herein that diversions to the Rio Grande Valley shall not exceed one million three hundred and fifty thousand acre-feet of water in any period of ten consecutive years... *Provided, however,* That not more than two hundred and seventy thousand acre-feet shall be diverted in any one year.³¹¹

To address Texas's concerns,³¹² the 1962 Act required the project to comply with all compacts and follow certain accounting procedures for diverted waters:

(c) all works of the project shall be constructed so as to permit compliance physically with all provisions of the Rio Grande compact, and all such works shall be operated at all times in conformity with said compact;

(d) the amount of water diverted in the Rio Grande Basin for uses served by the San Juan-Chama project shall be limited in any calendar year to the amount of imported water available to such uses from importation to and storage in the Rio Grande Basin in that year;

(e) details of project operation essential to accounting for diverted San Juan and Rio Grande flows shall be developed through the joint efforts of the Rio Grande Compact Commission, the Upper Colorado River Commission, the appropriate agencies of the United States and of the States of Colorado, New Mexico, and Texas, and the various project entities. In this connection the States of Texas and New Mexico shall agree, within a reasonable time, on a system of gaging devices and measurements to secure data necessary to determine the present effects of tributary irrigation, as well as present river channel losses: *Provided,* That if the State of Texas shall require, as a condition precedent to such agreement, gaging devices and measurements in addition to or different from those considered by the Department of the Interior and the State of New Mexico to be necessary to this determination, the State of Texas shall pay one-half of all costs of constructing and operating such additional or different

310. *Hearings on S. 72, supra* note 302, at 4.

311. 43 U.S.C. § 615(pp) (2000).

312. *See* Dixon Testimony, *supra* text accompanying note 305.

devices and making such additional or different measurements which are not borne by the United States....³¹³

The State Engineer of New Mexico did not object to this language, but he did suggest that "such language...is not necessary."³¹⁴

C. San Juan-Chama Project Facilities

The initial stage of the San Juan-Chama Project involved three major elements, namely diversion dams and conduits, regulation facilities, and water use facilities (principally for the tributary irrigation units). The regulation facilities consist of Heron Dam and reservoir, owned and operated by Reclamation.³¹⁵ Early plans for the project described how these facilities would work:

The regulation facilities would comprise the proposed Heron No. 4 dam and reservoir, located on Willow Creek near its confluence with the Rio Chama, and the enlargement of the outlet works of the existing El Vado Dam. Heron No. 4 reservoir, which is the "single offstream dam and reservoir on a tributary of the Chama River" referred to in section 2 of the act of April 11, 1956, would have a capacity of about 400,000 acre-feet at normal water surface elevation. The enlargement of the El Vado outlet would permit passing of Heron No. 4 releases through El Vado Reservoir unimpeded in order to insure compliance with the Rio Grande compact.³¹⁶

Operating the reservoirs in this way would insure that Rio Chama water was not commingled with imported water while in storage. Willow Creek flows would pass through Heron immediately, and "only when excessive flood flows from Willow Creek entered the reservoir would Willow Creek

313. Act of June 13, 1962, Pub. L. No. 87-483, § 8, 76 Stat. 96, 98.

314. *Hearings on S. 3648*, *supra* note 89, at 146.

315. El Vado Reservoir is not covered in detail in this article. It is discussed in depth in two other articles in this issue of the *Natural Resources Journal*. Joshua Mann, *A Reservoir Runs Through It: A Legislative and Administrative History of the Six Pueblos' Right to Store "Prior and Paramount Water" at El Vado*, 47 NAT. RESOURCES J. (2007); Viola Sanchez, *Carryover Storage of Indian Prior and Paramount Water in El Vado*, 47 NAT. RESOURCES J. (2007).

316. *Hearings on S. 3648*, *supra* note 89, at 59-60 (statement of N.B. Bennett, Jr., Chief, Division of Project Development, Bureau of Reclamation). Many Reclamation reports refer to the Heron Reservoir as Heron No. 4. This apparently is due to the fact that early San Juan-Chama plans considered the possibility of two Heron reservoirs, nos. 3 and 4. No. 4 became what today is known simply as Heron Reservoir.

water be stored."³¹⁷ A 1955 report estimated the maximum storage capacity of the proposed Heron reservoir to be about 400,000 acre-feet.³¹⁸

Heron was to be the "terminal regulatory" facility, capable of storing large amounts of San Juan water in the short term such as those anticipated for Albuquerque.³¹⁹ However, as will be seen, Heron may not be used for the long-term storage of such water. Other reservoirs must therefore satisfy this need.

Early Reclamation reports did mention Abiquiu reservoir as one of these "other reservoirs."

Heron No. 4 reservoir was included as the terminal regulatory reservoir in the plan in lieu of the Abiquiu reservoir contemplated for construction by the Corps of Engineers as a part of the Middle Rio Grande Project, because of downstream opposition to the use of reservoirs located on the main stem of the Rio Chama or the Rio Grande for storage of imported San Juan River water and because of the less complicated operating procedures under the Rio Grande Compact. It should be recognized at this time, however, that Abiquiu reservoir probably will be constructed with adequate capacity to serve in lieu of Heron No. 4 reservoir and a good opportunity will exist for its use at a great savings in cost.³²⁰

Although the legislation specified that storage for imported water should be provided in a single reservoir, these early reports mentioned the possibility of making alternate storage available in the potential Abiquiu reservoir on the mainstem of the Rio Chama.³²¹

As plans for the project began to solidify, the Rio Grande Compact continued to be a part of the discussion. Specifically, accounting under the Compact was central to the debate.

The problem of compliance with the Rio Grande Compact resolves itself into assessing the effect the operation of the San

317. DEP'T OF INTERIOR, *supra* note 278, at 31.

318. DEP'T. OF INTERIOR, BUREAU OF RECLAMATION, 4 SAN JUAN-CHAMA PROJECT, app. E, at E-13 (Nov. 1955).

319. The plan provides for supplying the City of Albuquerque with 50,000 acre-feet of water annually, by the year 1990, in conformity with a resolution of the Albuquerque City Commission. This amount of water represents roughly the increased demands of the City for municipal and industrial uses between the years 1960 and 1990. While the water supply studies assumed the demand would start at 6,000 acre-feet annually in 1960 and increase uniformly over a 30 year period, the project plan provides for supplying the full amount of 50,000 acre-feet annually whenever it is desired by the City. *See* Flood Control Act of 1948, Pub. L. No. 81-858, 62 Stat. § 1175, 46-47.

320. DEP'T OF INTERIOR, *supra* note 278, app. D, vol. II, at D3-1.

321. *Id.* app. A, vol. I, at A-35.

Juan-Chama Project has on the Otowi index supply for determining New Mexico's obligation to deliver water under the Rio Grande Compact. This further resolves itself into determining (1) the depletions above Otowi caused by project operation, and (2) the project water passing Otowi which would not be there except for releases of imported water.

...

The water to be stored in the reservoirs on the tributary units will be physically Rio Grande water, and the flow at Otowi would be reduced as a result of such storage. Releases of water from Heron No. 4 Reservoir will be made concurrent with the diversion of water to storage on the tributary units in order that the flow at Otowi will not be so reduced.... [W]henver water is stored in the tributary unit reservoirs and concurrent releases of imported water in Heron No. 4 Reservoir are made in an equal amount, the interests of none of the parties to the Rio Grande Compact would be adversely affected under any circumstances.³²²

On November 7, 1962, the Rio Grande Compact Commissioners, Steve Reynolds for New Mexico and Louis A. Scott for Texas, agreed to the above-stated system, along with a number of gauging stations and measurements.³²³

D. Subsequent Developments

The 1962 Act authorized an \$85,828,000 appropriation specifically for the San Juan-Chama Project.³²⁴ Shortly after passage of the 1962 Act, President Johnson approved the Public Works Appropriation Bill for the Fiscal Year ending June 30, 1963. The Bill provided \$550,000 in advance planning funds for the initial stage of the San Juan-Chama Project.³²⁵ In December of 1963, President Johnson approved a similar bill for the fiscal year ending June 30, 1964, which provided \$1,600,000 for initial San Juan-Chama construction.³²⁶ Appropriations for the project continued to accumulate over the next eight years.

Repayment contracts between the Middle Rio Grande Conservancy District and the United States and between the City of Albuquerque and the United States were also executed during this period. Similar repayment

322. DEP'T OF INTERIOR, BUREAU OF RECLAMATION, DEFINITE PLAN REPORT SAN JUAN-CHAMA PROJECT 8, 16 (May 1963, revised June 1964).

323. *Id.* at 9-13. See also *Hearings on S. 3648*, *supra* note 89, at 145-46 (statements of Steve Reynolds and R.M. Dixon).

324. See Act of June 13, 1962, Pub. L. No. 87-483, 76 Stat. 96, 99.

325. See Act of October 24, 1962, Pub. L. No. 87-880, 76 Stat. 1216.

326. See Act of December 31, 1963, Pub. L. No. 88-257, 77 Stat. 844.

contracts between the United States and various New Mexico towns or conservancy districts have since been negotiated; however, only the former two are considered here.

The repayment contract between the MRGCD and the United States was executed on June 25, 1963.³²⁷ All early plans for the San Juan-Chama Project had anticipated that the project would furnish "supplemental irrigation water" to the irrigable lands of the District.³²⁸ The water would be released from Heron Reservoir as needed and diverted to the District lands through the existing irrigation system, a major element of which was MRGCD's El Vado Dam.

Consistent with these plans, the MRGCD, in its contract with the United States, agreed to the "enlargement and modification of the outlet works of El Vado Dam as required by the project plan."³²⁹ The contract also provided for a rate of repayment of the District's obligation and stated that the district's share should not exceed "20.55 percent of the total water supply available from the project in any year for all purposes."³³⁰

The MRGCD contract also allowed storage of water in El Vado Reservoir:

To the extent permissible under existing agreements and so long as the United States is operating El Vado Reservoir, it shall accept from the District and store in El Vado Reservoir any waters the District is entitled to receive under the provisions of this contract and for which space is available, for release as requested by the District.³³¹

A similar contract between the City of Albuquerque and the United States was executed on June 25, 1963.³³² In line with a long-proposed possible use of San Juan-Chama water for municipal purposes,³³³ the Albuquerque contract provided project costs to be allocated to the City along with a schedule for repayment. However, more important here are the contract clauses relating to storage of the City's water. The contract

327. Amendatory Contract Between the United States of America and the Middle Rio Grande Conservancy District, New Mexico, Contract No. I78r-423, Clause 6 (June 25, 1963) [hereinafter Amendatory Contract].

328. *San Juan-Chama Reclamation Project and Navajo Indian Irrigation Project: Hearings on H.R. 2552, H.R. 6541, and S. 107 Before the Subcomm. on Irrigation and Reclamation of the H. Comm. on Interior and Insular Affairs, 87th Cong. 102 (1961)* [hereinafter *Hearings on H.R. 2552, H.R. 6541, and S. 107*].

329. Amendatory Contract, *supra* note 327.

330. *Id.* clause 7(a).

331. *Id.* clause 10.

332. Contract Between the United States of America and the City of Albuquerque, New Mexico, Contract No. 14-00-500-810, Clause 6(b) (July 6, 1965).

333. See DEP'T OF INTERIOR, *supra* note 278 and accompanying text.

states that “[p]roject storage is designed to yield 53,200 acre-feet of water annually at the outlet of Heron Dam for City water supply purposes.”³³⁴ Further, “the City shall take its municipal water requirements at Heron Dam at the point designated by the Contracting Officer...[and]...[t]he responsibility of the United States shall cease at the point of delivery.”³³⁵ Thus, as with MRGCD water, once the water has been delivered to the City from Heron, the City is responsible for its utilization and storage. Most importantly, the contract limits long-term storage of Albuquerque water in Heron Reservoir, stating that “[r]ights to use water vested in the City...shall be allowed on an annual basis, and no credits covering any unused water shall be allowed to carry over to any subsequent calendar year.”³³⁶ In practice, this means that no Albuquerque water may be stored in Heron for more than one year. The provision prevents any one contracting party from preempting the storage capacity of Heron.³³⁷ Without an amendment to the City’s contract, longer-term storage in Heron may not be considered. Such an amendment could be considered at some future time, in view of the large capacity of Heron and clear intent that the reservoir be used for “storage for meeting future needs.”³³⁸ However, such an amendment is not likely, since the limitation has worked well to protect all contracting parties.

The contract with the City of Albuquerque was amended in 1965,³³⁹ but the amendments only addressed a reduction in the City’s repayment obligation and its water allocation as a response to the passage of the Cochiti Reservoir Bill. That bill, passed the previous year,³⁴⁰ authorized the Secretary of the Interior to make San Juan-Chama Project water available for a permanent pool for fish and wildlife and recreation purposes at Cochiti Reservoir.

1. Carryover Storage at Heron

While San Juan-Chama water makes up the vast majority of flows into Heron, a small amount of native water – around 15,000 acre-feet per year – flows into the reservoir.³⁴¹ However, currently Heron is authorized to store only imported San Juan-Chama water. Further, the following

334. Contract between the United States of America and the City of Albuquerque, *supra* note 332.

335. *Id.* clause 18(j).

336. *Id.* clause 18(e).

337. Interview with Steve Reynolds (Apr. 10, 1979).

338. *San Juan-Chama Project: Hearings Before the Subcomm. on Energy Research and Water Resources of the Sen. Comm. on Interior and Insular Affairs*, 94th Cong., at 13 (1975).

339. Amendatory Contract between the United States of America and the City of Albuquerque, New Mexico, Contract No. 14-00-500-810 (July 6, 1965).

340. Act of March 26, 1964, Pub. L. No. 88-293, 78 Stat. 171.

341. DEP’T OF INTERIOR, *supra* note 278, at 31–32.

provision in the authorizing legislation has been interpreted to mean that no carry-over storage is authorized at Heron from year to year.³⁴² "(d) the amount of water diverted in the Rio Grande Basin for uses served by the San Juan-Chama project shall be limited in any calendar year to the amount of imported water available to such uses from importation to and storage in the Rio Grande Basin in that year."³⁴³

Despite the interpretation of this provision as preventing carry-over storage, Reclamation has granted waivers in the past allowing the water to be evacuated as late as April of the following year.³⁴⁴ If the provision really operates as it has been interpreted, then there is a serious question as to the legality of these waivers. However, if the waivers are legal, then it is difficult to see why carry-over storage should be disallowed as a general matter. An initial review of the legislative history suggests that the issue was not directly addressed and, indeed, indicates that the provision could be subject to other interpretations.

The provision at issue was actually an amendment suggested by the State of New Mexico that was specifically shaped in response to proposed amendments submitted by the State of California. California submitted several official recommendations, one of which states the following:

Any authorizing legislation provides that none of the waters of the Colorado River system shall be exported from the natural basin of that system by means of works, constructed under authority of this act, or extensions or enlargements of such works, to the Rio Grande Basin for consumptive use outside of the State of New Mexico, and no such water shall be made available for consumptive use in any State not a party to the Colorado River compact by exchange or substitution or by use of return flow; nor shall the obligations of the State of New Mexico under the provisions of the Rio Grande compact be altered by any operations of any project for transmountain diversion of Colorado River system water into the Rio Grande Basin.³⁴⁵

Thus, California was focused on making sure that all imported water would be put to beneficial use within New Mexico and would not be allowed to go to other states in violation of various compact constraints.

342. See Bureau of Reclamation, Albuquerque Area Office, Operations Fact Sheet, Heron Dam and Reservoir, http://www.usbr.gov/uc/albuq/water/SanJuanChama/Reservoirs/fs/sjc_heron.html (last visited June 4, 2007).

343. Act of June 13, 1962, Pub. L. No. 87-483, § 8, 76 Stat. 96, 97.

344. See UPPER RIO GRANDE WATER OPERATIONS REVIEW DRAFT EIS, ch. II, at 5, available at <http://www.spa.usace.army.mil/urgwops/feis/Volume%201/URGWOPS%20FEIS%20Chapter%202.pdf>.

345. *Hearings on S. 3648, supra* note 89 (statement of Sen. Clinton P. Anderson).

Another one of California's proposed amendments placed an aggregate limit on the amount of water that could be diverted in any ten-year period because of an asserted concern over the impact of extreme variation in diversion amounts on other basin works.³⁴⁶

New Mexico was opposed to any aggregate limit on the amount that could be diverted in any ten-year period and felt that the interests of California and the Upper Basin States were adequately protected by the Colorado River Compact and Upper Colorado River Basin Compact.³⁴⁷ At the 1958 hearings before the Senate Subcommittee on Irrigation and Reclamation, Governor Edwin L. Mechem of New Mexico responded to California's proposed amendments as follows:

The main storage reservoir of the San Juan-Chama project will be constructed in the Rio Grande Basin on the east side of the Continental Divide. It will be necessary, in years when the San Juan River has a good water supply, to export and store amounts of water substantially greater than the average annual diversion in order that the needs of water users under the project can be met in years when little water is available for exportation. While the amount of water exported may vary widely from year to year, the annual amount drawn from storage will, of course, be fairly uniform.

In her comments California appears to contend that water exported from the Upper Basin must be accounted as a consumptive use in the year exported even though the water is stored out of the basin for use in a later year. ... California's implication is that, when consumptive uses in the Upper Basin approach the limit allowed by the 1922 compact, it would be necessary to reduce in-basin consumptive use in years when larger than average amounts of water are exported for out-of-basin storage.

New Mexico takes the position that, even if article III (a) of the compact were construed to set the upper limit of beneficial consumptive use in any year rather than the average, it is perfectly clear that water which has been exported and stored has not been applied to beneficial consumptive use any more than water stored within the basin. Water cannot properly be accounted as beneficially consumed under the provisions of the compact until it has been released from storage for use or is actually consumed by evaporation.³⁴⁸

346. *Id.* at 162.

347. *Id.* at 184 (statement of Governor Mechem).

348. *Id.*

These statements make it clear that New Mexico intended to store its imported water from year to year. However, Governor Mechem appears to have read California's proposed amendment limiting the amount of diversion to a ten-year aggregate as precluding carryover storage. Both the ten-year aggregate limit and New Mexico's proposed amendment were included in the final version of the Act, creating confusion for those trying to deduce what type of operations are authorized by the Act. It does not make sense that New Mexico would have proposed an amendment that would have prevented carryover storage at Heron reservoir from year to year. Is that provision modified by California's proposed aggregate limit? Or does it operate to ensure that all water diverted will be put to beneficial use within New Mexico?

There are certainly many questions lurking in this legislation that are not adequately clarified by cursory examinations of the murky legislative history. To really answer these questions will take a thorough comparison of all of the various compacts to which the Act is subject and a broader examination of the history of the San Juan-Chama Project. What is clear, however, is that the interpretation thus far accepted as to the authorization of carryover storage at Heron is not a given. There is certainly room for debate, particularly upon further probing of the various governing compacts.

Furthermore, if Reclamation were to take the position that carryover storage is authorized at Heron, a whole host of problems would be unleashed, not the least of which might be questions over ownership of the stored water. Would that water belong to the contractors? Would it be available for silvery minnow use? The battles over these issues would likely be fierce. For the moment, however, they remain at least temporarily stifled by the general acceptance of the interpretation prohibiting carryover storage.

E. The Use of San Juan-Chama Water by Non-Colorado Compact States

In its objections to the San Juan-Chama Project, California first raised the question of whether New Mexico could use any San Juan-Chama water to pay off debts to Texas. In its official comments to the then-proposed project, California made three recommendations concerning protections to be included in the authorizing legislation.³⁴⁹ The second recommendation, of concern here,³⁵⁰ stated,

349. *Hearings on S. 72, supra* note 302, at 31-34.

350. The other recommendations were as follows:

1. In the event the San Juan-Chama and Navajo projects are authorized, the authorizing legislation provides specifically that the projects shall not impair

Any authorizing legislation provides that none of the waters of the Colorado River system shall be exported from the natural basin of that system by means of works, constructed under authority of this act, or extensions or enlargements of such works, to the Rio Grande Basin for consumptive use outside of the State of New Mexico, and no such water shall be made available for consumptive use in any State not a party to the Colorado River compact by exchange or substitution or by use of return flow; nor shall the obligations of the State of New Mexico under the provisions of the Rio Grande compact be altered by any operations of any project for transmountain diversion of Colorado River system water into the Rio Grande Basin.³⁵¹

New Mexico Governor Mechem responded to this recommendation. He first made assurances that the San Juan-Chama Project would fully comply with the Rio Grande Compact.³⁵² As a guarantee of such compliance, Governor Mechem cited the cost of installation and operation of several gauging stations included in the San Juan-Chama Project total cost estimate. Additionally, in response to the portion of the recommendation that sought to limit the use of water outside New Mexico, Governor Mechem pointed out that,

[i]n the instance of almost every possible upper basin transmountain diversion there are downstream States, not parties to the Colorado River compact, which have rights to a portion of the in-basin waters and, therefore, substitution or exchange of imported water for in-basin water in which other States may have rights is inescapable.³⁵³

Clearly, California's position was that New Mexico would violate the Colorado River Compact should one drop of return flow from imported Colorado River water pass to another state. But, stated Mechem, since the

in either quality or quantity the rights of the State of California in and to the waters of the Colorado River.

...

3. Comprehensive studies be undertaken by the Department of the Interior to ascertain the effects of the proposed San Juan-Chama and Navajo projects, as well as other future water-development projects on the quality of the waters of the Colorado River.

Id.

351. *Id.* at 32.

352. *Id.*

353. *Id.* at 33.

Colorado River Compact provides for transmountain diversion projects, "any commonsense construction of its provisions" permits this to happen.³⁵⁴

All three of California's recommendations were incorporated into proposed amendments to the San Juan-Chama bill³⁵⁵ and explained in hearings by Raymond Matthew, Chief Engineer of the Colorado River

354. *Id.*

355. *Hearings on S. 3648, supra* note 89, at 164 (attachments to letter from Raymond Matthew, Chief Engineer, State of California). Proposed amendment No. 3 provided:

"SEC. — (a). The use of water, including that diverted from the Colorado River system to the Rio Grande Basin, through works constructed under authority of this Act, shall be subject to and controlled by the Colorado River compact, the Upper Colorado River Basin compact, the Boulder Canyon Project Act, and the Mexican Water Treaty (Treaty Series 994), and shall be included within and shall in no way increase the total quantity of water to the use of which the State of New Mexico is entitled and limited under said compact, statute, and treaty, and every contract entered into under this Act for the storage, use, and delivery of such water shall so recite.

"(b). All works constructed under authority of this Act, and all officers, employees, permittees, licensees, and contractees of the United States and of the State of New Mexico acting pursuant thereto and all users and appropriators of water of the Colorado River system diverted or delivered through the works constructed under authority of this Act and any enlargements or additions thereto shall observe and be subject to said compact, statute, and treaty, as hereinbefore provided, in the diversion, delivery, and use of water of the Colorado River system, and such condition and covenant shall attach as a matter of law whether or not set out or referred to in the instrument evidencing such permit, license, or contract and shall be deemed to be for the benefit of and be available to the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming and the users of water therein or thereunder by way of suit, defense, or otherwise in any litigation respecting the waters of the Colorado River system.

"(c). None of the waters of the Colorado River system shall be exported from the natural basin of that system by means of works constructed under authority of this Act, or extensions and enlargements of such works, to the Rio Grande River Basin for consumptive use outside of the State of New Mexico, and no such waters shall be made available for consumptive use in any State not a party to the Colorado River compact by exchange or substitution or by use of return flow; nor shall the obligations of the State of New Mexico under the provisions of the Rio Grande River compact (53 Stat. 785), be altered by any operations of any project for transmountain diversion of Colorado River system water into the Rio Grande Basin.

"(d). No right or claim of right to the use of the waters of the Colorado River system shall be aided or prejudiced by this Act, and Congress does not, by its enactment, construe or interpret any provision of the Colorado River compact, the Upper Colorado River Basin compact, the Boulder Canyon Project Act, or the Mexican Water Treaty or subject the United States to, or approve or disapprove any interpretation of, said compacts, statute, or treaty, anything in this Act to the contrary notwithstanding."

Id.

Board of California, Los Angeles. The Board expressed doubt as to whether the San Juan River's long-term average flow would be sufficient for the projects and whether New Mexico's entitlement to water under the Colorado River Compact would be sufficient to satisfy all proposed project uses.

According to Matthew, the portion of the proposed amendments that included California's second recommendation was a result of New Mexico's debt to Texas under the Rio Grande River Compact at the time.³⁵⁶ This amendment guaranteed that New Mexico could not supplement its payment of the Texas debt with water from the project. The Board felt that this foreclosure was necessary because the Colorado River Compact would be violated if "the proposed diversion from the San Juan River were to result in more water passing beyond the boundaries of New Mexico than would occur in the absence of such diversion."³⁵⁷

In response to these proposed amendments, and specifically to California's second recommendation, Steve Reynolds, New Mexico State Engineer and Secretary of the Interstate Stream Commission, gave assurances that New Mexico intended to comply fully with both the Colorado River and the Rio Grande Compacts.³⁵⁸ And, in reiterating and expanding upon the earlier statements of Governor Mechem, Reynolds challenged the practicability of the recommendation.

Any transmountain diversion results in commingling imported waters with in-basin waters. When the waters are once commingled the imported water cannot be used without involving, to some degree, substitution or exchange with in-basin water.

...

New Mexico maintains her right to substitute or exchange Colorado River water for Rio Grande water in which Texas may have a right.³⁵⁹

Reynolds also stated that any problem caused by the commingling of water could be overcome by measuring and managing the imported water in such a manner that "its equivalent would be fully consumed within the state."³⁶⁰

The proposed amendment incorporating California's second recommendation was not included in early versions of the San Juan-Chama bill that passed the House and Senate. However, California continued to submit this and other amendments based on the arguments described

356. *Id.* at 170.

357. *Id.*

358. *Hearings on S. 72, supra* note 302, at 93.

359. *Id.* at 94.

360. *Id.*

above.³⁶¹ These amendments were again rejected in committee, but in their place was put a new section, proposed by Senator Kuchel of California. This section provided as follows:

In the operation and maintenance of all facilities, authorized by Federal law and under the jurisdiction and supervision of the Secretary of the Interior, in the basin of the Colorado River, the Secretary of the Interior is directed to comply with the applicable provisions of the Colorado River compact, the Upper Colorado River Basin compact, the Boulder Canyon Project Act the Boulder Canyon Project Adjustment Act, and the treaty with the United Mexican States, in the storage and release of water from reservoirs in the Colorado River Basin. In the event of the failure of the Secretary of the Interior to so comply, any State of the Colorado River Basin may maintain an action in the Supreme Court of the United States to enforce the provisions of this section, and consent is given to the joinder of the United States as a party in such suit or suits, as a defendant or otherwise.³⁶²

The inclusion of this section was significant in removing the impasse between New Mexico and California and evoked the conciliatory remark from Senator Kuchel that "the people of New Mexico have a right to use every drop of water which the Colorado River compact gives them...."³⁶³

Kuchel's section made several of California's proposed amendments unnecessary, though it did not deal specifically with California's second recommendation, on which New Mexico maintained its position that any limitation providing that waters could not be used in any other state was "totally unacceptable." The inclusion of such a provision in any San Juan-Chama bill would "impair New Mexico's Compact rights and delay her from developing or making full use of her Compact allocation of the waters of the Upper Colorado system for many decades."³⁶⁴

That limitation was not included in the bill, and California's allegations that New Mexico's entitlement for the projects was insufficient were not followed. The section proposed by Senator Kuchel remains in the

361. *Navajo Indian Irrigation Project and San Juan-Chama Project: Hearings on S. 107 Before the Subcomm. on Irrigation and Reclamation of the S. Comm. on Interior and Insular Affairs, 87th Cong., 1st Sess., 50-58 (1961).*

362. 107 CONG. REC. 4995 (1961).

363. *Id.* at 4996.

364. *Hearings on H.R. 2552, H.R. 6541 and S. 107, supra note 328, at 74 (statement of Thomas O. Olson, First Assistant Attorney General of New Mexico, and John A. Bliss, New Mexico Commissioner, Upper Colorado River Commission).*

Act today as section 14 and has not been amended.³⁶⁵ This section, however, does not cover the Rio Grande Compact or place any limitations on its enforcement.

As to the slightly different question of whether San Juan-Chama water may be used to pay Texas for New Mexico debits, the answer is found in the 1922 Colorado River Compact. Section 2F of this Compact would prohibit using San Juan-Chama waters to pay a water debt to a non-Colorado River Basin state. Further, Senator Kuchel's amendment makes clear that withdrawals from the San Juan are subject to the law of the Colorado River. Once the water is diverted into the Rio Grande Basin thanks to the San Juan-Chama Project, it remains part of New Mexico's apportionment of the waters of the Colorado for use in the Rio Grande Basin. However, as Steve Reynolds' statement indicates, the problem of commingling could be overcome by measuring the imported water in such a manner that its equivalent would be fully consumed within the state. Further, that water is still subject to the law of gravity, which has not yet been repealed by any Act of Congress.

In the late 1990s, Heron became central to the litigation regarding Reclamation's discretion to release water for the silvery minnow. This litigation is fully detailed in several other articles in this edition of the *Natural Resources Journal*.

VI. LITIGATION INVOLVING THE RESERVOIRS

A. Litigation Involving the Rio Grande Compact

As described in the material on Elephant Butte, the dispute among claimants to the waters of the Rio Grande has a long history.³⁶⁶ One of the early results of this dispute was, of course, the Mexican Treaty of 1906, under which the United States agreed to deliver water to Mexico. The delivery was to occur in the bed of the Rio Grande at a point above the City of Juarez where the head works of the Acequia Madre, or Old Mexican Canal, is located.³⁶⁷ Elephant Butte Dam was constructed in part to fulfill this delivery requirement.

365. The few amendments that have been made to the 1962 Act relate only to the Navajo Irrigation Project and provide compensation for loss of grazing rights, funds for roads, and the like.

366. For in depth discussions of the negotiations and history leading up to the Rio Grande Compact, see Raymond A. Hill, *The Development of the Rio Grande Compact of 1938*, 14 NAT. RESOURCES J. 163 (1974), and Littlefield, *supra* note 15.

367. Convention Between the United States and Mexico, Equitable Distribution of the Waters of the Rio Grande, art. 1, U.S.-Mex., May 21, 1906, 34 Stat. 2953.

Because the Treaty and Reservoir contributed to a decreasing water supply, New Mexico, Texas, Colorado, and the United States each appointed a commissioner to study the situation.³⁶⁸ Negotiations between these commissioners resulted in the Rio Grande Compact of 1929. It "became effective upon its ratification, later that year, by the legislatures of the three States and by Congress."³⁶⁹ All parties agreed that the purpose of the Compact was "to prevent in the future controversies over the waters of each state, and to provide for the water to which each state is entitled from the interstate streams, so that litigation as to water rights may be prevented in the future."³⁷⁰

The Compact's major feature provided for "a moratorium [on lawsuits] for a 5-year period or until June 1, 1935, during which the three states, assisted by the United States, might work out all water problems involved and reach final agreement, subject, of course, to approval by Congress."³⁷¹

In October of 1935, however, Texas was granted leave to file a bill in equity against the State of New Mexico and the Middle Rio Grande Conservancy District.³⁷² Texas based its suit on two grounds:

[F]irst, that New Mexico had violated the Compact of 1929 by impairing the water supply in the Elephant Butte Reservoir through excessive diversions and through injurious increase of the salt contents of the water; and second, that such excessive diversions and increase of salt contents were in violation of the rights of Texas water users, under the general doctrines of the Supreme Court and of water law in the southwest.

This action by Texas was precipitated by the storage of water in El Vado Reservoir on Rio Chama in 1935, a year of deficiency of the supply of water in Elephant Butte Reservoir resulting from less than the normal runoff in the Rio Grande in preceding years. El Vado Reservoir had been constructed pursuant to a plan developed by the Chief Engineer of the Middle Rio Grande Conservancy District following an extensive investigation of conditions in the Middle Rio Grande Valley, made from 1926 to 1928 by the U.S. Bureau of

368. See AGUA URBAN STUDY, INSTITUTIONAL AND LEGAL CONSTRAINTS AND CONSIDERATIONS AFFECTING THE ADMINISTRATION OF WATER RESOURCES IN THE ALBUQUERQUE GREATER URBAN AREA 121-33 (1978).

369. Hill, *supra* note 366, at 167 (quoting NATURAL RESOURCES COMMITTEE, 75TH CONG., REGIONAL PLANNING PART VI—THE RIO GRANDE JOINT INVESTIGATION IN THE UPPER RIO GRANDE BASIN IN COLORADO, NEW MEXICO, AND TEXAS, 1936-1937 (1938)).

370. H.R. REP. NO. 70-1738, at 1 (1928).

371. S. REP. NO. 71-581, at 1 (1930).

372. *Texas v. New Mexico*, 296 U.S. 547 (1935).

Reclamation under a cooperative agreement with that District.³⁷³

Later that year, the Supreme Court granted a motion to appoint a Special Master.³⁷⁴ The Master, Charles Warren of Washington, D.C., was directed to make findings of fact and conclusions of law along with a recommendation for a decree. Following the submission of his report, New Mexico and Texas stipulated that "the general program of measurements of streamflow, of canal diversions and canal waste, of drain discharge, of the quality of river water, and of groundwater fluctuations carried out in 1936 as part of the Rio Grande Joint Investigation"³⁷⁵ should be held in abeyance until October 1937.³⁷⁶

In late 1935, a conference of the National Resources Committee and the Rio Grande Compact Commission was held in Santa Fe. Those attending the conference adopted a resolution stating

[t]hat the National Resources Committee, through its Water Resources Committee, be requested, in consultation with the members of the Rio Grande Compact Commission, to arrange immediately for such investigation (1) of the water resources of the Rio Grande Basin above Fort Quitman, (2) of the past, present, and prospective uses and consumption of water in such Basin in the United States, and (3) of opportunities for conserving and augmenting such water resources by all feasible means, as will assist the Rio Grande Compact Commission in reaching a satisfactory basis for the equitable apportionment of the waters of the Rio Grande Basin in the United States above Fort Quitman, as contemplated by such Rio Grande Compact.³⁷⁷

The investigation continued through July 1937. The results of this investigation gave all concerned parties a better understanding of the problems of equitable apportionment by the time negotiations for the new compact commenced.³⁷⁸

When the negotiations opened in Santa Fe in September of 1937, each state presented its position.³⁷⁹ In brief, Colorado wanted a storage project within the state for Rio Grande water, New Mexico wanted a San

373. Hill, *supra* note 366, at 168.

374. *Texas v. New Mexico*, 298 U.S. 644 (1935).

375. Hill, *supra* note 366, at 168.

376. *Texas v. New Mexico*, 300 U.S. 645 (1936) (hearings before the Special Master were further deferred until April 1, 1938 or such date as he might determine, *Texas v. New Mexico* 302 U.S. 658 (1937)).

377. Hill, *supra* note 366, at 169-70.

378. *Id.*

379. *Id.* at 171-74.

Juan diversion along with protection of Middle Rio Grande Conservancy District rights, and Texas wanted a guaranteed specific quantity of water delivered from Elephant Butte. These positions, together with the complete data collected by the Rio Grande Joint Investigation, formed the bases for the delivery schedules in the second Rio Grande Compact³⁸⁰ signed in Santa Fe on March 18, 1938. The delivery schedules set out each State's entitlements and obligations as well as a system of debits and credits for water accounting.³⁸¹

Although the primary purpose of the 1938 Compact was the equitable apportionment of the waters of the Rio Grande, many other subjects were covered.³⁸² These included provisions for the construction and operation of additional reservoirs above Elephant Butte Reservoir. In general, the 1938 Compact adhered to the principles of the 1929 Compact, "designed to provide for the maximum beneficial use of water in the basin of the Rio Grande."³⁸³

In October of 1939, the first major litigation involving the 1938 Compact was dismissed by the U.S. Supreme Court without a written opinion.³⁸⁴ The dismissal was based on the Special Master's report, which stated that the case had been settled. Costs were assessed, including compensation and expenses of the Special Master. One-half was to be paid by Texas and one-half by New Mexico and the Middle Rio Grande Conservancy District.

During this time, the U.S. Supreme Court decided one case that can be applied to the Rio Grande Compact. In *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*,³⁸⁵ Hinderlider, State Engineer of Colorado, was charged with depriving the Ditch Company of their water rights through his administration of the La Plata River Compact, entered into by Colorado and New Mexico and consented to by Congress. When the La Plata's flow was so low that it could not be divided, both states agreed to a system of administering the Compact that distributed all of the river to each state for alternating ten-day periods. In upholding this system, the Supreme Court stated that,

380. For a more detailed account of how each state's schedule was arrived at, see *id.* at 175-84.

381. See AGUA URBAN STUDY, *supra* note 368, at 122-27. See also Articles III, IV, VII, and VIII of the Rio Grande Compact of 1938, 53 Stat. 785 (1939), reprinted in N.M. Stat. § 72-15-23 (1978).

382. For a detailed discussion of these other articles, see Hill, *supra* note 366.

383. *Id.* at 198.

384. *Texas v. New Mexico*, 308 U.S. 510 (1939) (All earlier phases of the *Texas v. New Mexico* litigation are reported in 296 U.S. 547; 297 U.S. 693, 698; 298 U.S. 639, 644; 300 U.S. 645; 302 U.S. 658; and 304 U.S. 551.).

385. 304 U.S. 92 (1937).

[w]hether 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.³⁸⁶

B. Subsequent Compact Litigation

In 1952, Texas brought a second original suit in the U.S. Supreme Court.³⁸⁷ This suit was a result of New Mexico's continued increase in accumulated debit: as of December 31, 1951, New Mexico had accumulated a debit of 331,800 acre-feet, which had increased to an estimated debit of 453,200 acre-feet by December 31, 1952.³⁸⁸ The Court granted leave to file a bill of complaint on April 28, 1952, and a Special Master was appointed in December of the same year. The Special Master's report of March 15, 1954³⁸⁹ advised that "'the absence of the United States, an indispensable party because of the rights of the Indians,' called for dismissal of the suit unless Texas's prayer for relief were amended or unless 'the existing situation' were found to be changed after an invitation to the Government 'to submit a statement of its views as to its indispensability.'"³⁹⁰ The plaintiffs' motion for leave to amend the prayer of its complaint was referred to John Raeburn Green, Special Master.³⁹¹ He recommended that the prayer be granted and that the United States be found not to be an indispensable party.³⁹² Despite this recommendation, the complaint was dismissed on February 25, 1957³⁹³ for failure to list the United States as an indispensable party acting mainly for the Pueblo Indians of New Mexico.³⁹⁴ Again, the Court did not write an opinion.

386. *Id.* at 106.

387. *Texas v. New Mexico*, 343 U.S. 932 (1952).

388. General Plan and Drainage, Middle Rio Grande Project; Rio Grande Basin, New Mexico; United States Department of the Interior, August 1953, C-19, vol. 1B (on file with the Albuquerque Planning Office of the Bureau of Reclamation).

389. *Texas v. New Mexico*, 347 U.S. 925 (1954).

390. T.R. WITMER, DOCUMENTS ON THE USE AND CONTROL OF THE MATTERS OF INTERSTATE AND INTERNATIONAL STREAMS, H.R. DOC. NO. 90-319, at 290 (1968).

391. *Texas v. New Mexico*, 348 U.S. 805 (1954).

392. *Id.* at 946.

393. *Texas v. New Mexico*, 352 U.S. 991 (1957).

394. *Id.* All earlier phases of the *Texas v. New Mexico* litigation are reported in 343 U.S. 932; 344 U.S. 906; 347 U.S. 925; 348 U.S. 805; 348 U.S. 946; 349 U.S. 942; 350 U.S. 858; 350 U.S. 984.

New Mexico's debit status ultimately changed and improved greatly due to a variety of factors,³⁹⁵ although by the time the Texas suit was dismissed in 1957, New Mexico's accrued debit was 529,400 acre-feet.³⁹⁶ While New Mexico's deliveries were improving, Colorado's were declining. At the end of 1965, Colorado had accrued a debit of 939,900 acre-feet.³⁹⁷ A fight between Texas and Colorado was inevitable.

In the meantime, other cases indirectly involving the Rio Grande Compact arose in the 1950s. In *Martinez v. Maverik County Water Control & Improvement District No. 1*,³⁹⁸ a class of plaintiffs claimed that during 1933, the defendants had taken Rio Grande water before it reached the complainants, thereby depriving them entirely of its use. The Fifth Circuit refused to entertain the suit on the basis that the action was not a true class suit, so that judgment would be binding only on those parties before the court, and that every question of law presented was one of state law. Although the court did not expressly rely on it, one of the grounds for dismissal submitted by the defendant stated that,

[t]he Rio Grande being a navigable stream, the disposition of whose waters as between Mexico and the United States has been determined by treaty, they are not subject to private ownership or control but are governed by "treaty provisions regulating the division, use and distribution"; that... "no additional use of any kind was to be made of the waters" ...and that the same circumstances were "recognized in the compacts between the State of Texas and Colorado and Texas and New Mexico...."³⁹⁹

The same year, a Fifth Circuit district court decided *El Paso County Water Improvement District No. 1 v. City of El Paso*, a case that dealt more directly with the Rio Grande Compact.⁴⁰⁰ The case involved a suit by the District and others, including the United States, against the City of El Paso to determine rights in Rio Grande waters. The District and the United States contended that the waters in question had been committed to the needs and uses of a federal reclamation development, namely the Rio Grande Project. The plaintiffs' main contention was that land owners in the Rio Grande Project territory, pursuant to the water appropriations made by the United States, had acquired a vested right to use the water, superior to any claims

395. See S.E. Reynolds & Philip B. Mutz, *Water Deliveries Under the Rio Grande Compact*, 14 NAT. RESOURCES J. 201 (1974).

396. *Id.* at 203.

397. Vince F. Taylor, *Water for Texas*, TEXAS BAR J. 343, 384 (May 1967).

398. 219 F.2d 666 (5th Cir. 1955).

399. *Id.* at 668 (citation omitted) (quoting Treaty of November 14, 1944, 59 Stat. 1219).

400. *El Paso County Water Improvement Dist. No. 1 v. City of El Paso*, 133 F. Supp. 894 (D.C. Tex. 1955).

by the City. El Paso maintained that Project water entering Texas became subject to the laws of Texas and, therefore, they had a superior right.

In denying El Paso's claims, the court first held that a state, Texas, could not assert sole control over an international watercourse, in that case, the Rio Grande.⁴⁰¹ After finding that the "strongest bulwark" of the plaintiff's position was the Rio Grande Compact, the court considered its effect.

This Compact has a number of peculiar provisions. For example, the water New Mexico must pass to Texas is delivered not where the two States meet, but at San Marcial, New Mexico, more than 100 miles above the point where the Rio Grande leaves New Mexico. This delivery is made into the reservoir of the Elephant Butte Dam, the principal structure of the Rio Grande Project. Some of this water eventually goes to Mexico. The Compact, instead of leaving the Texas share of the water open for disposition under the general water statutes of Texas, plainly directs same for irrigation in the Project. A large part of the Project lands are in New Mexico and, consequently, this water delivered to Texas goes to irrigate not only Texas lands, but also New Mexico lands in the Project. The apparent reason for all this is that when the Compact was negotiated, the Rio Grande Project, in all of its far flung works and physical properties was, and for some time had been, superimposed on the Rio Grande and its adjoining valleys all the way from the Elephant Butte Reservoir in New Mexico, to a point below Fabens in Texas and that fait accompli colored the whole Compact as between New Mexico and Texas. Perhaps the problem was handled in the only practicable way.⁴⁰²

At any rate, the court found that the Compact committed Texas water to the Rio Grande Project and that the Compact was binding on Texas and all its inhabitants, including El Paso.

The court also considered many other issues relating to whether there were any situations in which the city would be entitled to appropriate Rio Grande water. But it was clear that, absent some such situation, the city must yield to the Project and Compact. All findings of the court were affirmed on other grounds by the Fifth Circuit Court of Appeals.⁴⁰³

The next major litigation involving the Rio Grande Compact was the anticipated action of Texas against Colorado, brought about by

401. *Id.* at 906-07.

402. *Id.* at 907.

403. *El Paso County Water Improvement Dist. No. 1 v. City of El Paso*, 243 F.2d 927 (5th Cir. 1957), *cert. denied*, 355 U.S. 820 (1957).

Colorado's accumulated debit to Texas. In 1967, Texas and New Mexico were granted leave to file a bill of complaint in the U.S. Supreme Court and Colorado was given 60 days in which to answer.⁴⁰⁴ The request of Texas and New Mexico for leave to reply to Colorado's counterclaim and to otherwise plead was granted in March of 1968.⁴⁰⁵ In May of 1968, the United States was allowed to intervene as plaintiff and the joint motion of Texas, New Mexico, and Colorado for continuance was granted.⁴⁰⁶ At the time this continuance was granted, the three states had worked out an agreement outlining Colorado's obligations under the Rio Grande Compact. As long as Colorado met its obligations and complied with the agreement, no further action was to be taken in this matter. When Elephant Butte spilled in 1985, Texas and New Mexico filed a motion to dismiss the case, which was granted.⁴⁰⁷

In 1977, a case that dealt only marginally with the Rio Grande Compact was decided. In *Holguin v. Elephant Butte Irrigation District*,⁴⁰⁸ landowners brought suit against the District for a declaratory judgment to establish their water rights on land located within the geographical limits of the irrigation district. The supreme court of New Mexico dismissed the action on the basis that the United States was an indispensable party to the suit. In reaching this conclusion, the court found that the landowners were attempting to validate unauthorized appropriations of water that affected the obligations of the United States in its administration of the Rio Grande Project and Compact. Therefore, questions of law and fact would be raised upon which the United States would have to be heard.

In 1983, the issue of ground water came to the fore, bringing with it the question of apportionment below Elephant Butte Reservoir. New Mexico had enacted a statute that prohibited pumping of ground water in New Mexico for use in another state.⁴⁰⁹ Texas, in defense of its reliance on New Mexico ground water, responded in a lawsuit, claiming that the statute violated the commerce clause of the U.S. Constitution.⁴¹⁰ New Mexico asserted the defense that Texas's groundwater pumping would

404. *Texas v. Colorado*, 389 U.S. 1000 (1967).

405. *Texas v. Colorado*, 390 U.S. 933 (1968).

406. *Texas v. Colorado*, 391 U.S. 901 (1968).

407. *Id.*, cause dismissed, 474 U.S. 1017 (1985).

408. 575 P.2d 88 (N.M. 1977), overruled by *C.E. Alexander & Sons, Inc. v. DEC Int'l, Inc.* 811 P.2d 899 (N.M. 1991) (overruling rule articulated by *Holguin* court concerning indispensable parties).

409. NMSA § 72-12-19 (1978) (repealed 1983) ("No person shall withdraw water from any underground source in New Mexico for use in any other state by drilling a well in New Mexico and transporting the water outside the state or by drilling a well outside the boundaries of New Mexico and pumping water from under lands lying within the boundaries of New Mexico....").

410. *City of El Paso v. Reynolds*, 563 F. Supp. 379 (D.N.M. 1983).

violate the Rio Grande Compact because it would disturb the river. Therefore, it was the Compact, and not the statute that the court must assess, because the statute merely implemented the Compact.⁴¹¹ The court, however, dismissed this argument, noting that "the success of defendants' Rio Grande Compact defense depends on the validity of two factual assertions: that the Compact (1) apportions the surface water of the Rio Grande between New Mexico and Texas and (2) controls the use of ground water hydrologically connected to the River."⁴¹² The court found neither assertion to be true. "[T]he Rio Grande Compact does not apportion the surface waters of the Rio Grande below Elephant Butte between New Mexico and Texas. [Rather, the] Compact apportions the river by requiring New Mexico to make deliveries at Elephant Butte according to a quantified in-flow, out-flow schedule."⁴¹³ Finding that the Compact did not govern the question at hand, the court went on to assess the constitutionality of the New Mexico statute and found it to be unconstitutional.⁴¹⁴ New Mexico then adopted a statute requiring the New Mexico State engineer to consider whether such transfers would be contrary to the conservation of water within the state and not otherwise detrimental to the public welfare of the citizens of New Mexico.⁴¹⁵

C. Litigation Involving Operation of Project Facilities

In 1986, Elephant Butte Irrigation District (EBID) filed a complaint in New Mexico state court against the New Mexico State Engineer, the United States, the City of El Paso, and all known and unknown claimants to water rights in the Rio Grande from Elephant Butte Dam to the Texas state line. EBID claimed a right to appropriate water superior to all defendants and the complaint sought a stream adjudication and an injunction preventing the state engineer from allowing appropriation of Rio Grande water until completion of the stream adjudication. There have been too many procedural twists to discuss this litigation fully, but currently the adjudication is on-going in the Third Judicial District and the State has been re-aligned as a plaintiff.⁴¹⁶

411. *Id.* at 381-82.

412. *Id.* at 384.

413. *Id.* at 386.

414. *Id.*

415. NMSA 1978, § 72-12B-1 (1985). New Mexico subsequently amended this statute and Texas challenged the constitutionality again. The District Court of New Mexico rejected Texas's argument and the case was eventually settled. *City of El Paso v. Reynolds*, 597 F. Supp. 694 (D.N.M. 1984).

416. Order on United States Motion to Amend Complaint, *New Mexico ex rel. Office of the State Engineer v. Elephant Butte Irrigation Dist.*, No. CV 96-888 (filed Apr. 2, 2003).

An excellent summary of the issues surrounding the adjudication and associated proceedings is contained in *United States v. City of Las Cruces*:

The procedural history of the New Mexico proceeding is complex but a summary is helpful. Numerous parties attempted to dismiss the case, including the United States and the New Mexico State Engineer. The United States' three motions to dismiss all asserted that it had not waived sovereign immunity under the McCarran Amendment because the scope of the lower Rio Grande stream adjudication, from Elephant Butte Dam to the Texas state line, did not constitute a "river system." See *Elephant Butte Irrigation Dist. v. Regents of N.M. State Univ.*, 115 N.M. 229, 849 P.2d 372, 374 (App. 1993). All of the motions were denied. See *id.* The United States also supported the City of El Paso's attempt to remove the case to federal district court in New Mexico. In 1989, however, the district court remanded the case back to state court.

The New Mexico State Engineer also sought to escape the stream adjudication. He filed a motion to dismiss based on venue grounds. See *id.* The New Mexico state district court granted the motion, but the New Mexico Court of Appeals reversed. See *id.* at 381. The State Engineer then filed another motion to dismiss, arguing, among other things, that the state court did not have personal jurisdiction over Project water users in Texas who were indispensable parties. The state court denied the motion on April 2, 1997. The State Engineer then ceased contesting the stream adjudication, was realigned as a plaintiff, commenced the hydrographic surveys required by N.M. Stat. Ann. § 72-4-17, and filed a fourth amended complaint.⁴¹⁷

After the United States failed in its several attempts to dismiss the case, it sued to quiet title to all Rio Grande Project water in federal district court for the District of New Mexico. The United States asserted in its quiet title complaint "that it acquired title to all Project water by filing notices with the New Mexico Territorial Engineer in 1906 and again in 1908."⁴¹⁸ The federal district court refused to exercise jurisdiction over the action and dismissed it. The dismissal was appealed and vacated by the Tenth Circuit, although the circuit court agreed with the reasoning of the district court that it was within the district court's discretion to decide that state court was a better forum for the matter. In part, the court reasoned:

417. *United States v. Las Cruces*, 289 F.3d 1170, 1177-78 (10th Cir. 2002) (footnote omitted).

418. *Id.* at 1176.

There are thousands of water users in New Mexico who may assert a right to Project water just as New Mexico State University and Stahmann Farms have in this case. Their claims will be adjudicated in the comprehensive New Mexico stream adjudication. By declining jurisdiction, the district court avoided a piecemeal approach to adjudicating the rights of the United States vis-a-vis innumerable water users in New Mexico. The district court acted within its discretion in determining that the United States' claims against the named defendants and other water users would be better settled in a unified proceeding.⁴¹⁹

The Tenth Circuit articulated several key legal concepts:

State law governs the United States' acquisition of water rights. Federal reclamation law provides that the United States must act in accordance with state law to acquire title to water used in reclamation projects.⁴²⁰

Generally, the water rights of the federal government are also adjudicated in state proceedings such as a stream adjudication. The McCarran Amendment, codified at 43 U.S.C. § 666, articulates the policy of the federal government to make state courts the primary forum for water rights adjudications. The amendment waives the United States' sovereign immunity in certain state water cases. *See* 43 U.S.C. § 666.⁴²¹

The Court was not persuaded by the United States' argument that the suit was about interstate or international treaty obligations, giving rise to issues of federal law. The Circuit Court agreed with the district court's concern that if the federal court declared relative rights to Project water, it could cause friction between the federal and state courts. "This court agrees with the district court that a federal declaration of rights could encroach upon the state courts' traditional role as arbiter of water rights disputes."⁴²² On April 3, 2003, the state Third Judicial District Court ruled that it has jurisdiction to provide a forum to determine the United States' interests.⁴²³

One outstanding issue is the federal government's role in the transfer of Rio Grande Project water rights from irrigation districts to municipal and industrial use. EBID and Las Cruces take the position that

419. *Id.* at 1187.

420. *Id.* at 1176.

421. *Id.* at 1177 (footnote omitted).

422. *Id.* at 1190.

423. *New Mexico ex rel. Office of the State Eng'r v. Elephant Butte Irrigation Dist.*, No. CV 96-888 (2003).

the United States lacks the authority to be involved with transfers or conversion because EBID has repaid its construction obligation.

Another issue is the continuing disagreement about how the Rio Grande Project should be operated. At the time of this update, litigation is before the Western District of Texas El Paso Division Court.⁴²⁴ El Paso County Water Improvement District No. 1 (EPCWID) has filed a claim for declaratory and injunctive relief against the Elephant Butte Irrigation District (EBID), the Department of the Interior (DOI), and Reclamation.⁴²⁵ EPCWID seeks a declaratory judgment confirming and validating the rights and obligations of the parties to several inter-related contracts: "a. the 1938 Contract; b. the EBID Contract; c. the EPCWID Contract; and d. the Stipulated Contract."⁴²⁶ EPCWID claims that these contracts provide the basis for water allocation between Texas and New Mexico under the Rio Grande Compact.

As support for its claims, EPCWID asserts that currently "no operational plan has been concluded among the United States, EBID and EPCWID. The Bureau of Reclamation therefore has allocated and distributed Project water on an *ad hoc* basis."⁴²⁷ Further, this *ad hoc* basis, the D-2 curve, is not in accordance with the above contracts and EPCWID is harmed by use of the D-2 curve, because it results in delivery of less water than EPCWID is entitled to by contract.⁴²⁸

The four contracts relied on by the EPCWID lay out what the EPCWID claims are the proper bases for allocations. First, the EPCWID relies on a February 16, 1938 contract between the EBID and the EPCWID. This contract limited increase in irrigated acreage to three percent in either irrigation district.⁴²⁹ Further, the contract stated that, in years of shortage, distribution should be made "in the proportion of 67/155 thereof to the lands within El Paso County Water Improvement District No. 1, and 88/155 to the lands within the Elephant Butte Irrigation District."⁴³⁰ Second, the EPCWID relies on a 1979 Contract between the United States and the EBID (EBID Contract). Under this contract, the United States "will make allocation of available stored project water among Elephant Butte Irrigation District, El Paso County Water Improvement District No. 1, and the Republic of Mexico."⁴³¹ Further, "[t]he United States will ensure delivery of

424. Complaint, El Paso County Water Improvement Dist. No. 1 v. Elephant Butte Irrigation Dist., No. EP07CA0027 (W.D. Tex. filed Jan. 22, 2007).

425. *Id.*

426. *Id.* ¶ 20.

427. *Id.* ¶ 23.

428. *Id.* ¶ 24.

429. *Id.* ¶ 14.

430. *Id.* ¶ 14 (citing contract between the EBID and the EPCWID, Feb. 16, 1938).

431. *Id.* ¶ 16, 6a (citing contract between the EBID and the United States, Feb. 26, 1979).

allocated irrigation water...and will make a prompt accounting of said water to the District."⁴³² Finally, Section 6d of this contract states,

In case of extraordinary climatic conditions or major accident to the District's distribution facilities, the United States, at its discretion, may adjust spills of allocated water from the District works....A detailed operational plan will be concluded between the United States and the District setting forth procedures for water delivery and accounting.⁴³³

The EPCWID also relies on a third contract between the United States and the EPCWID dated March 14, 1980 (EPCWID Contract) that includes identical provisions to the EBID Contract. Finally, the EPCWID relies on a stipulated contract that was the result of a judgment in a 2006 suit for the adjudication of water rights in the upper Rio Grande segment of the Rio Grande Basin within the state of Texas.⁴³⁴ This judgment, in conclusion of law number 3, confirmed EPCWID's 1938 contract right to

use an aggregate amount of water from the Rio Grande not in excess of 376,000 acre-feet per year from the following sources:

- a. All rights which Certificate Holders acquired or perfected pursuant to Certified Filing No. 123
- b. 67/155 of all water stored in Project Storage...and legally available for release to the Elephant Butte Irrigation District and Claimant District....
- c. Any waters entering Texas in the bed of the Rio Grande from New Mexico, including, but not limited to, return flows from New Mexico's use and groundwater discharged into the Rio Grande.⁴³⁵

Conclusion of law number four states the following:

In addition to the water diverted pursuant to Conclusion of Law No. 3, Claimants are authorized to divert from the Rio Grande up to 234,022 acre-feet per year of measurable...effluent...discharged into the Rio Grande by Claimant District....⁴³⁶

Finally, conclusion of law number five reads as follows:

In addition to the water diverted pursuant to Conclusions of Law Nos. 3 and 4, Claimants are authorized to divert from the Rio Grande an average of 1,899 acre-feet of water per

432. *Id.* ¶ 16, 6b.

433. *Id.* ¶ 16, 6d.

434. *Id.* ¶ 18 (citing Cause No. 2006-3219 in the District Court of El Paso County, Texas).

435. *Id.* ¶ 18(3).

436. *Id.* ¶ 18(4).

annum, when averaged over any five-year period, from tributary inflows of the Rio Grande between the Texas/New Mexico state line and the Riverside Diversion Dam.⁴³⁷

Therefore, this stipulated contract categorizes use rights based on the source of water subject to diversion by the EPCWID.

The EPCWID asks that the United States implement an operational plan envisioned by the contracts rather than continue with the ad hoc administration of Project water.⁴³⁸ According to the EPCWID, under section 6d of both the EBID and the EPCWID Contracts, "the United States has proposed various operational plans to EBID and EPCWID from 1984 until the present time, but no operational plan has been concluded...."⁴³⁹ The EPCWID claims that the resulting ad hoc administration, the Bureau's D-2 curve method of water allocation, is not in accordance with the EBID contract, the EPCWID contract, or the stipulated contract.⁴⁴⁰

Under the method of allocation used, all Project water delivered by the United States to EPCWID is charged by the United States against EPCWID's diversion allocation, regardless of the source or quality of such water and without protecting EPCWID from the degradation in water quality and the utility of such water that results from return flow. Such method is in violation of the requirement of the EPCWID Contract and of the Stipulated Contract, that the United States allocate the legally available stored Project water in Elephant Butte and Caballo reservoirs.⁴⁴¹

The EPCWID claims that the D-2 curve harms the EPCWID by reducing water supplies; delivering water of lesser quality, utility, and value than water delivered to the EBID; and reducing water available for storage by allowing EBID to divert water in excess of entitled amounts.⁴⁴² In addition to declaratory relief, the EPCWID incorporates all above allegations to seek an injunction.

In a nutshell, the EPCWID claims that "[t]he Bureau of Reclamation's failure to allocate legally available stored Project water and its failure to recognize and allow the carry over credit for the year of 2007 that it had promised to EPCWID will each result in irreparable harm to EPCWID and its users."⁴⁴³ The complaint alleges that the D-2 curve was

437. *Id.* ¶ 18(5).

438. *Id.* ¶ 23.

439. *Id.*

440. *Id.* ¶ 24.

441. *Id.* ¶ 25.

442. *Id.* ¶ 26.

443. *Id.* ¶ 30.

prepared in 1984 by the Bureau as an attachment to a proposed operating agreement that was never executed by any of the effected parties.⁴⁴⁴ At some point after the parties failed to execute, the Bureau negotiated an operating agreement with EPCWID and assured EPCWID that it would "allocate the legally available Project water as required by the EPCWID and EBID contracts and comply with the negotiated operating agreement even if EBID refused to approve or join in an operating agreement."⁴⁴⁵ The complaint further alleges that the Bureau has failed to comply with this negotiated agreement, instead opting to employ the D-2 curve originally contemplated but never agreed to by EPCWID.⁴⁴⁶

Finally, EPCWID alleges that the Bureau improperly allows diversions of ground water from the Mesilla aquifer resulting in harm to EPCWID users. EPCWID claims that the Bureau fails to "limit or account for such groundwater depletions."⁴⁴⁷ Therefore, "EBID is allowed to divert and use more Project water than EBID is entitled to use."⁴⁴⁸ As a result, EPCWID is harmed because users are unable to use water to which they are entitled.⁴⁴⁹ Thus, EPWCID asks the court to

- a) adjudicate, confirm, validate, and decree that the United States is required by the 1938 Contract, the EBID Contract, the EPCWID Contract, and the Stipulated Contract to allocate the legally available stored Project water in accordance with section 6.a. of the EPCWID Contract and insure delivery of Project water supply, as defined in section 1.g. of the EPCWID Contract, in accordance with section 6.b. of the EPCWID Contract;
- b) compel the United States to allocate and insure the delivery to EPCWID of 67/155th of the Project water that is available for release from Project Storage for EBID and EPCWID, and 67/155th of all other Project Water reaching the bed of the Rio Grande between Caballo Dam and American Diversion Dam;
- c) compel the United States to allocate and deliver Project water in accordance with applicable contracts, and prohibit EBID from using any Project water allocated by the United States to EPCWID; and
- d) grant such other relief to EPWCID as the Court deems to be just and proper.⁴⁵⁰

444. *Id.* ¶ 31.

445. *Id.*

446. *Id.*

447. *Id.* ¶ 32.

448. *Id.*

449. *Id.*

450. *Id.* Prayer for Relief.

Both the United States and EBID filed motions to dismiss the complaint on jurisdictional grounds and these motions are still pending as of November 2007. In June 2007, Reclamation issued a Record of Decision on an environmental assessment for the proposed agency action of implementing adjusted operating procedures for the Rio Grande Project.⁴⁵¹ The Record of Decision approves a finding of no significant impact for revised operating procedures that is essentially an accounting change to accomplish the following:

- Water allocations to Project water users would be made using [an] EBID proposed method which provides EPCWID and Mexico water deliveries at their river headings based on historical river performance and decreases EBID's allotment to make up for any losses in performance of the Rio Grande which may have been caused by changes in hydrologic conditions in New Mexico. This [is] an accounting change which does not impact the overall amount of water utilized by the Rio Grande Project.
- Each district may carry-over in Project storage a maximum of 20 percent of the current year's unused final allocation in a given year and will be able to accumulate and maintain a carry-over water account of a maximum amount of 60 percent of a full allocation.
- In accordance with Rio Grande Compact provisions, Reclamation would utilize an average release from Project storage of 790,000 acre feet, when available, as the amount needed to provide a full allocation to EBID, EPCWID, and Mexico at their respective accounting points.
- The allocation for Mexico would continue to be calculated using the total amount of water available for release from storage, including any carry-over water.
- Monitoring of deliveries to all water users and flows in the Rio Grande would be improved and closely coordinated with the Districts.
- The effects of the City of El Paso's Canutillo well field would continue to be monitored.⁴⁵²

The new procedures are proposed for a five year period and Reclamation hopes this will conclude in an Operating Agreement signed by all parties. The EPCWID, the EBID, the Department of the Interior, and Reclamation filed a joint motion to vacate the trial court's scheduling order

451. U.S. DEP'T OF INTERIOR, BUREAU OF RECLAMATION, ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT, BUREAU OF RECLAMATION FEDERAL RIO GRANDE PROJECT NEW MEXICO-Texas OPERATING PROCEDURES, DONA ANA, SIERRA, AND SOCORRO COUNTIES, NEW MEXICO AND EL PASO COUNTY, TEXAS (2007).

452. *Id.* at 5.

and trial setting citing Reclamation's new operating procedures.⁴⁵³ They agree that,

[o]n June 4, 2007, the Bureau of Reclamation signed a Record of Decision implementing such new operating procedures which address certain facts and issues covered in Plaintiff's previously filed Complaint. Defendant United States has not, to date, filed or submitted its administrative record supporting its decision to implement new operating procedures for the Project. Until Defendant United States files its administrative record, Plaintiff El Paso No. 1 and Defendant EBID cannot determine the sufficiency thereof, and cannot determine whether to seek supplementation thereof, and/or whether discovery of factual matters beyond the administrative record is necessary.⁴⁵⁴

EPCWID and EBID are waiting for Reclamation to file its administrative record. How the administrative proceeding will affect the court proceeding is unclear as of this writing. Finally, there are significant jurisdictional matters to be decided that could result in the eventual dismissal of the suit.

VII. CONCLUSION

Considering their importance to the three states, there has been very little litigation involving the Rio Grande reservoir facilities. When a dispute has arisen between New Mexico, Texas, and Colorado regarding the Rio Grande Compact, the more desirable method of resolving matters has been through negotiations between the states involved. In recent years, water shortages have led to Endangered Species Act litigation involving Reclamation and Corps project facility operations.⁴⁵⁵ The silvery minnow litigation likely represents only the beginning of conflict as a result of water shortages on the Rio Grande and in the West. Currently, population is on the increase and water is becoming increasingly scarce. Pressure for greater flexibility in the operation of the Rio Grande reservoirs will likely continue to build because of the considerable challenges facing the basin: the need to adjudicate water rights, increased demand for water supply for a growing

453. Joint Motion to Vacate Scheduling Order and Trial Setting at 2, *El Paso County Water Improvement Dist. No. 1 v. Elephant Butte Irrigation Dist. et al*, No. EP-07-CV-0027 (PRM) (W.D. Tex. filed Nov. 13, 2007) (on file with author).

454. *Id.*

455. *Rio Grande Silvery Minnow v. Keys*, 469 F. Supp. 2d 973 (D.N.M. 2002); *Rio Grande Silvery Minnow v. Keys*, 356 F. Supp. 2d 1222 (D.N.M. 2002); *Rio Grande Silvery Minnow v. Keys*, 333 F.3d 1109 (10th Cir. 2003); *Rio Grande Silvery Minnow v. Keys*, 469 F. Supp. 2d 973, 995-96 (D.N.M. 2002).

population, projected changes in the volume and timing of runoff due to climate change, and protection of a treasured riparian ecosystem. Colorado, Texas, Elephant Butte Irrigation District, and others will view any proposed changes in reservoir operations with great caution. Negotiation, legislation, and, potentially, litigation involving the reservoirs, their authorizations, and the Rio Grande Compact will continue to play a central role in the water future of the Rio Grande Valley.