CHAPTER 5: LOWER BASIN WATER DEVELOPMENT

Introduction

This chapter discusses the construction, operation, and administration of water projects in the Lower Basin of the Colorado River during the period from 1979 through 2008. This chapter also identifies projects for which operation, maintenance, and replacement (OM&R) responsibilities were transferred from the Bureau of Reclamation (Reclamation) to the project beneficiary and identifies projects for which title has been transferred from the United States to the project beneficiary. See Figure 5-1 for the location of projects discussed in this chapter.

Central Arizona Project

The Colorado River Basin Project Act, Public Law (Pub. L.) No. 90-537, 82 Stat. 885 (1968) (CRBPA or Basin Project Act) was approved on September 30, 1968, and authorized the Central Arizona Project (CAP). The legislative history of the Basin Project Act is discussed in *Updating the Hoover Dam Documents 1978*, Chapter XII. CAP transmission facilities and power contracts are discussed in Chapter 13 of this volume.

The CAP works consist of these primary elements:

- The main system composed of: a system of conduits, canals, and pumping plants for diverting and transporting water from Lake Havasu on the Colorado River to metropolitan Phoenix and Tucson and to various agricultural entities in central Arizona; and the Federal interest in the Navajo Generating Station and transmission facilities which provide for the delivery of power to points within the CAP service area for project needs

- Storage facilities, including New Waddell Dam and Modified Roosevelt Dam

- Distribution works for non-Indian agricultural lands, to distribute CAP water to lands with a history of irrigation within the CAP service area after the water is transported or delivered through the main system

- Distribution works for Indian lands to distribute CAP water to Indian reservations after the water is transported or delivered through the main system

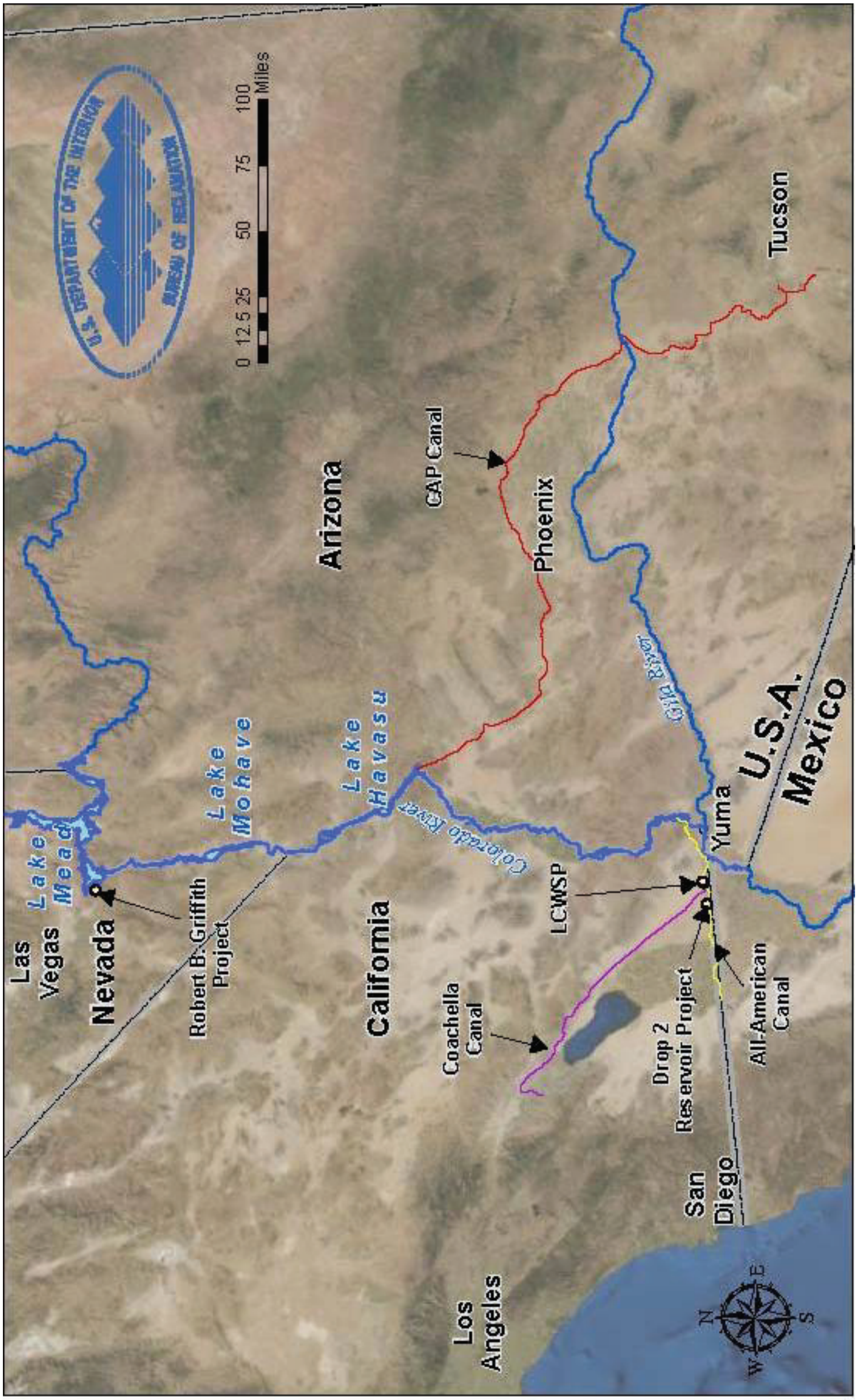

Figure 5-1. Map of Lower Colorado Region project locations.

Central Arizona Project Construction Stages

Repayment of the project was based on construction stages, with each stage having a separate 50-year repayment schedule. There are six construction stages, including those that have been deferred or have yet to be completed as of December 31, 2008:

Stage I:	The water supply system, including Navajo Generating Station
Stage II:	The regulatory storage division, including New Waddell and Modified Roosevelt Dams[1]
Stage III:	Replacement features or programs for Cliff Dam[2]
Stage IV:	Tucson Terminal Storage
Stage V:	Hooker Dam or suitable alternative[3]
Stage VI:	Buttes Dam[4]

Water Developed by the Central Arizona Project

Three distinct water sources are developed by Stages I and II of the CAP. The primary source is from the State of Arizona's apportionment of Colorado River

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[1] One of the principal works authorized for the CAP is described in Section 301(a) of the Basin Project Act as "Orme Dam and Reservoir and power-pumping plant or suitable alternative." A decision was made not to construct Orme Dam and instead to select alternative regulatory storage. On April 3, 1984, the Secretary of the Interior selected Plan 6 for the Regulatory Storage Division of the CAP as a suitable replacement for Orme Dam. Plan 6 included construction of New Waddell Dam and modifications to Roosevelt Dam.

[2]Cliff Dam was not constructed primarily due to environmental concerns. On July 1, 1987, the United States acting through the Secretary of the Interior, the State of Arizona, the Central Arizona Water Conservation District, and local cities and water entities entered into a supplemental agreement deleting Cliff Dam from the Plan Six funding agreement dated April 15, 1986. The Act of December 22, 1987, Pub. L. No. 100-202, Title II, 101 Stat. 1329-113 (1987) prohibited Federal funding for study or construction of Cliff Dam. In 1992, the Cities of Chandler, Mesa, Phoenix, and Scottsdale acquired the Hohokam Irrigation and Drainage District water service subcontract entitlement, including the CAP distribution system repayment obligation for that district, with the acquired water being a replacement for the water supply that would have been developed by Cliff Dam.

[3] Hooker Dam, which was to be located on the upper Gila River system to deliver water to counties in western New Mexico, is in a deferred status as of December 31, 2008. This feature of the CAP was addressed in the Arizona Water Settlements Act, Pub. L. No. 108-451, 118 Stat. 3478 (2004), and was described in that statute as the "New Mexico Unit" (discussed later in this chapter).

[4] Buttes Dam, which was to be located on the Gila River downstream of its confluence with the San Pedro River, was not found to be economically justified and is in a deferred status as of December 31, 2008.

water, a portion of which is imported into central Arizona through the CAP main system and regulated as needed in the reservoir behind New Waddell Dam.

The second source of water developed by the CAP results from the construction of New Waddell Dam to capture and conserve Agua Fria River floodflows which historically spilled from the smaller, original Waddell Dam. Water conserved by New Waddell Dam is commingled with Colorado River water and delivered to CAP water users served by the main system in accordance with CAP water service contracts. See “Central Arizona Project Water Allocations” later in this chapter.

The third source of water developed by the CAP results from the modifications to Roosevelt Dam which created storage space for new water conservation. The modifications to Roosevelt Dam allow the capture and control of Salt River floodflows that historically spilled from the Salt River Project (SRP) dams. The increased yield from modified Roosevelt Dam is not delivered under CAP water service contracts. Instead, this water is made available through contracts to certain Phoenix-area cities (Chandler, Glendale, Mesa, Phoenix, Scottsdale, and Tempe) in exchange for their upfront funding contribution of a portion of the construction costs of modifying Roosevelt Dam. Each of these cities is a CAP municipal and industrial (M&I) water service subcontractor, and each receives water deliveries from SRP as well. The additional water supply resulting from the modifications to Roosevelt Dam is delivered to the cities through SRP delivery facilities.

Completion of Construction and Initiation of Repayment

Construction of Stage I of the CAP began with the Navajo Generating Station in 1970. The Navajo Generating Station began operating on May 31, 1974. Construction of the CAP aqueduct and pumping plant facilities continued through the early 1990s. During construction status (that is, prior to issuance of a notice of completion) the water supply system was only capable of making partial water deliveries. Water deliveries began in 1985 to the Phoenix metropolitan area; in 1986 to Pinal County; in 1987 to the Ak-Chin Indian Community; in 1989 to northern Pima County; and in 1992 to the Tucson area. Stage I, the water supply system including the Navajo Generating Station, was declared substantially complete as of October 1, 1993, by a Notice of Completion letter from the United States to the Central Arizona Water Conservation District (CAWCD) dated September 30, 1993. Construction of Stage II, the regulatory storage division, began in 1985. Stage II was declared substantially complete as of September 30, 1996, by a Notice of Completion letter from the United States to CAWCD dated September 30, 1996.

Repayment of the Central Arizona Project

The repayment responsibility differs among the main system, the non-Indian distribution works, and the Indian distribution works. The main system, including New Waddell Dam, is repaid primarily by CAWCD. CAWCD’s annual repayment obligation for Stages I and II is addressed in the Contract Between the United States and the Central Arizona Water Conservation District for Delivery of Water and Payment of Costs of the Central Arizona Project, Contract No. 14-06-W-245, dated December 15, 1972 (Master Repayment Contract). This Master Repayment Contract was superseded and replaced by Amendment No. 1 on December 1, 1988, to increase the ceiling for CAWCD's repayment obligation.[5] The original Master Repayment Contract is discussed in *Updating the Hoover Dam Documents 1978*, Chapter II.

The three primary sources of revenue available to CAWCD to meet its annual repayment obligation to the United States are: (1) revenues from the sale of Navajo surplus by the United States under the Hoover Power Plant Act of 1984, Pub. L. No. 98-381, 98 Stat. 1333 (1984); (2) revenues from ad valorem taxes levied by CAWCD; and (3) revenues from capital charges assessed by CAWCD on irrigation and M&I subcontractors. Repayment revenues are deposited to the Lower Colorado River Basin Development Fund (Development Fund) established under Section 403 of the Basin Project Act.

Due to the lengthy CAP construction period, and the realization of significant benefits from CAP features placed into service before completion of the entire project, the Master Repayment Contract as amended in 1988 provided for staged repayment by CAWCD. Upon substantial completion of each construction stage, the United States placed the stage into repayment status and notified CAWCD of its estimated repayment obligation for the stage. Each stage has its own 50-year repayment period. The repayment obligation is divided into interest-bearing and interest-free components in accordance with the authorizing legislation and repayment contract provisions.

Repayment of construction costs for CAP distribution works for non-Indian agricultural lands is governed by contracts entered into under Section 9(d) of the Reclamation Project Act of 1939, Pub. L. No. 76-260, 53 Stat. 1187 (1939) and Section 309(b) of the Basin Project Act. Reclamation entered into these repayment contracts, often referred to as "9(d) contracts" with the non-Indian irrigation districts which had entered into subcontracts with the United States and CAWCD for non-Indian agricultural priority CAP water. In accordance with Section 309(b) of the Basin Project Act, the irrigation districts contributed upfront funding of 20 percent of the construction costs, with the remainder funded by Federal appropriations and subject to repayment.

Repayment of construction costs for Indian distribution works for delivery of CAP irrigation water is governed by section 402 of the Basin Project Act and by

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[5] On August 14, 2007, the United States and CAWCD executed Supplement No. 1 to Contract No. 14-06-W-245, Amendment No. 1, to allow CAWCD to fulfill its Central Arizona Groundwater Replenishment function under Arizona State law. Amendment No. 2 was executed November 30, 2007, to conform the Master Repayment Contract to the Arizona Water Settlements Act, Pub. L. No. 108-451, 118 Stat. 3478 (2004), which is discussed later in this chapter.

certain Native American water rights settlement statutes. Section 402 provides that costs allocated to irrigation of Indian lands that are within the repayment ability of such lands are subject to the Act of July 1, 1932, Pub. L. No. 72-240, 47 Stat. 564 (1932) (Leavitt Act), which defers repayment as long as the land remains in Indian ownership. Section 402 also provides that costs allocated to irrigation of Indian lands that are beyond the repayment ability of such lands are nonreimbursable.

Financial Difficulties and Repayment Dispute

In the 1980s, the Arizona agricultural economy experienced unprecedented growth, and farm commodity prices were relatively high. Execution of the non-Indian CAP distribution systems 9(d) repayment contracts and construction of the CAP non-Indian distribution systems coincided with a peak in the Arizona agricultural economy. Approximately $240 million of Federal funds were expended to construct CAP non-Indian distribution systems. In the 1990s, when repayment under the 9(d) contracts commenced, as discussed later in this chapter, the Arizona agricultural economy was in a downturn and several of the non-Indian irrigation districts experienced difficulties making their required payments.

The Basin Project Act authorizes the Secretary of the Interior (Secretary) to allocate CAP costs to the various project purposes. The cost allocated to each purpose is either reimbursable or nonreimbursable. Many of the factors used in the cost allocation, such as projected long-term usage of non-Indian irrigation water, M&I water, and Indian water, can have a significant effect upon the allocation of costs, and were under constant change. Beginning in the early 1990s, discussions began between the United States and CAWCD relating to repayment, cost allocation, and the financial difficulties that the non-Indian irrigation districts were experiencing. The United States and CAWCD attempted to develop an agreement in principle relating to several repayment and operational issues including the extent of the CAWCD repayment obligation under the 1988 Master Repayment Contract (discussed earlier in this chapter). Agreement was not reached.

Central Arizona Project Repayment Litigation

As a result of the lack of agreement regarding CAWCD's repayment obligation and other financial and operational issues, CAWCD filed a Complaint for Declaratory and Injunctive Relief, dated July 10, 1995, in the United States Bankruptcy Court in Tucson, Arizona, initiating an adversary proceeding (Adversary Proceeding No. A95-0091) in an ongoing bankruptcy case (Case No. 94-02043-TUC-JMM) involving the Central Arizona Irrigation and Drainage District, an irrigation district holding a subcontract for CAP non-Indian agricultural water. The United States filed a counter suit on August 24, 1995, in United States District Court in Arizona.

On September 20, 1995, the complaints were consolidated as a single action in the United States District Court with the CAWCD suit designated as the complaint and the United States suit designated as a counter claim in a case styled *Central Arizona Water Conservation District* v. *United States*, No. CIV 95-625-TUC-WDB (EHC) and No. CIV 95-1720-PHX-EHC (Consolidated Action). The basis of the numerous claims and counter claims presented in this consolidated action can generally be categorized as: (1) issues relating to CAWCD's repayment obligation; (2) issues relating to CAWCD's water delivery program, such as the marketing of excess water and the costs to be charged for that water; and (3) other financial and operational disputes.

The trial was organized into phases. Phase 1 of the trial, conducted in August 1998, addressed two key issues: determination of the repayment ceiling applicable to CAWCD under the CAP Master Repayment Contract, and determination of the Secretary's ability to limit use of CAP facilities if CAWCD failed to fully repay to the United States the repayment obligation determined by the Secretary. Phase 2 of the trial addressed the issue of CAWCD's repayment obligation for reimbursable costs under the 1988 Master Repayment Contract.

On November 3, 1998, in a decision reported at *Central Arizona Water Conservation District* v. *United States*, 32 F. Supp. 2d 1117 (D. Ariz. 1998), the district court made numerous rulings with respect to Phase 1 of the litigation, among them finding that the repayment ceiling provision of the Master Repayment Contract as amended by Amendment No. 1 in 1988, which the court called the "1988 Agreement," was ambiguous as a matter of law. Specifically, the court ruled:

> 2. The repayment ceiling provision of the 1988 Agreement is ambiguous as a matter of law insofar as it could reasonably be interpreted as establishing either a fixed or variable repayment ceiling for Stages One and Two. Article 9.3(e) shows the repayment ceiling as being fixed at $2.0 billion. Exhibit B, however, includes a repayment ceiling which makes adjustments depending on whether the GRIC executes a water delivery contract with the Secretary of Interior. The conflict between Article 9.3(e) and Exhibit B creates an ambiguity in the 1988 Agreement.

Id. at 1143. The court held that the ambiguity would be construed against the United States as the drafter of the conflicting provisions and further held that:

> 5. The repayment ceiling in the 1988 Agreement was $1.781 billion after the GRIC [Gila River Indian Community] executed a water delivery contract on October 22, 1992. The adjustment in the repayment ceiling from $2.0 billion to $1.781 billion reflects the fact that 173,100 acre-feet of water allocated to GRIC was no longer within the repayment obligation of CAWCD.
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> 6. The 1988 Agreement required the United States to cease construction if it determined that reimbursable construction costs would exceed the repayment ceiling. The United States breached the 1988 Agreement

> when it continued to incur construction costs in excess of the $1.781 billion repayment ceiling in the absence of an amendatory contract.
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> 11. Article 6.7 of the 1988 Agreement is unambiguous. However, it has no application to the present case, because there has been no claim asserted herein that the appropriations ceiling has been exceeded. The remedy set forth in Article 6.7 applies only to the appropriations ceiling, and is not relevant to a situation, such as the one in this case, where only the repayment ceiling has been exceeded. Accordingly, the United States is not entitled to bar CAWCD from using project facilities in the absence of an amendatory contract.

Id. at 1143-1144. The court then granted the following declaratory and injunctive relief against the United States:

> 1. The Court declares that Article 9.3(e) and Exhibit B to the 1988 Agreement limits CAWCD's repayment obligation for Stages One and Two to $1.781 billion unless an amendatory contract is executed providing otherwise.
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> 2. The Court declares that Defendants may not invoke Article 6.7 of the 1988 Agreement to prevent CAWCD from utilizing CAP facilities. Defendants are hereby enjoined from barring CAWCD from utilizing CAP facilities.

Id. at 1144. A Notice of Appeal for Phase 1 was filed with the United States Court of Appeals for the Ninth Circuit, Appeal No. 77-8-569, on December 31, 1998. The United States filed a motion for voluntary dismissal of appeal on May 17, 2000, based on a stipulated settlement for a stay of litigation reached by the parties, discussed in detail later in this chapter. The appeal rights were reserved until a final order by the district court was issued on November 21, 2007.

As noted above, Phase 2 of the trial, conducted in 1998, addressed the appropriate allocation of the construction costs for Stages I and II of the CAP. The district court did not issue a ruling on Phase 2 issues because negotiations were underway to reach a settlement agreement. All remaining phases of the litigation were stayed pending a settlement.

Central Arizona Project Stipulated Settlement

Negotiations for a stipulated settlement agreement were concluded in 2000, and a Stipulation Regarding a Stay of Litigation, Resolution of Issues During Stay and for Ultimate Judgment Upon the Satisfaction of Conditions (Stipulation) was filed with the district court on May 9, 2000. The court stayed the litigation for 3 years to allow time for implementation of the conditions identified in the Stipulation. During the stay, the United States and CAWCD operated in accordance with the terms of the Stipulation.

A key provision of the Stipulation permitted CAWCD to market "excess water" to help meet Arizona's long-term water planning needs. As provided in the Stipulation and as limited to this context, excess water is "all Project Water that is in excess of the amounts used, resold, or exchanged pursuant to long-term contracts and subcontracts . . . ." Excess water includes that water under contract to, but not ordered in a given year by, Native American tribes and communities.

Native American tribes and communities raised concerns that allowing a marketing program for excess water would motivate recipients of that water to oppose efforts to secure Federal appropriations for the construction of Indian water distribution systems for the CAP. Such opposition might prevent the construction of the facilities needed to allow the Native American tribes and communities to put the water to use on their reservation lands with the result that the water would remain available to the excess water marketing program. To address these concerns, the Stipulation was expressly conditioned upon Congress authorizing a firm funding stream (that is, a dedicated funding mechanism not subject to the annual appropriations process) to supplement annual appropriations for Indian distribution system construction and costs associated with Native American water rights settlements. The Stipulation provided that this firm funding stream was not to exceed the amount of Development Fund revenues credited each year against CAWCD's repayment obligation. See discussion of the Development Fund later in this chapter.

Final effectiveness of the Stipulation was further conditioned upon passage of Federal legislation and upon certain other events, which were to occur within three years of the entry of the Stipulation (that is, by May 2003), including:

- A significant additional allocation of CAP water for Federal purposes to be used for settlement of Native American water rights claims (bringing Native American allocation of the CAP water supply to nearly half of the project supply)

- Final and fully enforceable settlement of the Gila River Indian Community's water rights claims

- An amendment to the Southern Arizona Water Rights Settlement Act of 1982, Pub. L. No. 97-293, Title III, 96 Stat. 1274 (1982), fully enforceable (to resolve settlement implementation issues relating to the Tohono O'odham Nation)

- Final San Carlos Apache Tribe water rights settlement fully enforceable in accordance with the San Carlos Apache Tribe Water Rights Settlement Act of 1992, Pub. L. No. 102-575, Title XXXVII, 106 Stat. 4740 (1992), as amended in 1994, 1996, and 1997

- Amendment of the Navajo Power Marketing Plan[6] of December 1, 1987, to provide for the establishment and collection of rates for the sale or exchange of "Navajo Surplus Power" after September 30, 2011, which optimize the availability and use of revenue for specified purposes of the Stipulation

- Identification of a firm funding stream by Congress to meet purposes identified and prioritized in the Stipulation

Despite efforts to meet the requirements of the Stipulation, in 2002 the parties realized that the conditions of the Stipulation could not be met by the May 2003 deadline and successfully negotiated a Revised Stipulation Regarding a Stay of Litigation, Resolution of Issues During Stay and for Ultimate Judgment Upon the Satisfaction of Conditions (Revised Stipulation) that extended the date for meeting the conditions by nine years to 2012. The Revised Stipulation was filed with the district court on April 11, 2003. By Order dated April 28, 2003, the district court replaced the Stipulation with the Revised Stipulation and stayed the case until May 9, 2012.

Intensive negotiations continued in 2003 and 2004, culminating in passage of the Arizona Water Settlements Act, Pub. L. No. 108-451, 118 Stat. 3478 (2004) (AWSA), which provided the Federal legislation necessary to meet the key conditions established by the Stipulation and contained in the Revised Stipulation. The United States Department of the Interior, the United States Department of Justice, affected Native American tribes and communities, CAWCD, and State and local stakeholders were actively involved in the negotiations that led to passage of the AWSA.

After passage of the AWSA and after the Commissioner of Reclamation adopted the Amended Navajo Power Marketing Plan[7] on September 18, 2007, the parties submitted to the district court a Stipulation for Judgment which updated and modified the Revised Stipulation. The court then entered a Stipulated Judgment, approving the Stipulation for Judgment on November 21, 2007.

Under the Stipulation for Judgment, CAWCD's repayment obligation for the water supply system and regulatory storage stages (that is, Stages One and Two) of the CAP was set at $1,646,462,500 to be repaid to the United States in annual payments through 2046. This amount assumed a total allocation of 667,724 acre-feet per year of CAP water for Federal purposes. Because the amount of water devoted to Federal purposes may change within the overall limitations established under the AWSA, the Stipulation for Judgment also includes a formula to allow each acre-foot of water involved to be valued for the purposes of the CAWCD

[6] Published in the *Federal Register* at 52 Fed. Reg. 48328 (December 21, 1987). See Chapter 13.

[7] Published in the *Federal Register* at 72 Fed. Reg. 54286 (September 24, 2007). See Chapter 13.

repayment obligation at $1,415 per acre-foot. This allows the automatic modification of the CAWCD repayment obligation, up or down, depending on the precise quantity of water ultimately allocated for Federal purposes.

Central Arizona Project Water Allocations[8]

Following authorization of the CAP in 1968, Secretary of the Interior Stewart Udall requested assistance from the State of Arizona in planning for the distribution of the CAP water among the various purposes and potential recipients of such water allocations. The Arizona Department of Water Resources (ADWR) and its predecessor agency provided recommendations to the Secretary for allocation of CAP water to non-Indian water users in Arizona for M&I and non-Indian agricultural purposes.

Determination of the appropriate allocation of CAP water for Native American tribes and communities was undertaken by the Secretary. Initial allocations of CAP water for Indian use were made by Secretary of the Interior Thomas S. Kleppe in 1976 and published in the *Federal Register* at 41 Fed. Reg. 45883 (October 18, 1976). Five Native American tribes and communities were allocated a total of 257,000 acre-feet annually of CAP water, out of a total CAP water supply of approximately 1,500,000 acre-feet annually, in the 1976 decision.

Secretary Kleppe's 1976 allocation was followed by recommendations from the State of Arizona for M&I allocations in June 1977 and for non-Indian agricultural allocations in August 1979. Environmental compliance was initiated to analyze the impacts associated with implementation of the contracting actions needed to effectuate the State's recommended non-Indian allocations.

Before any water delivery contracts were entered into, Secretary of the Interior Cecil D. Andrus proposed to modify and increase the CAP Indian allocations. In December 1980, Secretary Andrus allocated additional CAP water for use by other specified Native American tribes and communities in a decision published in the *Federal Register* at 45 Fed. Reg. 81265 (December 10, 1980). The 1980 decision did not change the quantities allocated to the five tribes and communities in the 1976 decision, but it did revise the priority system applicable to those earlier allocations, and allocated additional tribal water supplies. The 1980 decision allocated a total of 309,828 acre-feet annually, which included the water allocated in 1976, to Native American tribes and communities. The CAP water allocated in 1976 and 1980 for Native American use was allocated either for irrigation use or for maintaining tribal homelands. Ten separate CAP water service contracts for this CAP project water supply were thereafter executed as two-party agreements between the United States and the relevant

[8] United States Department of the Interior notices concerning CAP water allocations published in the *Federal Register* are listed in *Central Arizona Project (CAP), Arizona; Water Allocations*, 71 Fed. Reg. 50449, dated August 25, 2006. *Federal Register* notices regarding CAP water allocations are included in the list of references at the end of this chapter.

Native American tribe or community, with 9 such contracts executed in December 1980 and the remaining contract in October 1992.

In early 1982, the State recommended a revised allocation for M&I and non-Indian agricultural purposes. After completion of a final environmental impact statement, Secretary of the Interior James Watt signed a Record of Decision on February 10, 1983, published in the *Federal Register* at 48 Fed. Reg. 12446 (March 24, 1983) (1983 ROD). In the 1983 ROD, Secretary Watt identified the total amounts of CAP water to be allocated to each of the three major sectors (Indian, M&I, non-Indian agriculture), quantifying the total amounts allocated for Indian use and for M&I use and allocating the remaining supply for non-Indian agricultural use. The 1983 ROD also identified the specific amounts or percentages to be allocated to each individual entity within those sectors, and the method by which priorities would be applied for delivery of CAP water during years of water supply shortages.

The 1983 ROD identified fixed volume allocations totaling 309,828 acre-feet annually for Native American tribes and communities, preserving the 1976 and 1980 allocations for such use. The 1983 ROD also identified fixed volume allocations totaling 638,823 acre-feet annually for 85 non-Indian M&I entities. The CAP water supply remaining after Native American allocations and M&I entities' allocations were made was divided among 23 non-Indian agricultural entities. The non-Indian agricultural allocations were expressed as percentages that would be applied to the supply remaining after the other two sectors had ordered CAP water in any given year. The percentages were based upon each district's CAP-eligible acres after adjustment to reflect any available surface water supplies.

CAP water service contracts were then entered into as subcontracts to the Master Repayment Contract. These CAP water service subcontracts were executed as three-party agreements among the United States, CAWCD, and either the M&I or agricultural entity receiving the particular allocation.

Not all entities that were offered M&I or non-Indian agricultural allocations chose to enter into subcontracts for the delivery of CAP water. At the conclusion of this subcontracting process, subcontracts had not been entered into for 29.3 percent of the non-Indian agricultural supply and 65,647 acre-feet per year or 10.3 percent of M&I water.

In 1988, Congress enacted the Salt River Pima-Maricopa Indian Community Water Rights Settlement Act of 1988, Pub. L. No. 100-512, 102 Stat. 2549 (1988). In accordance with that Act, the Secretary requested recommendations from ADWR with respect to the reallocation of the non-Indian agricultural water previously allocated but not placed under contract. By letter dated January 7, 1991, ADWR recommended to the Secretary an allocation of the remaining 29.3 percent of the non-Indian agricultural supply. After receiving and considering public comment, Secretary of the Interior Manuel Lujan, Jr. published an allocation decision in the *Federal Register* at 57 Fed. Reg. 4470 (February 5, 1992). That decision contemplated that new or amendatory CAP water service subcontracts would be offered soon thereafter.

The non-Indian agricultural priority subcontracts entered into after 1983 included a “take-or-pay” provision requiring the subcontractors to pay for their annual share of CAP water whether or not it was put to use. The take-or-pay provision became effective when Reclamation declared Stage I of the CAP substantially complete as of October 1, 1993. At that time, the amount of CAP water used by Native American tribes and communities and M&I subcontractors was a small percentage of the total CAP water supply available, thus resulting in a very large water supply for which the non-Indian agricultural subcontractors were financially responsible. In addition, the non-Indian agricultural subcontractors were responsible for the repayment of debt for construction of their irrigation distribution systems. Two of the non-Indian agricultural subcontractors (Central Arizona Irrigation and Drainage District and New Magma Irrigation & Drainage District) entered into bankruptcy proceedings.

CAWCD entered into two-party letter agreements with the non-Indian agricultural subcontractors in late 1993, shortly after Reclamation declared Stage I of the CAP substantially complete. In the letter agreements, the subcontractors purported to waive rights under their subcontracts to all or a portion of their percentage entitlement to CAP agricultural water and to waive certain rights to convert a portion of this water to M&I use. In return, CAWCD purported to waive rights under the subcontract to receive payment of fixed OM&R charges relating to this water; in effect, purporting to waive the take-or-pay provision in the three-party non-Indian agricultural CAP subcontracts entered into with the United States. CAWCD and the non-Indian agricultural subcontractors then entered into two-party excess water agreements. The 1992 non-Indian agricultural water reallocation process adopted by Secretary Lujan was put on hold.

The United States challenged the validity of the two-party letter agreements and the excess water agreements in the *Central Arizona Water Conservation District* v. *United States* litigation described earlier in this chapter. Ultimately, issues relating to the take-or-pay provisions of the non-Indian agricultural subcontracts and to excess water were resolved by relinquishment agreements and new excess water contracts entered into with the non-Indian agricultural subcontractors, in accordance with provisions of the stipulated settlement in the CAP litigation and its implementing legislation, the AWSA, enacted in 2004 and made enforceable in December 2007.

Congress provided for the final allocation of CAP water in the AWSA. In accordance with the AWSA, Secretary of the Interior Dirk Kempthorne rescinded the 1992 reallocation and, in a decision published in the *Federal Register* at 71 Fed. Reg. 50449 (August 25, 2006), reallocated CAP water as follows:

- An additional 197,500 acre-feet per year of CAP non-Indian agricultural priority water was made available for use by Native American tribes and communities in Arizona, of which:
  - 102,000 acre-feet per year was reallocated to the Gila River Indian Community (GRIC) to resolve water claims
  - 28,200 acre-feet per year was reallocated to the Tohono O'odham Nation to resolve water claims
  - 67,300 acre-feet per year was retained for reallocation to Native American tribes and communities in Arizona, subject to conditions specified in the notice relating to future allocations of the water to resolve Native American water claims; of this, 6,411 acre-feet per year was retained by the Secretary until December 31, 2030, for potential use in the settlement of the Navajo Nation's claims to water in the State of Arizona
- 96,295 acre-feet per year of non-Indian agricultural priority water was made available to ADWR to hold under contract in trust for future allocation with the condition that the water keep its non-Indian agricultural priority
- 65,647 acre-feet per year of uncontracted non-Indian M&I priority water was reallocated to certain M&I entities in accordance with recommendations from ADWR

Arizona Water Settlements Act (AWSA)

The Arizona Water Settlements Act, Pub. L. No. 108-451, 118 Stat. 3478 (2004), was enacted on December 10, 2004. The AWSA is a complex statute establishing a framework to resolve many key water rights issues within the State of Arizona related to the CAP, and to resolve certain Native American water claims within the State of Arizona. Title I of the AWSA addresses key CAP water allocation and financial issues and is discussed below. Titles II through IV of the AWSA address Native American water rights settlements and are discussed in Chapter 10. Title II of the AWSA also addresses and modifies provisions of the 1968 Basin Project Act providing for the consumptive use of waters from the Gila River system in New Mexico and for the construction of facilities for such water, described in the AWSA as the New Mexico Unit of the CAP.

AWSA Title I Provisions Relating to Reallocation

Title I of the AWSA is the implementing legislation for the 2003 Revised Stipulation entered in the CAP repayment litigation described earlier in this chapter. The short title for Title I is "Central Arizona Project Settlement Act of 2004." Title I permits the relinquishment of certain CAP non-Indian agricultural priority water held by CAP subcontractors within the State of

Arizona. Title I provides that relinquished water be reallocated by the Secretary to resolve water rights claims of the GRIC and the Tohono O'odham Nation, with a portion of the water to be reserved for use by the Secretary in future Indian water rights settlements.

The AWSA authorized, ratified, and confirmed the Arizona Water Settlement Agreement among ADWR, CAWCD, and the United States. The Arizona Water Settlement Agreement is referred to in the AWSA as the Master Agreement. The Arizona Water Settlement Agreement, effective as of September 20, 2006, provides for the relinquishment of up to 293,795 acre-feet per year of CAP non-Indian agricultural priority water and provides for this water to be reallocated for State and Federal purposes. The Arizona Water Settlement Agreement also serves as the trust agreement, referred to in section 104 of the AWSA, under which ADWR will hold CAP non-Indian agricultural priority water not reallocated for Federal purposes. This water is to be reallocated to M&I users at a later date, subject to conditions specified in the AWSA.

The Arizona Water Settlement Agreement provided the framework for the relinquishment of non-Indian agricultural priority water, so that the water might be used to meet the AWSA's requirement to reallocate 197,500 acre-feet of CAP water for Federal purposes to resolve Native American water claims. See discussion earlier in this chapter relating to CAP allocations.

In accordance with the terms of the AWSA, the irrigation districts relinquishing CAP non-Indian agricultural priority water were relieved of debt incurred under contracts for the repayment of construction costs for CAP distribution systems pursuant to section 9(d) of the Reclamation Project Act of 1939. The districts also benefit from the provisions of the AWSA stating that the Reclamation Reform Act of 1982, Pub. L. No. 97-293, Title II, 96 Stat. 1263 (1982), and any other acreage limitation or full cost pricing provisions of Federal law shall not apply to "land within the exterior boundaries of the Central Arizona Water Conservation District or served by Central Arizona Project water [or to other specified lands]."

In addition, under the terms of the Arizona Water Settlement Agreement, the districts obtained access to excess CAP water through the execution of an excess water agreement, attached as Exhibit 8.2 to the Arizona Water Settlement Agreement. The excess water agreements provide that the water service charge shall be equal to the cost of energy for pumping established for that year for delivery of water to long-term contractors and subcontractors. The excess water agreements are subject to automatic renewal with successive 1-year terms until December 31, 2030, subject to certain conditions. The reallocation of water to the Federal sector as a result of the relinquishment of non-Indian agricultural priority water also resulted in the reduction of CAWCD's repayment obligation.

The AWSA required that the Secretary offer to amend the long-term CAP contracts and subcontracts as a condition of enforceability:

- To provide for permanent service with an initial delivery term of 100 years or greater as authorized by Congress
- To conform to the shortage sharing criteria as described in the Tohono O'odham settlement agreement
- To not require that any CAP water received in exchange for effluent be deducted from the contractual entitlement of the CAP subcontractor

Contract offers and amendments were completed after passage of the AWSA. Amendment No. 2 to the CAP Master Repayment Contract No. 14-06-W-245, dated November 30, 2007, was executed to conform that contract to the AWSA.

The relinquished CAP non-Indian agricultural priority water that was reallocated for Federal purposes for use in Native American water rights settlements has the lowest priority during times of shortages. The provision that allowed Arizona to retain the uncontracted CAP non-Indian M&I priority water was coupled with a provision ensuring that the priority of a portion of the reallocated water available for Federal purposes would be "firmed up" to be equivalent to CAP non-Indian M&I priority for a period of 100 years. For that portion of the relinquished non-Indian agricultural priority CAP water subject to the firming requirement, the State and the Federal government are to secure substitute water supplies to be available for delivery in times of shortage when the relinquished CAP non-Indian agricultural priority water is not available.

On November 15, 2007, the United States and the State of Arizona entered into the Agreement between the Secretary of the Interior and the State of Arizona for the Firming of Central Arizona Project Indian Water, Agreement No. 07-XX-30-W0515 (Firming Agreement), which identifies the terms and conditions under which the State will firm certain CAP Indian water. This Firming Agreement was a condition of enforceability under the AWSA.

The firming program outlined in the AWSA ensures that 60,648 acre-feet of the non-Indian agricultural priority water will be delivered during water shortages in the same manner as CAP M&I priority water. Under the AWSA, the Secretary is to firm 28,200 acre-feet of non-Indian agricultural priority water reallocated to the Tohono O'odham Nation and 8,724 acre-feet of water to be reallocated to Arizona Native American tribes and communities in the future. In accordance with the AWSA and the Firming Agreement, the State is to firm 15,000 acre-feet of non-Indian agricultural priority water reallocated to the GRIC and 8,724 acre-feet of water to be reallocated to Native American tribes and communities in Arizona in the future. In addition, the State of Arizona is also to provide $3 million of assistance to the Secretary, through cash or in kind services, to carry out the firming obligations related to the Tohono O'odham Nation.

AWSA Title I Provisions Relating to the Development Fund

A key element of Title I of the AWSA is the amendment of the Basin Project Act to authorize additional uses of revenues deposited to the Development Fund (discussed earlier in this chapter). The sources of these revenues, and the uses to which these revenues may be applied, fall under two different sets of rules or tiers. Each tier consists of cascading priorities. Under the terms of the AWSA, the revenues become available for use for AWSA-specified purposes without further congressional action.

The first tier of cascading priorities established under the AWSA fulfilled the requirement of the 2003 Revised Stipulation in the CAWCD repayment litigation that a firm funding stream be provided for construction of CAP Indian distribution systems. The first tier funding stream is firm because, in the event revenues deposited to the Development Fund are insufficient to meet the CAWCD annual repayment obligation, CAWCD is required to make up the difference. Thus, during the period of CAWCD's CAP repayment obligation, a revenue stream equal to CAWCD's annual repayment obligation will be available each year for tier one. Tier one funds are made available for the following purposes in the following order of cascading priorities as provided for in Section 107(a) of the AWSA, which strikes and replaces language in Section 403(f) of the Basin Project Act:

Priority 1. To pay annual fixed OM&R charges associated with the delivery of CAP water under long-term contracts for use by Native American tribes and communities in Arizona. Charges associated with deliveries to the Ak-Chin Indian Reservation are excepted from this provision by Section 107(a)(5) of the AWSA.

Priority 2. To make deposits totaling $53 million in the Gila River Indian Community Water OM&R Trust Fund.

Priority 3. To pay $147 million (amount to be indexed from January 2000 forward) for the rehabilitation of the GRIC portion of the San Carlos Irrigation Project, of which not more than $25 million is to be available annually consistent with an agreement among the GRIC, the United States of America, and the San Carlos Irrigation and Drainage District dated May 13, 2006.

Priority 4. To pay for activities designated as (a.) through (h.) below. The AWSA provides that (a.) has first priority, and that (b.) through (h.) may be funded "under any particular priority and without regard to priority":

a. To make deposits totaling $66 million into the New Mexico Unit Fund as provided in Section 212(i) of the AWSA (amount to be indexed from January 2004 forward) in 10 equal annual payments beginning in 2012;

b. Upon satisfaction of the conditions set forth in Section 212(j) and 212(k) of the AWSA, to pay certain costs associated with construction of the New Mexico Unit, in addition to any amounts that may be expended from the New Mexico Unit Fund, a minimum of $34 million and a maximum of $62 million as provided in Section 212 of the AWSA (amount to be indexed from January 2004 forward);

c. To pay the costs associated with the construction of distribution systems required (i) to implement the Master Contract Between the United States and the Gila River Indian Community for Repayment of Construction Costs and Operation, Maintenance, and Replacement of a Water Distribution System, Contract No. 6-07-30-W0345, for the Community's Pima-Maricopa Irrigation Project; (ii) to implement Section 3707(a)(1) of the San Carlos Apache Tribe Water Rights Settlement Act of 1992; and (iii) to implement Section 304 of the Southern Arizona Water Rights Settlement Amendments Act of 2004;

d. To pay $52,396,000 for the rehabilitation of the San Carlos Irrigation and Drainage District's portion of the San Carlos Irrigation Project of which not more than $9 million is to be available annually (total amount to be indexed from January 2000 forward);

e. To pay other costs specifically identified under Sections 213(g)(1) and 214 of the AWSA and under the Southern Arizona Water Rights Settlement Amendments Act of 2004;

f. To pay a total of not more than $250 million to the future Indian Water Settlement Subaccount of the Development Fund to be used for future Native American water rights settlements in Arizona approved by the United States Congress, under conditions set forth in the AWSA;

g. To pay costs associated with installation of gages on the Gila River and its tributaries to measure water for purposes of the New Mexico Consumptive Use and Forbearance Agreement, not to exceed $500,000; and

h. To pay the Secretary's cost of implementing Title I of the AWSA.

Priority 5. In addition to amounts appropriated for these purposes, to pay the costs associated with on-reservation CAP distribution systems for the Yavapai Apache (Camp Verde), Tohono O'odham Nation (Sif Oidak District), Pasqua Yaqui, and Tonto Apache Tribes, and to make payments to those tribes as provided for in the Revised Stipulation, subject to the conditions of the AWSA.

Priority 6. Carry-over funds to following year.

The second tier provided for in Section 107(a) of the AWSA, which as noted above strikes and replaces statutory language in Section 403(f) of the Basin Project Act, is comprised of revenues deposited to the Development Fund in a given year that are in excess of the amount to be credited against the CAWCD annual repayment obligation. This, for example, might occur through sales of Navajo surplus above cost during times of high power demand. Tier two funds are made available for the following purposes in the following order of cascading priorities:

Priority 1. To pay annual fixed OM&R charges associated with the delivery of CAP water under long-term contracts held by Native American tribes and communities in Arizona. Charges associated with deliveries to the Ak-Chin Indian Reservation are excepted from this provision by Section 107(a)(5) of the AWSA.

Priority 2. To make the final outstanding annual payment for the costs of each unit of the projects authorized under Title III of the Basin Project Act that are to be repaid by CAWCD.

Priority 3. To reimburse the general fund of the United States Treasury (Treasury) for CAP fixed OM&R charges previously paid under Priority 1 of the first tier, described above.

Priority 4. To reimburse the general fund of the Treasury for costs previously paid under Priorities 2 through 5 of the first tier, described above.

Priority 5. To pay the annual installment to the general fund of the Treasury for non-Indian irrigation system debt under repayment contracts entered into pursuant to section 9(d) of the Reclamation Project Act of 1939 and made nonreimbursable under the AWSA.

Priority 6. To pay to the general fund of the Treasury the difference between (i) the costs of each unit of the projects authorized under Title III of the Basin Project Act that are repayable by CAWCD, and (ii) any costs allocated to reimbursable functions under any CAP cost allocation undertaken by the United States.

Priority 7. For deposit in the general fund of the United States Treasury.

The AWSA's amendments to the Basin Project Act provide authority to the Secretary of the Treasury to invest the Development Fund revenues if, in the judgment of the Secretary of the Interior, the funds are not needed to meet current year payments due. Section 107 of the AWSA limits the types of investments which may be made. Disbursements from the Development Fund may begin after January 1, 2010, to fund the two tiers of cascading priorities.

Title I of the AWSA also provides authorization of appropriations as necessary to comply with the following biological opinions, including any funding transfers required by the opinions, and requires these costs to be treated as CAP construction costs:

- Biological opinion, numbered 2-21-90-F-119, entitled *Transportation and Delivery of Central Arizona Project Water to the Gila River Basin (Hassayampa, Agua Fria, Salt, Verde, San Pedro, Middle and Upper Gila Rivers and Associated Tributaries), in Arizona and New Mexico,* dated April 15, 1994

- Biological opinion, numbered 2-21-95-F-462, entitled *Biological Opinion on Operation of Modified Roosevelt Dam in Gila and Maricopa Counties, Arizona*, dated July 23, 1996, relating to the impacts of modifying Roosevelt Dam on the southwestern willow flycatcher

- Any final biological opinion resulting from the draft biological opinion, numbered 2-21-91-F-706, entitled *Biological Opinion on Impacts of the Central Arizona Project (CAP) to Gila Topminnow in the Santa Cruz River Basin Through Introduction and Spread of Nonnative Aquatic Species*, dated May 1999

Robert B. Griffith Water Project, Nevada

Updating the Hoover Dam Documents 1978, Chapter II, discusses the authorization, water allocation, and repayment of Stages I and II of the project originally named the Southern Nevada Water Project (SNWP) and renamed in 1982 the Robert B. Griffith Water Project (Griffith Project) and discusses construction of Stage I.

Construction of Stage II of the SNWP was initiated in 1977 and completed in 1983 after it was renamed the Griffith Project. The second stage provided an additional annual delivery capability of 166,800 acre-feet of Colorado River water (the first stage provided a delivery capability of 132,200 acre-feet) and expanded some of the existing Stage I facilities. Stage II facilities included five pumping plants, the second barrel to the main aqueduct, and about 30 miles of pipeline and laterals with surge tanks, regulating tanks, and other delivery facilities. In conjunction with this stage, the State of Nevada enlarged and modified the Alfred Merritt Smith water treatment facilities to accommodate both stages. The Stage II aqueduct system has a peaking capability of 53.4 million cubic feet of water per day.

In the early 1990s, the project was incorporated into the Southern Nevada Water System, which is managed by the Southern Nevada Water Authority (SNWA), a political subdivision of the State of Nevada. Also included in the Southern Nevada Water System is the Treatment and Transmission Facility, which was constructed solely by SNWA. The Colorado River Commission of Nevada approved development of this independent water treatment and delivery system in 1994. The SNWA Treatment and Transmission Facility, which interfaces with the Griffith Project and supplements the capabilities of the Griffith Project, provides Nevada full access to its annual 300,000 acre-feet apportionment of Colorado River water.

On July 3, 2001, the United States transferred title of the Griffith Project to SNWA pursuant to the Griffith Project Prepayment and Conveyance Act, Pub. L. No. 106-249, 114 Stat. 619 (2000). Through its Capital Improvement Program before and after title transfer of the Griffith Project, SNWA has made significant improvements to the Griffith Project’s intake, treatment, and delivery system to meet increased demand in the Las Vegas Valley.

Lower Colorado Water Supply Project, California

The Lower Colorado Water Supply Act, Pub. L. No. 99-655, 100 Stat. 3665 (1986) authorized the Secretary to construct, operate, and maintain the Lower Colorado Water Supply Project (LCWSP) in California. The project consists of wells that pump ground water to be exchanged for Colorado River water. The LCWSP provides service for nonagricultural water supply demands, in particular for “domestic, municipal, industrial, and recreational purposes.”

Funds of approximately $1,800,000 were appropriated for the construction of the LCWSP. Stage I of the LCWSP was completed in 1996 and consists of two wells located in the sand dunes area east of Drop 1 along the All-American Canal (AAC) in Imperial County, California. Reclamation transferred responsibilities for OM&R for the LCWSP to the Imperial Irrigation District (IID) in 1997.

Ground water wells in addition to those constructed under Stage I may be constructed under Stage II when the demand for water from the LCWSP exceeds the existing pumping capacity.

To recover construction costs, the Lower Colorado Water Supply Act authorized the Secretary to enter into repayment contracts with individuals or Federal or non-Federal governmental entities whose lands or interests in lands are located adjacent to the Colorado River in the State of California who do not hold rights to Colorado River water or whose rights are insufficient to meet their present or anticipated future needs, as determined by the Secretary.

The Lower Colorado Water Supply Act also authorized the Secretary to enter into water exchange agreements such that persons or non-Federal entities agree to exchange a portion of Colorado River water to which they hold an entitlement for an equivalent quantity and quality of ground water to be withdrawn from the LCWSP wells. Water from the LCWSP wells is pumped into the AAC and is exchanged for Colorado River water used by LCWSP contractors and subcontractors. The LCWSP is authorized to provide up to 10,000 acre-feet per year at salinity levels equal to, or less than, the annual average salinity of flows arriving at Imperial Dam. Although Stage I of the LCWSP was constructed with a design capacity of 5,000 acre-feet, as of December 31, 2008, the wells constructed under Stage I of LCWSP were capable of producing more than 5,000 acre-feet of water per year.

The Lower Colorado Water Supply Act was amended by Section 203 of the Act of November 19, 2005, Pub. L. No. 109-103, 119 Stat. 2267 (2005). The 2005 amendment authorizes the Secretary to enter into LCWSP contracts with persons or entities holding water delivery contracts under Section 5 of the Boulder Canyon Project Act (see Chapter 6) for M&I uses of Colorado River water within the State of California, subject to the demand of M&I users along or adjacent to the Colorado River. The 2005 amendment further authorizes the Secretary to enter into agreements with IID or the City of Needles for the design and construction of the remaining stages of the project.

Major Contracts

The Contract Among the United States, Imperial Irrigation District, and the Coachella Valley Water District for Exchange of Water from the Lower Colorado Water Supply Project Well Field for Colorado River Water, Contract No. 2-07-30-W0277, was executed May 22, 1992. IID and Coachella Valley Water District (CVWD) agreed to reduce their diversions from the Colorado River in an amount equal to the volume of ground water pumped from LCWSP wells and discharged into the AAC up to a maximum of 10,000 acre-feet per year. The groundwater is then available to IID and CVWD. An amount of Colorado River water equal to the amount of water that would have otherwise been diverted by IID and CVWD is made available for beneficial consumptive use by LCWSP beneficiaries.

The Contract Between the United States and City of Needles, California for the Lower Colorado Water Supply Project Repayment of Costs and Delivery of Water, Contract No. 2-07-30-W0280, dated September 10, 1992, provides for the construction of Stage I of the LCWSP and repayment of Federal costs associated with Stage I. Contract No. 2-07-30-W0280 also provides for Needles to contract for 3,500 acre-feet of Stage I LCWSP well field capacity. In accordance with the Lower Colorado Water Supply Act, Needles advanced to the United States 20 percent of Needles' share of the estimated LCWSP construction costs and assumed the administrative responsibilities associated with the LCWSP for non-Federal entities located in specified areas of San Bernardino County. The repayment period for Needles' repayment obligation was 15 years, but Needles repaid the balance of its obligation with a lump sum payment in 1995. Contract No. 2-07-30-W0280 was amended on July 3, 2002, and Needles assumed the administrative responsibilities for the non-Federal LCWSP beneficiaries in specified areas of Riverside and Imperial Counties, as well as San Bernardino County.

The Contract Between the United States and Imperial Irrigation District for Administration and Operation, Maintenance, and Replacement of the Lower Colorado Water Supply Project, Contract No. 5-07-30-W0323, dated October 13, 1995, provides for OM&R of the LCWSP. Costs for OM&R performed by IID for the LCWSP are paid by LCWSP water users.

Agreement No. 8-07-30-W0375, dated September 30, 1998, allocated 1,150 acre-feet of Stage I capacity to the Bureau of Land Management (BLM) for consumptive use on BLM-administered lands located adjacent to the Colorado River in California. The agreement also provides for BLM's repayment of its portion of LCWSP capital costs over a 15-year period. BLM is also responsible for paying the annual costs of OM&R for LCWSP facilities that are allocable to BLM.

On December 29, 2004, a Reclamation determination reserved an additional 350 acre-feet of Stage I capacity in the LCWSP for use by Reclamation in California at Federal facilities on Federal land adjacent to the Colorado River. With this determination, the estimated 5,000 acre-feet per year of Stage I capacity was completely allocated.

The Contract Among the United States, the City of Needles, and The Metropolitan Water District of Southern California for Delivery of Lower Colorado Water Supply Project Water, Contract No. 06-XX-30-W0452, dated March 26, 2007, provides for The Metropolitan Water District of Southern California (MWD) to be supplied with unused LCWSP water, as determined on an annual basis by Needles in consultation with Reclamation and BLM. The contract's term extends until December 31, 2045, unless it is renewed by the parties. MWD paid a capital charge and will pay LCWSP OM&R charges assessed by Needles, together with an administrative fee for each acre-foot of unused LCWSP water delivered to MWD.

Contract No. 06-XX-30-W0452 also authorizes Needles to establish a trust fund account with funds provided by MWD. The purposes of the trust fund are: (1) to advance monies or reimburse costs for the construction of Stage II of the LCWSP, if Stage II is to be constructed; (2) to reimburse Needles for certain remaining Stage I capital costs that Needles has paid; (3) to conduct studies regarding desalting of LCWSP water; (4) to reduce, as necessary, the total dissolved solids concentration of LCWSP ground water to permit such water to continue to be discharged into the AAC; and (5) to obtain an alternative water supply, if necessary.

All-American Canal and Coachella Canal Lining Projects, California

Congress authorized construction of the All-American Canal in 1928, as part of the Boulder Canyon Project Act, Pub. L. No. 70-642, 45 Stat. 1057 (1928) (BCPA). In the BCPA, Congress approved a new diversion dam and "a main canal and appurtenant structures located entirely within the United States connecting the Laguna Dam, or other suitable diversion dam, with the Imperial and Coachella Valleys in California . . . ." The main canal became known as the "All-American" Canal because its route lies wholly within the United States. The AAC replaced the Alamo Canal, a privately financed canal that diverted irrigation water from the Colorado River to California's Imperial Valley, but ran for 50 miles within the United Mexican States (Mexico). Prior to the construction of the AAC, there was a series of disputes regarding the operation of the portion of the Alamo Canal in Mexico.

The AAC is approximately 80 miles long, runs roughly parallel to the United States - Mexico border, and carries more than 3 million acre-feet each year of Colorado River water for use in the Imperial and Coachella Valleys of Southern California. The AAC was constructed as an earthen canal. The United States retains title to the canal, which is operated and maintained by IID under contract with the Secretary.

The Coachella Branch of the AAC is also known as the Coachella Canal and serves the Coachella Valley, which lies to the north of the Imperial Valley. The Coachella Canal is approximately 120 miles long and carries approximately 300,000 acre-feet each year of Colorado River water for use in the Coachella Valley. The Coachella Canal was constructed as an earthen canal in some segments and a concrete canal in other segments. The United States retains title to the canal, which is operated and maintained by CVWD under contract with the Secretary.

Because the earthen segments of the canals were constructed through sandy desert soils, seepage occurs. Seepage losses are charged against California's 4,400,000-acre-feet per year apportionment of Colorado River water. Federal actions were undertaken, beginning in the 1970s, to reduce seepage from these canals.

In Section 102(a) of the Colorado River Basin Salinity Control Act, Pub. L. No. 93-320, 88 Stat. 266 (1974), Congress authorized the concrete lining of approximately the first 49 miles of the Coachella Canal. The purpose of the lining was to reduce seepage and, for an interim period, to assist the Secretary by providing a source of replacement water for Wellton-Mohawk Irrigation and Drainage District (WMIDD) irrigation drainage flows. See Chapter 4 for a discussion of the bypass flows. A Reclamation report entitled *Colorado River Basin Salinity Control Projects Title I Division, Coachella Canal Unit Definite Plan Report* dated June 1978, estimated that the 49-mile lined section of the Coachella Canal conserves approximately 132,000 acre-feet of water per year.

In 1988, Congress enacted legislation to authorize the Secretary to undertake canal lining projects to line portions of the Coachella Canal and the AAC. The lining projects were to conserve seepage in order to provide additional water supplies for California water agencies. Title I of this legislation authorized the Secretary to use up to 16,000 acre-feet of the conserved water to facilitate a Native American water settlement, and an amendment to Title I later directed the Secretary to do so. See the Act of November 17, 1988, Pub. L. No. 100–675, 102 Stat. 4000 (1988) (1988 Act), as amended and supplemented by Section 211 of Title II of the Act of October 27, 2000, Pub. L. No. 106-377, Appendix B, Title II, 114 Stat. 1441A-70 (2000) (Packard Amendment). Title I of the 1988 Act is the San Luis Rey Indian Water Rights Settlement Act further discussed in Chapter 10.

Title II of the 1988 Act authorized the Secretary to construct a new lined canal or line the previously unlined portions of the Coachella Canal. Title II further authorized Reclamation to recover the seepage loss from a portion of the AAC, from the vicinity of Pilot Knob to Drop 4, utilizing one of three options: (1) construct a new lined canal; (2) line the previously unlined portions of the AAC; or (3) construct seepage recovery facilities.

In the 1988 Act, Congress prohibited the use of Federal funds for the canal lining projects but authorized the Secretary to accept funds from major California water agencies for this purpose. Ultimately, funding for the canal lining project was provided by the State of California and through agreements entered into among California water agencies, as discussed later in this chapter.

Consultations with Mexico

A portion of the seepage from the AAC is believed to move in a generally southerly direction underground into Mexico. After passage of the 1988 Act, the

United States Section of the International Boundary and Water Commission (IBWC) initiated formal consultations with the Mexican Section of the IBWC, pursuant to Resolution 6 of Minute 242, regarding the proposed project to line the AAC. The consultations included technical exchanges regarding the potential effects of canal lining on ground and surface water in the Mexicali Valley. In the course of those consultations, Mexico expressed concerns over potential adverse impacts to Mexican ground water wells in areas south of the AAC.

During the consultations, the United States advised Mexico that Colorado River water seeping from the AAC is water reserved to the United States under the Treaty between the United States of America and Mexico, Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, signed on February 3, 1944, 59 Stat. 1219 (Mexican Water Treaty), and that the United States has the right to recover such water. See the Record of Decision dated May 1994, discussed later in this chapter. As a matter of comity, in its May 1994 Record of Decision (which, as discussed below, selected an alternative to construct a new parallel concrete-lined canal for approximately a 23-mile portion of the AAC), the United States identified a number of actions that could assist Mexico in its efforts to adjust for the loss of the seepage.

Although formal consultations with Mexico under Minute 242 concluded in the 1990s, the United States Section of the IBWC continued to address cross-border water and salinity issues with its counterpart, the Mexican Section of the IBWC. See Chapter 4. Additional discussions of AAC lining issues continued intermittently throughout the 1990s through the initiation of AAC Lining Project construction activities in 2007.

Records of Decision

Following passage of the 1988 Act, Reclamation initiated a process under the National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (1970) (NEPA), to examine the various methods to conserve a portion of the seepage of water from the AAC. Notice of availability of the Final Environmental Impact Statement/Final Environmental Impact Report (FEIS/FEIR) dated March 1994, was published in the *Federal Register* at 59 Fed. Reg. 18573 (April 19, 1994). Ultimately, in the July 29, 1994, *Record of Decision, Final Environmental Impact Statement, All-American Canal Lining Project Imperial County, California* (1994 ROD), for which a notice of availability was published in the *Federal Register* at 59 Fed. Reg. 40601 (August 9, 1994), Reclamation selected the AAC alternative that called for construction of a new parallel lined canal from 1 mile west of Pilot Knob to Drop 3 (a length of approximately 23 miles). The construction of this 23-mile parallel canal is known as the AAC Lining Project and was projected in the FEIS/FEIR to conserve approximately 67,700 acre-feet of water per year.

Following completion of a series of agreements with the State of California and various California agencies in 2003, efforts to undertake construction of the

AAC Lining Project were renewed. These efforts are discussed later in this chapter and in Chapter 6. On January 13, 2006, Reclamation issued a memorandum regarding its reevaluation of the 1994 FEIS/EIR and the 1999 Reexamination and Reanalysis Document for the AAC Lining Project. Attached was the *Supplemental Information Report, All-American Canal Lining Project*, dated January 12, 2006, which concluded that no significant new circumstances or information relevant to environmental concerns and bearing on the project or its impacts have occurred since completion of the FEIS/EIR.

Reclamation also initiated a process under NEPA to examine the various methods to conserve a portion of the seepage of water from the Coachella Canal. In the *Record of Decision of the Lower Colorado Region for the Coachella Canal Lining Project, Riverside and Imperial Counties, California* (2002 ROD), signed March 27, 2002, based on a 2001 FEIS/FEIR for which the notice of availability was published in the *Federal Register* at 66 Fed. Reg. 21179 (April 27, 2001), Reclamation approved the Conventional Lining Alternative as the agency Preferred Alternative for implementing the Coachella Canal Lining Project (CCLP). The 2001 FEIS/FEIR also analyzed a Parallel Canal Alternative.

Subsequent to completion of the 2002 ROD, a number of issues were identified which caused Reclamation to reconsider the original Preferred Alternative for the CCLP. These included a determination that the condition of the original siphons and related control structures had deteriorated and needed replacement, the inability to make full water deliveries to CVWD during construction, an unacceptable risk for water delivery outage and damage to project facilities and to third parties, and a requirement for a large area of ground disturbance within and outside of the right-of-way. On April 9, 2004, Amendment Number 1 to the 2002 ROD was executed, identifying a change in the Preferred Alternative from the Conventional Lining Alternative (using the existing canal alignment) to a refined Parallel Canal Alternative. Under Amendment Number 1, the length of the refined Parallel Canal Alternative would be approximately 35.1 miles including 25 new siphons and 6 new replacement check/control structures.

During these years, the major California water agencies continued to attempt to reach agreement with respect to funding for the canal lining projects and with respect to the distribution of the water which would be conserved. In 2003, these issues were ultimately resolved in a set of agreements involving numerous parties.

The Allocation Agreement Among the United States of America, The Metropolitan Water District of Southern California, Coachella Valley Water District, Imperial Irrigation District, San Diego County Water Authority, the La Jolla, Pala, Pauma, Rincon and San Pasqual Bands of Mission Indians, the San Luis Rey River Indian Water Authority, the City of Escondido and Vista Irrigation District (Allocation Agreement), dated October 10, 2003, and discussed in Chapter 6, provides for the distribution of water conserved by the CCLP and the AAC Lining Project.

The Allocation Agreement is integrally related to the Colorado River Water Delivery Agreement: Federal Quantification Settlement Agreement (CRWDA), dated October 10, 2003, which is designed to reduce use of Colorado River water in California through quantification and capping of certain priorities within California and commitments to conserve and transfer water for a period of years. The CRWDA included a major portion of the CCLP's projected water conservation savings (26,000 acre-feet per year) and all of the AAC Lining Project's projected water conservation savings (67,700 acre-feet per year) in the agreed schedule of water transfers. The CRWDA is discussed in detail in Chapter 6.

Non-Federal funding for the CCLP and the AAC Lining Project was secured through the set of agreements entered into in 2003, and the California Legislature committed substantial State financial resources to this effort as part of State legislation implementing the CRWDA and related agreements.

Following execution of the CRWDA, with funding secured and disposition of the conserved water within California addressed, Reclamation and the participating California entities proceeded with the necessary work to implement the CCLP and the AAC Lining Project.

Coachella Canal Lining Project Construction and Determinations

Construction of the CCLP began in 2004. The CCLP consists of 25 new siphons, a redesigned parallel lined canal to replace 34.5 miles of existing earthen reaches of canal between siphons 7 and 14 and between siphons 15 and 32, and 1 lined reach of canal between siphons 14 and 15. Construction of the lining project began in November 2004. The principal lining portion of the project was complete by December 2006, and water started flowing in the newly lined canal at that time. The new canal was constructed on the west side of the existing canal and within the existing canal right-of-way. The new canal has a flow capacity of 1,300 cubic feet per second (cfs), while the original canal had the following capacities: 1,600 cfs between siphons 7 and 24; 1,350 cfs between siphons 24 and 31; and 1,300 cfs between siphons 31 and 32.

The amount of conserved water available for allocation from the CCLP is determined by the Secretary as provided for in the 1988 Act and the Allocation Agreement. Of the total amount conserved, 4,850 acre-feet per year is available to implement mitigation measures to satisfy the requirements of Section 203(a)(2) of the 1988 Act.

As of January 2008, although water was being conveyed through the parallel canal, the CCLP had not been transferred into an O&M status. In accordance with Section 204 of the 1988 Act and Section 5.3 of the Allocation Agreement, the Secretary, through an Interim Determination dated January 31, 2008, determined the quantity of water conserved by the CCLP and the amount of water available for allocation from the CCLP as follows:

- The quantity of water conserved by the CCLP through the term of the Allocation Agreement is 30,850 acre-feet per year, except that for calendar years 2007 and 2008, the quantity of water conserved by the CCLP is 27,850 acre-feet per year.

- The amount of water available for allocation from the CCLP each year is the quantity of water conserved by the CCLP minus the amount of water taken from the Coachella Canal that is used for CCLP mitigation in that year.

- The amount of water allocated to the San Diego County Water Authority (SDCWA) each year is the amount of water available for allocation from the CCLP minus the amount delivered for the benefit of the San Luis Rey Settlement parties and for IID under Articles 7 and 9, respectively, of the Allocation Agreement.

- Notwithstanding the above, of the quantity of water conserved by the CCLP each year, the Secretary shall allocate each year at least 4,500 acre-feet for the benefit of the San Luis Rey Settlement parties and, of the remainder, at least 21,500 acre-feet to the San Diego County Water Authority, minus the amount, if any, delivered in excess of 4,500 acre-feet for the benefit of the San Luis Rey Settlement parties and minus the amount, if any, delivered to IID under Articles 7 and 9, respectively, of the Allocation Agreement.

The Interim Determination is subject to review by the Secretary at reasonable intervals and, at a minimum, at the completion of construction of the CCLP.

All-American Canal Litigation, Legislation, and Construction

Following execution of a number of agreements with California entities in October 2003 (described in this chapter and Chapter 6), in July 2005, as efforts to begin the construction of the AAC Lining Project were nearing completion, a number of groups from both the United States and Mexico brought suit against the United States in Federal district court in Nevada to enjoin the AAC Lining Project. The suit alleged that the project would affect water users in Mexico that rely on Colorado River water that seeps from the AAC into Mexico. The suit further alleged that the project was approved in violation of various Federal environmental statutes, primarily NEPA and the Endangered Species Act of 1973, Pub. L. No. 93-205, 87 Stat. 884 (1973).

The plaintiffs included a civic and business organization from the Mexicali Valley in Mexico; the City of Calexico, California; and two nonprofit environmental organizations from California. Intervenor-defendants included IID, SDCWA, SNWA, the State of Nevada, and several other major water users from the lower Colorado River Basin.

The district court ruled in favor of the United States on all counts. The district court found that the Mexican Water Treaty governed allocation of the Colorado River between the two nations and that the Treaty limited the applicability of United States environmental laws beyond the borders of the United States. See *Consejo de Desarrollo Economico de Mexicali AC* v. *United States*, 417 F. Supp. 2d 1176 (D. Nev. 2006); *Consejo de Desarrollo Economico de Mexicali AC* v. *United States*, 438 F. Supp. 2d 1194 (D. Nev. 2006); and *Consejo de Desarrollo Economico de Mexicali AC* v. *United States*, 438 F. Supp. 2d 1207 (D. Nev. 2006). These decisions are discussed further in Chapter 12.

Following the decisions issued by the District Court, the plaintiffs appealed to the United States Court of Appeals for the Ninth Circuit. With construction efforts poised to proceed, the Ninth Circuit temporarily enjoined the construction during the pendency of the appeal. *Amicus curiae* briefs were filed with the Ninth Circuit, including a brief jointly filed by the seven Colorado River Basin States in support of the United States and a brief filed by Mexico's Ministry of Foreign Affairs on behalf of Mexico.

While the appeal before the Ninth Circuit was pending, but prior to any substantive rulings by the Circuit Court, Congress enacted the Tax Relief and Health Care Act of 2006, Pub. L. No. 109-432, 120 Stat. 3046 (2006), in which Subtitle J – All American Canal Projects, directed the Secretary to carry out the lining project "without delay" and "notwithstanding any other provision of law." After consideration of the new legislation, the Ninth Circuit dismissed the case against the AAC Lining Project as moot. See *Consejo de Desarrollo Economico de Mexicali A.C.* v. *United States*, 482 F.3d 1157 (9th Cir. 2007), discussed further in Chapter 12.

Construction of the AAC Lining Project began in June 2007 and, as of December 31, 2008, was expected to be completed in 2010.

Lower Colorado River Drop 2 Storage Reservoir Project

Congress, in Section 396 of the Tax Relief and Health Care Act of 2006 (discussed immediately prior with respect to the AAC Lining Project), directed the Secretary to design and provide for the construction, operation, and maintenance of a regulated water storage facility near the AAC. This facility is known as the Drop 2 Storage Reservoir. The purpose of the Drop 2 Storage Reservoir project is to provide additional storage capacity to reduce nonstorable flows on the Colorado River below Parker Dam.

As of December 31, 2008, the Drop 2 Storage Reservoir was being constructed within Imperial County, California, just north of the Drop 2 Power Plant, which is located on the AAC approximately 25 miles west of Yuma, Arizona. The Drop 2 Storage Reservoir Project consists of:

- A reservoir facility of approximately 615 acres, comprised of two 4,000-acre-foot capacity cells having a total storage capacity of 8,000 acre-feet

- An inlet canal of approximately 6.5 miles in length connecting the AAC to the reservoir facility

- A piping system and outlet canal connecting the reservoir facility back to the AAC

Based on historical data, the Drop 2 Storage Reservoir is estimated to conserve, on average, approximately 70,000 acre-feet of water annually that would otherwise be nonstorable and would flow to Mexico in excess of treaty obligations. The life of the Drop 2 Storage Reservoir is estimated to be 50 years. Over the life of the Drop 2 Storage Reservoir, the estimated amount of water projected to be conserved is 3,500,000 acre-feet. Construction began in 2008 and is expected to be completed in 2010.

The Agreement Among the United States of America, through the Department of the Interior, Bureau of Reclamation; the Colorado River Commission of Nevada; and the Southern Nevada Water Authority for the Funding and Construction of the Lower Colorado River Drop 2 Storage Reservoir Project, Contract No. 07-XX-30-W0516, dated December 13, 2007 (Drop 2 Funding Agreement), provides that SNWA will pay construction, construction management, and mitigation costs estimated at $172 million, and will pay approximately 15 years of operation, maintenance, repair, and replacement costs estimated at $7.4 million. In return, 600,000 acre-feet of Intentionally Created Surplus (ICS) is made available to SNWA to be used within 25 years but no more than 40,000 acre-feet per year.

CAWCD exercised its right to enter into the Drop 2 Funding Agreement and contribute funds to the project in exchange for a portion of the ICS credits by executing the Notice of Election to Participate on January 3, 2008. MWD exercised its right to enter into the Drop 2 Funding Agreement and contribute funds to the project in exchange for a portion of the ICS credits by executing the Notice of Election to Participate on April 22, 2008. MWD and CAWCD each contributed one-sixth of the project funding in exchange for each receiving 100,000 acre-feet of SNWA's ICS credits. SNWA's ICS credits were reduced to 400,000 acre-feet. ICS is further discussed in Chapter 2.

Transfers of Responsibility for Operation, Maintenance, and Replacement of Water Facilities

Reclamation has the authority under Federal reclamation law to enter into a contract with project beneficiaries to transfer responsibility for OM&R of project facilities to the project beneficiaries. Listed below are the major facilities that have been transferred to project beneficiaries for OM&R during the period from 1979 through 2008:

- Transfer of OM&R of Bard Unit, Yuma Project, to the Bard Water District was accomplished through Contract No. 1-07-30-W0018, dated March 10, 1981.

- Transfer of OM&R of the Gila Gravity Main Canal, Gila Project, to the North Gila Valley Irrigation District, the Yuma Irrigation District, the Yuma Mesa Irrigation and Drainage District, and the Unit B Irrigation and Drainage District was accomplished through Contract No. 2-07-30-W0026, dated June 16, 1982.

- Transfer of OM&R of Imperial and Laguna Dams and Senator Wash Pump-Generating Facility and Reservoir Structures to IID was accomplished through Contract No. 3-07-30-W0030, dated December 7, 1982.

- Transfer of OM&R of Indian Unit, Yuma Project, to Bard Water District was accomplished through Contract No. 3-07-30-W0031, dated January 19, 1983.

- Transfer of OM&R of certain CAP facilities to CAWCD was accomplished through Contract No. 7-07-30-W0167, dated August 5, 1987.

- Transfer of the OM&R of certain works of the Valley Division, Yuma Project, relating to salinity and flow variability to the Yuma County Water Users' Association was accomplished through the Second Supplementary Contract to Contract No. I76r-671, dated June 3, 2005.

Title Transfers

The United States typically holds title to facilities that have been constructed under Federal reclamation law. Consistent with the Reclamation Act of 1902, Pub. L. No. 57-161, 32 Stat. 388 (1902), unless the authorizing legislation for the project provides for transfer of title, special legislation is required to transfer title of project facilities to project beneficiaries. Listed below are the facilities for which title has been transferred during the period from 1979 through 2008:

- Transfer of title of the Boulder City Water Supply System to the City of Boulder City, Nevada, occurred in 1996 under the authority of Section 11 of the National Forest and Public Lands of Nevada Enhancement Act of 1988, Pub. L. No. 100-550, 102 Stat. 2749 (1988).

- Transfer of title of the San Diego Aqueduct to SDCWA occurred in 1997 under the authority of the Act of October 11, 1951, Pub. L. No. 82-171, 65 Stat. 404 (1951).

- Transfer of title of the Griffith Project to SNWA occurred in 2001 under the authority of the Griffith Project Prepayment and Conveyance Act, Pub. L. No. 106-249, 114 Stat. 619 (2000).

- Transfer of title of the Harquahala Valley Irrigation District (HVID) CAP distribution system to HVID occurred in 2004 under the authority of the Fort McDowell Indian Community Water Rights Settlement Act of 1990, Pub. L. No. 101-628, Title IV, 104 Stat. 4480 (1990).

- Transfer of title of the WMIDD Gila Project water distribution system and lands to WMIDD occurred in 2007 and 2008 under the authority of the Wellton-Mohawk Transfer Act, Pub. L. No. 106-221, 114 Stat. 351 (2000).

- Transfer of title of the Palo Verde Diversion Dam to the Palo Verde Irrigation District occurred in 2008 under the authority of the Act of August 31, 1954, Pub. L. No. 83-752, 68 Stat. 1045 (1954).

Chapter 5: List of References

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