

**ADMINISTRATION OF COLORADO RIVER ALLOCATIONS:
THE LAW OF THE RIVER & THE COLORADO RIVER
WATER DELIVERY AGREEMENT OF 2003**

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ABSTRACT

Under federal law developed over the past century, each of the seven Colorado River Basin States of Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming has an allocation to water from the Colorado River. In addition, pursuant to a 1944 Treaty with the Republic of Mexico, the United States agreed to annual deliveries of water to Mexico. This body of law is commonly referred to as "the Law of the River." Under this legal system, the Secretary of the Interior, through the U.S. Bureau of Reclamation, is responsible for the operation of massive storage facilities in the Colorado River Basin. Primary storage in the Colorado River's Lower Basin is provided by Hoover Dam. Within the Lower Basin, California has a "basic" annual allocation of 4,400,000 acre-feet (af), yet has been using significant amounts in excess of this amount since the early 1950s, with recent use exceeding 5,300,000 af. While this use has been legal during this period, continued overuse of the Colorado River by California reduced storage amounts in system reservoirs and threatened the allocations of the other six basin states. This paper will present a case study and an overview of the history, issues, and operation of the Colorado River in the Southwest United States. This paper will have a particular emphasis on the increase in use of water in the Lower Basin and recent developments in the Lower Basin States of California, Arizona and Nevada. This paper will identify legal and operational issues that have been the subject of active negotiations by the Department of the Interior for nearly a decade. This effort, undertaken in close consultation with the seven Colorado River Basin States, led to a successful agreement in October 2003 on a long-term transfer of Colorado River water from high priority agricultural users in the Imperial Valley to municipal users on the coastal plain in San Diego. The recently executed *Colorado River Water Delivery Agreement* provides a turning point in Colorado River management and operations: it provides the necessary agreement among Colorado River water users in California for an agreed-upon reduction in California's Colorado River use over the upcoming decades. With the successful implementation of this Agreement each state's allocation from the Colorado should be more secure, and these arrangements will demonstrate that there is sufficient flexibility within the Law of the River to meet the changing needs and increased demands for urban use of water in the Colorado River Basin.

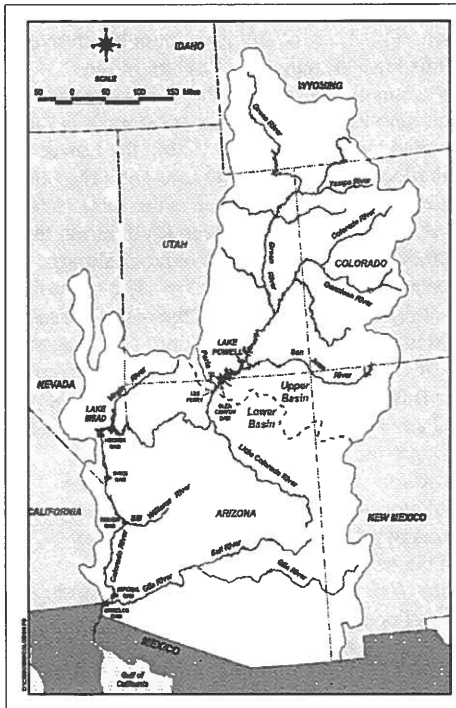
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CASE STUDY: THE COLORADO RIVER

Development of the Law of the Colorado River

At the center of the Western United States flows the 1,450 mile-long Colorado River. One-twelfth of the nation's lands, equaling 244,000 square miles, drain to the Colorado. The drainage includes portions of the states of Colorado, New Mexico, Wyoming, Utah, Arizona, California and Nevada (collectively the "Basin States"). The Colorado River forms a portion of the U.S.-Mexico border, divides the states of Baja California and Sonora in Mexico and discharges into the Gulf of California (also known as the Sea of Cortez).



The original name given to the river by the Spanish explorers was the Rio Colorado, which means "Red River" – referring to the red desert sediments that give the river its stunning color.

The Colorado River has been described as the most closely regulated and controlled stream in the United States.³ Major dams on the Colorado are operated by the U.S. Bureau of Reclamation (Reclamation) in accordance with "The Law of the River" – a broad phrase that attempts to describe a legal framework that includes interstate compacts, the 1944 U.S.-Mexico Water Treaty, federal statutes and regulations, court decrees, water delivery contracts, operating criteria, and other implementing documents relating to the use of the waters of the Colorado.⁴

³Milton N. Nathanson, *Updating the Hoover Dam Documents*, 1 (Reclamation 1978) (Hoover Update). The Colorado River drains approximately 244,000 square miles, yields approximately 15 million acre-feet (maf) per year and is the lifeblood of the arid southwestern United States. *New Courses for the Colorado*, at 1 (1986).

⁴2002 Annual Operating Plan for Colorado River System Reservoirs at 1-2 (Reclamation 2002); see also Hoover Update at 1. The use of the shorthand

It is fair to say that controversy and conflict have created the Law of the River, and that the Law of the River also provides the means to manage conflict and facilitate development and use of the River through changing times. It is not possible to discuss the issues regarding use of the Colorado River, however, without a basic understanding and appreciation of the key elements of "The Law of the River."

This paper addresses a central theme that runs throughout the modern history of the Colorado: the concern by the other six states and users in the basin with California's demands on, and use of, the Colorado River. These concerns predated the Colorado River Compact of 1922, and remained unresolved and at the forefront of Colorado River negotiations until Secretary Gale Norton executed the Colorado River Water Delivery Agreement of 2003.

Colorado River Compact of 1922: The relative rights of the Upper and Lower basins of the Colorado were established by the Colorado River Compact of 1922, with each basin receiving a right to 7.5 million acre-feet of water in perpetuity.⁵ Congress had authorized negotiation of a "compact"⁶ among the Basin States and,

phrase "the Law of the River" has generated various debates about what is or is not part of the "Law of the River." That debate, while entertaining, is not likely to ever have a definitive answer. The general practice at the Department of the Interior is to reference the phrase "applicable federal law" or to reference particular federal statutes, etc., when describing the legal basis for particular actions and/or decisions.

⁵Colorado River Compact, Article III(a) (1922). The allocation of water to the Upper Basin serves the states of Colorado, New Mexico, Utah, and Wyoming. The waters allocated to the Upper Basin are quantified and administered pursuant to the Upper Colorado River Basin Compact of 1948 and the operation of the state laws of the respective states. Act of April 6, 1949, ch. 48, 63 Stat. 31). Under the provisions of the Upper Basin Compact, the Upper Basin states receive the following specific percentages of the total quantity of consumptive use annually and are apportioned in perpetuity: Colorado (51.75%), New Mexico (11.25%), Utah (23.00%), Wyoming (14%). In addition, a small amount of Upper Basin water (50,000 afy) has been allocated to Arizona pursuant to the Upper Basin Compact, reflecting the small portion of Arizona that lies within the Upper Colorado River Basin drainage. The allocation of water to the Lower Basin serves the states of Arizona, California and Nevada. The Compact also allows the Lower Basin "the right to increase its beneficial consumptive use of [the Colorado River system] by one million acre-feet." Colorado River Compact, Art. III(b) (1922). This right has not been exercised and is not within the scope of issues addressed by this article.

⁶Authority for states to make agreements or "compacts" is contained in Art. I, § 10 of the U.S. Constitution ("No State shall, without the Consent of Congress, ...

in 1922, then Secretary of Commerce Herbert Hoover (who later became the 31st President of the United States) was called upon to facilitate an agreement. The need for the 1922 Colorado River Compact was created by California's early and significant development utilizing the river's water. This use created fear among the other six basin states that California would acquire a superior right to Colorado River water under the doctrine of prior appropriation – as applied on an interstate basis within the Colorado River system.

While the objective of the 1922 Compact negotiations had been to provide a specific allocation of water to each of the seven Colorado River basin states, the negotiators were unable to reach agreement on this point, and had to settle on a perpetual allocation to the Upper and Lower Basins.⁷ Having made the allocation between the Basins, the express provisions of the 1922 Compact provide that the Compact would become binding only after approval by the legislatures of each of the seven basin states.⁸

After adoption of the 1922 Compact, disputes between Arizona and California regarding their relative rights to the lower basin's allocation led Arizona to refuse to ratify the Compact. In response, Congress developed an alternate mechanism for ratification of the Compact in the Boulder Canyon Project Act of 1928: ratification by six states, including California, if and only if the California legislature,

agree irrevocably and unconditionally ... as an express covenant ... that the aggregate annual consumptive use of water of and from the Colorado River for use in the State of California ... shall not exceed four million four hundred thousand acre-feet of the waters apportioned to the lower basin States.⁹

With Arizona refusing to ratify the Compact, and with ratification from Colorado, Nevada, New Mexico, Utah and Wyoming, all that remained for the effectiveness of the Compact was action by California pursuant to this provision of the Boulder Canyon Project Act. The California Limitation Act of 1929 was enacted by California in fulfillment of this requirement and on June 25, 1929 President Hoover (who, as noted above, previously served as the federal representative to

enter into any Agreement or Compact with another State ..."). This mechanism for interstate agreements predates the U.S. Constitution by over a century.

⁷See fn. 5 supra.

⁸Colorado River Compact, Article XI (1922).

⁹Boulder Canyon Project Act, § 4(a) (1928) (codified at 43 U.S.C. § 617c(a)).

the Compact negotiations) proclaimed that the conditions required for Congressional approval of the Compact had been met.¹⁰

Boulder Canyon Project Act of 1928: In addition to approval of the 1922 Compact, and authorization for construction of Hoover Dam, the Boulder Canyon Project Act also served to impose an allocation of the Colorado River water within the lower Basin. In the absence of an agreement within the lower Basin, Congress provided its own method for a complete apportionment of the mainstream water among Arizona, California, and Nevada. Arizona v. California, 373 U.S. 546, 595 (1963) (Az.v. Cal. Opinion).¹¹ This provision of Boulder

¹⁰California Limitation Act (Stats. Cal. 1929, ch. 16); Presidential Proclamation (46 Stat. 3000) (1929); Boulder Canyon Project Act at §§ 4(a), 13 (codified at 43 U.S.C. §§ 617c(a), 617l).

¹¹The Arizona v. California litigation was initiated in 1952 and involved, in part, the quantity of water that each Lower Basin State had a legal right to use out of the waters of the Colorado River and its tributaries. Az. v. Cal. Opinion at 550-51. The case was one of the most complex and extensive in U.S. Supreme Court history: oral argument alone lasted over 24 hours before the Court between 1961 and 1963. Id. at 551. The Court found that the Boulder Canyon Project Act had vested the Secretary with broad authority to administer the waters allocated to the Lower Basin:

In undertaking this ambitious and expensive project for the welfare of the people of the Lower Basin States and of the Nation, the United States assumed the responsibility for the construction, operation, and supervision of [Hoover] Dam and a great complex of other dams and works. All this vast, interlocking machinery--a dozen major works delivering water according to congressionally fixed priorities for home, agricultural, and industrial uses to people spread over thousands of square miles--could function efficiently only under unitary management, able to formulate and supervise a coordinated plan that could take account of the diverse, often conflicting interests of the people and communities of the Lower Basin States. Recognizing this, Congress put the Secretary of the Interior in charge of these works and entrusted h[er] with sufficient power, principally the § 5 contract power, to direct, manage, and coordinate their operation. Subjecting the Secretary to the varying, possibly inconsistent, commands of the different state legislatures could frustrate efficient operation of the project and thwart full realization of the benefits Congress intended this national project to bestow. We are satisfied that the Secretary's power must be construed to permit h[er], within the boundaries set down in the Act, to allocate and distribute the waters of the mainstream of the Colorado River.

Canyon Project Act authorized the Secretary to execute contracts for the Lower Basin's 7.5 maf apportionment as follows: Arizona - 2.8 maf, California - 4.4 maf, and Nevada - 0.3 maf.

After passage of the Boulder Canyon Project Act the Secretary undertook the process of contracting for the lower Basin's apportionment. Within California, representatives of agricultural and urban entities that utilize Colorado River water recommended an approach to the Secretary that was embodied in the "Seven Party Agreement" of August 18, 1931. The quantities and priorities recommended by this agreement are reflected in Secretary's 1931 implementing regulations and water delivery contracts.

California has developed a massive agricultural and urban infrastructure that is dependent on imported Colorado River water, and as shown in Table 1 below, the contracts executed by the Secretary exceed California's apportionment by nine hundred and sixty-two thousand acre-feet.

Since the early 1950s, California has consistently used more than its apportionment of 4.4 million acre-feet, with use in some years exceeding 5.3 maf. California has relied on two legal mechanisms to access water in excess of its 4.4 maf apportionment: unused apportionment and surplus water. Both of these mechanisms are consistent with applicable provisions of the Law of the River, in particular, the Supreme Court's Decree in Arizona v. California.¹²

Arizona v. California, 373 U.S. 546, 588-90 (1963). After issuing its opinion in the case in 1963, the Court issued a Decree in the case serves as a "blueprint" for the Secretary's actions pursuant to the provisions of the Boulder Canyon Project Act and the other elements of applicable federal law. The Decree also imposes a permanent injunction on the Secretary and limits the Secretary's actions with respect to the water master function on the lower Colorado River.

¹²Arizona v. California, 376 U.S. 340 (1964) (Decree) at Art.II(B)(2) ("surplus") and Art. II(B)(6) ("unused apportionment"). Unused apportionment refers to water that is unused in any year by a lower basin state; surplus water refers to water authorized for release by the Secretary for use in the lower basin in excess of 7.5 maf.

Table 1: Priorities and Quantities of California's contracts for Colorado River Water reflected in 1931 regulation promulgated by the Secretary of the Interior

Priority	Description	Annual Amount
1	Palo Verde Irrigation District (104,500 acres)	>3.85 million acre feet (priorities 1, 2, 3(a), 3(b))
2	Yuma Project (Reservation Division) (25,000 acres)	
3(a)	Imperial Irrigation District and Coachella Valley County Water District	
3(b)	Palo Verde Irrigation District (16,000 acres of mesa lands)	
4	Metropolitan Water District	550,000 af
	<i>Sub-total: Priorities 1-4</i>	<i>4.4 million acre feet</i>
5(a)	Metropolitan Water District	550,000 af
5(b)	City and/or County of San Diego (<i>Note: San Diego's contract has been merged with MWD's</i>)	112,000 af
6(a)	Imperial Irrigation District and Coachella Valley County Water District	>300,000 af (priorities 6(a) and 6(b))
6(b)	Palo Verde Irrigation District (additional 16,000 acres of mesa lands)	
	<i>Total: Priorities 1-6(b)</i>	<i>5.362 million acre feet</i>

Role of The Secretary under the Decree in Arizona v. California: The role of the Secretary on the lower Colorado River (generally defined as that part of the river between the upper reaches of Lake Mead and the Mexican border) is unique in the United States. The Secretary serves the function commonly referred to as that of a "water master" and administers delivery of the waters of the mainstream of the

Colorado below Lee Ferry, providing for delivery of water to the Lower Division states of Arizona, California and Nevada, and to the Republic of Mexico.¹³

The Secretary manages the lower Colorado River system in accordance with federal law, including, in particular, the Supreme Court's Decree. The Decree guides the actions of the Secretary in her role as water master and provides that the "United States, its officers, attorneys, agents and employees ... are hereby severally enjoined" from acting in a manner that is inconsistent with the water management provisions embodied in the Decree.¹⁴ The Decree enjoins the Secretary from releasing water stored in Lake Mead except for specific identified purposes: primarily the satisfaction of the allocations to the lower Basin states and the Republic of Mexico.¹⁵

The system established by the Decree provides for three quantities of water supply: "normal" years when 7.5 maf is available,¹⁶ "shortage" years when less than 7.5 maf is available,¹⁷ and "surplus" years, when more than 7.5 maf is available.¹⁸ The Secretary is authorized by the Decree to determine the conditions upon which such water may be made available; i.e., to determine whether it is a "normal", "surplus," or "shortage" year.¹⁹

Subsequent to the Court's issuance of the Decree, in the 1968 Colorado River Basin Project Act, Congress required the Secretary develop a set of operating criteria for the coordinated long-range operation (LROC) of the reservoirs on the Colorado.²⁰ This Act also requires the Secretary, beginning in 1970, to make annual determinations of available water supply in a report describing projected operations for the current year and requires that the report be issued no later than January 1st of each year.²¹ This report is routinely referred to as the "Annual

¹³Mexico is allotted an annual quantity of 1.5 million acre-feet per year (maf) pursuant to Article 10(a) of the Treaty titled "*The Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, Treaty Between the United States of America and Mexico*," signed February 3, 1944 (1944 U.S.-Mexico Treaty).

¹⁴Decree at Art. II, 376 U.S. at 341.

¹⁵*Id.* The only identified exceptions to releasing water for downstream consumptive use are flood control operations, river regulation, and improvement of navigation. *Id.* Releases for power are also identified in Art. II of the Decree.

¹⁶Decree at Art. II(B)(1), 376 U.S. at 342.

¹⁷Decree at Art. II(B)(3), 376 U.S. at 342.

¹⁸Decree at Art. II(B)(2), 376 U.S. at 342.

¹⁹Decree at Art. II(B)(1)-(3), 376 U.S. at 342.

²⁰Colorado River Basin Project Act of 1968, § 602(a) (codified at 43 U.S.C. § 1552(a)).

²¹*Id.* at § 602(b) (codified at 43 U.S.C. § 1552(b)).

Operating Plan” or “AOP” and is the document in which the Secretary determines available water supply for the lower Basin States each year.²²

Annual Secretarial Determinations in the Lower Basin: California’s Use. The AOP Process and the Surplus Determinations under the Long-Range Operating Criteria: Figure 1, below, shows California’s annual consumptive use from the Colorado River over the past century, including its use since issuance of the Supreme Court’s Decree in Arizona v. California in 1964.

While California has been using water in excess of its basic allocation for decades, up until the 1990s neither Arizona nor Nevada were using the full amounts of their Colorado River apportionments. As noted above, the Decree authorizes the Secretary to release water that is unused by one state in any year to meet the consumptive use needs of authorized users in another state or states.²³

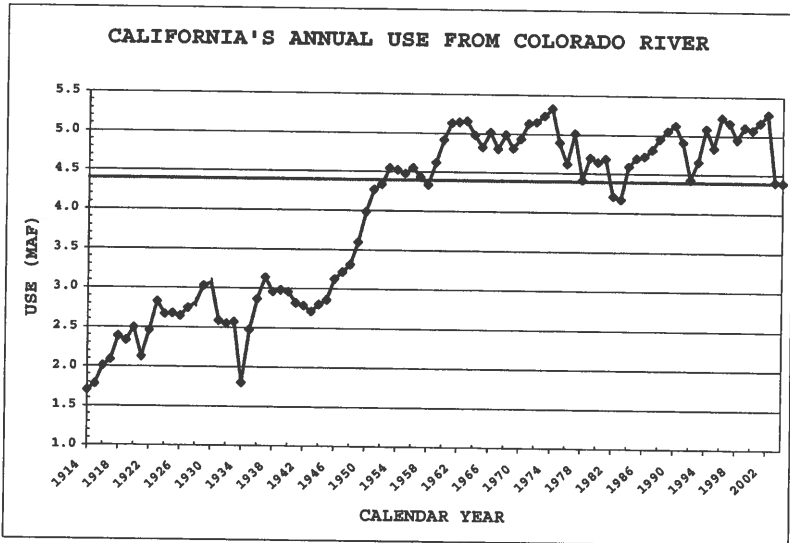


Figure 1: California’s Annual Consumptive Use from Colorado River

Under this authority, the Secretary allowed California to utilize unused Arizona and Nevada apportionment. In the early 1990’s, however, Arizona and Nevada

²²The AOP is prepared by Reclamation, acting on behalf of the Secretary, in consultation with representatives of the Colorado River Basin states, academicians, representatives of interested environmental organizations, and other members of the general public, as required by § 602(b) of the Colorado River Basin Project Act of 1968, as amended.

²³Decree at Art. II(B)(6), 376 U.S. at 343.

began approaching their full entitlements and it became apparent that California would soon have to begin curtailing its use in a “normal” year. The need for California to plan for this transition from use in excess of 5 million acre-feet to its basic apportionment of 4.4 maf has been a focus of intense efforts over the past decade.

The Long-Range Operating Criteria (LROC), discussed above, provide a set of narrative criteria for the Secretary to apply when deciding on available water supply.²⁴ By considering various factors, including the amount of water in storage and the predicted natural runoff, the Secretary makes an annual determination whether there is sufficient water available in a single year to provide Arizona, California, and Nevada water users more than their basic 7.5 million-acre foot entitlement for consumptive use. If the determination is made that this water is available, the Secretary can make it available to users in these three states as “surplus” water.

With California’s demands steady at over 5 maf, high reservoir conditions in the late 1990’s allowed the Secretary to declare “surplus” conditions based on the fact that Lake Mead reached near full capacity and was in fact releasing millions of acre-feet of water under flood control conditions. Surplus water was made available to California on this basis during the period 1997 through 2000.

Applying the Law of the River & Adoption of the Interim Surplus Guidelines

In the early 1990’s, consumptive use in the Lower Basin began approaching the 7.5 maf Lower Basin allocation (see Figure 2). As a result of increasing demands in the Lower Basin, especially given the increase in urban use, the Upper Basin States became concerned that the Lower Basin would be unable to live within its 7.5 maf compact apportionment.

²⁴The Long-Range Operating Criteria (LROC) were adopted by the Secretary on June 4, 1970 (35 Fed. Reg. 8951) and are subject to review “at least” every five years. See LROC at Introductory Paragraphs. *Id.*

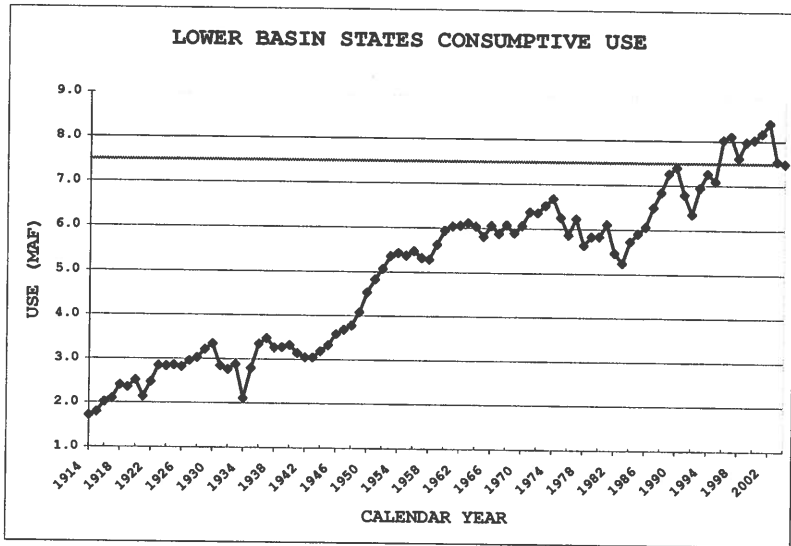


Figure 2: Lower Colorado Basin States Consumptive Use

Intensive discussions among the Basin States took place during much of the 1990s that focused on a need for California to develop a credible plan to live within its basic apportionment of 4.4 maf. There was also a recognition that, even with a detailed “4.4 Plan”, California would also need time to implement the plan. This was commonly referred to as a “soft landing” period, a timeframe to allow California to put a variety of programs into place to begin to reduce their use of Colorado River water.

In response to concerns of the other six basin states, California prepared a draft California Colorado River Water Use Plan that described numerous options for California’s reduction in Colorado River water use. Reclamation and the Basin States also engaged in studies of Surplus Guidelines, looking at various alternative methodologies of guidelines that could accommodate California’s desire to have relaxed conditions for determinations of “surplus” while implementing its “4.4 Plan.”

In light of the very general nature of the narrative factors for determinations of surplus identified in the LROC,²⁵ representatives of the other six Basin States feared that the Secretary would be unable to cease making water available as “surplus” water in light of the steady demand for water in the urban sector of southern California. Imposition of a “normal” year would involve reducing the Colorado River water supply of the Metropolitan Water District (MWD), which

²⁵See LROC at Art. III(3)(b).

serves cities between Los Angeles and San Diego by up to 600,000 af or nearly 50% of its imported Colorado River supply. The prospect of such drastic reductions to MWD's Colorado River supply was a motivating factor for all parties to address the need for both a "California 4.4 Plan" and a strategy to allow California a "soft landing."

In 1997, with storage in the reservoir system high, and a large snow pack in the Basin, Reclamation ordered flood control releases from Lake Mead for the first time in a decade. Accordingly "surplus" determinations were made in the Annual Operating Plan based on these high runoff years. In short, the pressure was reduced - somewhat - for a few years to determine how the Lower Basin would live within its normal year apportionment.

In 1998, the San Diego County Water Authority (SDCWA) and the Imperial Irrigation District (IID) developed a plan to transfer conserved water from the agricultural district to the coastal plain for SDCWA. With this plan, issues arose including the verification of reduction in use by IID that would be transferred to SDCWA (and potentially MWD). The need to quantify the Colorado River allocations of some or all of the California agencies with contracts with the Secretary would be crucial to the verification of conserved water and the success of this transfer. At a minimum, quantification of IID and CVWD was needed in order to allow orderly transfers among the California water entities.

The California parties worked together and in 1999 adopted the "Key Terms Agreement" that identified the quantification of IID and the CVWD, as well as transfers of conserved water from IID to SDCWA.

While high reservoir conditions in the late 1990's were allowing surplus determinations to be made on a "flood control" basis, the six Basin states were very concerned that surplus determinations would also be made at lower reservoir and inflow conditions, thereby reducing system storage and placing the other users in the basin at risk.

In particular, lower reservoir elevations place Arizona at an increased risk of shortages. Despite Arizona's victory in the Supreme Court in the Arizona v. California litigation, California was still able to extract a final concession from Arizona. In exchange for California's support of Congressional authorization for the Central Arizona Project (CAP), Arizona agreed to allow its CAP water to have a subservient priority to that of California during times of shortage on the Colorado River system.²⁶

²⁶See Colorado River Basin Project Act of 1968 at § 301(b). This was a significant concession since CAP water use represents more than half -- approximately 1.5 maf of its 2.8 maf - of Arizona's apportionment, and serves the municipal and irrigation sectors between Phoenix and Tucson, Arizona.

The states pressed the Secretary to develop objective criteria that would be used in these annual water supply determinations. The Secretary agreed that more specific criteria would aid in the annual decisions made in the AOP process and formally initiated work to develop and adopt surplus guidelines on May 18, 1999.²⁷

The Secretary of the Interior adopted a Record of Decision incorporating final Interim Surplus Guidelines (Guidelines) on January 18, 2001.²⁸ The guidelines that were ultimately adopted by the Secretary in the ROD were based upon a consensus proposal crafted by the seven Colorado River Basin states and submitted as a recommended approach in mid-2000.²⁹ As adopted, the Guidelines supplement the more general factors provided in the LROC and are to be applied by the Secretary in the development of the AOP for the 15 year period beginning in the 2002 AOP and through preparation of the 2016 AOP.³⁰

The Guidelines are based on a “tiered” or “stairstep” approach to surplus determinations, linking the elevation of Lake Mead operations to the availability of surplus water within the Lower Basin (see Figure 3 below). The Guidelines provide “surplus” water to the Lower Basin even under conditions at which Lake Mead is roughly 90 feet below its full elevation.³¹

Thus, the Guidelines are much more permissive with respect to declaring surplus availability than had been the Secretary’s prior administrative practice.³² As noted

²⁷See 64 Fed. Reg. 27008 (May 18, 1999).

²⁸Record of Decision, at § 4(a), Final EIS, Colorado River Interim Surplus Guidelines, 66 Fed. Reg. 7781 (Jan. 25, 2001). These guidelines are labeled as “interim” as they were only adopted for a 15 year period.

²⁹As a technical matter, the Seven Basin States Alternative was submitted to the Secretary as a “comment” from the seven states during the comment period on the Draft Environmental Impact Statement. *See* 65 Fed. Reg. 48531 (Aug. 8, 2000). Subsequently this alternative was identified as the preferred alternative in the Final EIS and selected, with minor modifications, in the Secretary’s Record of Decision. *See* 66 Fed. Reg. 7772 (Jan. 25, 2001).

³⁰Interim Surplus Guidelines, § 3, 66 Fed. Reg. 7781 (Jan. 25, 2001).

³¹*Id.* at § 2(A)(1), 66 Fed. Reg. 7780.

³²In addition to years in which flood flows were required to be released from Lake Mead, the Secretary had made surplus water available considering the relevant factors listed in the Long Range Operating Criteria, as well as considering several other approaches. One of the approaches is referred to as the “70R” approach that is based on nearly a century of recorded streamflow data. The “70R” analysis involves assuming a 70th-percentile inflow into the system, subtracting out the consumptive uses and system losses and checking the results to see if all the water could be stored or if flood control releases would be required. If flood control releases would be required, additional water is made available as “surplus” water.

above, the Interim Surplus Guidelines were adopted for a limited period of 15 years, through year 2016. The ISG did not guarantee surplus over the 15 years, and surplus water is only provided *if* the hydrology warranted the availability of additional water.³³

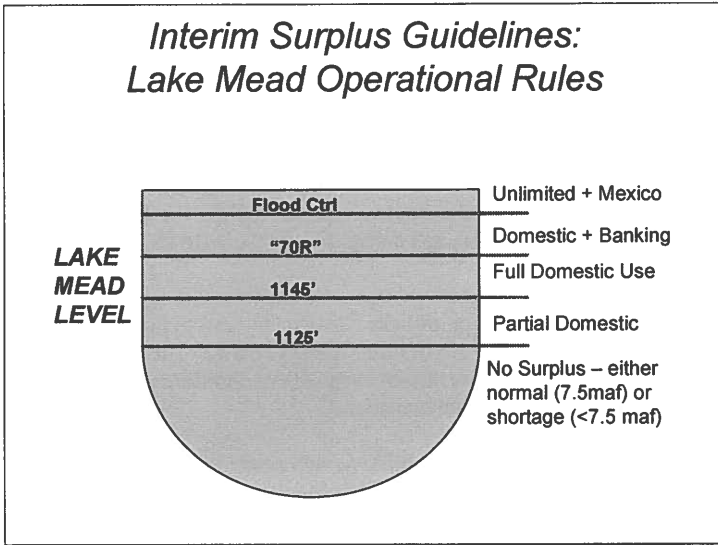


Figure 3: Interim Surplus Guidelines: Lake Mead Operational Rules

Attempts to Adopt a California “4.4 Plan”

Requiring reductions in use by California: The Interim Surplus Guidelines & The QSA: The more permissive surplus determinations incorporated in the Interim Surplus Guidelines, were conditioned on California taking certain actions to reduce its reliance on surplus water. This would allow California to be in a

The notation “70R” refers to the specific inflow where 70 percent of the historical runoff is less than this value (17.4 maf) for the Colorado River basin at Lee Ferry. 2001 Annual Operating Plan for Colorado River Reservoirs at 19 (Reclamation 2001). The Surplus Guidelines adopt an alternative approach for a fifteen year period and base surplus availability to Lake Mead elevations which are well below the levels which produce flood control releases under the 70R analysis.

³³See Record of Decision, Interim Surplus Guidelines at “Implementing the Decision, § 4, Relationship with Existing Law: These Guidelines are not intended to, and do not: a. Guarantee or assure any water user a firm supply for any specified period.” Interim Surplus Guidelines, Record of Decision, 66 Fed. Reg. 7772 (Jan. 25, 2001).

position to live within its 4.4 maf allocation by 2016 (the end of the 15-year “interim” period).

In this way the Surplus Guidelines adopted a “Trust but Verify” approach to California’s promised reductions in Colorado River water use. In order to assure that California actually takes the necessary actions to reduce its use of Colorado River supplies, the Guidelines include certain “benchmark” clauses that required California to take specific actions over the 15-year period of the Interim Surplus Guidelines.³⁴ Failure to meet the identified benchmarks would lead to suspension of the permissive provisions of the Surplus Guidelines (and revert to the 70R analysis for surplus determinations).

The first benchmark, completion of the California Quantification Settlement Agreement (QSA) was the subject of significant controversy in 2003.

The stated purpose of the “benchmark” provisions was to provide an incentive to California to implement its plan to reduce its use of Colorado River water. A critical element in California’s plan was execution of the Quantification Settlement Agreement (QSA), an agreement among Imperial Irrigation District, Coachella Valley Water District (CVWD), and the MWD. The QSA provides a mechanism for “quantification” of California’s unquantified priorities within 3(a) (see Table 1, *supra*).

The QSA also contemplates and facilitates a transfer of conserved water from the Imperial Irrigation District to San Diego County Water Authority pursuant to a 1998 Agreement between IID and SDCWA. This agriculture to urban water transfer, on a willing buyer/willing seller basis, allows urban areas to underwrite the cost of conservation efforts to free up additional water supplies. These transactions are implemented through an agreement with the Secretary that will allow a change in place of use for water that was anticipated to be conserved by IID.³⁵ The period of the transfer is up to 75 years.

When the four California agencies failed to complete the QSA, the result was – as required by the Guidelines – suspension of the more permissive bases for surplus determinations in calendar year 2003. Application of the much more restrictive criteria previously utilized by the Secretary led to declaration of a “normal” or 7.5 maf supply for 2003.³⁶

³⁴Interim Surplus Guidelines, § 5, 66 Fed. Reg. 7782 (Jan. 25, 2001).

³⁵The issues raised by the transfer include impacts on the Salton Sea as a result of water conservation activities by the Imperial Irrigation District. Various issues are involved in the proposed transfers, including the potential to utilize fallowing rather than on-farm conservation. These issues are beyond the scope of this paper.

³⁶Interim Surplus Guidelines, § 5, 66 Fed. Reg. 7782 (Jan. 25, 2001).

Continued Efforts to Adopt QSA

As noted above, the Interim Surplus Guidelines expected that the California Colorado River contractors would execute the Quantification Settlement Agreement, and its related documents, among the IID, CVWD, MWD and SDCWA by December 31, 2001. The Guidelines also provide, as noted above, that in the event that the California contractors and the Secretary had not executed these agreements by December 31, 2002, the interim surplus determinations for Full and Partial Domestic surpluses would be suspended. The surplus determinations would then be based upon a very conservative strategy for the remainder of the 15 years of the ISG or until such time as California completed all required actions and complied with reductions in agricultural water use as specified by the ISG.

In a number of contexts the Department of the Interior made clear that it would enforce the benchmark deadlines in the Interim Surplus Guidelines.³⁷ The California parties were unable to reach agreement on the provisions of the QSA by the Guidelines' deadline of December 31, 2002, and as a result, the 2003 AOP required that Lower Basin deliveries be limited to 7.5 maf in 2003, with California, Arizona and Nevada limited to 4.4 maf, 2.8 maf, and 0.3 maf, respectively.

Enforcing the Law of the River and the First Phase of Litigation

In light of the inability of the four water agencies to reach agreement on the Quantification Settlement Agreement by Dec. 31st, the Secretary of the Interior imposed the 4.4 million acre-feet legal limit on California beginning Jan. 1, 2003.

³⁷See, e.g., Federal Register Notice Regarding Implementation of the Interim Surplus Guidelines, 67 Fed. Reg. 41733 (June 19, 2002). See also, Formal Remarks of Secretary Norton to the Colorado River Water Users Association, December 16, 2002 :

I signed the 2003 Annual Operating Plan this morning. The Annual Operating Plan implements the Surplus Guidelines. It provides that if the California entities do not sign the QSA, surplus deliveries of water to Southern California cities will automatically be suspended in 2003.

...

If the California entities choose not to take the steps necessary for the gradual, voluntary reductions contemplated under the seven-state agreement, California will lose access to extra water available under the Interim Surplus Guidelines. In such an event, California will be forced to live within its 4.4 million acre-feet apportionment from the Colorado River in 2003.

Formal Remarks of Secretary Norton, at 3 (Dec. 16, 2002).

This action reduced California's allocation during calendar year 2003 by approximately 800,000 acre-feet (i.e., from 5.2 maf to 4.4 maf).

The Imperial Irrigation District (IID), which received a reduction of approx. 231,000 acre-feet, sued the U.S. on January 10, 2003, alleging that the method the Secretary used to reduce California to its 4.4 maf limit violated the District's water rights under federal and state law. The other entity that was reduced in January 2003 was the Metropolitan Water District (serving the greater Los Angeles metropolitan area), which lost 40% of its requested 2003 supply from the Colorado River.

IID's complaint also raised claims based on violation of the separation-of-powers doctrine, violation of IID's water rights, along with alleged violations of the National Environmental Policy Act, the Endangered Species Act, and the Administrative Procedures Act.

Subsequently, on January 27, 2003, IID filed a motion for a Preliminary Injunction to prevent any reductions in water delivery to IID as a result of the missed deadline. After a hearing, the U.S. District Court granted IID's motion for a preliminary injunction and ordered the United States to conduct a through review pursuant to Reclamation's regulations published at 43 C.F.R. Part 417 as to whether IID's use of water was in compliance with the legal and contractual limits: that is, Reclamation was to "*meticulously* follow Part 417's prescribed procedures in determining IID's reasonable beneficial use [of Colorado River water]..." *Imperial Irrigation District v. United States*, Case No. 03-CV-0069 (WJFS) (April 17, 2003) (emphasis in original).

During the summer of 2003, Reclamation proceeded to review IID's water use in a public process pursuant to 43 C.F.R. Pt. 417, pursuant to the District Court's order.³⁸ Reclamation's findings indicated that IID did not require as much water for its reasonable and beneficial use as it had ordered. IID disputed these findings, and submitted voluminous material challenging Reclamation's conclusions. Much attention focused on this "beneficial use" inquiry, as it was the most detailed beneficial use inquiry ever conducted on the lower Colorado River and had the potential to shift significant quantities of water "down" the priority chain by operation of law and contract (water unused by a senior user automatically becomes available for those next in priority). Absent an agreement among the California parties, many predicted that the California water use controversy was on the brink of descending into years of divisive litigation.

³⁸This process is detailed in a Federal Register Notice published at 68 Fed. Reg. 22738 (Apr. 29, 2003).

Colorado River Water Delivery Agreement of 2003

After much legal wrangling, months of negotiations, and significant national attention, the Quantification Settlement Agreement – revised and restyled as the Colorado River Water Delivery Agreement of 2003 – was signed on October 10, 2003.

As the IID to San Diego transfer – the key transfer incorporated in the QSA - proves, the Law of the River has sufficient flexibility to accommodate the transfer of water between agricultural and urban areas in the Lower Basin.³⁹ This historic new chapter of the Law of the River allows California to honor the solemn promise it made in 1929 to live within an annual basic allocation of 4.4 million acre-feet. The single most important aspect of this Ten-Page agreement is that both the Imperial Irrigation District and the Coachella Valley Water District voluntarily adopted a “quantification” of their Colorado River allocations. This long-term agreement - for up to 75 years - achieves a quantification of these districts and settles disputes dating back nearly 75 years to the early 1930s. With this quantification in place, orderly, market-based transfers of Colorado River water between California’s agricultural users and its growing population on the coastal plain are possible.

Figure 4 shows both recent water use within California and the anticipated water use under the QSA in coming decades.

³⁹There is great concern as to how the Lower Basin will meet the ever-rising demand for water to serve urban uses within the Lower Basin, particularly in Los Angeles, San Diego, Las Vegas, Phoenix and Tucson. The fact that there is approximately 5 million acre-feet (about 65 percent) of water in Lower Basin agriculture provides an ample resource to structure a market on a willing buyer, willing seller basis, that will allow the needs of the Lower Basin to be met within the Lower Basin’s allocation.

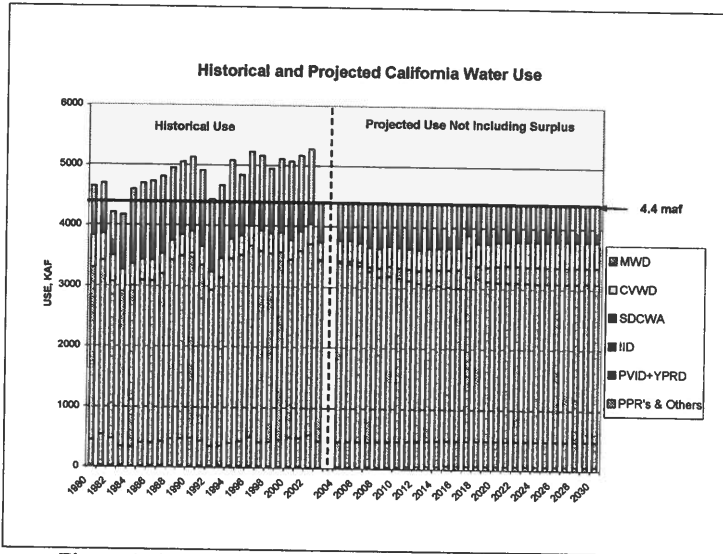


Figure 4: California Water Use 1980-2003 & 2004-2030 (Under QSA)

**Current Operations under the Interim Surplus Guidelines (Spring 2004):
The New Challenge of the Drought**

After reinstatement of all provisions of the Guidelines when the Quantification Settlement Agreement was signed on October 10, 2003, water elevations at Lake Mead provided “full domestic surplus” flows in 2002 and 2003. With prolonged drought and a rapidly declining Lake Mead elevation, a “partial domestic surplus” controlled Lower Basin operations in 2004. Drought conditions have been present in the basin since 1999. Figure 5 below, shows the decline in Lake Mead elevation due to the ongoing drought. As this paper is written, it is unknown whether any surplus water will be available to the Lower Basin in 2005. Current model projections, on which annual surplus determinations are based, indicate that access to surplus water may be suspended as early as January 1, 2005. Even if Lake Mead remains above the “surplus line” for 2005, it is almost certain that deliveries in 2006 will be limited to “normal year” conditions; i.e., releases will be limited to 7.5 maf in the Lower Basin. Moreover, as shown in Figure 6, below, there is a high likelihood that the Lower Basin will not enjoy the benefits of “surplus” water for some time to come.

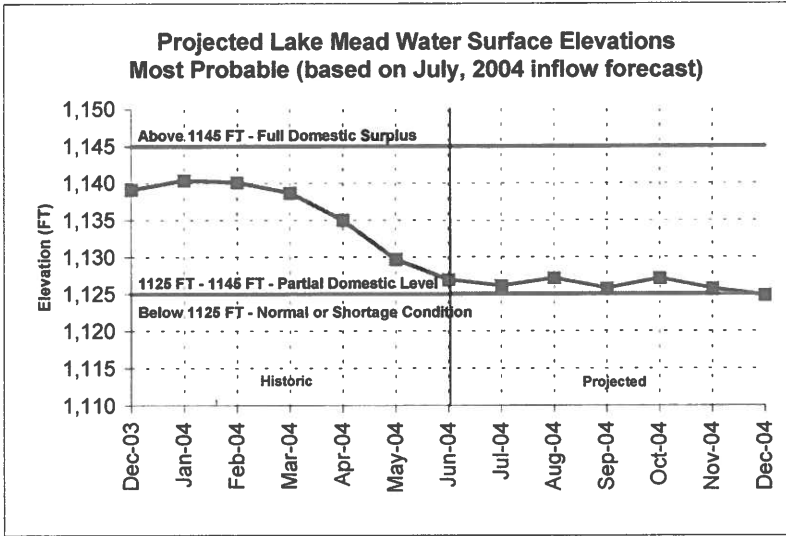


Figure 5: Lake Mead Elevation 1999-2004

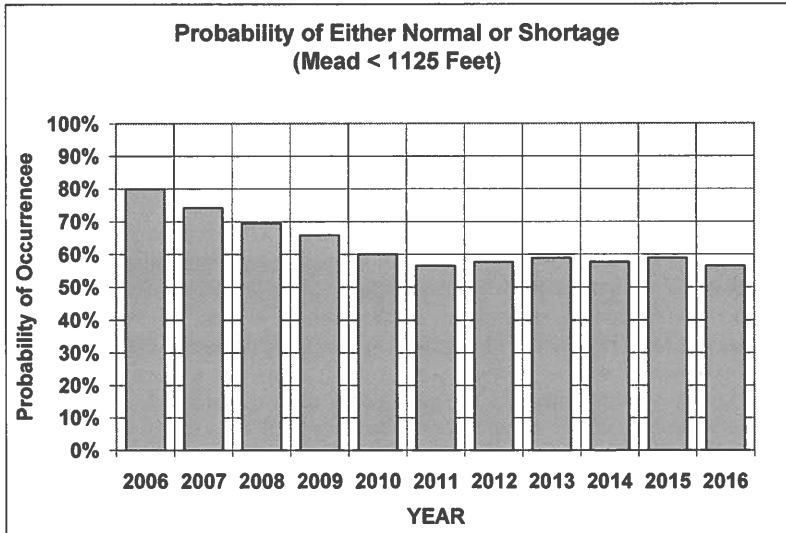


Figure 6: Probability of “Normal” or “Shortage” elevations (<1125’) at Lake Mead (based on Interim Surplus Guidelines) 2006-2016

Next Steps: Addressing the Drought

Flows in the Colorado have been abnormally low since 1999. In water year 2000, inflow to Lake Powell was 62 percent of average; in WY 2001, it was 59 percent of average; in WY 2002, it was only 25 percent of average, the lowest on record; and in WY 2003, it was 53 percent of average.

This is the fifth consecutive dry year in the Basin. Since record-keeping began 100 years ago, there have never been six consecutive years of below average runoff (as measured at Lees Ferry).

The month of March 2004 brought the drought into sharp reality. Basin snow pack on March 1, 2004 was 96% of average. Extremely warm and dry conditions over the month of March caused basin snow pack to drop over 30 percentage points. As of July 6th, with this paper going to print, unregulated inflow to Lake Powell this water year is expected to be only 44 percent of average.

In any case, with system capacity in the Colorado River dropping to approximately 50%, the next chapter of the Law of the River is likely to address new forms of interstate cooperation and shortage avoidance strategies.

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