

Figure 1.1-2. Other Potentially Affected Water Agencies and Selected Tribes

Sea, with the exception of those at the southern end of the Valley. Agricultural drains at the southern end of the Coachella Valley flow directly to the Salton Sea.

The Metropolitan Water District of Southern California

MWD was organized in 1928 under the authority of the Metropolitan Water District Act (Chapter 429, California Statutes of 1927, page 694). Historically, MWD has provided supplemental water to the coastal plain of Southern California. MWD's deliveries augment local and imported water supplies developed through surface catchment, groundwater production, and water recycling. This supplemental water is provided to MWD's 26 member agencies through a regional network of canals, pipelines, reservoirs, treatment plants, and related facilities. In recent years, MWD has broadened its mission to include funding a number of regional water management activities, including groundwater and recharge facilities, water recycling projects, water conservation programs, and groundwater recovery and reclamation projects. MWD contracts with federal and state agencies for water supplies. Water from the Colorado River is diverted at the MWD facility at Lake Havasu under contract with the United States (U.S.) Department of Interior, Bureau of Reclamation (Reclamation). Colorado River water is conveyed to the MWD service area via the CRA, an MWD-owned and -operated facility. Lake Havasu and the CRA are shown on Figure 1.1-1. Water from the SWP is delivered via the state-owned Governor Edmund G. Brown California Aqueduct (California Aqueduct) under contract with the California Department of Water Resources. The California Aqueduct is shown on Figure 1.1-1. From the terminal points of these aqueducts, water is delivered to MWD's member agencies via 775 miles of pipelines, five regional water treatment plants, Lake Mathews, Diamond Valley Lake, and several smaller regulating facilities. Water from these and other sources is delivered to approximately 240 cities and unincorporated municipalities in the 5,200 square-mile MWD service area. MWD currently provides approximately 60 percent of the total water used in its service area.

San Diego County Water Authority

SDCWA was organized in 1944 under the County Water Authority Act (California Statutes of 1943, Chapter 545, as amended) in order to bring imported water supplies to the San Diego region. SDCWA provides wholesale water supplies to its 23 member agencies, which are all public agencies delivering water to retail customers or other public agencies within San Diego County. SDCWA joined MWD in 1946 and is today one of 26 member agencies of MWD. SDCWA purchases more water from MWD than any other MWD member agency. In calendar year 1999, SDCWA received approximately 27 percent of MWD's total deliveries and provided approximately 27 percent of MWD's revenue. Currently, SDCWA's entire imported water supply is purchased from MWD. Although MWD imports water from the Colorado River and the SWP, the majority of water delivered by MWD to SDCWA is from the Colorado River. Depending on the availability of local water in any given year, imported water accounts for between 75 and 95 percent of all water utilized in the SDCWA service area.

SDCWA delivers water to its member agencies through two main aqueducts composed of five large-diameter pipelines, along with numerous branch lines. The two aqueducts follow north-to-south alignments extending through the SDCWA service area from the MWD point of delivery located about 6 miles south of the Riverside/San Diego County line. Municipal and

industrial use constitutes between 80 and 85 percent of regional water consumption, and agricultural use accounts for the remainder.

1.3 COLORADO RIVER WATER MANAGEMENT OVERVIEW

This section provides a general description of the Colorado River system and its associated reservoirs and diversion facilities, summarizes the water supply available in the Colorado River Basin from natural runoff, and describes how that water supply is distributed under the Law of the River, including the water order and accounting process. The Colorado River Basin, major tributaries, dams and reservoirs are shown in Figure 1.3-1.

1.3.1 Colorado River System and Water Supply

The Colorado River system serves as a source of water for irrigation, domestic, and other uses in Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming and in the Republic of Mexico (Mexico). The Colorado River also serves as a source of water for a variety of recreational activities, hydroelectric power, and environmental benefits.

Most of the total annual flow into the Colorado River Basin is a result of natural runoff from mountainous snowmelt. The natural flow of the Colorado River is high in the late spring and early summer, diminishing rapidly by mid-summer. "Natural flow" is an estimate of flows that would exist without reservoir regulation, depletion¹, or transbasin diversion by humans. While flows in the late summer through autumn may increase following rain events, natural flow in the later summer through winter is generally low. Major tributaries to the Colorado River include the Green, San Juan, Yampa, Gunnison, and Gila rivers.

The annual flow of the Colorado River varies considerably from year to year. The natural flow at the Lees Ferry gaging station, located 17 river miles below Glen Canyon Dam and above Lee Ferry, Arizona (the division point between the Upper and Lower basins of the Colorado River as described in section 1.3.3 below), has varied annually from 5 million acre feet (MAF) to 24 MAF.

Most of the water in the lower Colorado River flows into the Lower Basin from the Upper Basin and is measured at Lee Ferry, Arizona. In years when the minimum objective release is being made from Glen Canyon Dam, about 92 percent of the annual natural supply is attributed to the releases from the Upper Basin. The remaining 8 percent of the water in the lower Colorado River is attributed to sidewash inflows due to rainstorms and tributary rivers in the Lower Basin. In the Lower Basin, the Colorado River mean annual tributary inflow is approximately 1.3 MAF, excluding the intermittent Gila River inflow. Actual Lower Basin tributary inflows are highly variable from year to year.

1.3.2 Colorado River Reservoirs and Diversion Facilities

The Colorado River system contains numerous reservoirs and facilities constructed by Reclamation that combined provide approximately 60 MAF of active storage. The Lower Basin

¹ Depletion is defined as consumptive use of Colorado River water plus system losses.

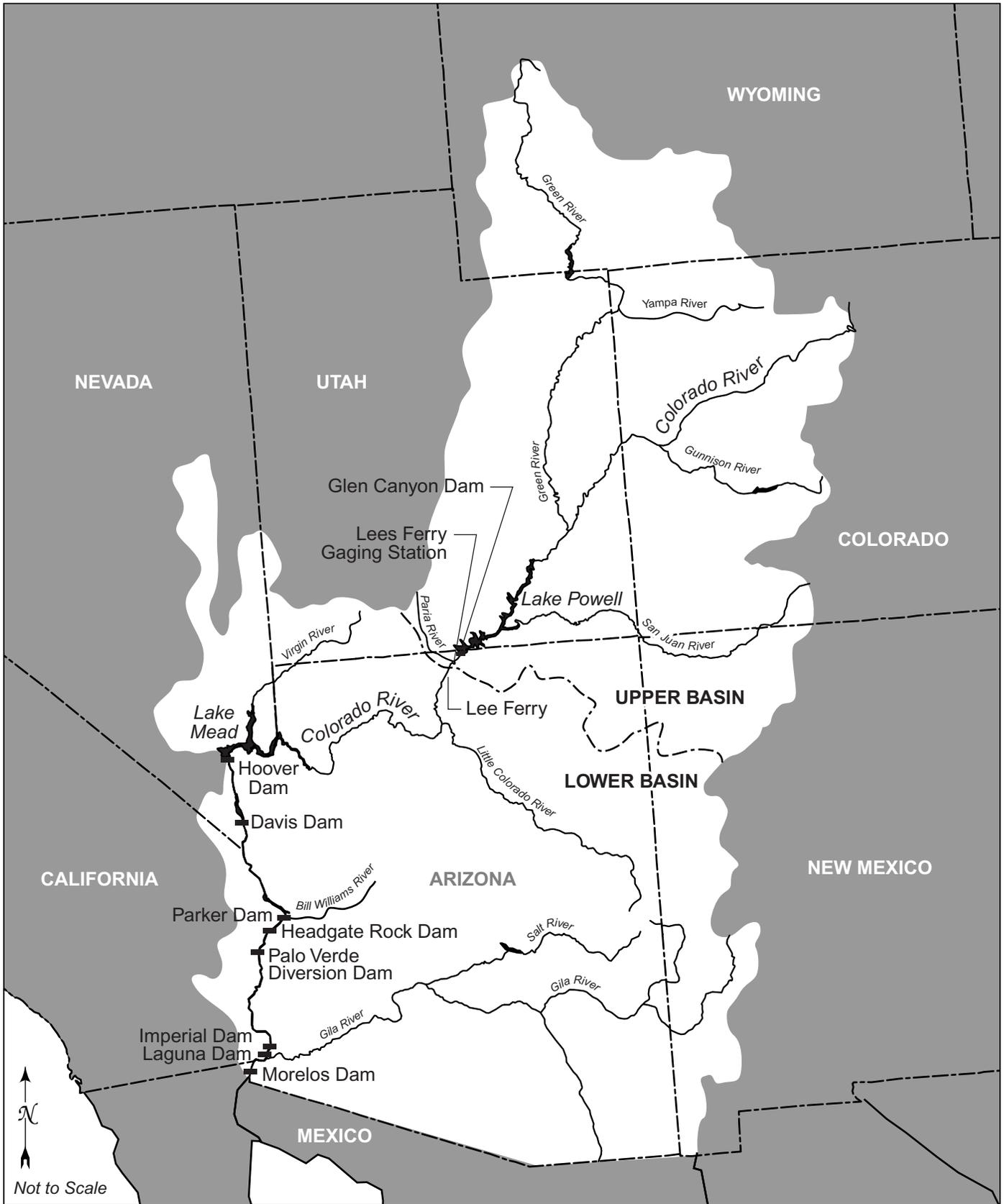


Figure 1.3-1. Upper and Lower Basins of the Colorado River

dams and reservoirs include Hoover, Davis, Parker, Headgate Rock, Palo Verde Diversion, Imperial, Laguna, and Morelos dams. Hoover Dam created Lake Mead, which can store up to 27.4 MAF of storage. Davis Dam was constructed to re-regulate Hoover Dam's releases, and to aid in the annual U.S.-Mexico Water Treaty deliveries. Davis Dam forms Lake Mohave and provides 1.8 MAF of storage. Parker Dam forms Lake Havasu, which provides up to 0.648 MAF of storage. Headgate Rock Dam forms Lake Moovalya and is a run-of-the-river structure (i.e., it creates a small impoundment, but has no substantial storage capacity). Palo Verde Diversion Dam forms an unnamed impoundment and is a run-of-the-river structure. Imperial Dam, located approximately 28 miles northeast of Yuma, Arizona, is a diversion and desilting facility for the All American Canal and the Gila Main Gravity Canal. Laguna Dam forms an unnamed impoundment and can store up to 700 acre-feet (AF). Morelos Dam, near the Northern International Boundary with Mexico, is the primary delivery point for Colorado River water under the U.S.-Mexico Water Treaty. Table 1.3-1 summarizes the storage facilities and major diversion dams from Hoover Dam to Morelos Dam (refer to Figure 1.3-1 for general locations).

California receives most of its Colorado River water at three diversion points: the Whitsett Pumping Plant, owned and operated by MWD in Lake Havasu; the Palo Verde Diversion Dam, which diverts water for the Palo Verde Irrigation District (PVID); and the All American Canal diversion at Imperial Dam, which diverts water for CVWD, IID, and the Yuma Project Reservation Division.

There are several points of diversion of Colorado River water in Arizona, including but not limited to the following: the Central Arizona Project facilities at Lake Havasu; Headgate Rock Dam near Parker, Arizona; Imperial Dam into both the Gila Gravity Main Canal and the All American Canal for subsequent release into the Yuma Main Canal. Arizona is also apportioned 50 KAFY of water from the Upper Basin. This water is diverted above Lee Ferry, Arizona.

Approximately 90 percent of Nevada's Colorado River water apportionment is diverted at Saddle Island in Lake Mead by the Southern Nevada Water Authority (SNWA); the remainder of the state's apportionment is diverted below Davis Dam in the Laughlin area.

1.3.3 Regulatory Framework

1.3.3.1 *The Law of the River*

The use of Colorado River water is governed by a group of federal and state laws, interstate compacts, an international treaty, court decisions, federal contracts, federal and state regulations, and multi-party agreements. This body of law is commonly referred to as the "Law of the River." Selected documents that comprise the Law of the River are discussed below, and a more comprehensive list is included in Table 1.3-2.

Colorado River Compact of 1922 (Compact)

The Compact divided the Colorado River into the Upper Basin and the Lower Basin. As shown on Figure 1.3-1, the Upper Basin includes those portions of Arizona, Colorado, New Mexico, Utah, and Wyoming within and from which waters drain naturally into the Colorado River above Lee Ferry, Arizona. The Lower Basin consists of those portions of Arizona, California, Nevada, New Mexico, and Utah within and from which waters drain naturally into the

Table 1.3-1. Colorado River Storage Facilities and Major Diversion Dams from Hoover to Morelos Dam

<i>Facility</i>	<i>Reservoir</i>	<i>Location</i>	<i>Storage Capacity (AF)</i>
Hoover Dam	Lake Mead	Nevada and Arizona near Las Vegas, 270 miles downstream of Glen Canyon Dam	27,400,000
Davis Dam	Lake Mohave	70 miles downstream of Hoover Dam	1,818,000
Parker Dam	Lake Havasu ¹	150 miles downstream of Hoover Dam	648,000
Headgate Rock Dam	Lake Moovalya	164 miles downstream of Hoover Dam	N.A. ³
Palo Verde Diversion Dam	Unnamed impoundment	209 miles downstream of Hoover Dam	N.A. ³
Senator Wash regulating facility	Senator Wash Reservoir ²	290 miles downstream of Hoover Dam near Imperial Dam	13,800 ⁴
Imperial Dam	Unnamed impoundment	290 miles downstream of Hoover Dam	1000
Laguna Dam	Unnamed impoundment	300 miles downstream of Hoover Dam	700
Morelos Dam	Unnamed impoundment	320 miles downstream of Hoover Dam	N.A. ³
1. Lake Havasu provides a relatively constant water level for water diversions. 2. Senator Wash Reservoir is an offstream reservoir with a pumping/generating plant. 3. Not applicable, Run-of-river diversion structure. 4. Current operating restrictions limit storage of water.			

Colorado River system below Lee Ferry. The Compact apportioned to each basin, in perpetuity, the exclusive beneficial consumptive use of 7.5 million acre-feet per year (MAFY). In addition to the 7.5 MAFY apportioned to the Lower Basin, the Lower Basin was given the right to increase its beneficial consumptive use by 1.0 MAFY.

The Compact also divided the seven Colorado River Basin States into the Upper Division and Lower Division. The Upper Division states are Colorado, New Mexico, Utah, and Wyoming. The Lower Division states are Arizona, California, and Nevada.

Boulder Canyon Project Act of 1928 (BCPA)

In 1928, Congress enacted the BCPA (45 Stat. 1057), which authorized the Secretary of the Interior (Secretary) to construct Hoover Dam and the All American Canal, and to contract for the delivery and use of water from these facilities for irrigation and domestic uses. Congress conditioned the BCPA upon the ratification of the Compact by at least six of the Colorado River Basin states, including California. The BCPA authorized the States of Arizona, California, and Nevada to enter into an agreement in which Nevada would be entitled to 0.3 MAFY and Arizona 2.8 MAFY of the 7.5 MAFY apportioned to the Lower Basin for beneficial use by Article III, paragraph A of the Compact, leaving 4.4 MAFY available for California. The authorized

Table 1.3-2. Selected Documents Included in the Law of the River

The River and Harbor Act, March 3, 1899.	The Parker and Grand Coulee Dams Authorization Act of August 30, 1935.
The Reclamation Act of June 17, 1902.	Palo Verde Diversion Dam Act of August 31, 1954.
Reclamation of Indian Lands in Yuma, Colorado River, and Pyramid Lake Indian Reservations Act of April 21, 1904.	Change Boundaries, Yuma Auxiliary Project Act of February 15, 1956.
Yuma Project authorized by the Secretary of the Interior on May 10, 1904, pursuant to Section 4 of the Reclamation Act of June 17, 1902.	The Colorado River Storage Project Act of April 11, 1956.
Protection of Property Along the Colorado River Act of June 25, 1910.	Water Supply Act of July 3, 1958.
Warren Act of February 21, 1911.	Boulder City Act of September 2, 1958.
Patents and Water-Right Certificates Acts of August 9, 1912 and August 26, 1912.	Report of the Special Master, Simon H. Rifkind, <i>Arizona v. California</i> , et al., December 5, 1960.
Yuma Auxiliary Project Act of January 25, 1917.	United States Supreme Court Decree, <i>Arizona v. California</i> , March 9, 1964.
Availability of Money for Yuma Auxiliary Project Act of February 11, 1918.	International Flood Control Measures, Lower Colorado River Act of August 10, 1964.
Sale of Water for Miscellaneous Purposes Act of February 25, 1920.	Southern Nevada (Robert B. Griffith) Water Project Act of October 22, 1965.
Federal Power Act of June 10, 1920.	The Colorado River Basin Project Act of September 30, 1968.
The Colorado River Compact, 1922.	Criteria for the Coordinated Long Range Operation of Colorado River Reservoirs, June 8, 1970.
The Colorado River Front Work and Levee System Acts of March 3, 1925, June 21, 1927, June 28, 1946	Supplemental Irrigation Facilities, Yuma Division Act of September 25, 1970.
The Boulder Canyon Project Act of December 21, 1928.	Minutes 218, March 22, 1965; 241, July 14, 1972, (replaced 218); and 242, August 30, 1973, (replaced 241) of the International Boundary and Water Commission, pursuant to the U.S.-Mexico Water Treaty.
The California Limitation Act of March 4, 1929.	The Colorado River Basin Salinity Control Act of June 24, 1974, as amended.
The California Seven Party Agreement of August 18, 1931.	United States Supreme Court Supplemental Decrees, <i>Arizona v. California</i> , January 9, 1979, April 16, 1984, and June 19, 2000.
The Rivers and Harbors Act of August 30, 1935.	Hoover Powerplant Act of August 17, 1984.
The Parker Dam Power Project Appropriation Act of May 2, 1939.	The Numerous Colorado River Water Delivery and Project Repayment Contracts with the states of Arizona and Nevada, cities, water districts, and individuals.
The Reclamation Project Act of August 4, 1939.	Hoover and Parker-Davis Power Marketing Contracts.
The Boulder Canyon Project Adjustment Act of July 19, 1940.	The Grand Canyon Protection Act of 1992.
The Flood Control Act of December 22, 1944.	The Reclamation States Emergency Drought Relief Act of March 5, 1992, as extended by the Act of January 24, 2000.
U.S.-Mexico Water Treaty, February 3, 1944.	
Gila Project Act of July 30, 1947.	
The Upper Colorado River Basin Compact of October 11, 1948.	
Consolidate Parker Dam Power Project and Davis Dam Project Act of May 28, 1954.	
43 CFR Part 414.	
43 CFR Part 417.	

agreement would have also provided Arizona with one-half of the excess or surplus waters unapportioned by the Compact. Such an agreement was never executed by Arizona, California, and Nevada. The BCPA's taking effect was conditioned upon the State of California irrevocably and unconditionally agreeing to the following if Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming had not ratified the Compact within six months of passage of the BCPA:

- limit annual consumptive use (diversions less return to the Colorado River) in California to no more than 4.4 MAF of the 7.5 MAF of the waters apportioned to the Lower Division States by the Compact; plus,
- utilizing not more than one-half of any excess or surplus waters unapportioned by the Compact.

California met this requirement by passing the California Limitation Act in 1929.

Section 5 of the BCPA authorizes the Secretary to contract with entities and individuals in the Lower Division States (including the states themselves) for delivery of Colorado River water. These contracts are generally referred to as "Section 5 Contracts," and are for permanent service.

California Seven Party Agreement of 1931 (Seven Party Agreement)

Neither the Compact, the BCPA, nor the California Limitation Act apportion the use of water among agencies within California. Prior to entering into Section 5 Contracts with California agencies, the Secretary requested that the State of California recommend to the Secretary an apportionment of California's share of Colorado River water among California water users. In response, seven major California entities executed the California Seven Party Agreement of 1931, in which the California entities agreed to an apportionment of California's share of Colorado River water, and agreed to priorities among the seven parties. The State of California recommended that the Secretary adopt such apportionments, which the Secretary did. The terms of the Seven Party Agreement were incorporated into the Section 5 Contracts with the Secretary, thereby placing the recommended apportionments into effect.

The California water delivery contracts, executed from 1930 to 1934 between the United States and California public agencies, provided for storage and delivery of water from Lake Mead in excess of 5.362 MAFY, the amount shown in the Seven Party Agreement. The Seven Party Agreement sets the priorities among the signatory agencies relative to their use of Colorado River water. The first three priorities are for a total beneficial consumptive use of up to 3.85 MAFY, with PVID having the first priority to irrigate 104,500 acres of Valley lands (Priority 1); the Yuma Project Reservation Division, having second priority to irrigate not more than 25,000 acres (Priority 2); and the third priority being shared amongst IID, CVWD, and PVID, the latter being for 16,000 acres of adjoining lower Palo Verde Mesa lands (Priority 3a and 3b); pursuant to the 1934 Compromise Agreement, IID has priority over CVWD within Priority 3a. The fourth priority is for beneficial consumptive use of 0.55 MAFY held by MWD (Priority 4). The first four priorities allocate a total of 4.4 MAFY, which is equal to California's normal year apportionment of Colorado River water. The fifth priority for 0.662 MAFY was originally allocated to the City and County of San Diego, but later transferred to MWD when SDCWA

joined MWD (Priority 5a and 5b). The sixth priority is held by CVWD, IID, and PVID for 0.3 MAF (Priority 6a and 6b). The seventh priority is for agricultural use in the Colorado River Basin in California (Priority 7). The Seven Party Agreement priority provisions were incorporated verbatim by the Secretary into each of the water delivery contracts. There is no further written division of the first three priorities' right (Priority 1, 2, 3a, and 3b) to the use of the 3.85 MAFY under the priority provision of the Seven Party Agreement.

Figure 1.3-2 schematically shows the allocation, by priority, of Colorado River water to entities within California under the Seven Party Agreement. Many of California's major diverters on the Colorado River do not have exact quantified apportionments, although their entitlements are capped at an overall maximum by priority. The amount of Colorado River water apportioned under the Seven Party Agreement totals 5.362 MAFY, or 0.962 MAFY more than California's normal year apportionment of 4.4 MAF. Therefore, diversions of more than 4.4 MAF under Priorities 5a, 5b, 6a, and 6b in any given year are dependent upon one or more of the following conditions: surplus water is available; Arizona and/or Nevada do not divert their full apportionments or less than 4.4 MAF is used within California by entities with higher priorities.

United States-Mexico Water Treaty of 1944 (U.S.-Mexico Water Treaty)

Under Article 10(a) of the *Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande - Treaty between the United States of America and Mexico* dated February 3, 1944, Mexico is entitled to an annual amount of 1.5 MAF of Colorado River water. Under Article 10(b) of the U.S.-Mexico Water Treaty, Mexico may schedule up to an additional 0.2 MAF when "there exists a surplus of waters of the Colorado River in excess of the amount necessary to satisfy uses in the United States."

Arizona v. California, 1964 Supreme Court Decree (Decree)

In 1964, the Supreme Court of the United States entered its Decree in *Arizona v. California* (376 U.S. 340), and supplemental Decrees were entered in 1979 (439 U.S. 419), 1984 (460 U.S. 605), and 2000 (531 U.S. 1). The Decree resolved disputes over how apportioned water available for release from Colorado River water controlled by the United States for use in Arizona, California, and Nevada should be determined. The Decree recognized certain Federal Reserved Rights and provided a process for the quantification of all claimed Present Perfected Rights (PPRs), all to be supplied from the existing apportionments of the respective states. As set forth in the Decree, the term "PPRs" refers to water rights based upon diversion and beneficial use prior to the effective date of the BCPA (June 25, 1929).² All PPRs are numbered, and their relative priorities are set forth within the supplemental Decree entered January 9, 1979, although some of the Federal Reserved Rights have been further modified by the supplemental Decrees entered in 1984 and 2000. During a shortage, the Federal Reserved Rights identified in Article II(D)(1)-(5) of the Decree have the highest priority. The Federal Reserved Rights so identified in Article II(D)(1)-(5) of the Decree are identified in the 1979 supplemental Decree as numbers 1-3, 22-25, and 81. After Federal Reserved Rights and Miscellaneous PPRs are

2 Federal Reserved Rights do not require diversion and use to be considered valid water rights under the concepts embodied in the Federal Reserved Rights Doctrine.

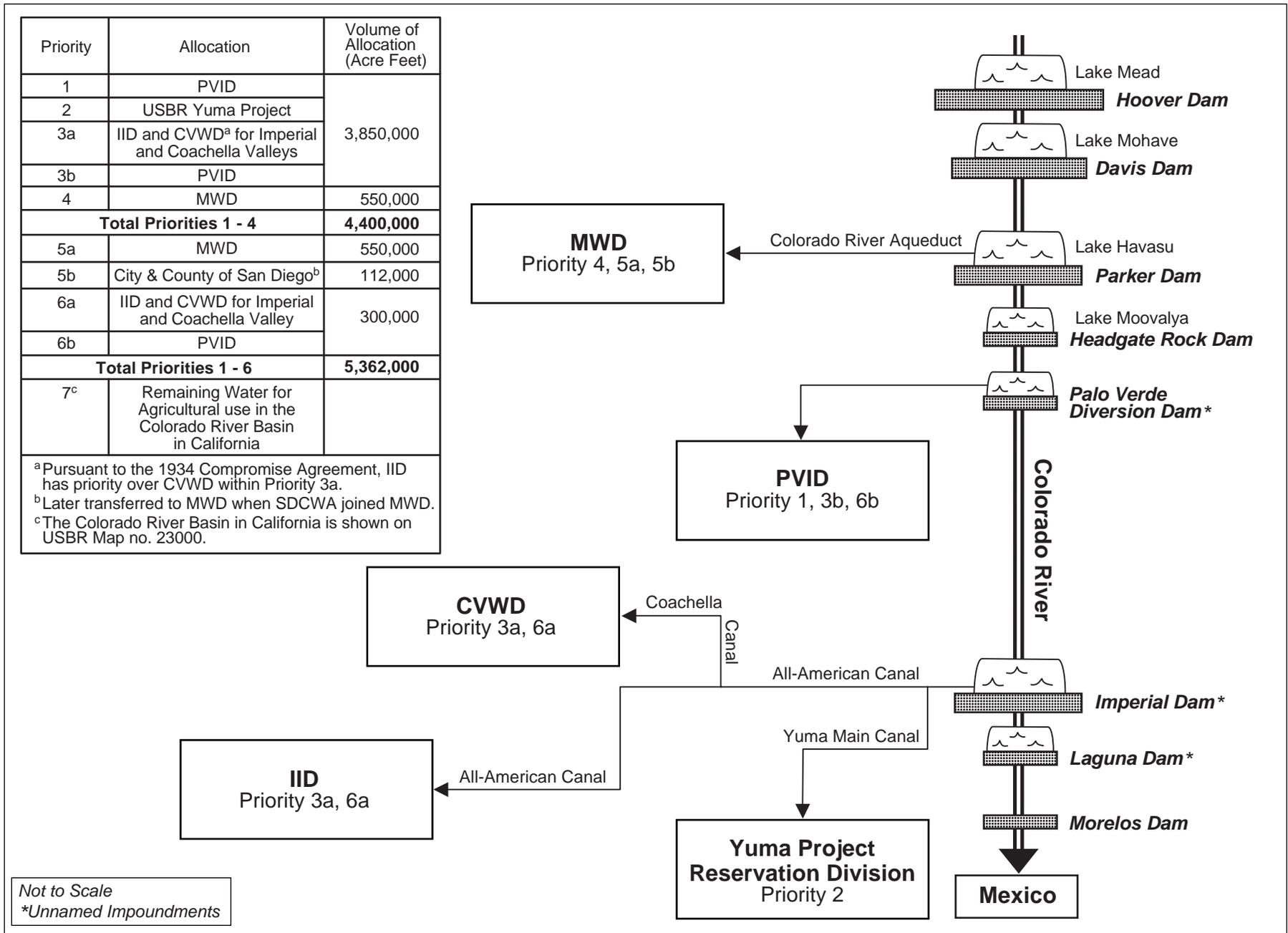


Figure 1.3-2. Colorado River Water Allocation Under the Seven Party Agreement

satisfied, the next category of water rights to be satisfied is PPRs for water projects and water districts, which are identified in the 1979 supplemental Decree as numbers 4-6, 26-28, and 82. The Miscellaneous PPRs identified in the 1979 supplemental Decree as numbers 7-21 and 29-80 have the next highest priority.

The Decree enjoins the Secretary from releasing or delivering water other than to water users in the United States with valid contracts made pursuant to Section 5 of the BCPA or to specified federal reservations. The Decree provides the parameters for delivering water in “normal,” “surplus,” and “shortage” years. The Decree directs the Secretary to release 4.4 MAF of mainstream water controlled by the United States to California in a normal year. Holders of Federal Reserved Rights and certain PPRs are not parties to the Seven Party Agreement, and their rights must be satisfied out of California’s 4.4 MAFY apportionment in a normal year. In addition to the normal year allocation, in a surplus year as determined by the Secretary, the Secretary shall apportion 50 percent of the water in excess of 7.5 MAF for use in California. In a shortage year, the Secretary must first satisfy all of the PPRs pursuant to the 1964 Decree and subsequent Decrees. The Secretary must then apportion the remaining water consistent with the BCPA and the Decree, but in no event shall more than 4.4 MAF be apportioned for use in California, including use by all PPRs. The Decree also provides that Colorado River water apportioned to a Lower Division State but not used by that state may be made available to another Lower Division State (this water is generally termed “unused apportionment”). California therefore has historically been allowed to divert water that was apportioned to, but not used by, Arizona and Nevada.

Colorado River Basin Project Act of 1968 (CRBPA)

This Act authorized construction of a number of water development projects, including the Central Arizona Project and required the Secretary to develop the Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs (LROC).

1.3.3.2 Recent Reclamation Guidelines and Rules

Interim Surplus Guidelines

As discussed above, California has been legally diverting more than its normal year apportionment of 4.4 MAF of Colorado River water for many years. The Secretary has adopted specific Interim Surplus Guidelines that provide users of Colorado River water, particularly those in California who currently utilize surplus water, a greater degree of predictability with respect to the likely existence, or lack thereof, of a surplus determination in a given year for the interim period (2002 to 2016). The Interim Surplus Guidelines facilitate California’s transition to use of a reduced supply of Colorado River water. A Final Environmental Impact Statement (EIS) was released that assesses the impacts of these guidelines (United States Bureau of Reclamation [USBR] 2000b) and a Record of Decision (ROD) was adopted (*Federal Register*, Vol. 66, No. 17, January 25, 2001, Notices).

The Interim Surplus Guidelines will be used annually during the interim period to determine the conditions under which the Secretary may declare the availability and volume of surplus water for use within the states of Arizona, California, and Nevada. The Interim Surplus

Guidelines are consistent with both the Decree and the LROC. The water conservation and transfer projects that are part of the QSA would facilitate compliance with the benchmarks or milestones as identified in the Interim Surplus Guidelines ROD, described below. Subject to suspension as described below, the Interim Surplus Guidelines will remain in effect for determinations made through calendar year 2015 regarding the availability and volume of surplus water through calendar year 2016. The Interim Surplus Guidelines may be subject to 5-year reviews conducted concurrently with LROC reviews. The Interim Surplus Guidelines would be applied each year as part of the Annual Operating Plan for Colorado River Reservoirs.

The Interim Surplus Guidelines, as adopted in the ROD, provide for a number of actions and certain benchmarks for reduction of California's Colorado River water use. In the event that California contractors have not executed the QSA by December 31, 2002, the Interim Surplus determinations identified in the Interim Surplus Guidelines ROD will be suspended and surplus determinations will be based upon the 70R Strategy³, until such time that California completes all actions and complies with reductions in water use identified in Section 5(c) of the Interim Surplus Guidelines ROD. Section 5(c) establishes benchmark quantities and dates for reductions in California agricultural usage, and states that in the event California has not reduced its use to meet the benchmark quantities, the Interim Surplus determinations identified in the Interim Surplus Guidelines ROD will be suspended and determinations will be based on the 70R strategy. Section 5(c) also provides conditions regarding reinstatement of Interim Surplus determinations if missed benchmarks are later met.

Rule for Offstream Storage of Colorado River Water

Reclamation developed and the Department of the Interior adopted a rule to facilitate interstate contractual distribution of Colorado River water among Arizona, California, and Nevada. Reclamation prepared an Environmental Assessment to assess the environmental impacts of the rule, and a Finding of No Significant Impact was issued on October 1, 1999. The final rule was published in the *Federal Register* on November 1, 1999, and became effective December 1, 1999. The Rule establishes a procedural framework for an expressly authorized storing entity to enter into storage agreements with authorized entities to store Colorado River water offstream.

The Arizona Water Banking Authority (AWBA) has entered into an initial interstate banking agreement with SNWA and the Colorado River Commission of Nevada (CRC) under which Colorado River water will be stored by AWBA for the benefit of Nevada. AWBA, SNWA, CRC, and Reclamation are developing a Storage and Interstate Release Agreement that would cover the actions to be taken by the United States. AWBA is developing a third agreement with Central Arizona Water Conservation District (CAWCD) for development of "intentionally created unused apportionment" under which Arizona would be committed to reduce its consumptive use of Colorado River water when water is recovered from offstream storage. Under these agreements, when SNWA wants to receive the benefit of the stored water, AWBA

3 The "70R" Strategy is an operating strategy for distributing surplus water and avoiding spills. The 70R strategy assumes a particular percentile historical runoff, along with a normal year, or 7.5 MAF delivery to the Lower Division States, for the next year. Applying these values to current reservoir storage, the projected reservoir storage at the end of next year is calculated. If the calculated space available at the end of next year is less than the space required by flood control criteria, then a surplus condition is determined to exist.

would recover the stored water that would be used in Arizona, permitting CAWCD to reduce its consumptive use of Colorado River water and thereby allowing the Secretary to release the intentionally created unused apportionment to SNWA under Article II (B)(6) of the Decree.

1.3.4 Operation of the Colorado River

Long-Range Operating Criteria

The CRBPA required the Secretary to adopt operating criteria for the Colorado River by January 1, 1970. The LROC, adopted in 1970, controls the operation of the Colorado River reservoirs in compliance with requirements set forth in the Compact, the Colorado River Storage Project Act of 1956, the BCPA, the U.S.-Mexico Water Treaty and other applicable federal laws. Under the LROC, the Secretary makes annual determinations published in the Annual Operating Plan (discussed in the following section) regarding the availability of Colorado River water for deliveries to the Lower Division States. A requirement to equalize the active storage between Lake Powell and Lake Mead when there is sufficient storage in the Upper Basin is also included in the LROC. The LROC call for formal reviews at least every 5 years and can only be modified after correspondence with the governors of the seven Basin States and appropriate consultation with such state representatives as each governor may designate.

Annual Operating Plan

The CRBPA also requires the preparation of an Annual Operating Plan for the Colorado River reservoirs that guides the operation of the system for the following year. The Annual Operating Plan describes how Reclamation will manage River resources over the 12-month period, consistent with the LROC and the Decree. The Annual Operating Plan is prepared annually by Reclamation in cooperation with the Basin States, other Federal agencies, Indian tribes, state and local agencies and the general public, including governmental interests as required by federal law. As part of the Annual Operating Plan process, the Secretary makes annual determinations regarding the availability of Colorado River water for deliveries to the Lower Division States as described below.

Normal, Surplus, and Shortage Determinations

The Secretary is required to determine when “normal,” “surplus,” and “shortage” conditions occur. These conditions are determined in the Annual Operating Plan and are referred to as “normal,” “surplus,” and “shortage” years. As generally set forth in the Decree, a “normal year” occurs if sufficient mainstream Colorado River water is available to satisfy 7.5 MAF of annual consumptive use in the three Lower Division States (Arizona, California, and Nevada); a “surplus year” occurs if sufficient mainstream water is available for release to satisfy in excess of 7.5 MAF of annual consumptive use in the Lower Division States; a “shortage year” occurs if insufficient mainstream water is available for release to satisfy 7.5 MAF of annual consumptive use in the Lower Division States. The Secretary makes an annual determination of the water supply conditions, in consultation with the Basin States, Indian tribes, and other parties, as described in more detail below.

For the interim period, surplus conditions are determined based on the Interim Surplus Guidelines as described in section 1.3.3.2 above.

Water Orders and Decree Accounting

Water Orders

Each September, Reclamation requires water users to submit diversion schedules, commonly referred to as annual water orders. Annual water orders are estimates of monthly diversions required by the water user for the following calendar year. Reclamation uses these annual water orders to determine a tentative schedule of monthly releases for Hoover Dam, Davis Dam, and Parker Dam. In addition to the annual water order, weekly water orders are also submitted to Reclamation each Wednesday for the following week's (Monday through Sunday) water requirement. In December of each year, Mexico provides the United States with a monthly water order for the upcoming year.

Decree Accounting

In accordance with Article V of the Decree (376 U.S. 340), the Secretary compiles and maintains records of the following: diversions of water from the mainstream of the Colorado River; return flow of such water to the mainstream of the Colorado River as is available for consumptive use in the United States or in satisfaction of the U.S.-Mexico Water Treaty obligation; and, consumptive use of such water, for each state and diverter. Reclamation reports these data for each calendar year in the Decree Accounting Report. The Decree Accounting Report is released within the calendar year following the calendar year of water use (for example, the Decree Accounting Report for calendar year 1999 was released in July of 2000).

1.4 HISTORY AND BACKGROUND

Key Concepts

The concepts of "apportionment," "entitlement," "beneficial use as reasonably required," and "priority" are key to understanding the Law of the River. "Apportionment" refers to the distribution of Colorado River water between the Upper and Lower Basin States as identified in the Compact, within the Lower Division States as identified in the BCPA and the Decree, and within the State of California as identified in the Seven Party Agreement. "Entitlement" is a legal authorization to beneficially consume Colorado River water and is obtained through historical diversion rights under state law and a right recognized in the Decree, a contract with the United States through the Secretary or a Secretarial reservation of water. It is the entitlement, not the apportionment that establishes a right to consumptively use Colorado River water. "Beneficial use as reasonably required" refers to the standard for consumptive use of water by an entitlement holder based on a variety of factors such as, location of use, land classification, purpose of use, types of crops, condition of delivery facilities, and past record of water orders (see 43 Code of Federal Regulations [CFR] Part 417). As stated in the Seven Party Agreement, and the 1931 Secretarial regulations, "Priority" refers to the relative entitlement to divert Colorado River water relative to other entities (i.e., in times of shortage, a lower priority entitlement holder must reduce its diversions before a higher priority entitlement holder must).

The flow in the Colorado River is variable, and it may not always be possible to meet all water demands. When water demands cannot be met in the aggregate, the entity with the highest priority water rights is entitled to have its request for beneficial use as reasonably required met

first. The entity with the next highest priority is entitled to have its request met second, and so on through all subordinate users, as long as supplies are available. In the Seven Party Agreement (described above), priority is ranked numerically, with Priority 1 being the highest. When insufficient water supplies are available to meet all of California's beneficial uses, a reduction in the amount of water available to California for beneficial use as reasonably required would impact those entities with the lowest water priority. Under such circumstances, the entities with lower priorities may have only some, or none, of their request met.

Historic Water Diversions by California

The Decree Accounting process established after the 1964 Decree forms the basis for comparing years of California use of Colorado River water. California's use of Colorado River water from 1964 to 1999 varied from 4.2 to 5.4 MAFY, with an average of 4.9 MAFY. The 1990 to 1999 period includes ranges of 4.5 to 5.2 MAFY, with an average of 5.0 MAFY. The infrastructure and land use patterns that were present during the 1990 to 1999 time period are comparable to current conditions; therefore, the water diversions that occurred during this time are assumed to be representative of the current demand. Water diversions by California's major Colorado River diverters for the period 1990 through 1999 as reported in the Decree Accounting Records, are illustrated in Table 1.4-1.

To date, California's demands in excess of 4.4 MAFY have been met in part by Colorado River water apportioned to Arizona and Nevada but not used by those states, and by water designated as surplus by the Secretary. The amount of unused apportionment that previously was available to California is diminishing, and unused apportionment is not likely to be available in future years. This is due to the commencement of operation of the Central Arizona Project in 1985 (a project that delivers Colorado River water to central Arizona irrigation districts, cities, and Indian tribes), its substantial completion in 1993, and growing demand for water in Nevada. Recently, California water agencies completed a major step toward reducing California's reliance on Colorado River water in excess of its apportionment of 4.4 MAFY in a normal year when they negotiated the Quantification Settlement Agreement, and worked with the Colorado River Board of California to develop the California Plan. The California Plan describes an overall program that would assist California in limiting the state's use of Colorado River water to its 4.4 MAF apportionment in a normal year, and is described below.

California's Colorado River Water Use Plan

The California Plan was developed by the Colorado River Board of California (CRB) to prepare for likely reductions of Colorado River water available to California. The California Plan, which was released in draft form in May 2000, is available at <http://ceres.ca.gov/crb/reports.htm>. The goal of the California Plan is to put in place a realistic strategy to assure that California will be able to reduce its use of Colorado River water to its 4.4 MAFY apportionment in normal years, and to meet its needs from sources that do not jeopardize the apportionments of other states.

The California Plan provides a policy framework by which programs, projects, and other actions would be coordinated and cooperatively implemented, allowing California to most effectively satisfy its annual water supply needs within its annual apportionment of Colorado River water. It includes the conservation of water within Southern California and the transfer

Table 1.4-1. California's Consumptive Use of Colorado River Water, 1990 to 1999
All Values in Acre Feet

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Min.	Ave.	Max.
Agricultural District Net Diversions													
Palo Verde Irrigation District (PVID)	459,615	412,965	334,689	334,467	382,476	426,599	493,572	421,851	427,113	468,888	334,467	416,224	493,572
Yuma Project Reservation Division	67,711	61,862	51,319	57,624	56,208	50,168	46,516	41,591	45,003	42,419	41,591	52,042	67,711
Imperial Irrigation District (IID)	3,054,188	2,898,963	2,572,659	2,772,148	3,048,076	3,070,582	3,159,609	3,158,486	3,101,548	3,088,980	2,572,659	2,992,524	3,159,609
Coachella Valley Water District (CVWD)	369,685	317,563	309,367	318,990	326,102	326,697	331,473	338,028	337,466	333,810	309,367	330,918	369,685
Metropolitan Water District (MWD)	1,214,971	1,252,352	1,193,830	1,204,003	1,300,203	994,373	1,227,279	1,238,660	1,073,125	1,212,067	994,373	1,191,086	1,300,203
California Other ¹	51,452	60,083	53,904	54,796	56,335	57,065	64,205	51,504	60,975	48,216	48,216	55,854	64,205
Unmeasured Return Flow Credit ²	N/A	N/A	N/A	N/A	44,669	88,679	96,487	88,227	91,996	87,203	44,669	82,877	96,487
Total California Net Diversions³	5,217,622	5,003,788	4,515,768	4,742,028	5,124,731	4,836,805	5,226,167	5,161,893	4,953,234	5,107,177	4,515,768	4,988,921	5,226,167
PVID Test Land Following Savings to Storage in Lake Mead⁴													
	0	0	28,301	92,989	64,689	0	0	0	0	0	0	18,598	92,989
IID/MWD Water Conservation Program	6,110	26,700	33,929	54,830	72,870	74,570	90,880	97,740	107,160	108,500	6,110	67,329	108,500
<p><i>Notes:</i> N/A = Not Applicable <i>Source:</i> Based on Reclamation's Annual Decree Accounting Reports for Calendar Year 1990 to 1999. 1. All other uses in California by Colorado River water users not encompassed by the Seven Party Agreement, a portion of which are made under Present Perfected Rights. 2. Unmeasured return flows are not credited to individual users but reported as a State total since 1994. 3. Total California Net Diversions = Agricultural District Net Diversions + MWD + California Other - Unmeasured Return Flow Credit 4. Saved water was stored in Lake Mead and subsequently discharged in flood control releases made in 1997.</p>													

of conserved water from agricultural to predominantly urban uses. It also identifies future groundwater conjunctive use projects that could be used to store Colorado River water when available. In addition, the California Plan outlines how California could continue to use surplus Colorado River water during the Interim Surplus Guidelines period (2002 to 2016).

1.5 RELATED PLANS, PROGRAMS AND ACTIONS

Several planned water resources management plans, programs, and actions may affect the allocation, distribution, and/or use of Colorado River water and associated environmental resources in California and adjacent states. A description of these plans, programs, and actions is provided below for background information. As appropriate, these same plans, programs, and actions are included in the Chapter 4 analysis of cumulative impacts.

Implementation Agreement

The IA, an agreement between CVWD, IID, MWD, SDCWA, and the Secretary, specifies the federal actions that are necessary to implement the QSA. Execution of the IA would commit the Secretary to making Colorado River water deliveries in accordance with the terms and conditions of the IA to enable the implementation of the QSA. The execution of the IA would authorize changes in the amount and/or location of deliveries of up to 388 KAFY of Colorado River water. Execution of the IA is a condition precedent to the QSA. A Draft EIS that evaluates the environmental impacts of the execution of the IA and related accounting and environmental actions was issued by Reclamation in January 2002. These related actions (the Inadvertent Overrun and Payback Policy and biological conservation measures) are described below. The Secretary will make a decision on the IA EIS concurrent with a decision on the IID Water Conservation and Transfer Project EIR/EIS.

Inadvertent Overrun and Payback Policy

Reclamation is proposing to adopt the Inadvertent Overrun and Payback Policy (IOP), which would identify inadvertent overruns of Colorado River water and define subsequent payback requirements to the Colorado River. The IOP would not be materially modified for a 30-year period. Adoption of the IOP is a condition precedent to the IA and QSA; that is, the IOP must be in place prior to implementation of the IA and QSA. A Draft EIS that evaluates the environmental impacts of the IOP and related actions was issued by Reclamation in January 2002.

An inadvertent overrun is defined as Colorado River water that is diverted, pumped, or received by an entitlement holder in excess of the water user's entitlement for that year and is a result of circumstances not anticipated by the water user. The IOP does not create any right or entitlement to this water, nor does it expand the underlying entitlement in any way. The IOP applies to all quantified Colorado River water entitlements in the Lower Division States and can only be applied to quantified consumptive use entitlements or entitlements that would take the remaining quantity of a state's fixed apportionment. A procedure has not been established for applying the IOP to un-quantified Colorado River water entitlements since entitlements that are not quantified would have no baseline from which to make a determination that an overage

occurred. Un-quantified Colorado River water entitlements are entitlements that specify the diversion of Colorado River water for irrigation of a certain acreage or specific area of land.

Under the IOP, payback would be required to begin in the calendar year that immediately follows the release date of the Decree Accounting Record that reports inadvertent overruns for a Colorado River water user. The IOP includes the following provisions:

- Payback must be made only from water management measures that are above and beyond the normal consumptive use of water; actions must be taken to conserve water that otherwise would not return to the mainstream of the Colorado River and be available for beneficial consumptive use in the United States.
- Maximum cumulative inadvertent overrun accounts for individual entitlement holders are approximately 10 percent of an entitlement holder's normal year consumptive use entitlement.
- The number of years within which an overrun, calculated from consumptive uses reported in final Decree Accounting Records, must be paid back, and the minimum payback required for each year shall be as follows:
 - In a year in which the Secretary makes a flood control release⁴ or a space building release⁵, any accumulated amount in the overrun account would be forgiven.
 - If the Secretary has declared a 70R surplus in the Annual Operating Plan, any payback obligation would be deferred at the entitlement holder's option.
 - When Lake Mead's elevation is between the elevation for a 70R surplus declaration and elevation 1,125 feet above mean sea level on January 1, the payback obligation must be paid back in full within 3 years. The minimum payback that year would be the greater of 20 percent of the individual entitlement holder's maximum allowable cumulative overrun account amount, or 33.3 percent of the total account balance.
 - When Lake Mead's elevation is at or below elevation 1,125 feet above mean sea level on January 1, the total account balance must be paid back in full in that calendar year.

Biological Conservation Measures

In August 2000, Reclamation released its *Biological Assessment for Proposed Interim Surplus Criteria, Secretarial Implementation Agreements for California Water Plan Components, and Conservation Measures on the Lower Colorado River (Lake Mead to the Southerly International Boundary)* (Biological Assessment). The Biological Assessment identified potential impacts that could occur to federally listed fish and wildlife species and their associated critical habitats within the historic floodplain of the Colorado River between Parker Dam and Imperial Dam

4 Flood control release is a release of water from Lake Mead for the purpose of meeting specific criteria as specified by the U.S. Army Corps of Engineers (USACE).

5 Space building release is a release of water from Lake Mead for the purpose of obtaining the required August 1 to January 1 available flood control storage space in Lake Mead as specified by the USACE.

from implementing a change in point of delivery and diversion of Colorado River water from Imperial Dam to Lake Havasu of 400 KAFY. The biological conservation measures to offset potential impacts from the change in point of delivery and diversion were developed and agreed to by Reclamation and the U.S. Fish and Wildlife Service (Service) and were incorporated into the Service's January 2001 *Biological Opinion for Interim Surplus Criteria, Secretarial Implementation Agreements, and Conservation Measures on the Lower Colorado River, Lake Mead to the Southerly International Boundary, Arizona, California, and Nevada* (Biological Opinion). A Draft EIS that evaluates the environmental impacts of the biological conservation measures and related actions including the IA and IOP, was issued by Reclamation in January 2002.

Interim Surplus Guidelines

The Interim Surplus Guidelines are discussed above in section 1.3.3.2.

Coachella Valley Water Management Plan

CVWD prepared the Coachella Valley Water Management Plan (CVWMP) (CVWD 2000) to establish an overall program for managing its surface and groundwater resources in the future. The CVWMP involves a number of actions to reduce the current overdraft of the groundwater basin in the Coachella Valley. These actions include: increased use of Colorado River water to reduce groundwater pumping; water recycling; and, conservation measures to decrease the overall consumption of water. The CVWMP is available from CVWD, Highway 111 at Avenue 52, Coachella, CA 92236, and is published on the Internet at http://www.cvwd.org/Public_Docs.htm. CVWD is currently preparing a PEIR to address the potential environmental impacts of the CVWMP implementation.

The CVWMP consists of both QSA and non-QSA components. Water that becomes available through implementation of the QSA will be used to reduce groundwater overdraft in the Coachella Valley. The QSA-related elements of the CVWMP are described in detail in Chapter 2 of this PEIR. Under the QSA, from 52 to 152 KAFY of additional Colorado River and an exchange of SWP water would be used to replace an equivalent portion of the groundwater now used, or would be used for direct groundwater recharge. Reducing the amount of groundwater pumpage and increasing the use of imported water would allow the overdrafted aquifer to recover. Other elements of the CVWMP that are not directly related to the implementation of the QSA are described in detail in Chapter 4, Cumulative Impact Analysis. Components of the CVWMP could proceed regardless of whether the QSA is implemented.

IID Water Conservation and Transfer Project

IID and SDCWA have executed an Agreement for Transfer of Conserved Water dated April 29, 1998, as subsequently amended (for the purposes of this document, the Agreement, as amended, is collectively referred to as the IID/SDCWA Water Conservation and Transfer Agreement), which provides parameters for water conservation in the IID service area and transfer of conserved water to SDCWA. The IID/SDCWA Water Conservation and Transfer Agreement calls for IID to conserve and transfer an annual amount of water (termed primary transfer) not less than 130 KAFY, or more than 200 KAFY. The quantity transferred in the first year will be 20 thousand acre-feet (KAF), increasing each year by approximately 20 KAF until a "stabilized primary quantity" (e.g., maximum annual primary transfer) is reached. The

stabilized primary quantity to be conserved and transferred to SDCWA is between 130 KAFY and 200 KAFY, as determined by the IID in its complete discretion. After at least 10 years of primary transfers, an additional discretionary transfer, not to exceed 100 KAFY may be transferred to SDCWA. The initial term of the agreement is 45 years after the transfers commence. Both IID and SDCWA have the option, under certain conditions, to extend the term for an additional 30 years.

In the event that the QSA is executed, SDCWA would be limited to the primary transfer (up to 200 KAFY) of conserved water under the IID/SDCWA Water Conservation and Transfer Agreement, and CVWD and/or MWD would have the option to acquire the discretionary amount (up to 100 KAFY) pursuant to the terms of the QSA. Under a proposed amendment to the IID/SDCWA Water Conservation and Transfer Agreement, which amendment would be conditioned upon implementation of the QSA, IID would make an additional 10 KAFY (called the “early water transfer”) available to SDCWA in the following increments: 2.5 KAF in 2005, 5 KAF in 2006, and 2.5 KAF in 2007.

San Luis Rey Indian Water Rights Settlement

On November 17, 1988, the President approved the San Luis Rey Indian Water Rights Settlement Act (Title I of Public Law [PL] 100-675) which has since been amended. The San Luis Rey Indian Water Rights Settlement Act authorizes a source of water to settle the reserved water rights claims of the La Jolla, Rincon, San Pasqual, Pauma, and Pala Bands of Mission Indians; the City of Escondido; the Escondido Mutual Water Company (which is no longer in existence); and Vista Irrigation District. The La Jolla, Rincon, San Pasqual, Pauma, and Pala Bands of Mission Indians, the City of Escondido (successor in interest to the Escondido Mutual Water Company), and Vista Irrigation District are collectively termed the San Luis Rey Indian Water Rights Settlement Parties in this PEIR. The Act authorizes the Secretary to arrange for development of a water supply for the benefit of the La Jolla, Rincon, San Pasqual, Pauma, and Pala Bands of not more than 16 KAFY and authorized the Secretary to use water conserved from the works authorized by Title II of the same Act for this purpose. Implementation of the QSA, including the All American Canal and Coachella Canal lining projects would make water available to facilitate the San Luis Rey Indian Water Rights Settlement Act.

Lower Colorado River Multi-Species Conservation Program

The Lower Colorado River Multi-Species Conservation Program (MSCP) is a partnership of state, federal, tribal, and other public and private stakeholders with an interest in managing the water and related resources of the Colorado River in the Lower Basin. The underlying need for the MSCP is to implement a conservation plan that enhances the status of protected species and provides the basis for incidental take authorizations under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA), as amended, for ongoing operations and maintenance and proposed future operations of the lower Colorado River.

The purpose of the MSCP is to develop a Conservation Plan that will:

- Conserve habitat and contribute to the recovery of “covered species” within the historic floodplain of the lower Colorado River, pursuant to the ESA and attempt to reduce the likelihood of additional species listings under the ESA; and

- Accommodate current water diversions and power production and optimize opportunities for future water and power development, to the extent consistent with law.

The MSCP covers the mainstem of the lower Colorado River from below Glen Canyon Dam to the Southerly International Boundary with Mexico. The program area includes the historic floodplain and reservoir full-pool elevations. Specific conservation measures are being developed, but include the following categories:

- Protection of existing habitat;
- Enhancement of existing habitat;
- Restoration to create new habitat;
- Management of habitat to maintain and preserve ecological functions;
- Avoidance and minimization of direct impacts on individuals and populations of covered species; and
- Population enhancement measures that directly or indirectly increase population levels of covered species.

Conservation measures would be implemented over a 50-year period and would focus on the lower Colorado River from Lake Mead to the Southerly International Boundary. The MSCP is intended to cover any incidental take associated with a number of actions, including changes in point of diversion of up to 1.574 MAF (which would include transfers contemplated under the QSA) of Colorado River water from below Parker Dam. This volume was based on a series of conceptual transfers and changes in points of diversion. Although long-term ESA and CESA compliance for the Proposed Project would be provided by the MSCP, the Section 7 consultation by Reclamation and the USFWS Biological Opinion will provide ESA authorization. A Section 2081 permit will provide CESA authorization for the Proposed Project, as described in section 2.6.1. An EIS/EIR is being prepared to analyze the potential impacts of the MCSP Conservation Plan. Reclamation and the Service are the lead agencies under the National Environmental Policy Act (NEPA), and MWD is the lead agency under CEQA.

Hayfield Groundwater Storage Program and Cadiz Groundwater Storage and Dry-Year Supply Program

MWD has proposed to store between 500 and 800 KAF of water in the Hayfield groundwater basin located between Chiriaco Summit and Desert Center in the eastern Mojave Desert. Colorado River water from the CRA would be stored in the Hayfield basin in years when sufficient water is available. The annual storage capacity of the project is approximately 150 KAF and the annual withdrawal capacity would be 150 KAF. When needed, the stored water would be delivered to the MWD's service area via the CRA. This water would be used to partially compensate for reduced Colorado River water diversions in a normal year.

The environmental documentation for this project was approved by MWD's Board of Directors in April 1999, followed by approval of the project itself. Construction is scheduled to begin in 2004, and program operation is scheduled to commence by the year 2005.

MWD has also proposed to store up to 1 MAF of water in the Cadiz and Fenner valleys in eastern San Bernardino County, under a cooperative agreement with Cadiz Inc. Colorado River water would be delivered to the Cadiz Inc. property for storage in the Cadiz and Fenner basins in years when sufficient water is available. When needed, this water would be withdrawn from storage and delivered to the MWD service area via the CRA. Another objective of the project is to provide the maximum amount of indigenous groundwater for transfer consistent with the Groundwater Monitoring and Management Plan (Management Plan). Two additional project objectives are to provide: delivery capability to storage of up to 150 KAFY of Colorado River water, and recovery capability of stored or indigenous water at a rate of up to 150 KAFY for delivery to the MWD service area. The term of the project is 50 years. The accomplishment of project objectives will depend on the availability of Colorado River water for storage and the natural recharge of the groundwater basin, and will be governed by the Management Plan.

The Bureau of Land Management (BLM) and MWD released a Final EIS/EIR for the Cadiz Groundwater Storage and Dry-Year Supply Program in September 2001.

These Proposed Projects are important elements of both MWD's long term water planning and the California Plan. These Proposed Projects would be one source of water to supplement Colorado River supplies during years in which surplus water is unavailable and California is limited to its 4.4 MAF normal year apportionment.

Salton Sea Restoration Project

As described in the Draft Salton Sea Restoration Project EIS/EIR (USBR and Salton Sea Authority [SSA] 2000), the Salton Sea is an excessively saline, nutrient-rich lake in a closed basin. The Salton Sea was formed by an accidental breach of an irrigation structure in 1905, which resulted in an uncontrolled flow from the Colorado River into the basin for 18 months. The Salton Sea is sustained by drainage from the Imperial, Mexicali, and Coachella valleys. In discussing the legislation to reclaim the Salton Sea, House Report No. 105-621, released on July 14, 1998 by the U.S. House of Representatives Committee on Resources states the following:

Land, recreational, and ecological values associated with the Sea have declined over the last decade, due in large part to the rising salinity and surface elevation. Without efforts to reduce and stabilize the salinity level, it will continue to rise and will have severe impacts on the existing fish and wildlife resources, as well as causing odor and land value impacts.

The Salton Sea Reclamation Act of 1998 (PL 105-372), developed in response to these conditions, directs the Secretary to do the following:

...complete all studies, including, but not limited to environmental and other reviews, of the feasibility and benefit-cost of various options that permit the continued use of the Salton Sea as a reservoir for irrigation drainage and: (i) reduce and stabilize the overall salinity of the Salton Sea; (ii) stabilize the surface elevation of the Salton Sea; (iii) reclaim, in the long term, healthy fish and wildlife resources and their habitats; and (iv) enhance the potential for recreational uses and economic development of the Salton Sea.

The Salton Sea study is separate from the Proposed Project, and can proceed with or without implementation of the QSA. PL 105-372 specifically directs the Secretary not to include any option that (1) relies on the importation of any new or additional water from the Colorado River; or (2) is not consistent with existing rights and obligations of persons under treaties, laws, decrees, contracts, and agreements that make up the Law of the River. In furtherance of this limitation, PL 105-372 directs the Secretary to:

...apply assumptions regarding water inflows into the Salton Sea Basin that encourage water conservation, account for transfers of water out of the Salton Sea Basin, and are based on a maximum likely reduction in inflows into the Salton Sea Basin which could be 800,000 acre-feet or less per year.

House Report No. 105-621 specifically refers to efforts underway that would transfer between 130 and 300 KAFY of water from IID to SDCWA and acknowledges that this would reduce the inflow to the Salton Sea.

To implement the directive provided in PL 105-372, the Salton Sea Authority, as the California lead agency under CEQA, and Reclamation, as the federal lead agency under NEPA, released a Draft EIS/EIR in January, 2000, that evaluated alternative methods of restoring the Salton Sea. A revised Draft EIS/EIR including different alternatives and revised modeling and impact analysis is being prepared. Alternatives that are currently being considered for inclusion in the revised Draft EIS/EIR include: No Action; Evaporation Ponds; Enhanced Evaporation System (EES) at Bombay Beach; EES at Salton Sea Test Base; Evaporation Ponds and EES; and In-Sea EES in Evaporation Ponds.

Land Management, Crop Rotation, and Water Supply Program in the Palo Verde Valley

MWD and PVID are developing a land management, crop rotation, and water supply program in the Palo Verde Valley. The program's objective is to develop a flexible and reliable water supply for MWD of approximately 100 KAFY for 35 years and to assist in stabilizing the farm economy within the Palo Verde Valley through sign-up payments and annual payments for participating farmers and through implementation of specific community improvement programs. Participation in the program would be voluntary. Participating farmers would, at MWD's request and with specific notice periods, not irrigate a portion of their farmland. The same land would not be irrigated for a minimum of a one-year term and a maximum of a three-year term at the farmer's option. A base area of 6,000 acres would not be irrigated each year of the 35 years. Under certain options, the amount of nonirrigated area could increase from 6,000 acres up to a maximum of 26,500 acres per year. Overall, a maximum of 24,000 acres per year in any 25-year period or 26,500 acres per year in any 10-year period during the 35-year program would be dedicated to the program. MWD would provide financial compensation to the participating farmers. Not irrigating a portion of the Palo Verde Valley's farmland would result in less Colorado River water being used by PVID. The amount of water conserved by the program would be determined on an annual basis. An EIR assessing the impacts of this program is being prepared by PVID, and was released for public review in May 2002.