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The Metropolitan Water District of Southern California

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California Colorado River Issues

Warren J. Abbott*

I. INTRODUCTION

The waters of the Colorado River have perhaps been the subject of more writing and more litigation than any other major water source in this country. The fights over Colorado River water rights continue today. Justice Black, in an oft-quoted passage, described this river ably in *Arizona v. California*,

The Colorado River itself rises in the mountains of Colorado and flows generally in a southwesterly direction for about 1,300 miles through Colorado, Utah, and Arizona and along the Arizona-Nevada and Arizona-California boundaries, after which it passes into Mexico and empties into the Mexican waters of the Gulf of California. On its way to the sea it receives tributary waters from Wyoming, Colorado, Utah, Nevada, New Mexico, and Arizona. The river and its tributaries flow in a natural basin almost surrounded by large mountain ranges and drain 242,000 square miles, an area about 900 miles long from north to south and 300 to 500 miles wide from east to west - practically one-twelfth the area of the continental United States excluding Alaska. Much of this large basin is so arid that it is, as it always has been, largely dependent upon managed use of the waters of the Colorado River System to make it productive and inhabitable . . . .

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* Former General Counsel, The Metropolitan Water District of Southern California. A.B. Harvard, 1953; J.D., U.C.L.A., 1958. In my capacity with Metropolitan I have dealt with most of the issues discussed in this paper, and thus, I disclose any bias that may exist. The views expressed herein, however, are my own and may not be the same as those of my client.

2. *Id.* at 552.
To this should be added the incredible development and use of this river in California alone. It is a major source of domestic and industrial water for over 14,000,000 people on the coastal plain of Southern California, and is the source of life for the rich agricultural valleys of Imperial, Palo Verde and Coachella.

The history of the waters of the Colorado River is the story of how man has tamed this river and developed a unique legal system to allocate its waters between and within basins. This system consists of a variety of legal documents including interstate compacts, an international treaty, acts of Congress, state legislative actions, Supreme Court decrees, and regulations of and contracts with the Secretary of the Interior. This collection of regulatory measures is popularly referred to as "The Law of The River," and it is both the source and the solution to the many allocation problems today.

The heart of the problems facing the Colorado River Basin states and their water users is the simple fact that the river is oversubscribed. The statesmen who built the foundation of the Law of the River, the Colorado River Compact, did so on an assumption that the average annual flow of the river system was greater than it in fact is. For example, the California Colorado River Commission, in a 1931 report, estimated an annual surplus of four million acre-feet available to the Lower Basin states of Arizona, California and Nevada. A more recent report of the Colorado River Board of California anticipates the need for 1.25 million acre-feet of additional water annually to meet the existing Lower Basin apportionments.

The purpose of this article is to examine this compendium of legal documents, the Law of the River, and to measure it against four

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6. The author knows of no single book that contains all the documents comprising the
legal problem areas that are of modern significance to California and, indeed, the entire Colorado River Basin: (1) Proposed interstate and interbasin sales or transfers of Colorado River water, using the well publicized Galloway proposal for illustrative purposes; (2) proposed intrastate sales or transfers of Colorado River water within California, here using the example of potential savings of great quantities of water by conservation measures in the Imperial Valley; (3) proposed sale or transfer of Indian Reservation Colorado River water rights, which involves not only the first two problems, but also raises questions of whether such water rights may be used off the reservations and whether such rights are subject to the Law of the River at all; and (4) the problems of meeting the obligations of the United States-Mexico Water Treaty in both quantity and quality.

II. THE LAW OF THE RIVER

A. Overview

To understand the continuing legal issues relating to the use of Colorado River water, it is necessary to have some background in that curious collection of treaties, compacts, and acts of Congress that we call "The Law of The River." Thus, this section of the article will analyze the portions of documents that bear on those issues affecting California. It will, however, leave to others the discussion of such subjects as the effect, if any, of state anti-export statutes on transfers of Colorado River water and the role state law plays in the appropriation of Upper Basin water as contrasted with the Lower Basin scheme.7

It is worthy of mention, at this point, that many people have suggested that portions of the Law of the River be changed and modernized to achieve social or economic goals, such as facilitating "water marketing."8 The purpose of this article, however, is to treat the issues in light of what the law is now, with, in a few areas, the


7. See, e.g., New Courses For The Colorado River, supra note 5.
8. Id. Particularly, the reader should see the essays by White, at 221-23, and by Getches and Meyers, The River of Controversy: Persistent Issues, at 51.
author's interpretation of the law now. At the same time, it should be recognized that if at any time the affected parties and institutions all agree, a change can be made in a particular provision of the Law of the River, or a provision can be waived. Whether any changes should even be recommended is beyond the scope of this article. The article proceeds on the assumption that some parties wish to act in relation to the use of Colorado River water in some manner not clearly authorized by the Law of the River and without securing the consent of all of the affected parties. Further, it is not the intent of this article to pass judgment on whether good public policy supports any changes in the law in this area.

B. The Colorado River Compact

The Colorado River Compact is the cornerstone to the Law of the River and was intended to meet or assist in meeting several Colorado River Basin needs. The Lower Basin states, consisting of Arizona, Nevada and California, desperately needed river regulation, flood control and water storage for development. The Upper Basin, consisting of Colorado, New Mexico, Utah, Wyoming and a portion of Arizona, also needed storage for development. Primarily, however, the Upper Basin states were concerned about California's plans, particularly the growing coastal area of Los Angeles, to appropriate waters of the Colorado River system. Los Angeles and its surrounding areas was studying the possibility of transporting Colorado River water to the burgeoning cities and communities and satisfying the growing needs for electric power for the area.9 The Upper Basin states thus needed to quell their fear that the water would be appropriated before the Upper Basin could begin economic development of the Colorado River system in the basin. In context, and with pressure brought by all the Colorado River basin states, Congress authorized the negotiation of a Colorado River Compact in 1921.10 President Harding felt that the federal interest in this project was sufficient to appoint the Secretary of Commerce, Herbert Hoover, as the federal representative in the negotiations.11

9. See Wilbur & Ely, supra note 3 at 17.
10. See supra note 3 and accompanying text. See Hundley, supra note 5 (an excellent history of the compact).
The history of the Compact negotiations and its ratification is a long and valuable resource for those dealing with Colorado River matters, but need not be dealt with extensively here. A point of historical and legal importance, however, must be noted. After early failures at an attempt to apportion the water of the river between the states, the negotiators settled on apportioning the use of the waters of the Colorado River between the Upper and the Lower Basins. With this approach, they quickly reached agreement on the Compact. Also, the apportionment was on the basis of "beneficial consumptive use" rather than ownership of the water itself. This phrase, "beneficial consumptive use," appears repeatedly in Law of the River documents and plays a major role in the analysis of many Colorado River issues.

The Compact, after defining such terms as "Colorado River System," "Upper Basin," and "Lower Basin" (but failing to define the term "beneficial consumptive use") included five key provisions.

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1. Due to the objections of Arizona, ratification of the Compact by all seven states was not possible at the time. The Boulder Canyon Project Act of 1928, provided an alternate ratification procedure of approval of six states including California, provided that California agreed to limit its use of Colorado River water to 4,400,000 acre-feet per year plus one half of any surplus. The Act also contained Congressional approval of the Compact. All these events took place, and the Compact went into effect in 1929. Arizona finally ratified the Compact in 1944. On the subject of ratification See Virnau & Etz, supra note 3, at 35-43 (regarding the subject of ratification); infra text at notes 37-43 (the Boulder Canyon Project Act).

2. See HUNDLEY, supra note 3, at 169 (regarding the division between the Basins). Water rights being confined to the right to beneficial use of water rather than ownership is common in the West. See, e.g., CAL. CONST. art. X, § 2; CAL. WATER CODE § 102 (declares ownership to be in the state, with individual rights to water being confined to reasonable beneficial use).

3. Compact, supra note 3, at art. II(a) ("the term 'Colorado River System' means that portion of the Colorado River and its tributaries within the United States of America").

4. Id. at art. II(b) ("The term 'Upper Basin' means those parts of the States of Arizona, Colorado, New Mexico, Utah, and Wyoming within and from which waters naturally drain into the Colorado River System above Lee Ferry, and also all parts of said States located without the drainage area of the Colorado River System which are now or shall hereafter be beneficially served by waters diverted from the System above Lee Ferry").

5. Id. at art. II(g) ("The term 'Lower Basin' means those parts of Arizona, California, Nevada, New Mexico, and Utah within and from which waters naturally drain into the Colorado River System below Lee Ferry, and also all parts of said States located without the drainage area of the Colorado River System which are now or shall hereafter be beneficially served by waters diverted from the System below Lee Ferry").

6. Id. at art. III. The Compact provides the following:

(a) There is hereby apportioned from the Colorado River System in perpetuity to the Upper Basin and to the Lower Basin, respectively, the exclusive beneficial consumptive use of 7,500,000 acre-feet of water per annum, which shall include all water necessary for the supply of any rights which may now exist.

(b) In addition to the apportionment in paragraph (a), the Lower Basin is hereby given the right to increase its beneficial consumptive use of such waters by one
These provisions constitute the main operative parts of the Compact, and in simplified terms provide that each Basin may have the beneficial consumptive use of 7,500,000 acre-feet of Colorado River water per year, with an additional 1,000,000 acre-feet for the Lower Basin if available there. The Upper Basin is also obligated to release 75,000,000 acre-feet of water every continuing 10-year period at Lee Ferry, Arizona, the dividing line between the two basins. Moreover, neither Basin is to hoard or waste water. Finally, water to satisfy any future Mexican Water treaty would come from surplus waters. If there is no surplus, the two Basins would share the obligation equally.

Another Compact provision that is important for the Lower Basin concerns the matter of “present perfected rights.” Article VIII of the Compact provides for the protection of “present perfected rights to the beneficial use of the waters of the Colorado River System . . . .” It further provides that if storage capacity of 5,000,000 acre-feet is provided on the main Colorado River for the benefit of the Lower Basin, then Lower Basin present perfected rights are to be satisfied out of such storage. Unfortunately, the phrase “present perfected rights” was not defined. A definition was ultimately provided by the United States Supreme Court in Arizona v. California.

The negotiators of the Colorado River Compact were unable to agree on an apportionment between the states within each Basin, but this was subsequently resolved by another compact for the Upper

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(c) If, as a matter of international comity, the United States-of America shall hereinafter recognize in the United States of Mexico any right to the use of any waters of the Colorado River System, such waters shall be supplied first from the waters which are surplus over and above the aggregate of the quantities specified in paragraphs (a) and (b); and if such surplus shall prove insufficient for this purpose, then, the burden of such deficiency shall be equally borne by the Upper Basin and the Lower Basin, and whenever necessary the States of the Upper Division shall deliver at Lee Ferry water to supply one-half of the deficiency so recognized in addition to that provided in paragraph (d).

(d) The States of the Upper Division will not cause the flow of the river at Lee Ferry to be depleted below an aggregate of 75,000,000 acre-feet for any period of ten consecutive years reckoned in continuing progressive series beginning with the first day of October next succeeding the ratification of this compact.

(e) The States of the Upper Division shall not withhold water, and the States of the Lower Division shall not require the delivery of water, which cannot reasonably be applied to domestic and agricultural uses.

Id.

18. In theory this additional apportionment for the Lower Basin was intended to cover the flow of the Gila River in Arizona, although this theory has been debated. See Wilbur & Ely, supra note 3, at 25 n.19.

Basin and by an act of Congress, as interpreted by the Supreme Court for the Lower Basin. We shall turn first to the Upper Basin.

C. Upper Colorado River Basin Compact

The Upper Basin states were anxious to proceed with development after ratification of the Colorado River Compact. Any comprehensive development would have to be preceded by a division among the states of annual 7,500,000 acre-foot use of Colorado River water apportioned by the Colorado River Compact. This was accomplished by the signing and approval of the Upper Colorado River Basin Compact of 1948.20

Subject to the provisions and the apportionments of the Colorado River Compact, the Upper Basin Compact apportions the consumptive use of the annual 7,500,000 acre-feet to each Upper Basin state from the Upper Colorado River System (the Colorado River and its tributaries above Lee Ferry),21 as follows:

1. Arizona: 50,000 acre-feet; and the balance:
2. Colorado: 51.75 percent;
3. New Mexico: 11.25 percent;
4. Utah: 23 percent;
5. Wyoming: 14 percent.22

These apportionments are then made subject to the following rules:

1) The apportionment is of any and all man-made depletions;
2) Beneficial use is the basis, the measure and the limit of the right to use;
3) No State shall exceed its apportioned use in any water year when the effect of such excess use . . . is to deprive another signatory State of its apportioned use during that water year . . . .23

The Compact then contains provisions for apportioning shortages, and for accounting for and requiring the releases to the Lower Basin obligated by the Colorado River Compact.24 The Upper Basin Compact contains numerous provisions dealing with the division or reg-

21. See supra notes 14-16 and accompanying text.
22. Compact, supra note 3, at art. III(a).
23. Id., at art. III(b).
24. Id., at art. IV.
ulation of particular tributaries between Upper Basin states.\textsuperscript{25} These provisions affect any interbasin transfer of Colorado River water. For example, Article XIII prohibits Colorado from allowing the aggregate flow of the Yampa River into Utah to be less than 5,000,000 acre-feet for any period of ten consecutive years. In addition, "all consumptive use of the waters of the Yampa River ... shall be charged ... to the State in which the use is made."\textsuperscript{26}

Implicit in the Upper Basin Compact, with its apportionment, accounting, storage,\textsuperscript{27} and strict requirements for delivery for water to Lee Ferry to comply with the Colorado River Compact, is the concept that any water in the Upper Basin System which is not consumed in one state, may be beneficially consumed in another Upper Basin state. This beneficial use, however, is subject to release requirements to the Lower Basin.

Approval of the Upper Colorado River Basin Compact by the five Upper Basin states and by Congress in 1949 was followed by the Congressional enactment of the Colorado River Storage Project Act in 1956.\textsuperscript{28} By this time most of the development of the federal dams and canals in the Lower Basin had been completed and were operational, except for the Central Arizona Project and the Southern Nevada Water Project which had not yet been authorized. The 1956 Act was designed to develop the water of the Upper Basin with a comprehensive, Basin wide development plan. This act authorized, among many projects, the construction of the Glen Canyon storage project designed to provide the long term storage necessary to meet the Upper Basin’s release obligations to the Lower Basin.

With that discussion, we shall now examine the more complicated regulation of the Colorado River in the Lower Basin.

\textbf{D. Lower Basin Regulation}

There are several key documents involved in the regulation of the Lower Colorado River. First and foremost, of course, is the Colorado

\textsuperscript{25} Id., at arts. X-XIV.
\textsuperscript{26} Id., at art. XIII(b). The Yampa River is a tributary of the Green River, which in turn flows into the Colorado River.
\textsuperscript{27} Id., at art. V. The general rule is that storage losses are charged to the State in which the reservoir is located. Losses from storage in a reservoir built in one state for the benefit of a second Upper Basin state is charged to the latter.
\textsuperscript{28} Colorado River Storage Project Act, 70 Stat. 105 (1956). \textit{See generally} Nathanson, \textit{supra} note 6, at 11-12.
River Compact, which was discussed above. The Colorado River Compact apportioned the use of 7,500,000 acre-feet per year to the Lower Basin, with the option to use an additional 1,000,000 acre-feet per year, presumably from the Gila River. Other key documents that followed the Colorado River Compact included:

1. The Boulder Canyon Project Act

The Boulder Canyon Project Act authorized the construction and operation of a massive storage and hydroelectric project in a canyon on a stretch of the Colorado River that forms the boundary of Nevada and Arizona. It also authorized the construction and operation of the All-American Canal in Imperial County, California, to replace the then existing diversion works which travelled in part

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29. See supra notes 17 & 18 and accompanying text.
32. See Willbur & Ely, supra note 3, at 1003.
36. See generally Willbur & Ely, supra note 3; Nathanson, supra note 6, (excellent histories of these documents).
through Mexico. No construction on the dam was to commence until the Secretary of the Interior had entered into contracts for the sale of hydro-electric power sufficient to assure the repayment of the cost of the dam.\textsuperscript{38} The Act contained three items of significance for purposes of this article.

First, as later interpreted by the United States Supreme Court in \textit{Arizona} v. \textit{California},\textsuperscript{39} the Act apportioned the right to use the 7,500,000 acre-feet per year apportioned by the Colorado River Compact, when available, among the Lower Basin States as follows:

To Arizona, 2,800,000 AF/Yr. plus one half of any surplus (to be reduced by 4 percent if Nevada entered into a surplus water contract with the Secretary).

To California, 4,400,000 AF/Yr. plus one half of any surplus.

To Nevada, 300,000 AF/Yr. plus 4 percent of any surplus if that State entered into a contract for that purpose.\textsuperscript{40}

One can look in vain for that result in the wording and find only an authorization for those states to enter into a compact which would have that result.\textsuperscript{41} The Court, however, reasoned that the water delivery contracts entered into by the Secretary under the authority of the Act constituted the apportionment.

Secondly, the Act would only go into effect if the Colorado River Compact were approved by all seven basin states. Alternatively, lacking approval by seven states, the Compact would become effective with the approval by six states, including California, and then only if the California Legislature passed an act by which California, shall agree irrevocably and unconditionally with the United States and for the benefit of the States of Arizona, Colorado, Nevada, New Mexico, Utah and Wyoming, as an express covenant and in consideration of the passage of the Act, that the aggregate annual consumptive use (diversions less returns to the river) of water of and from the Colorado River for use in the State of California, including all uses under contracts made under the provisions of this Act and all water necessary for the supply of any rights which may now exist, shall not exceed four million four hundred thousand (4,400,000) acre-feet of the waters apportioned to the lower basin States by paragraph (a) of Article III of the Colorado River Com-

\textsuperscript{38} 45 Stat. 1057, 1059 (1928) (codified at 43 U.S.C. § 617c(b) (1982)).

\textsuperscript{39} 373 U.S. 545 (1963).

\textsuperscript{40} \textit{Arizona}, 373 U.S. at 564-65 n.33.

\textsuperscript{41} 45 Stat. 1057, 1058-59 (1928) (codified at 43 U.S.C. §§ 617c (1982)).
pact, plus not more than one-half of any excess or surplus waters unapportioned by said Compact. . . .\(^{42}\)

At the time of the enactment of the Boulder Canyon Project Act, it was felt that Arizona might not approve the Compact, which, indeed, it did not do until 1944. The requirement imposed on California as a prerequisite for effectiveness of the Act would assure Arizona of its share of river water in the future. As discussed below, California did pass the required limitation act, and California and the remaining five basin states approved the Compact.

Thirdly, the Act provided that "no person shall have or be entitled to have the use for any purpose of the water stored . . . [behind Hoover Dam] except by contract . . ." as authorized by the Act.\(^{43}\)

2. The California Limitation Act

The California Legislature in 1929 adopted a Colorado River Limitation Act in response to and in the language of the requirement of the Boulder Canyon Act.\(^{44}\) The Act required the State of California to irrevocably and unconditionally agree with the United States and for the benefit of the other Basin states to comply with the limitation of the use of 4,400,000 AF/Yr plus one half of any surplus of the Lower Basin apportionment of Colorado River water. In any proposal to transfer the use of Colorado River water from one state to California, as will be discussed below, the California Limitation Act appears to present an obstacle and perhaps a cause of action for a nonconsenting state.

3. The Seven Party Agreement and Water Delivery Contracts

On June 25, 1929, President Hoover declared by Public Proclamation that all the prerequisites of the Boulder Canyon Project Act had been met and that the Act was effective that day.\(^{45}\) The Secretary

\(^{42}\) *Id.* at 1064 (codified at 43 U.S.C. § 617e (1982)) (approval by Congress of the Compact).

\(^{43}\) *Id.* at 1060-61 (codified at 43 U.S.C. § 617d (1982)). It should be noted that section 6 of the Act set forth the purposes of the dam, including "satisfaction of present perfected rights in pursuance of Article VIII of said Colorado River Compact."

\(^{44}\) 1929 Cal. Stat. ch. 16, sec. 1 at 38-9.

of the Interior entered into the requisite power contracts, and then looked to water delivery contracts. After some activity in this regard, the Secretary wrote to the existing and prospective users in California and the State Division of Water Rights requesting a recommendation as to the allocation and relative priorities of parties to be given water contracts. After considerable negotiating under the leadership of the State Engineer, an agreement was reached among those interested in obtaining contracts for Colorado River water on August 18, 1931. This agreement is known as the Seven Party Agreement.

The Agreement apportioned the Colorado River water available for use within California under the Colorado River Compact and

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46. See Wilbur & Ely, supra note 3, at 107, 1002.
47. See id. at 1003.
48. The Agreement contained the following seven sections:

SECTION 1. A first priority to Palo Verde Irrigation District for beneficial use exclusively upon lands in said District as it now exists and upon lands between said District and the Colorado River, aggregating (within and without said District) a gross area of 104,500 acres, such waters as may be required by said lands.

SECTION 2. A second priority to Yuma Project of the United States Bureau of Reclamation for beneficial use upon not exceeding a gross area of 25,000 acres of land located in said project in California, such waters as may be required by said lands.

SECTION 3. A third priority (a) to Imperial Irrigation District and other lands under or that will be served from the All-American Canal in Imperial and Coachella Valleys, and (b) to Palo Verde Irrigation District for use exclusively on 16,000 Acres in that area known as the "Lower Palo Verde Mesa," adjacent to Palo Verde Irrigation District, for beneficial consumptive use, 3,850,000 acre feet of water per annum less the beneficial consumptive use under the priorities designated in Sections 1 and 2 above. The rights designated (a) and (b) in this section are of equal priority. The total beneficial consumptive use under priorities stated in Sections 1, 2 and 3 of this article shall not exceed 3,850,000 acre feet of water per annum.

SECTION 4. A fourth priority to the Metropolitan Water District of Southern California and/or the City of Los Angeles, for beneficial consumptive use, by themselves and/or others, on the Coastal Plain of Southern California, 550,000 acre feet of water per annum.

SECTION 5. A fifth priority, (a) to the Metropolitan Water District of Southern California and/or the City of Los Angeles, for beneficial consumptive use, by themselves and/or others, on the Coastal Plain of Southern California, 550,000 acre feet of water per annum and (b) to the City of San Diego and/or County of San Diego, for beneficial consumptive use, 112,000 acre feet of water per annum. The rights designated (a) and (b) in this section are equal in priority.

SECTION 6. A sixth priority (a) to Imperial Irrigation District and other lands under or that will be served from the All-American Canal in Imperial and Coachella Valleys, and (b) to Palo Verde Irrigation District for use exclusively on 16,000 Acres in that area known as the 'Lower Palo Verde Mesa,' adjacent to Palo Verde Irrigation District, for beneficial consumptive use, 3,000,000 acre feet of water per annum. The rights designated (a) and (b) in this section are equal in priority.

SECTION 7. A seventh priority of all remaining water available for use within California, for agricultural use in the Colorado River Basin in California, as said basin is designated on Map No. 23000 of the Department of the Interior, Bureau of Reclamation.

See id.
the Boulder Canyon Project Act as follows: a maximum beneficial consumptive use of 3,850,000 acre-feet per year were allotted to the so-called agricultural interests. The agricultural interests affected included the Palo Verde Irrigation District, the Yuma Project of the Bureau of Reclamation in California, the Imperial Irrigation District, and the Coachella Valley Water District (after reaching a compromise agreement with Imperial).49 The next two priorities went to the Metropolitan Water District of Southern California for a total of 1,212,000 acre-feet per year.50 The remainder was allotted for agricultural use.

Two items should be noted. First, if there is no surplus and California is limited to 4,400,000 acre-feet, Metropolitan, with the lower priority, will be cut by 662,000 acre-feet and Imperial and Palo Verde will lose a potential 300,000 acre-feet. Second, all diversions must be made only for beneficial consumptive use.51

The Secretary accepted the recommendations of the Seven Party Agreement and amended existing contracts52 to include and limit them to the Agreement, which was set forth in full. The Seven Party Agreement was similarly included in all contracts executed after its date. As a result, California’s share of the use of Colorado River water was entirely apportioned.

4. The Opinion and Decree in Arizona v. California53

In 1952 the States of Arizona and California commenced a legal battle concerning the equitable apportionment of the Lower Colorado River. The Court handed down a far reaching opinion eleven years later followed by a decree in 1964. The decree which affects the

49. The Imperial-Coachella compromise agreement allowed Coachella to share in the third priority, but as between the two agencies, Imperial has the higher priority. See Wilbur & Ely, supra note 3 at 122, 1107.

50. The City of Los Angeles never executed a water delivery contract with the Secretary, so Metropolitan holds all the interests of Priorities 4 and 5. The City of San Diego executed a water delivery contract for the 112,000 acre feet of Priority 5. See Wilbur & Ely, supra note 3 at 1009. When the San Diego County Water Authority joined Metropolitan in 1946, that contract was assigned to Metropolitan. Id. at 1011-14.

51. The first two priorities (Palo Verde Irrigation District and the Yuma Project) speak in terms of “beneficial use” rather than beneficial consumptive use, presumably because those two agencies measure use by diversions less returns to the River.

52. See, e.g., id. at 1007-08 (Metropolitan contract of April 24, 1930, amended Sept. 28, 1931).

Lower Basin states, and the California users of Colorado River water, also involved the United States on behalf of five Indian Reservations and awarded the Indian Reservations nearly 1,000,000 acre-feet of the Lower Basin's annual apportionment of 7,500,000 acre-feet. Between 1952 and 1963, two special masters held several years of hearings which led to a massive report in 1961.

The heart of the Supreme Court's opinion is contained in this passage:

We have concluded, for reasons to be stated, that Congress in passing the [Boulder Canyon] Project Act intended to and did create its own comprehensive scheme for the apportionment among California, Arizona, and Nevada of the Lower Basin’s share of the mainstream waters of the Colorado River, leaving each State its tributaries. Congress decided that a fair division of the first 7,500,000 acre-feet of such mainstream waters would have 4,400,000 acre-feet to California, 2,800,000 to Arizona, and 300,000 to Nevada; Arizona and California would each get one-half of any surplus. Prior approval was therefore given in the Act for a tri-state compact to incorporate these terms. The States, subject to subsequent congressional approval, were also permitted to agree on a compact with different terms. Division of the water did not, however, depend on the States' agreeing to a compact, for Congress gave the Secretary of the Interior adequate authority to accomplish the division. Congress did this by giving the Secretary power to make contracts for the delivery of water and by providing that no person could have water without a contract.

The Arizona Court thus disposed of arguments claiming that the doctrine of equitable apportionment applied and that the Colorado River Compact itself had caused an apportionment in the Lower Basin.

The Court also addressed the problem of whether state or federal water law applies in questions of apportionment and delivery of Lower Basin Colorado River water. Traditional reclamation law required the Bureau of Reclamation to comply with state law in the appropriation of water for these federal projects, pursuant to Section 8 of the Reclamation Act of 1902. Section 14 of the Boulder Canyon Project Act stated that the Act is a supplement to reclamation

55. Arizona, 373 U.S. at 564-65.
law and that reclamation law governs the construction, operation, and management of the works authorized by the Act with certain exceptions. In addition, Section 18 provided:

Nothing herein shall be construed as interfering with such rights as the States now have either to the waters within their borders or to adopt such policies and such laws as they may deem necessary with respect to the appropriation, control, and use of waters within their borders, except as modified by the Colorado River Compact or other interstate agreement.

The Special Master relied on the language of those sections to recommend and urge that the Secretary's water delivery contracts must comply with state law, but the Supreme Court disposed of these arguments:

In our view, nothing in any of these provisions [sections 14 and 18] affects our decision, stated earlier, that it is the Act and the Secretary's contracts, not the law of prior appropriation, that control the apportionment of water among the States. Moreover, contrary to the Master's conclusion, we hold that the Secretary in choosing between users within each State and in settling the terms of his contracts is not bound by these sections to follow state law.

Section 18 merely preserves such rights as the States 'now' have, that is, such rights as they had at the time the Act was passed. While the States were generally free to exercise some jurisdiction over these waters before the Act was passed, this right was subject to the Federal Government's right to regulate and develop the river. Where the Government, as here, has exercised this power and undertaken a comprehensive project for the improvement of a great river and for the orderly and beneficial distribution of water, there is no room for inconsistent state laws. Section 18 plainly allows the States to do things not inconsistent with the Project Act or with federal control of the river, for example, regulation of the use of tributary water and protection of present perfected rights. What other things the States are free to do can be decided when the occasion arises. But where the Secretary's contracts, as here, carry out a congressional plan for the complete distribution of waters to users, state law has no place.

57. 45 Stat. 1057, 1065 (1928) (codified at 43 U.S.C. § 617(a) (1982)).
58. Id. at 1065 (codified at 43 U.S.C. § 617(a) (1982)).
60. Arizona, 373 U.S. at 585-87.
The decree issued by the Supreme Court one year after the *Arizona* opinion contains several important items significant to California’s use of the Colorado River. First, the Court defined two key phrases. The phrase “water controlled by the United States” was defined as the water in Lakes Mead, Mohave, and Havasu . . . and all other waters in the mainstream below Lee Ferry and within the United States.”61 Consequently, the moment any Upper Basin water passes Lee Ferry, it becomes “water controlled by the United States” and subject to the strictures of the decree and the Boulder Canyon Project Act, irrespective of any purported agreement between an Upper Basin entity and a Lower Basin entity.

The Court also defined “perfected rights” to mean “a water right acquired in accordance with state law, which right has been exercised by the actual diversion of a specific quantity of water that has been applied to a defined area of land or to definite municipal or industrial works. . . .”62 “Present perfected right” was defined as a perfected right existing as of June 25, 1929, the effective date of the Boulder Canyon Project Act.63 Of note here is the fact that not all water rights in the Lower Basin existing as of that crucial date were protected. For example, after the decree any unused riparian rights which were recognized under California law no longer existed. Similarly, any validly acquired appropriated rights which either had not been exercised by the key date or not yet fully used would not be or only partially recognized. Finally, in a later Colorado River case, the Supreme Court noted that although one looks to state law for the source of present perfected rights, the question of whether any rights provided by state law constitute present perfected rights within the meaning of section 6 of the Boulder Canyon Project Act is one of federal law.64

Second, the Court enjoined the United States from releasing mainstream Colorado River water other than in accordance with the apportionment among the states as set forth. In the event of a shortage, however, the Court gave the Secretary of the Interior the discretion to apportion the available supply “after providing for satisfaction of present perfected rights in the order of the priority dates without regard to state lines.”65 As a result, in a shortage year,

62. *Id.* at 341.
63. *Id.*
the Secretary has the discretion to allocate the remaining supply, after present perfected rights are cared for, to lower priorities under the Seven Party Agreement for domestic purposes if he so chooses. The United States was additionally enjoined from releasing any water to water users other than pursuant to valid contracts with the Secretary.66

The Court also enjoined the states. The injunction stated that the States and the named California agencies (Metropolitan, Palo Verde, Imperial, Coachella, City of Los Angeles, City of San Diego, and County of San Diego) and all other users of mainstream water were enjoined from diverting any such water without United States authorization.67 The Court also stated that the mainstream water used within a particular state was to be charged to that state's apportionment regardless of the purpose for which it was released.68

As a final note on the decree, it was amended in 1979 to set forth the present perfected rights in the three Lower Basin states.69 It also set forth the "Federal Establishments' Present Perfected Rights." These rights established the Lower Basin Indian Reservation water rights. Unlike other users, the Indian Reservation retained their water rights even if those rights had not been exercised by June 25, 1929. In addition, these reservation rights were subject to adjustment when the boundaries were finally determined.70

5. The Colorado River Basin Project Act of 1968

Arizona had long desired to construct a diversion works along the Colorado River together with an aqueduct from the River to Phoenix and on to Tucson. This dream had no hope of realization as long as Arizona and California were feuding over Colorado River rights. The Arizona v. California decision perhaps set the stage for the development of the Central Arizona Project (CAP).71 In 1968, after the States had settled the water rights issue, Congress authorized the

66. Id. at 343.
67. Id. at 347.
68. Id. at 343.
70. Id. at 423, 428, 435-36.
71. See Nathanson, supra note 6, Ch. XII (a brief history of this struggle).
CAP with the passage of the Colorado River Basin Project Act. California's price for support for the Project and the Act was severe. Water could be delivered to the CAP in a shortage year only after California had received its basic 4,400,000 acre-foot appropriation, irrespective of the Secretary's discretion to allocate the remaining supply after providing for present perfected rights. In sum, the continued usefulness of the Project and its repayment became largely dependent on surplus waters and the flow of unused Upper Basin water. The planning for the project acknowledges this fact.

The other relevant feature of the Colorado River Basin Project Act required the Secretary to develop criteria to coordinate the long-range operation of the reservoirs constructed on the Colorado River under the various acts of Congress. These criteria have been adopted after considerable review by and consultation with all the Colorado River Basin States. Important to California is the provision that once the Central Arizona Project is on line, California will be limited to its basic annual beneficial consumptive use rights of 4,400,000 acre-feet, unless a surplus exists or the Secretary exercises the authority given in the Arizona v. California decree to allocate to California the unused apportionments of Arizona and Nevada. Fortunately, during the middle 1980s, heavy snowfall in the Rockies contributed to full reservoirs and surpluses in the Lower Basin.

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73. Id. at 888. The Act provides:
   (b) Article II(B)(3) of the decree of the Supreme Court of the United States in Arizona against California (376 U.S. 340) shall be so administered that in any year in which, as determined by the Secretary, there is insufficient main stream Colorado River water available for release to satisfy annual consumptive use of seven million five hundred thousand acre-feet in Arizona, California, and Nevada, diversions from the main stream for the Central Arizona Project shall be so limited as to assure the availability of water in quantities sufficient to provide for the aggregate annual consumptive use by holders of present perfected rights, by other users in the State of California served under existing contracts with the United States by diversion works heretofore constructed, and by other existing Federal reservations in that State, of four million four hundred thousand acre-feet of mainstream water, and by users of the same character in Arizona and Nevada.

76. See Nathanson, supra note 6, at 207, App. VII-5.
6. The Secretary's Lower Basin Conservation Regulations

Section 5 of the Boulder Canyon Project Act authorized the Secretary to adopt general regulations in connection with water delivery contracts. More recently, the Secretary had adopted regulations applicable to holders of water delivery contracts in the Lower Basin. The regulations are directed at the waste or non-beneficial use of Colorado River water. While to date these regulations have only been used to require the submittal of water conservation plans by the contract holders, they remain a strong tool available to the Secretary as Watermaster of the River to insure that consumptive use of Colorado River water is indeed beneficial.

E. The United States-Mexico Water Treaty

As noted earlier, the Colorado River Compact recognized that some day there might be a treaty between the United States and the Republic of Mexico concerning Colorado River water. Under the Compact, any obligation to deliver water to Mexico pursuant to that treaty would be met out of surplus waters. If there was not a surplus, each Basin (Upper and Lower) was to share the burden equally. A treaty with Mexico was in fact negotiated and signed in 1944 which affected the water supply in both the Colorado River and the Rio Grande River. The treaty obligated the United States to deliver to Mexico 1,500,000 acre-feet of water per year (up to 1,700,000 acre-feet in surplus years). Most people concede that this quantity comes mainly from the mainstream of the Colorado River. At the signing

78. See Wilbur & Ely, supra note 3, at 1004, 1005.
80. See infra text at notes 100-04, 137-40 and accompanying text (a brief discussion of the role of the California State Water Resources Control Board in eliminating waste of Colorado River water).
81. Compact, supra note 3, at Art. III (c). See supra note 17 and accompanying text (text of Article III (c)). See Hundley, supra note 5, at 203-14 (a history of the concern of the framers of the Compact on this issue).
of the Colorado River Compact, there were estimates of 2,000,000 acre-feet of surplus even after both Basins were developed. These estimates, however, have proven inaccurate. There will be no surplus in the future.

Congress recognized the problem of fulfilling the U.S. obligations to supply water under the Mexican treaty with surplus water. As a result Congress provided in the Colorado River Basin Project Act of 1968 that "the satisfaction of the requirements of the Mexican Water Treaty from the Colorado River constitutes a national obligation which shall be a first obligation of any water augmentation project planned pursuant to . . . [the Act]. . . ." Of course, to date there have been no major effective river augmentation projects put in place, and in light of current Federal budget deficits, none are likely in the foreseeable future. Thus, the problem discussed briefly in Part VI sharing the obligation between the Upper and Lower Basins looms before us.

With that look at the Law of the River, it is time to examine some of the recent problems in Colorado River water supply as they relate to California.

III. INTERSTATE AND INTERBASIN SALES AND TRANSFERS - THE GALLOWAY PROPOSAL MODEL

In the course of this author's employment by The Metropolitan Water District of Southern California, he received calls from persons who claimed to own, or represented such people, rights to water in the Colorado River System in the Upper Basin and who inquired whether the District would be interested in buying that water. After explaining the many problems stemming from the Law of the River, the callers were requested to put a proposal in writing. Few, if any ever did.

One proposal for such a water transfer or sale, however, received much publicity, and indeed, critical comment in 1984 and following. That was the "Galloway" proposal to deliver to the San Diego County Water Authority at Lake Havasu, the forebay for Metropolitan's Colorado River Aqueduct, between 300,000 and 500,000 acre-feet of Colorado River water each year for 40 years. The source

83. See Nathanson, supra note 6, at 10.

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of the water was to be (1) 50,000 acre-feet from the White River in Colorado, a tributary of the Green River and then the Colorado, the rights to which the Galloway group claimed to own, and (2) 300,000 or more acre-feet to be stored behind a dam on the Yampa River, to be released for the production of electrical power and ultimate delivery to San Diego. The key to the whole project was that the water delivered would be charged to Colorado’s share of the Colorado River supply.

Examining this proposal in light of the Law of the River will demonstrate why it and others can only succeed with massive changes to existing law and institutions.

A. Upper Basin Problems

Counsel for the Galloway group explained to the author his theory that the storing of water behind a dam and its use for the generation of electrical power was a beneficial use, and therefore, the water could be charged to Colorado. This theory, however, overlooks the fact that both the Colorado River Compact and the Upper Colorado River Basin Compact apportion and charge water for beneficial consumptive use. Additionally, the Upper Basin Compact rules measure apportionments on the basis of man-made “depletions.” Indeed, the definition in that Compact of “domestic use” lists many uses which consume water, but specifically excludes the generation

85. The author has heard of no evidence that the Galloway group in fact owns any rights to the use of Yampa River water. The San Diego County Water Authority is an umbrella organization importing water to the developed portion of San Diego County, California. The Authority is a member agency of Metropolitan and purchases up to 90% of the water used within the Authority service area from Metropolitan. San Diego has no water transportation facilities from the Colorado River to San Diego and would need a wheeling arrangement with Metropolitan and its own power source to accomplish the proposal.


87. See supra notes 17, 21-23 and accompanying text.
88. See supra note 23 and accompanying text.
of electrical power.\(^9\) Moreover, as noted in the discussion on the Colorado River Compact, Article III (e) specifically prevents the Upper Basin from withholding water that can not reasonably be applied to domestic and agricultural uses, even if the quantity is within the Upper Basin apportionment.

Secondly, the handling of the Galloway water in relation to Colorado’s Yampa River delivery obligation to Utah would have to be worked out.\(^9\) As noted earlier, an implicit right exists for other Upper Basin States to use unused Upper Basin water, subject to the requirements of the Colorado River Compact. If the Galloway project transferred water in storage in Colorado for use in Utah, the Upper Basin Compact specifically states that the consumptive use will be charged to Utah, which would defeat the purpose of the transfer.\(^9\)

Most importantly, however, is the effect of the proposal on the Upper Basin’s obligation to deliver 75 million acre-feet of water every continuing ten year period at Lee Ferry for the benefit of the Lower Basin.\(^9\) The Galloway proposal does not create any new water for the Colorado River System. For the proposal to work and assure ultimate delivery of the water to San Diego, three events need to occur: (1) The Upper Basin would agree to an increase in the Lee Ferry delivery obligation by the amount of water to be delivered to San Diego, and Colorado would have to agree that the additional delivery at Lee Ferry would be charged to its Upper Basin apportionment. One need only state that proposition to see its poor chances of success. (2) The apportionment between the states in the Lower Basin would have to be changed to accommodate the new quantity for San Diego. This event is unlikely to occur. (3) An existing California contractor would have to subordinate its priority to the San Diego County Water Authority.

In sum, the changes that would be required to assure delivery of the Galloway water to Lee Ferry, involving Upper Basin and Colorado River Compacts amendments by seven states and the Congress, and changes in the contracts between California users and the Secretary, seem to be beyond present day political reality. A prospect with perhaps a better chance of success would be the payment by

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89. Upper Colorado River Basin Compact, 63 Stat. 31, 32 (1949) (“The term 'domestic use' shall include the use of water for household, stock, municipal, mining, milling, industrial and other like purposes, but shall exclude the generation of electrical power.”).
90. See supra note 26 and accompanying text.
Lower Basin interests to Upper Basin interests to delay or stop development, with its accompanying consumptive use of water in the Upper Basin. The objective would be to foreclose Lower Basin shortages or even create surpluses.93

B. Lower Basin Problems

As just noted, if the quantity of water delivered by the Upper Basin at Lee Ferry is not increased, an attempted reapportionment of Lower Basin apportionments would necessarily result from the Galloway proposal if it were to succeed. The moment the Galloway water reaches Lee Ferry, however, under the decree in Arizona v. California, it becomes "water controlled by the United States,"94 and is subject to the allocation scheme and contract regulations of the decree and the Boulder Canyon Project Act. San Diego cannot divert Colorado River water at Lake Havasu without a contract from the Secretary. Since California has already allocated, indeed over-allocated, its dependable apportionment of Colorado River water, and at the same time has agreed in its Limitation Act, to use no more than 4.4 million acre-feet per year plus one half of any surplus,95 it seems unlikely that the Secretary would grant such a contract.96 If he did, presumably San Diego would receive a lower priority, which in fact will mean no water at all except in surplus years. The existing contractors have rights to more than California's share of 4,400,000 acre-feet per year. If San Diego were given a higher priority than existing contractors, the result would be lengthy litigation.

Finally, Galloway water could be allowed to be added to California's apportionment and the water would be taken from the Central Arizona Project due to that project's lower priority pursuant to the

93. See Getches, supra note 86 at 5.
95. See supra note 44 and accompanying text.
96. The San Diego County Water Authority obtained an opinion which concluded that as to any Imperial Irrigation District water sold to the Authority, the Secretary could not deny a contract to the Authority, since no federal interest is implicated. The Imperial matter is discussed in Part IV of the text. The author here suggests, however, that as to both a Galloway proposal for interbasin transfers or an intrastate transfer in California, a federal interest is indeed implicated where existing contracts, acts of Congress and Supreme Court decrees have apportioned, indeed, over-apportioned California's share of Colorado River water. See Letter Opinion, May 8, 1985 (Transfer of Colorado River Water Within California) (on file at the Pacific Law Journal).
Colorado River Basin Project Act of 1968. Any additions to California's apportionment would require amendments to the decree in *Arizona v. California* and to the Boulder Canyon Project Act, and waivers by six States and Congress to the California Limitation Act. The reallocation would jeopardize the repayment prospects of the Central Arizona Project, thus insuring the objections of both the United States and Arizona.

The whole point of this discussion, of course, is to emphasize that due to the legal and political institutions that have built up concerning Colorado River water rights, the prospects of interbasin or even interstate transfers of Colorado River water with the consumption being charged to a different State than the one where it occurs is indeed unlikely. Whatever the economic or social merits, one can expect that in the future offers to transfer currently unused Upper Basin water to the Lower Basin for a price will increase as both Arizona and California seek new or additional supplies of water. It is difficult to foresee much success for such offers.

### IV. Interstate Sales and Transfers of Colorado River Water in California

This part of the article will examine an event of Colorado River water, that of a transfer of Colorado River water between parties within the States of California. In the opinion of the author this type of transfer is more likely to occur than interbasin transfer of Colorado River waters. The question presented is what limitations, if any, apply to such transfers, and more particularly, whether they are governed by state law or federal law.

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98. There have been some transfers and exchanges of Colorado River water in California. For example, Metropolitan has agreements with the Coachella Valley Water District and the Desert Water Agency, both State Water Project contractors, whereby Metropolitan will take delivery of Coachella's and Desert's State Water Project water (from Northern California) and, in turn, will deliver an equal quantity of its Colorado River water to Desert and Coachella, including a storage account of 600,000 acre-feet for future delivery. In another agreement, Metropolitan agreed to deliver up to 17,000 acre-feet per year of its Colorado River entitlement to San Diego Gas and Electric Co. for cooling purposes at its proposed Sundesert generating plant in the Palo Verde Valley (which has not yet been constructed). In both examples, the approval of all of the parties to the Seven Party Agreement which have contracts with the Secretary and the Secretary himself was obtained.
A. The Imperial Irrigation District Model

The setting for the discussion will be the enormous quantities of Colorado River water used by the Imperial Irrigation District, and the efforts of The Metropolitan Water District of Southern California and Imperial to negotiate a water conservation agreement. Such an agreement would result in reduced Colorado River water diversions by Imperial, with the consequence of there being more water available to Metropolitan. As long ago as the Special Master's Report in Arizona v. California, Judge Rifkind noted that much water diverted by Imperial could be conserved by lining canals and other regulatory measures, lacking which large quantities of seepage and runoff would continue to flow to the Salton Sea, an inland agricultural sump. Indeed, in 1984, the California State Water Resources Control Board after a lengthy hearing determined that the failure of Imperial to implement additional water conservation measures is unreasonable and constitutes a misuse of water under the California Constitution and Water Code.

For nearly four years, Imperial and Metropolitan have attempted to negotiate an agreement whereby Metropolitan would pay an annual sum to Imperial to be used for construction and operation of water conservation measures. In addition Imperial would guarantee that a specified quantity of water chargeable to Imperial's water delivery contract with the Secretary of the Interior would be left in the River for diversion by Metropolitan under its lower priority. The stum-

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100. Id. at 103 n. 25. The Special Master in Arizona v. California noted that in 1955 Coachella Valley Water District and the Imperial Irrigation District consumptively used 3,662,000 acre-feet of Colorado River water. Id. at 128. Also, between 1965 and 1980 the Imperial Irrigation District diverted an average of 2,835,000 acre-feet each year and that an average of 1,036,446 acre-feet entered the Salton Sea as agricultural return flow from Imperial Calif. S.W.R.C.B. Decision 1600, at 7 (June 21, 1984).
101. 1968 Cal. Stat. ch. 392, sec. 2 (the primary purpose of the Salton Sea is for collection of seepage).
102. S.W.R.C.B. Decision 1600, at 66 (June 21, 1984). The jurisdiction of the Board to enforce its decision was challenged and validated in Imperial Irrigation Dist. v. State Water Resources Control Bd., 186 Cal. App. 3d 1160, 1162, 1171 (1986). At the time of this writing, the merits of Decision 1600 are being tried on remand to the Superior Court.
103. The author, as a participant in those negotiations will reserve the historic details for another time. The parameters of such an agreement are perhaps shown by a Memorandum of Understanding reached by the negotiators in July 1985, and approved unanimously by Metro-
bling block has been the amount of money, and putting aside the natural desire of Imperial County farmers and citizens to receive as large an infusion of money as possible, it represents the clash of the divergent views on whether State or Federal law applies. Metropolitan (and, it should be noted, Palo Verde and Coachella) insists that the diversion and use of Colorado River water in California is governed by the Law of the River: The Colorado River Compact, the Boulder Canyon Project Act, the opinion and decree in *Arizona v. California*, and perhaps more importantly, the Seven Party Agreement and the Secretary’s water delivery contracts. Under this theory, if a contractor with a higher priority does not use all the water available to it under its priority, that water is available to the next priority user. Since Imperial has a higher priority than Metropolitan, any water not used by Imperial, or any other user in higher priority, is available to Metropolitan. Imperial’s view is that recent California laws encouraging conservation and the transfer of water authorize Imperial to sell or lease any water conserved by it to anyone. To analyze these views, we should first examine Imperial’s water rights.

**B. Imperial’s Water Rights**

The water rights of the Imperial Irrigation District are in two forms: its contract to divert Colorado River water with the Secretary of the Interior, and its present perfected rights now protected by the amended decree in *Arizona v. California*.\(^{104}\)

\(^{104}\) In the 1930’s, Imperial applied for State water rights permits for diversion of Colorado River water for agricultural use and for hydro-electric generation along the soon to be constructed All-American Canal. The agricultural use permit, which was granted in 1930, is by its terms specifically subservient to the Secretary’s water delivery contracts and the Seven Party Agreement. See California Defendants Exhibit No. 107, *Arizona v. California* (*proceedings before the Special Master*) (on file at the Pacific Law Journal). As far as the author knows, Imperial has never contended that this permit grants Imperial any rights it did not already have by virtue of its water delivery contract with the Secretary or its present perfected rights.
1. Contract Rights

Imperial's contract of December 1, 1932 provided for both the construction and operation of the All-American Canal as well as for the delivery of water.\textsuperscript{105} The key water delivery provision begins:

The United States shall, from storage available in the reservoir created by Hoover Dam, deliver to the District each year at a point, in the Colorado River immediately above Imperial Dam, so much water as may be necessary to supply the District a total quantity, including all other waters diverted for use within the District from the Colorado River, in the amounts and with priorities in accordance with . . . [the Seven Party Agreement]. . . .\textsuperscript{106}

The water delivered is "as reasonably required for potable and irrigation purposes within the boundaries of the District in the Imperial and Coachella Valleys in California."\textsuperscript{107} The contract is also made expressly subject to the Colorado River Compact.\textsuperscript{108}

This contract was issued pursuant to the authority of the Boulder Canyon Project Act and, as noted, is subject to the Colorado River Compact. Of even greater significance is the fact that Imperial is not entitled to a specific quantity of water. Its prime entitlement is the third priority of the Seven Party Agreement. As third priority, Imperial has rights to all the water that can be beneficially and consumptively used for agricultural and potable uses within the boundaries of the District, provided that the total quantity used by the first three priorities shall not exceed 3,850,000 acre-feet per year.\textsuperscript{109} Thus, under these federal documents, if Imperial has no reasonable need for beneficial consumptive use within its District boundaries of that entire quantity, it has no right to divert such water. The next party in priority is entitled to use the surplus, subject to quantity and contract restrictions for that party. On the face of these documents, there is no room for sale of Colorado River water by Imperial outside its boundaries without the approval of affected priority holders and the Secretary of the Interior.

\textsuperscript{105} See Wilbur & Ely, supra note 3, at 1106 (Contract for Construction of Diversion Dam, Main Canal, and Appurtenant Structures and Delivery of Water (December 1, 1932)).
\textsuperscript{106} Id. (Article 17 of the Contract). The Seven Party Agreement is then set forth in full.
\textsuperscript{107} Id.
\textsuperscript{108} Id.
\textsuperscript{109} Id. at 1003.
2. Present Perfected Rights

Imperial is one of two signers of the Seven Party Agreement (the other being Palo Verde Irrigation District) to qualify for present perfected rights. As was noted before, the Supreme Court decree in *Arizona v. California*, set forth a two part test. A party must have acquired a water right under state law and exercised that right by actual diversion of a specific quantity of water applied to a defined area of land, and the right had to exist as of June 25, 1929.\textsuperscript{110} Imperial was acknowledged to have a present perfected right in the 1979 amended decree in *Arizona v. California*:

The *Imperial Irrigation District* in annual quantities not to exceed (i) 2,600,000 acre-feet of diversions from the mainstream or (ii) the quantity of mainstream water necessary to supply the consumptive use required for irrigation of 424,145 acres and for the satisfaction of related uses, whichever of (i) or (ii) is less, with a priority date of 1901.\textsuperscript{111}

Several items should be noted about Imperial’s present perfected rights. First, the rights are only relevant in the event of a shortage in the Lower Basin. Even then there must be insufficient water to meet California’s claim of 4,400,000 acre-feet, after the Central Arizona Project has been cut-off.\textsuperscript{112} With the huge storage reservoirs on the Colorado River System and the Upper Basin requirements, this event is extremely unlikely to occur. Second, Imperial has no specific quantity of water available to it. Instead Imperial may divert the water needed for the irrigation of 424,125 acres of land, but not exceeding 2,600,000 acre-feet. Again, if Imperial can not beneficially and consumptively use the maximum amount, it has no right to the water.

Finally, the Supreme Court made it implicitly clear, in *Bryant v. Yellen*\textsuperscript{113} that the present perfected water rights of Imperial could only be used on the specific 424,125 acres which were being irrigated in 1929. *Bryant* dealt with the question of whether Imperial, by using water from Hoover Dam, was subject to the 160 acre limitation

\textsuperscript{110} See supra notes 62-4 and accompanying text.

\textsuperscript{111} *Arizona v. California*, 439 U.S. 419, 429 (1979) (emphasis added).


\textsuperscript{113} 447 U.S. 352 (1980).
under the Reclamation Act. The Court determined as a matter of statutory interpretation that Congress had not intended the Reclamation Act limitation to apply to those specific lands which were being irrigated on June 25, 1929 pursuant to a state water right. As a result, Imperial’s 424,125 acres which had been awarded a present perfected right were not subject to the limitations of the Reclamation Act. The conclusion that seems to be called for is that if Imperial calls for present perfected water rights, it can only claim the amount necessary for the specific acreage and must use the water for that purpose. Therefore Imperial has no water to sell for use elsewhere.

C. California Water Transfer Law

Imperial, as a California irrigation district, has technically the right to sell surplus water for use outside its boundaries subject to certain restrictions and approvals. Under its federal contract, Imperial is not entitled to a specific quantity of water, but only the amount necessary for beneficial consumptive use on its lands. It is then difficult to see how, without the consent of the other California water contractors and the Secretary, Imperial could invoke this provision. In recent years, however, the California Legislature has passed several statutes designed to encourage conservation of water and to facilitate the transfer of such conserved water. These laws should be briefly reviewed.

In 1982, the Legislature passed AB 3491 introduced by Assemblyman Katz. The bill included an amendment to Water Code section 1011 relating to appropriative rights:

(b) Water, or the right to the use of water, the use of which has ceased or been reduced as the result of water conservation efforts as described in subdivision (a), may be sold, leased, exchanged, or otherwise transferred pursuant to any provision of law relating to the transfer of water or water rights, including, but not limited to, provisions of law governing any change in point of diversion, place of use, and purpose of use due to the transfer.

114. Bryant, 447 U.S. at 373-78. The Court left open the question of whether the 160 acre limitation in the Reclamation Act applied to other lands within the District which were not awarded present perfected rights, but noted that legislation was pending to exempt such lands. Id. The legislation was adopted. See Sacramento Valley Canals Act, 94 Stat. 3339, 3340 (1980).

115. CAL. WATER CODE §§ 22259-60 (West 1984).


117. 1982 Cal. Stat. ch. 867, sec. 4, at 3224 (enacting CAL. WATER CODE § 1011(b)).
In 1984, Water Code section 1012 was added to provide:
Notwithstanding any other provision of law, where any person, public agency, or agency of the United States undertakes any water conservation effort, either separately or jointly with others entitled to delivery of water from the Colorado River under contracts with the United States, which results in reduced use of Colorado River water within the Imperial Irrigation District, no forfeiture, diminution, or impairment of the right to use the water conserved shall occur, except as set forth in the agreements between the parties and the United States.¹¹⁸

The legislative intent may have been to overrule a prior California water law rule which provided that an unused appropriative right may be lost. To make sure that the new section was truly a tautology, the Legislature added section 2 to the 1984 statute:
The Legislature finds and declares that the enactment of Section 1012 of the Water Code is intended to clarify and make specific existing California law in regard to water conservation measures which may be taken within the Imperial Valley. In enacting Section 1012 of the Water Code, it is not the intent of the Legislature to alter the relationship of state and federal law, as each may apply to the distribution and use of Colorado River water.¹¹⁹

These, then, are the provisions of California law upon which Imperial relies for its insistence that it may sell so-called conserved water to any party outside its boundaries. We should now turn to the question of whether California law applies at all.

¹¹⁸. 1984 Cal. Stat. ch. 429, sec. 1, at 1805-06 (enacting CAL. WATER CODE § 1012). It should be noted, however, that since 1943, California Water Code section 1005 contains a similar provision:
Any right to the water of any stream which flows along a boundary of the State and which is the subject of an interstate compact to which the State is a party, to the extent such right relates to quantities of water which the United States has, under the authority of an act of Congress, contracted to deliver to any municipal corporation, political subdivision, or public district in the State, from storage constructed by the United States on any such stream, shall not be subject to any requirement or limitation provided by law relating to the time within which the construction of works for the use of such water shall be commenced, carried on, or completed, or within which such water shall be put to use, or relating to the continuity of use of such water; and water contracted to be delivered from such stream, shall be reserved to the contractor therefor without diminution by reason of the contractor’s failure to apply such water to use during any period, and shall not be subject to appropriation by any other than such contractor.

D. California versus Federal Law

We have earlier noted that Special Master Rifkind in Arizona v. California urged the Supreme Court to adopt a rule that state law governs intrastate rights and priorities to water diverted from the Colorado River. The Supreme Court rejected this view and additionally made it crystal clear that State law has no place in matters of distribution of Colorado River water in the Lower Basin. Professor Charles Meyers, a strong advocate of the application of state law to the distribution and use of Colorado River water, recognized the Court’s pronouncements were the law. Indeed, the Supreme Court dealt with the additional question of salvaged or conserved water in Arizona v. California. The court denied a claim by the United States to the use of any waters that would have been wasted if not for the salvage without charge against its consumption. The Court simply noted that under the Boulder Canyon Project Act consumptive use is to be measured by diversions less returns to the river. It also perhaps bears reminding that so-called conserved water in Imperial in fact means water not diverted and thus constitutes mainstream Colorado River water in storage behind Hoover Dam, subject to the strictures of the Law of the River.

Arizona v. California is the basis of the regulation of intrastate transfers. Therefore, we must now determine if Congress or the Supreme Court has altered the law as enunciated in 1963 in Arizona v. California. Professor Meyers and others assert the Supreme Court in its decision in California v. United States, made State law applicable to the distribution and use of Colorado River water within California. The author contends that a careful reading of that case and Bryant v. Yellen will show that the law has not changed as to Lower Basin Colorado River water.

California v. United States, more popularly known as the New Melones case, involved the desire of the United States Bureau of

120. See supra note 59 and accompanying text.
121. See supra note 60 and accompanying text.
Reclamation to fill its newly constructed, but highly controversial New Melones Dam. The dam was a facility of the Central Valley Project and a Reclamation Act project. The issue before the court was to determine the degree that the act of filling would be subject to the jurisdiction of the California State Water Resources Control Board, the controlling state water rights authority. The Court made it quite clear that Section 8 of the Reclamation Act subjects federal reclamation projects to state water law unless to do so would be inconsistent with a Congressional directive. The Court addressed the decision in Arizona v. California, and also disapproved the dictum in Ivanhoe Irrigation District v. McCracken and City of Fresno v. California. The Court cited Arizona v. California during its discussion of the place of State law.

In Arizona v. California, the States had asked the Court to rule that state law would control in the distribution of water from the Boulder Canyon Project, a massive multistate reclamation project on the Colorado River. After reviewing the legislative history of the Boulder Canyon Project Act . . ., the Court concluded that because of the unique size and multistate scope of the Project, Congress did not intend the State to interfere with the Secretary's power to determine with whom and on what terms water contracts would be made. While the Court in rejecting the States' claims repeated the language from Ivanhoe and City of Fresno as to the scope of sec. 8, there was no need for it to reaffirm such language except as it related to the singular legislative history of the Boulder Canyon Project Act.

The author suggests that disavowing the dictum in Ivanhoe and City of Fresno and reaffirming the singular legislative history of the Boulder Canyon Project Act is hardly sufficient to overrule the Court's prior holding in Arizona v. California that federal law governs transactions in the Lower Basin, nor do the Court's actions constitute a basis for holding that a Colorado River water contractor may with impunity sell water stored behind Hoover Dam to any party. The Secretary is still the Watermaster of the River in the Lower Basin.

126. It is interesting to note that Professor Meyers in his own name, filed an amicus curiae brief in California v. United States, urging the Court to overrule its Arizona v. California holdings in regard to the place of state law in federal water projects.
Further, two years after *California v. United States*, the Supreme Court decided *Bryant v. Yellen*. The Court noted the holding in *California v. United States*, but commented:

In *Arizona v. California*, we held that the Project Act vested in the Secretary the power to contract for project water deliveries independent of the direction of Sec. 8 of the Reclamation Act to proceed in accordance with state law and of the admonition of Sec. 18 not to interfere with state law. . . .

In an accompanying footnote the Court stated:

In terms of reclamation law generally, the import of the Court’s opinion in this respect was considerably narrowed in *California v. United States*. . . ., but the latter case did not question the description of the Secretary’s power under the Project Act itself.


There remain two subsidiary issues on this question of the intrastate transfer of Colorado River water. First, does the “appurtenancy” provision of the Reclamation Act apply to such transfers, and secondly, if state law applies, does the State Water Resources Control Board have authority to reallocate Colorado River water based on California Water Code priorities. We will deal with these questions briefly.

The “appurtenancy” issue involves a proviso to Section 8 of the Reclamation Act of 1902. Section 8 has been construed to require the Bureau of Reclamation to comply with state water law unless to do so would interfere with a clear Congressional directive. Section 8 provides:

Nothing in this Act shall be construed as affecting or intended to affect or to in any way interfere with the laws of any State or Territory relating to the control, appropriation, use, or distribution of water used in irrigation, or any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions of this Act, shall proceed in conformity with such laws, and nothing herein shall in any way affect any right any landowner, appropriator, or user of water in, to, or from any interstate stream or the waters thereof: Provided, *That the right to the use of water acquired under*

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132. *Id.* at 370 n.21 (emphasis added).
the provisions of this Act shall be appurtenant to the land irrigated,
and beneficial use shall be the basis, the measure, and the limit of
the right.\textsuperscript{134}

The emphasized language is the appurtenancy clause, and would on
its face appear to bar a transfer of reclamation project water to
other buyers. The legislative history of the clause indicates that bar
was indeed the objective of the clause in order to "prevent the
possibility of speculative use of water rights. . . ."\textsuperscript{135} The Supreme
Court, in \textit{California v. United States}, referred to the appurtenancy
clause as being an exception to the requirement of complying with
state law. "Congress did not intend to relinquish total control of the
actual distribution of water to the States. \textit{Congress provided in § 8
itself that the water right must be appurtenant to the land irrigated
and governed by beneficial use. . . .}''\textsuperscript{136} In any event, it would appear
that a resolution of the question of whether the appurtenancy clause
bars a transfer of Colorado River water in the Lower Basin would
be needed before a sale of such water by Imperial could be effective.

If State law applies, how much of that body of law must be
complied with by Colorado River water users?

Must they obtain appropriation permits from the State Water
Resources Control Board?\textsuperscript{137} Even Imperial's permits acquired in the
1950s are admitted to add nothing to their existing Colorado River
water rights.\textsuperscript{138}

May the State Water Resources Control Board reallocate Colorado
River water between users to effectuate the California relative pri-

orities of use: domestic purposes is the highest use, and irrigation is
next?\textsuperscript{139}

\textsuperscript{134} Act of June 17, 1902, 32 Stat. 388, 390 (1902) codified at 43 U.S.C. § 372 (emphasis
added).

\textsuperscript{135} H.R. REP. No. 1468, 57th Cong. 1st Sess., 6-7, 8-9 (1902). \textit{See also} 35 CONG. REC.
6679 (1902) (the statements of the floor manager of the bill showing the intent of the clause
was to limit the use of the water to tracts and land originally irrigated and not be transferable).
\textit{But see} Ross-Collins, \textit{Voluntary Conveyance of the Right to Receive a Water Supply from the

\textsuperscript{136} \textit{California v. United States}, 438 U.S. 645, 668 n.21 (1980) (emphasis added). \textit{But see,}
El Paso County Water Improvement Dist. No. 1 v. City of El Paso, 133 F. Supp. 894, 904
(W.D. Tex. 1955), \textit{aff'd in part}, 243 F.2d 927 (5th Cir. 1957), \textit{cert. denied}, 355 U.S. 820
(1957).


\textsuperscript{138} \textit{See supra} note 104. In fact Coachella and Metropolitan have also obtained, subsequent
to the issuance of contracts by the Secretary, state water rights permits for diversion of
Colorado River water.

\textsuperscript{139} \textit{CAL. WATER CODE} § 106 (West 1971).
Finally, may a court or the State Board invoke the public trust doctrine\textsuperscript{140} to reallocate Colorado River water in California, perhaps providing more water for recreation and fish and wildlife, and if so, at the expense of what present contractors? The author does not believe the State Board has these powers to the detriment of the powers granted to the Secretary by the Boulder Canyon Project Act. If, however, it is determined that a contractor has the power under state law to sell so-called conserved water without the approval of the other California water contractors and the Secretary, these questions will need to be addressed.

V. SALE OR TRANSFER OF INDIAN RESERVED WATER RIGHTS

This portion of the article will deal with a problem that hangs over the heads of present users of Colorado River water, particularly in the Lower Basin. The problem deals with quantification and use of Indian reserved water rights in the overall Colorado River Basin. These rights, commonly referred to as \textit{Winters} rights, when finally identified in full may well constitute a significant portion of the total available supply of the water of the Colorado River System.

The doctrine of Indian reserved waters was first enunciated by the United doctrine of States Supreme Court in the 1908 decision of \textit{Winters} v. \textit{United States}.\textsuperscript{141} The Court held that when Congress created an Indian reservation, it impliedly reserved water for the benefit of the reservation when water is necessary to fulfill the purposes of the reservation.

In examining the circumstances of each reservation, courts are to look to the reason for the creation of the reservation,\textsuperscript{142} the characteristics of the land, and the needs of the Indians. Once finding that the right is implied, however, the right is granted without regard to the equities of competing water uses.\textsuperscript{143} Thus, \textit{Winters} rights are


\textsuperscript{141} 207 U.S. 564 (1908).

\textsuperscript{142} Reservations do not need to be Indian Reservations. Reserved water rights have been declared for such federal purposes as national monuments. See Cappaert v. United States, 426 U.S. 126 (1976).

another exception to the usual practice that the United States defers to state law in the area of water rights.\textsuperscript{144}

The first area of concern in dealing with Indian reserved rights is quantification. In \textit{Arizona v. California}, the United States intervened on behalf of the five Indian tribes seeking \textit{Winters} rights. The Special Master recommended a standard of “practicably irrigable acreage” when he wrote “the more sensible conclusion is that the United States intended to reserve enough water to irrigate all of the practicably irrigable lands on a reservation and that the water rights thereby created would run to defined lands, as is generally true of water rights.”\textsuperscript{145} The Supreme Court accepted the Master’s recommendation, and the decree awarded the five tribes the right to divert over 900,000 acre-feet of mainstream Colorado River water each year, with priority dates of the date of the creation of each reservation.\textsuperscript{146} Thus, the Indian rights may be quantified today, with the effect of depriving existing users of water because of the priority dates.

There are still unquantified Indian reserved water rights in the Upper Basin. Indeed, there have been and exist continuing attempts to increase the already awarded Lower Basin quantities.\textsuperscript{147} There have also been attempts to negotiate these rights with competing users. These efforts usually will only succeed if there is unappropriated water or an imported supply available. One such negotiated effort will serve to demonstrate the issues involved here.

\begin{footnotesize}
\begin{enumerate}
\item See United States v. New Mexico, 438 U.S. 696, 715 (1978). Because this is an exception, the courts have emphasized the importance of the limitation of such rights to that essential to accomplish the purposes for which the land was reserved. See United States v. Adair, 723 F.2d 1394 (9th Cir. 1984).
\item Report of the Special Master, supra note 59 at 263.
\item By three separate orders of Secretaries of the Interior, as to three Lower Basin Indian Reservations, the boundaries were declared to be adjusted retroactively to the dates of the creation of the reservations to increase the size of the reservations, and, thus, the amount of practicably irrigable acreage. The United States and the Indian Tribes sought to reopen \textit{Arizona v. California} to have more water awarded for those acres, and also for some acreage within the original boundaries which were said to be “omitted” in the first trial. After an extensive hearing before a new Special Master, the Supreme Court rejected his report which would have awarded substantial quantities for the two categories of acreage. The Court held as to the “omitted” acreage, finality and certainty preclude it being brought up now, and as to the boundary lands, unilateral orders of a Secretary do not constitute a final boundary determination. The Court suggested a pending case in the District Court of Southern California was a suitable forum for that determination. See Arizona v. California II, 460 U.S. 605 (1983). The referenced case is \textit{Metropolitan Water Dist. of S. Cal. v. United States}, S.D. Cal. Civ. No. 81-0678-RB. That case is winding its way through the courts. See Metropolitan Water Dist. of S. Cal. v. United States, 628 F. Supp 1018 (S.D. Cal.1986); 830 F.2d 139 (9th Cir. 1987); \textit{cert. granted, ___U.S. ___}, 108 S. Ct. 1572 (1988).
\end{enumerate}
\end{footnotesize}
The Animas-La Plata project is a reclamation project authorized by the Colorado River Basin Project Act of 1963, but never funded. The project was long sought by the States of Colorado and New Mexico. Part of the problem of construction has been the reserved rights claims of two Indian tribes, the Ute Mountain Ute Indian Tribe and the Southern Ute Indian Tribe, of waters that are tributary to the Colorado River. A settlement agreement was reached between each Tribe and the United States and the State of Colorado. The agreement quantified the water rights of both Tribes. Approval legislation is pending in Congress, but opposition has been strong, particularly from the Lower Basin States. The agreement allows the Tribes to transfer their water for use off their reservations. If this is to be done within Colorado, the Tribes must comply with Colorado water law and accept for water used off the reservation a priority date based on the date of the application rather than the date of creation of the reservation. The agreement allows the sale of reservation water out of state, without any of the same instate restrictions.

For all practical purposes, the only real market for the water of these Tribes is the Lower Basin, either the cities of Arizona or the Coastal Plain of Southern California. The same problems that attended the Galloway type interbasin transfers discussed in part III, also affect any attempted interbasin transfer of Winters rights water. Indian reserved water rights, however, present two additional questions that we will introduce here: May Winters rights water be used off the reservation; and are Indian Tribes subject to the Colorado River Compact and other documents of the Law of the River.

A. Off-Reservation Sales?

As shown by the Colorado Ute Indian Water Rights Agreement, there have been Congressional attempts to authorize Indian Tribes

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151. Id. at art. V B (b).
152. Since the courts have not definitely answered either question, the discussion here will be brief. The author commends to law students and others to write on these subjects, which will surely be litigated.
to lease or sell their reserved water off the reservation. There are, however, no court decisions known to the author interpreting the Winters doctrine in a manner which would allow such activity. There are some cases dealing with the lease or sale of Indian reservation land with the accompanying water rights, but those rights are subject to loss for non-use. Moreover, the discussion in some cases seems to lead to the conclusion that the water obtained pursuant to the Winters doctrine can only be used on the land for which it was reserved.

The Special Master, as previously noted, discussed the intent and limitation of the doctrine. He further concluded that these rights “are of fixed magnitude and priority and are appurtenant to defined lands.” In the Cappaert case, the Supreme Court held: “[t]he implied reservation of water doctrine, however, reserves only that amount of water necessary to fulfill the purpose of the reservation and no more.” In Washington v. Fishing Vessel Association, the Court held:

As in Arizona v. California and its predecessor cases, the central principle here must be that Indian treaty rights to a natural resource that once was thoroughly and exclusively exploited by the Indians secures so much as, but no more than is necessary to provide the Indians with a livelihood that is to say, a moderate living.

The theory that reserved water rights can only be used on the reservation is based on the fact that the rights were implied as being necessary to fulfill the purposes for which the reservation was created. This rationale supports the holding that these rights cannot be lost by the Indians by non-use, and the priority of the rights is not changed by late quantification. However, the transfer of water off the reservation does not further the life of the Indians on the reservation. Therefore, to retain the early priority date does mischief

153. E.g., Skeem v. United States, 273 F. 93 (9th Cir. 1921); United States v. Hibner, 27 F.2d 909 (E.D. Idaho 1928).
155. See supra text at note 145. See also In re The General Adjudication of All Rights to Use Water in the Big Horn River System, P.2d __________(Feb. 24, 1988), (the Wyoming Supreme Court affirmed the trial court’s decree, which among other items ordered that Indian Tribes that were awarded water rights could not export that water off the reservation).
156. Report of Special Master, supra note 58, at 266.
159. Washington, 443 U.S. at 685.
with the rights of other appropriators. This is particularly true in the Lower Basin of the Colorado River.

The Indians, on the other hand, have a compelling economic and political argument. The reserved water rights, particularly if they are to be used for agricultural purposes, are of little use to the Indians unless they have the usual irrigation works in place. With the federal government reducing expenditures on such projects, there would appear to be little hope of the tribes accomplishing the necessary development to make use of their water rights unless they can lease or sell the water to raise the necessary capital, or to have lower priority users pay the tribes not to develop their reservation lands.

This problem is not going to go away. The Indians hold rights to large quantities of water, not just in the Colorado River Basin. Lower priority holders are going to balk at off-reservation sales. Colorado, with the Colorado Ute Indian agreement, may have touched on a possible compromise solution by insisting that if off-reservation sales are permitted, the priority date of that sold water will be the date of the sale.

B. Are Indian Reserved Water Rights Subject to the Law of the River?

Several attorneys representing Indian Tribes with Winters rights have indicated to the author and others their belief that those rights are not subject to the Law of the River. The agreement with the Colorado Ute Indian Tribes discussed above skirts this question by allowing out of state off reservation sales only to the extent permitted by State law, Federal law, interstate compact, or international treaty. The argument seems to rest on the dual theory that the Tribes are sovereign nations and Article VII of the Colorado River Compact which provides: "Nothing in this Compact shall be construed as affecting the obligations of the United States of America to Indian tribes."

There is no question that the United States is bound by the Law of the River, through acts and approvals of Congress and decisions

160. See supra notes 149-51 and accompanying text.
161. Id.
162. Compact, supra, note 3 at art. VII. Professor Hundley indicates that this article was placed in the Compact to protect the Indian tribes water rights, whatever they were. Hundley, supra note 5, at 211-12.
and decrees of the Supreme Court. The answer to the question presented may well turn on whether and to what extent the United States may represent and bind Indian tribes by its actions and litigation. This seems to have been well settled, at least for water rights purposes in the Lower Basin of the Colorado River by Arizona v. California II. In the original case, the United States represented the Indians in the quantification of their water rights. In the amended decree in 1979, the five Lower Basin Tribes were awarded present perfected rights, presumably protected by and subject to the provisions of the Law of the River, and the Tribes were denied leave to intervene to oppose the amendment. 163 In the second Arizona case, the three affected Indian Tribes intervened and raised the question of inadequate representation of the United States in the original case. The Court rejected this attack and made it amply clear that the United States had full authority to bind the Tribes in litigation and that its representation was exemplary. 164 In any event, if any Upper Basin Indian Tribes seek to sell water in the Lower Basin, this question, as many other will undoubtedly be resolved by litigation.

VI. UNITED STATES-MEXICO WATER TREATY SUPPLY OBLIGATIONS

We noted in the discussion on the Law of the River that the United States undertook an obligation to deliver 1,500,000 acre-feet of Colorado River water to Mexico each year. Two problems develop out of this agreement. It is the author’s intent here only to introduce the problems, as it appears that despite the many discussions between the Bureau of Reclamation and the States on the Treaty water quantity and quality shortfalls, no great analysis of resolution of the potential interstate squabbles had been undertaken. The first problem is determining who should bear the burden of supplying the water. The Colorado River Compact provided that such a treaty obligation should be first met out of surplus waters, and if there was no surplus, it should be borne equally by the Upper and Lower Basins. 165 In the future, the prospects are that there will not be any surplus waters. Even though the Colorado River Basin Project Act of 1968 made the satisfaction of the obligation a national one, before the satisfaction of the Mexican agreement can be met out of water augmentation.

165. See supra notes 81-2 and accompanying text.
projects,\textsuperscript{166} it seems likely the methodology of sharing the burden between the Basins will come into play and most likely lead to litigation.

The negotiators of the Colorado River Compact proceeded on the assumption that there was ample water for the interbasin apportionments made plus unapportioned and unappropriated waters sufficient to meet any treaty obligation.\textsuperscript{167} That not being the case, the questions will face the states of both Basins, and conceivably could result in another original proceeding in the Supreme Court.\textsuperscript{168}

A second problem is the quality of the water delivered to Mexico. Even though this is a Federal problem, it may ultimately require some action by the United States which could affect existing Colorado River allocations.

The issue of water quality is basically a problem of salinity. The Mexican Water Treaty was silent on the question of the quality of the water obligated to be delivered at the international boundary. It is a well known fact, however, that after running the full length of the river in the United States, and particularly from returns to the river from upstream diversions in the Upper Basin, and the Palo Verde drain in California and the Welton-Mohawk drain in Arizona, the water of the Colorado River is heavily laden with salts, cutting its efficient use.\textsuperscript{169} The Mexican Government complained in the 1960s, and in 1972 and 1973 agreements were reached obligating the United States to deliver water at the international boundary with a salinity of no more than 115 parts per million.\textsuperscript{170} Various actions have been and can be taken to meet this requirement, such as the construction of the Yuma desalting plant,\textsuperscript{171} the lining of the Coachella Canal with the conserved water being available for salinity dilution until California is limited to use of 4.4 million acre-feet per year, and taking acreage out of production.

\textsuperscript{166} See \textit{supra} note 84 and accompanying text.

\textsuperscript{167} See \textit{supra} note 81 and accompanying text.

\textsuperscript{168} Does the Upper Basin bear the losses of its share due to seepage and evaporation between Lee Ferry and the Mexican border, which may be as much as several hundred thousand acre-feet per year? The loss calculations, as made by the California Colorado River Board staff, are based on evaporation records of Lake Mojave behind Davis Dam, which was designed in part as storage to meet the Mexican Treaty obligation.

\textsuperscript{169} See Nathanson, \textit{supra} note 6, ch. XIII (a brief background on this problem).

\textsuperscript{170} See id. \textit{supra} at 218-21 (International Boundary and Water Commission Minutes 241 and 242).

\textsuperscript{171} Operation of the desalting plant will produce brine water which will be conveyed to the Gulf of California. As less water, even though desalted, will reenter the Colorado River than previously, it will be necessary to develop water to replace the brine.
The Federal and State governments have done much to try to reduce the salinity in the River, which will redound to the benefit of all.\textsuperscript{172} Indeed, the Colorado River Basin Salinity Control Act of 1974 is a massive Federal authorization for constructing and operating salinity control measures throughout the entire Colorado River Basin.\textsuperscript{173} As with all Federal programs, however, funding requires constant vigilance by the States. The concern of the States is that if the salinity is not controlled to meet the agreed standards, the States and entities within each State may well have to take action to meet these standards. It has been suggested that this supply might come from imposed conservation measures on Lower Basin agriculture,\textsuperscript{174} or that the Federal Government has a call on all the unappropriated water in the Upper Basin as of the Treaty date for meeting the supply obligation.\textsuperscript{175} Weather modification and vegetation management to increase water supplies are other solutions that have been suggested. The point is that despite the obvious federal jurisdiction and obligation, the solution may well seriously affect state Colorado River allocations.

\section*{VII. Conclusion}

The author has attempted to set forth here, with it is hoped some objectivity, the major problems facing Colorado River water users, with an emphasis on the effect of these problems on California. It is obvious that most of these problems stem from the over-appropriation of this interstate water supply. It is easy to say that with increasing urban demands for water, particularly in the Lower Basin, we should change the Law of the River. This could be done if everyone agreed, but in each of the proposals examined here, some party is adversely affected. In the Galloway proposal, Colorado, or either Arizona or Metropolitan would be hurt. The sale of Imperial's water outside its boundaries would adversely affect Metropolitan and Coachella, and so on as you look at each idea. There can be a voluntary reallocation of Colorado River water supplies with con-

\begin{footnotesize}
\textsuperscript{172} See Environmental Defense Fund v. Costle, 657 F.2d 275, 280-82 (D.C. Cir. 1983) (for a description of these efforts).
\textsuperscript{174} See Getches, supra note 86, at 68.
\textsuperscript{175} Clyde, \textit{Institutional Response to Prolonged Drought}, in \textit{New Courses for the Colorado River}, supra note 5, at 105, 121.
\end{footnotesize}
comitant changes in the Law of the River, but it would require much careful thought and lengthy negotiations. These prerequisites are not in evidence yet.