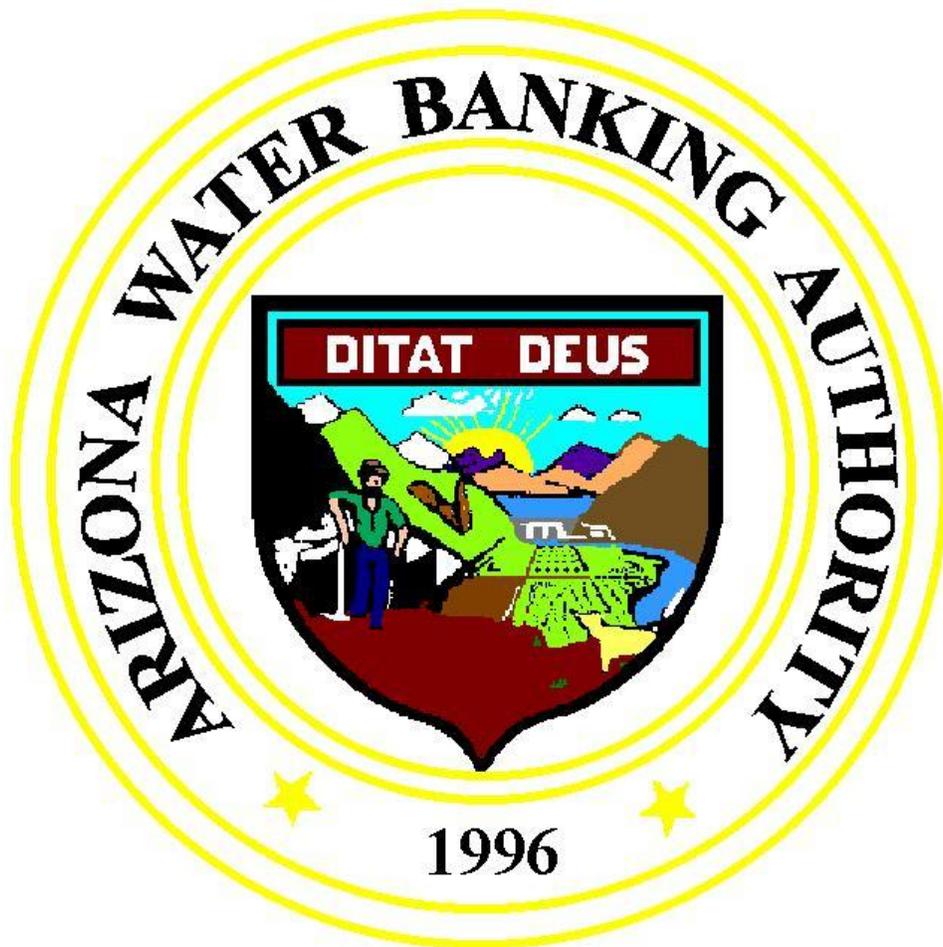


# ARIZONA WATER BANKING AUTHORITY

ANNUAL REPORT  
2009



Submitted

July 1, 2010

# **Arizona Water Banking Authority**

## **Annual Report 2009**

**Honorable Janice K. Brewer  
Governor of Arizona**

### **Members**

**Herbert R. Guenther  
*Chairman***

**Maureen R. George  
*Vice-chairman***

**Tom Buschatzke  
*Secretary***

**John T. Mawhinney  
*Member***

**Gayle J. Burns/Lisa A. Atkins  
*Member***

### ***Ex officio***

**Senator Robert Burns  
Senator Steve Pierce  
Representative Kirk Adams**

# Arizona Water Banking Authority

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#### AUTHORITY MEMBERS

Herbert R. Guenther, Chairman  
Maureen R. George, Vice-Chairman  
Tom Buschatzke, Secretary  
John Mawhinney  
Lisa A. Atkins

#### EX OFFICIO MEMBERS

The Honorable Steve Pierce  
The Honorable Kirk Adams

July 1, 2010

The Honorable Janice K. Brewer  
Governor, State of Arizona  
1700 West Washington Street  
Phoenix, Arizona 85007

Dear Governor Brewer:

Enclosed is the 2009 Annual Report of the Arizona Water Banking Authority (AWBA). The Annual Report details the activities of the AWBA for calendar year 2009, including the amount of water stored, the monies received, the monies expended for the storage and delivery of excess CAP water and the remaining funds available. The Annual Report also includes a Ten-Year Plan that examines the ability of the AWBA to achieve its statutory purposes into the future.

While the demand for Central Arizona Project water continues to grow, the AWBA still plays an important role in insuring the State maximizes use of its Colorado River entitlement. Again in 2009 as part of the budget balancing efforts, approximately \$18 million was transferred from the Water Banking Fund. Through the end of 2009 approximately \$42 million, \$30 million in the last two years, has been transferred from the Water Banking Fund to support other statewide efforts. The money that has been transferred has reduced the AWBA ability to meet the State's obligations under the Arizona Water Rights Settlement Act plus other ongoing obligations of the AWBA. Even with this reduced funding the AWBA continues to move towards meeting its obligations. The AWBA will continue to work with the Central Arizona Water Conservation District and other water users to insure Arizona utilizes its full Colorado River entitlement through AWBA's existing funding sources.

I am pleased to submit this report detailing the accomplishments of the AWBA. During these times of reduced budgets, I am confident the AWBA will continue to be an important and potentially expanding component of Arizona's water future.

Sincerely,

Herbert R. Guenther  
Chairman

CC: The Honorable Robert Burns, President of the Arizona State Senate  
The Honorable Kirk Adams, Speaker of the Arizona House of Representatives  
The Honorable Steve Pierce, Arizona State Senate

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# The Arizona Water Banking Authority

## Summary

The Arizona Water Banking Authority (AWBA; Water Bank) was created in 1996 to store the unused portion of Arizona's annual allocation of the Colorado River. Until the AWBA was created, Arizona had not used its full 2.8 million acre-foot share of Colorado River water. Leaving a portion of Arizona's water in the Colorado River was a lost opportunity; the AWBA has seized this opportunity to further secure dependable water supplies necessary to ensure the State's long-term prosperity.

The Water Bank stores unused Arizona Colorado River water to meet future needs for:

- Firming (to secure) adequate water supply to municipal and industrial users in the Central Arizona Water Conservation District (CAWCD) service area and along the Colorado River in times of shortages;
- Meeting the management plan objectives of the Arizona Groundwater Code;
- Assisting in the settlement of Indian water rights claims; and
- Assisting Nevada and California through interstate water banking.

Each year, the AWBA pays the delivery and storage costs to bring Colorado River water into Central and Southern Arizona through the Central Arizona Project (CAP) canal. The water is stored underground in aquifers (direct recharge) or is used by irrigation districts in lieu of pumping groundwater (indirect or in lieu recharge). For each acre-foot stored, the AWBA accrues a credit that can be redeemed in the future when Arizona's communities or neighboring states need this backup water supply.

The money that funds the AWBA and, specifically, water storage for the benefit of Arizona (intrastate storage) comes from three sources. Restrictions on the ways these monies can be used depend on the source of the monies, which currently include:

- Fees for groundwater pumping currently collected within the Phoenix, Pinal and Tucson Active Management Areas (AMA). These monies can only be used to benefit the AMA in which the fees are collected.
- A four cent *ad valorem* property tax collected in the three county CAWCD service area. These monies can only be used to benefit the county in which the tax is levied.
- Shortage reparation funds are available upon demand from Nevada to be used to purchase and store water supplies to mitigate the impact of shortages on Arizona users.
- A general fund appropriation received at the discretion of the Legislature.

In addition to these sources of funding for intrastate storage, the AWBA also uses funds provided by Nevada pursuant to the Amended Agreement for Interstate Water Banking (Amended Agreement) to create credits for the benefit of Nevada.

In calendar year 2009, the Water Bank delivered for recharge a total of 165,042 acre-feet at a cost of \$17.9 million. Of that amount, 106,018 acre-feet were for intrastate storage at a cost of \$7.1 million and 59,024 acre-feet were for interstate storage at a cost of \$10.8 million.

From the Water Bank's inception through calendar year 2009, the AWBA has accrued approximately 3,319,702 acre-feet of credits at a cost of \$240,931,649. Of this total volume, intrastate credits totaled 2,786,930 acre-feet at a cost of \$135,646,479 or \$48.70/acre-foot and interstate credits totaled 532,772 acre-feet at a cost of \$105,262,472 or \$197.60/acre-foot. In addition to the credits accrued by the AWBA, 50,000 acre-feet of credits previously accrued by CAWCD were transferred to the account creating a total of 582,772 acre-feet of credits available for Nevada.

## Arizona Water Banking Authority Annual Report Requirement

Arizona Revised Statutes § 45-2426 mandates that the AWBA file an annual report with the Governor, President of the Senate, and Speaker of the House of Representatives on or before July 1 of each year for the previous calendar year. The report is required to be a full and complete account of the AWBA's transactions and proceedings and must include the following:

1. An accounting of all monies expended from the banking fund.
2. An accounting of all monies in the banking fund remaining available to the AWBA.
3. The amount of water stored by the AWBA.
4. The number of long-term storage credits distributed or extinguished by the AWBA.
5. The purposes for which long-term storage credits were distributed or extinguished by the AWBA.
6. A description of the water banking services and interstate water banking to be undertaken by the AWBA during the following ten-year period and a projection of the capacity of the AWBA during that period to undertake those activities in addition to storing Colorado River water brought into the state through the CAP for all of the following purposes:
  - a. Protecting this state's municipal and industrial (M&I) water users against future water shortages on the Colorado River and disruptions of operation of the CAP.
  - b. Fulfilling the water management objectives of the state.
  - c. Making water available to implement the settlement of water rights claims by Indian communities within Arizona.
7. Any other matter determined by the authority to be relevant to the policy and purposes of the AWBA.

## Update

For the first ten years of its operations, AWBA was the major user of incentive recharge water; however, in the last two years, many Central Arizona Project (CAP) contractors, along with the AWBA requested the low-cost recharge water. Calendar year 2009, started similar to 2008, as another year of very limited water availability for the AWBA because of the continued interest in incentive recharge water.

The preliminary 2009 water orders submitted in October 2008 to the Central Arizona Water Conservation District (CAWCD) by its customers exceeded projected supply by 234,000 acre-feet. This was a result of both new customers and an increase in historic water orders. These increased water orders left no water available to the AWBA. In response to these competing demands, CAWCD recognized the need to develop a strategy for distributing Excess CAP water. AWBA staff coordinated with CAWCD in that process and in developing a comprehensive policy for the distribution of Excess CAP water beginning in 2010. In November 2008, the CAWCD Board adopted a policy for 2009 reserving two pools to ensure recovery goals and Indian firming goals could be accomplished. AWBA met the requirements to participate in those two pools. The policy also allowed for the distribution of the balance of water remaining (see Water Availability topic under **Activities and Projects**).

The initial AWBA Plan of Operation for 2009 (Plan) identified 118,500 acre-feet available for intrastate storage. Interstate storage on behalf of SNWA was not included due to the limited water volumes available to the Water Bank. Through the year, interstate water did become available for storage as a result of a number of factors: legislative transfers reducing funding available to the AWBA, water orders turned back by other CAWCD customers, and Nevada's unused apportionment made available to Arizona for storage (see Interstate Banking under **Activities and Projects**). The 2009 Plan was amended in April and again in November to account for these changes. By the end of 2009, water delivered by AWBA for storage totaled 165,042 acre-feet (106,018 acre-feet for intrastate storage and 59,024 acre-feet for interstate storage; additional discussion on deliveries near end of **Update** section).

In addition to quarterly meetings, the AWBA held four Special meetings that focused on the Interstate Water Banking Agreement, legislative transfers, Amended Plan of Operation, recovery planning/recovery agreement and acquisition of additional water supplies.

Four membership changes occurred to the AWBA Commission in 2009. With the beginning of the legislative session on January 12, 2009, statutorily appointed Senator Robert Burns, President of the Senate, and Representative Kirk Adams, Speaker of the House, began serving on the Commission as *ex officio* members. In March, 2009, Ms. Susan Bitter Smith, President of the CAWCD Board of Directors, designated Ms. Lisa Atkins as the AWBA Commission member replacing Ms. Gayle Burns. In April, 2009, Senator Burns designated Senator Steve Pierce to serve as the Senate *ex officio* member. Additionally, there was one change to AWBA support staff. Mr. Ken Slowinski was promoted to ADWR's Chief Legal Counsel following Patrick Schiffer's retirement in June, 2009.

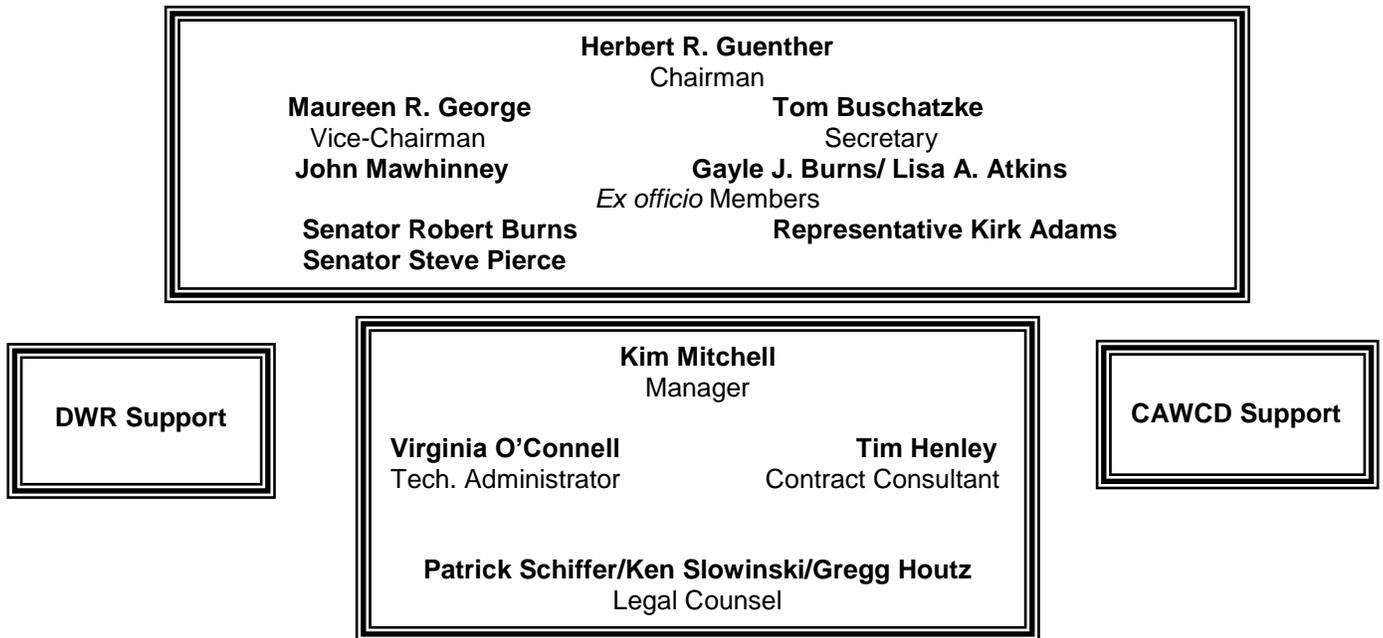


Figure 1. Arizona Water Banking Authority Organizational Chart for 2009

The Arizona Water Banking (AWB) Fund continued to be a favorite target of the legislature. In calendar year 2009, a series of legislative transfers totaling over \$18 million were made from the AWB Fund. Of this, approximately \$13.9 million was from the Nevada Resource subaccount.

The Agreement between the Secretary of the Interior and the State of Arizona for the Firming of Central Arizona Project Indian Water (Secretarial Agreement) was executed in 2007. The AWBA continued to work toward meeting some of the obligations outlined in the Secretarial Agreement in 2009. The AWBA continued further development of credits and subsequently completed the \$3 million contribution to the Federal government in 2009 for the Southern Arizona Water Rights Settlement Act. The White Mountain Apache Tribe Water Rights Quantification Act was introduced in Congress. Negotiations continued throughout 2009 with the Hopi Tribe and Navajo Nation concerning their Indian water right claims.

In 2009, the AWBA executed an intergovernmental agreement (IGA) with the Gila River Indian Community (GRIC) for the purpose of establishing the Southside Replenishment Bank (SSR Bank) required under the Gila River Indian Community Settlement Act. The AWBA must deliver at least 1,000 acre-feet per year, up to 15,000 acre-feet, to establish the SSR Bank; the initial 1,000 acre-feet of direct delivery to the GRIC was made in 2009.

The AWBA continued to work with Mohave County Water Authority (MCWA) on amending the Agreement to Firm Future Supplies to recognize newly acquired municipal water supplies by MCWA and to outline a process for allowing other on-river M&I users the opportunity to participate in on-river firming.

CAWCD filed a petition for special action with the Arizona Supreme Court. The petition claimed that the legislative transfer of funds from the Nevada Resource subaccount was unconstitutional. After the petition for review was denied by the Supreme Court without comment, the CAWCD Board authorized its attorney to refile the lawsuit in Superior Court. The lawsuit was filed on February 3, 2010, and is pending.

Recognizing the AWBA's new obligations under the Arizona Water Settlements Act and the increase in demand for Excess CAP water by other CAP customers, the AWBA Commission decided to pursue legislative solutions to confirm the AWBA authority to fulfill the significant number of responsibilities of the Water Bank. Senator Steve Pierce, *ex officio* Commission member, sponsored a legislative amendment that would clarify how the AWBA could participate in any pools created by CAWCD. The amendment was submitted for consideration in January, 2010 and was signed into law by Governor Brewer on April 26, 2010.

In 2009, the AWBA delivered for recharge a total of 106,018 acre-feet of water for intrastate purposes and a total of 59,024 acre-feet were delivered for storage on behalf of the Southern Nevada Water Authority. Of the interstate water, 51,387 acre-feet was released to Arizona as Nevada's unused apportionment pursuant to II(B)(6) accounting, over and above Arizona's 2.8 million acre-feet allocation. The interstate credits accrued through 2009 are estimated at 582,772 acre-feet and fulfills about 47 % of Arizona's obligation to Nevada under the Second Amended Agreement for Interstate Banking (Amended Agreement). The quantity of water received by each facility is described in Appendix A and totaled 62,691 acre-feet of water in the Phoenix AMA, 66,594 acre-feet of water in the Pinal AMA, and 35,757 acre-feet in the Tucson AMA.

In addition to the 2009 deliveries, 27,504 acre-feet of Intentionally Created Unused Apportionment (ICUA) was created and made available to California. This ICUA was created pursuant to the *Amended Letter Agreement for the Creation of Intentionally Created Unused Apportionment with Credits Created Under the 1992 Demonstration Agreement between CAWCD and MWD, December 11, 2007*. For the second time, ICUA was certified in 2009. In June, 2009, the AWBA certified the creation of 28,442 acre-feet of ICUA in 2008.

Based on the Decree accounting data, total consumptive use of Colorado River water by Arizona for 2009 was 2.83 million acre-feet (maf). From Arizona's basic apportionment of 2.8 maf, the total consumptive use is calculated by making addition/subtraction adjustments such as system conservation, Nevada's unused apportionment, and creation of ICUA. Arizona ended the 2009 calendar year with an overrun of about 11,700 acre-feet. Distribution of the 2.83 maf was approximately 1.17 maf for direct uses along the Colorado River and CAP diversions of approximately 1.66 maf (U.S. Bureau of Reclamation, Lower Colorado River Operations, Colorado River Accounting and Water Use Report – 2009, dated May 2010). In 2009, storage by the AWBA assisted Arizona in using its entitlement to Colorado River water.

For more information about the Water Bank, consult the AWBA website at [www.azwaterbank.gov](http://www.azwaterbank.gov) or contact Kim Mitchell ([krmitchell@azwater.gov](mailto:krmitchell@azwater.gov)), Virginia O'Connell ([voconnell@azwater.gov](mailto:voconnell@azwater.gov)), or Tim Henley ([tjhenley@azwater.gov](mailto:tjhenley@azwater.gov)), or by phone at 602-771-8500.

## Activities and Projects - 2009

### Indian Firming Program

#### *Secretarial Agreement*

On December 14, 2007, the legislation that passed in 2004 approving the Arizona Water Settlements Act (Settlements Act) P.L. 108-451, became enforceable, thus settling longtime claims to water by the Gila River Indian Community (Community; GRIC) and the Tohono O'odham Nation. A key provision affecting the Water Bank within the Settlements Act is the provision authorizing the Secretary of the Interior (Secretary) and the State of Arizona (State) to develop a Firming Program to ensure that 60,648 acre-feet of Non-Indian agricultural (NIA) priority CAP water reallocated to Indian tribes shall be delivered during water shortages at the municipal and industrial (M&I) priority.

The Agreement between the Secretary of Interior and the State of Arizona for the Firming of Central Arizona Project Indian Water (Secretarial Agreement) executed in 2007, identifies the obligations that must be met and develops the method for meeting the obligations between the State and Federal governments. The Settlements Act and Secretarial Agreement recognize three categories where the State has firming responsibilities. The first two obligations pertain to improving the priority of water for the GRIC and other Arizona tribes; the third obligation pertains to providing assistance to the Secretary in carrying out obligations of the Southern Arizona Water Rights Settlement Act (SAWRSA).

In 2008, \$12.4 million of money appropriated for Indian firming was swept by the legislature out of the Arizona Water Banking (AWB) Fund. Until there is an appropriation specifically for Indian firming, the AWBA will work toward its obligation to firm using withdrawal fees collected in the Phoenix and Pinal Active Management Areas to develop credits through storage of water at Groundwater Savings Facilities (GSFs).

The State committed to provide support to the Federal government for the Tohono O'odham Nation, as part of the SAWRSA, by contributing \$3 million in either cash or in-kind goods and services. Through 2009, the AWBA expended \$3 million (\$2,968,660 for water deliveries and storage; \$31,340 for cost of services) for Indian firming to develop 34,101 acre-feet of credits in the Tucson area. The Secretarial Agreement requires the State to meet this obligation within four years, beginning January 1 after the enforceability date; thus the AWBA met this obligation two years in advance of the mandated schedule. These credits will later be assigned to the Secretary to satisfy the State's obligation to assist the U.S. in meeting its obligation to firm Tohono O'odham water.

#### *Other Indian Water Rights Settlements*

In September, 2008, Federal legislation was introduced to authorize the White Mountain Apache Tribe (WMAT) water rights settlement and to allow the Secretary to enter into an agreement. In January, 2009, Senator Kyl and Representative Anne Kirkpatrick reintroduced the WMAT bill, the WMAT Water Rights Quantification Act of 2009 (Quantification Act) as S.313. By the end of the year, both S. 313 had been reported out of Committee, and H.R. 1065 had been passed by the House.

Senate acceptance of H.R. 1065 will finalize enactment. Under the Quantification Act, the State of Arizona and the Federal government will equally share a 7,500 acre-foot per year firming obligation. The AWBA will therefore, as agent for the State, be responsible for firming 3,750 acre-feet of non-Indian agricultural (NIA) CAP water for a 100-year period. The outside enforceability date has been pushed back to 2020 for financial scoring purposes. All of the water under the WMAT Settlement requiring firming will be leased by the Phoenix valley cities for 100 years after the enforceability date.

Negotiations on the Northeastern Arizona Indian Water Rights Settlement Agreement (Navajo Nation/Hopi Tribe) continued throughout 2009. The AWBA continued to follow these discussions since the AWBA could be involved in firming responsibilities for these settlements, if the tribes receive water from the future settlement pool. The U.S. and the State share responsibility for the firming of 17,448 acre-feet, which is dedicated for future Indian settlements. This responsibility is divided equally (8,724 acre-feet each) between the Secretary and the State.

### *Southside Replenishment Bank*

In addition to the firming requirements of the Settlements Act, the AWBA, acting as agent for the State, is required to replenish any use of groundwater that exceeds the amounts established for designated Protection Zones. The AWBA was required to enter into an inter-governmental agreement (IGA) with GRIC for direct delivery of water for the purpose of establishing the Southside Replenishment Bank (SSR Bank). The SSR Bank will be used to fulfill the obligations created under the Settlements Act for protection of the Reservation from off-reservation groundwater pumping. The AWBA will create the SSR Bank by delivering a minimum of 1,000 acre-feet of water per year to the GRIC up to a maximum of 15,000 acre-feet. In 2009, the AWBA entered into an IGA with the GRIC that describes the procedure both parties will follow for delivering water to the Community for the purpose of this obligation. Following execution of the IGA, the AWBA made its first deliveries of 1,000 acre-feet to the Community establishing the SSR Bank.

### Shortage Sharing

#### *Arizona Shortage-Sharing*

The Director's Shortage-Sharing Workgroup (Workgroup) established in 2005 met regularly to come up with recommendations to present to the Secretary of the Interior for implementing future shortages in the lower basin and between CAWCD and equivalent 4<sup>th</sup> priority Colorado River water users.

As part of the recommendation of the Workgroup, a provision was included that recommended the AWBA continue to provide the opportunity for on-river fourth priority M&I users to enter into contracts with the AWBA for firming. Staff began working on an efficient approach by which these users could be given opportunities to firm their entitlements. Resolution 2010-1 was approved in March, 2010 that outlines a process for allowing other on-river M&I users that are not included within MCWA's agreement with the AWBA the opportunity to participate in on-river firming.

## Agreement to Firm Future Supplies

The AWBA is required by statute to reserve a reasonable number of credits accrued with General Fund appropriations for entities outside the CAWCD service area. In 2005, the AWBA entered into an Agreement to Firm Future Supplies (Agreement to Firm) with MCWA. In the Agreement to Firm, the AWBA agreed to reserve approximately 230,000 acre-feet of credits for MCWA's use. The MCWA agreed to make a \$20 per acre-foot pre-payment of the replacement cost for those credits.

Once those credits were identified for use by an entity outside of the three-county service area, CAWCD was required to charge the AWBA a fee in lieu of taxes. CAWCD has set the in lieu tax rate at \$20 per acre-foot for AWBA. The AWBA use monies collected from MCWA to make these payments.

The MCWA had recently acquired new Colorado River entitlements and approached the AWBA to discuss inclusion of these new supplies in the Agreement to Firm. In 2009, the AWBA continued to discuss with MCWA amending the Agreement to Firm to include these new supplies and to address timing of payback of credits. The Amended Agreement to Firm Future Supplies was executed by the AWBA in March, 2010 and will be addressed in more detail in next year's annual report.

## Water Availability and AWBA Legislation

### *Distribution of Excess CAP Water*

For the last three years, CAWCD has experienced increased requests to purchase Excess CAP water for underground storage. Excess CAP water is water that in any year is remaining after CAWCD meets the demand of its contractors and subcontractors. Excess CAP water orders for 2008 received by CAWCD in October, 2007 exceeded the available supply by 100,000 acre-feet. Again, in October, 2008, orders for 2009 exceeded supply by more than 225,000 acre-feet, and in October, 2009, orders for 2010 exceeded supply by 57,000 acre-feet.

To balance these competing demands, the CAWCD Board recognized the need to develop a strategy for distributing Excess CAP water. The Board directed their staff in the Fall of 2008 to develop temporary procedures for distribution of water in 2009 and to develop a more comprehensive policy for future distribution of Excess CAP water in 2010 and beyond. In 2009, the Board also adopted a rate-setting strategy to phase out the price subsidy for incentive recharge in 2010.

### *Distribution of Excess CAP Water - 2009*

AWBA staff participated with CAWCD staff in meetings held during the Fall of 2008 to focus on developing procedures quickly for distribution of water in 2009. Subsequently, the CAWCD Board adopted a 2009 policy that reserved two new pools within the Excess Pool and methodology for distribution of any remaining Excess Pool balance.

An 81,900 acre-foot pool was created for use at GSFs. This pool provided agricultural- pricing incentives for irrigation districts that participated in the CAP recovery programs or assisted in meeting AWBA/CAGR storage goals. These pricing incentives helped ensure that CAWCD could meet

recovery expectations of Metropolitan Water District of Southern California. The AWBA with its GSF facility partners were the main participants in this pool. Another pool of 45,000 acre-feet was created for use by the AWBA to be used to assist Arizona in meeting its Indian firming obligations. The remaining water was distributed based on maximum incentive recharge orders from the last three years, a de minimus of 2,500 acre-feet, and distribution in proportion to the amount order had been reduced.

#### *Distribution of Excess CAP Water - 2010-2014*

In late 2008 and the Spring of 2009, AWBA staff participated in stakeholder workshops held by CAWCD staff to develop a long-term policy for 2010 and beyond. These "Access to Excess" workshops helped to identify areas of agreement in the allocation of excess supplies. Consensus emerged around a multiple-pool approach that recognized major categories of uses. Throughout this process there was broad public support for ensuring the AWBA continued to make progress toward its obligations and goals. In June, 2009, the CAWCD Board adopted a five-year policy for distribution of Excess CAP water for 2010 through 2014.

From the total available supply of Excess CAP water, the Agricultural Settlement Pool<sup>1</sup> of 400,000 acre-feet is filled first and is not subject to provisions of the Access to Excess policy. Four separate pools are created under this policy. The AWBA, Central Arizona Groundwater Replenishment District (CAGRDR) Replenishment Reserve, and the U.S. Bureau of Reclamation share a pool of 175,000 acre-feet. The second pool is for CAGRDR's annual replenishment and is capped at 35,000 acre-feet. The remaining volume of 190,000 acre-feet is split evenly between a Municipal pool and an Industrial & Other pool. Water unused within the AWBA, CAGRDR and Federal pool adds equally to the Municipal and Industrial pools. Any additional water available in the Municipal pool is added to the Industrial pool and vice versa. Additional details of the pool allocation can be obtained from the CAP website [www.cap-az.com](http://www.cap-az.com).

#### *Proposed AWBA Legislation*

The recent increase in demand for excess CAP water has limited the excess CAP water available for storage by the AWBA. At the time the settlement legislation was enacted identifying the AWBA as the agent for the State, it appeared there would be an abundance of excess CAP incentive water available for storage by the Water Bank. This increase in water demand has been of great concern to the AWBA and its partners given the new obligations it has acquired. In tandem with the development of CAWCD's Access to Excess policy in the Fall of 2008, the AWBA sought a legislative amendment that clarifies the AWBA's ability to obtain and store any excess CAP water that is made available in pools established by CAWCD. The AWBA worked with potential sponsors to develop such an amendment.

The first draft enumerated five purposes for which the AWBA could participate in pools identified by CAWCD. Overall, the proposed legislation was well-received and supported by the various entities

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<sup>1</sup> CAP non-Indian agricultural users relinquished their long-term entitlements to Non-Indian Agriculture priority water for reallocation to Indian and M&I users in accordance with the Arizona Water Settlements Act of 2004. In return, CAWCD agreed to make available to these users through 2030 a special category of excess water referred to as the Ag Settlement Pool. This pool has the highest priority of all excess water. The Ag Settlement Pool is initially sized at 400,000 AF/YR, declining to 300,000 AF/YR in 2017, and to 225,000 AF/YR in 2024.

that provided feedback. General comments received from these initial meetings and public review included:

- Clarifying changes to specify replenishment related to Gila River Indian Community.
- Specify interstate banking is for newly acquired water using interstate monies.
- Limiting the volume of excess water set aside for AWBA.
- Ensuring the legislation does not affect priority of the agricultural pool.
- Ensuring the legislation does not allow storage of water for interstate banking that would otherwise have been used in Arizona.

Following receipt of public comment and further analysis by the AWBA, the Commission at the AWBA meeting in December, 2008, approved potential legislative language. The language clarifies how the Water Bank would participate in two specific pools that could be created by CAWCD. The first pool would be for the various intrastate purposes allowed under the Water Bank's statute, including meeting Indian firming obligations, replenishing water under the Gila River Indian Water Settlement program, and storing water for municipal and industrial purposes in times of shortage. The second pool would be for the purpose of meeting interstate contractual obligations and is specific to the storage of new CAP water acquired from the Colorado River with AWBA interstate funds.

Early in 2009, at the request of the Governor, state agencies were asked to withdraw any request for legislation not directly related to addressing budget deficits. In the Fall of 2009, Senator Steve Pierce, *ex officio* AWBA Commission member, agreed to sponsor the previously proposed legislative changes to the AWBA authorizing legislation. Senator Pierce serves as the Senate Majority Whip and as Vice Chairman for the Natural Resources, Infrastructure and Public Debt Committee. The amendment was submitted for consideration in January, 2010 and was signed into law as Chapter 168 by Governor Brewer on April 26, 2010, effective immediately pursuant to its emergency clause.

## Interstate Banking

### *Amended Agreement for Interstate Water Banking*

In January, 2009, Southern Nevada Water Authority (SNWA) requested an opportunity to discuss potential changes to the Amended Agreement for Interstate Water Banking (Agreement) to address conditions that had changed since the Agreement was executed and to create flexibility in its implementation. At a Special AWBA meeting, January 7, 2009, Commission members agreed to toll the performance dates of the Agreement for 90 days to allow time for all parties to consider permanent modifications to the Agreement. SNWA had asked for flexibility in making the 2009 payment for fiscal reasons and because the AWBA had not included interstate deliveries in its 2009 Plan of Operation. In addition to payment flexibility, other modifications that were discussed included the addition of recovery definitions, the revision of the recovery schedule, the addition of the credit exchange method for creating Intentionally Created Unused Apportionment (ICUA), and modifying coordination dates with Nevada and CAWCD in forecasting water storage and recovery.

The Second Amended Agreement for Interstate Water Banking (Amended Agreement) that addressed these modifications was approved at the April 1, 2009 AWBA meeting. There was in-depth discussion on the need to further define the duties of the Authorized Representative and to set forth the changes that could be made with certain limits or guidelines. The AWBA Commission requested staff draft a Resolution that sets forth the limits of the Authorized Representative's authority.

Also in April, following the approval of an amended 2009 Plan of Operation (see discussion below), a letter agreement dated April 2, 2009 was signed between the AWBA and SNWA that addressed the SNWA's request for payment flexibility by allowing a modification to the payment schedule for 2009. At the quarterly AWBA meeting, September, 16, 2009, the AWBA Commission approved Resolution 2009-1 establishing the responsibilities and limitations of the AWBA's Authorized Representative.

*Amended 2009 Plan of Operation*

The 2009 Plan of Operation did not include storage of interstate water on behalf of SNWA due to limited water availability. Yet, there were two occurrences during the calendar year that made interstate water available for storage. First, legislative transfers reduced the amount of withdrawal fees available for delivery and storage of water to the Pinal AMA. In order to maintain planned water deliveries to Pinal GSF operators, it was necessary to reclassify 25,000 acre-feet as interstate water. The 2009 Plan of Operation was amended April 1, 2009 to reflect this change and to include additional intrastate water that became available in Tucson. Secondly, SNWA notified the Secretary of Interior and the AWBA of Nevada's unused apportionment that would be made available for storage by AWBA. In November, 2009, the Plan of Operation was again amended to include these additional interstate supplies. By the end of calendar year 2009, the AWBA was able to store on behalf of Nevada 59,024 acre-feet. Of this, 51,387 acre-feet of water was sent to AZ from Nevada's unused apportionment.

The AWBA sub-account for Nevada had a balance of 582,772 acre-feet of LTSCs at the end of 2009. Of that balance, 50,000 acre-feet of credits were transferred from CAWCD for storage done in the early 1990's under the demonstration project. Annual interstate storage for 2002 through 2009 is displayed in Table 6b.

Development of and Requests for Creation of Intentionally Created Unused Apportionment

For the third year, ICUA was developed in 2009. In December, 2008 the AWBA provided notice to the Bureau of Reclamation (USBR) of 30,000 acre-feet of ICUA to be created in 2009 through the development of LTSC on behalf of Metropolitan Water District of Southern California (Metropolitan). In November, 2009, the AWBA received an amended schedule from CAWCD that identified an estimated 27,500 acre-feet of recovery for 2009. By year's end, an estimated 27,504 acre-feet of ICUA was developed in 2009 as LTSCs recovered from wells used within three irrigation districts in Pinal County, Arizona. Below is a summary of ICUA developed for the benefit of Metropolitan through 2009.

**Development of ICUA for the Benefit of MWD**

Year	Long-term Storage Credits		ICUA Developed	Credits Remaining
	Recovered	Exchanged		
				80,909
2007	10,921	5,883	16,804	64,105
2008	27,442	1,000	28,442	35,663
2009	27,504	-	27,504	8,159
<b>Total</b>	<b>65,867</b>	<b>6,883</b>	<b>72,750</b>	

In addition to the development of ICUA, Metropolitan requested from CAWCD development of the remaining balance of ICUA in 2010 (letter dated November 19, 2009). This request for ICUA was included in the AWBA's 2010 Plan of Operation.

### Certification of Intentionally Created Unused Apportionment

For the second time, ICUA was certified in 2009. AWBA is required to certify the creation of ICUA to the Secretary, Metropolitan, and CAWCD in the year following development of the ICUA. In a letter dated June 17, 2009, the AWBA certified the creation of 28,442 acre-feet of ICUA in 2008, following the review of annual reports and verification by ADWR of the recovery and exchange of LTSCs in 2008.

### Recovery

CAWCD staff continued their planning efforts for the recovery of credits accrued by the AWBA. For the third year, the CAWCD continued recovering credits previously stored in Pinal County for the benefit of Metropolitan. Recovery in 2009 occurred from three irrigation districts; 11,004 acre-feet were recovered from Central Arizona Irrigation and Drainage District (CAIDD), 15,000 acre-feet were recovered from Maricopa-Stanfield Irrigation & Drainage District (MSIDD), and 1,500 acre-feet were recovered from the Hohokam Irrigation and Drainage District.

Recent planning by CAWCD includes an evaluation of recovery needs based on future demand projections and worst-case scenario shortages, methods for recovering long-term storage credits, and recovery opportunities within the Phoenix, Pinal and Tucson Active Management Areas. Various delivery arrangements through the service area have also been evaluated. An update on these planning efforts was presented to the AWBA Commission at a Special Meeting on November 23, 2009. Additional recovery planning information can be found on the CAWCD website [www.cap-az.com](http://www.cap-az.com).

### Purchase of Long-Term Storage Credits from Tohono O'odham Nation

The AWBA purchased 234 acre-feet of LTSCs in 2009 from the Tohono O'odham Nation pursuant to A.R.S. § 45-841.01. It is important to note that this is the AWBA's only authorization to purchase credits.

The Tohono O'odham Nation is statutorily required to offer to sell to the AWBA ten percent of any credits accrued from water delivered to the Mission Mine Complex. The credits must be offered at a price per acre-foot that is equal to the AWBA's delivery and storage costs at the time of sale. Credits purchased by the AWBA cannot be recovered within five miles of the exterior boundary of the reservation.

## Differential Pricing for Groundwater Savings Facilities (GSFs) in Tucson AMA

Over the last few years there has been increased concern over the slow progress in AWBA water storage in the Tucson Active Management Area (AMA). The slow progress has been a result of limitations for both funding and, at times, storage capacity at Underground Storage Facilities (USFs). Based on LTSCs accrued through 2009 (using *ad valorem* tax revenues) only 31% of the Municipal and Industrial (M&I) firming goal has been met in the Tucson AMA. Comparatively, 73 % of the M&I firming goal has been met in the Phoenix AMA and 64% has been met in the Pinal AMA.

The AWBA began to evaluate the potential for GSF opportunities in the Tucson AMA through the use of differential pricing of the cost share paid by operators. Historically, the AWBA decided against setting different rates between AMAs. The AWBA's cost share reflects operating costs primarily for the Phoenix and Pinal AMAs (\$32/acre-foot in 2009). Groundwater pumping costs in Tucson have been much lower than the cost share which has resulted in little to no interest in GSF partnerships with the AWBA.

Staff compared the effect of potential storage capacity availability at different cost shares on the firming goal impacts in the Tucson AMA. The different scenarios showed an increase in the firming goal of between two and four percent. Public comments received showed general support of a different cost share in Tucson. The Tucson Groundwater Users Advisory Council (GUAC) was supportive, and the Pinal AMA irrigation districts were accepting of this concept as long as Tucson funding was available and the Pinal districts were not affected. The 2010 AWBA Plan of Operation adopted in December, 2009, included a lower GSF cost share of \$15/acre-foot for the Tucson AMA.

## Agreement and Facility Permit Activity

The AWBA executed two new agreements for water storage in 2009. The water storage agreement for the Central Avra Valley Storage and Recovery Project/Southern Avra Valley Storage and Recovery Project (CAVSARP/SAVSARP) was executed April 1, 2009 and for Cortaro-Marana Irrigation District (CMID) was executed on December 16, 2009.

The AWBA submitted one new application for water storage permit in 2009. The new permit was for CMID, issued on January 4, 2010 for a maximum storage volume of 20,000 acre-feet.

At the September AWBA meeting, the Commission approved the new intergovernmental agreement (IGA) between the Gila River Indian Community (GRIC) and the AWBA for direct delivery of water for the purpose of establishing the Southside Replenishment Bank (SSR Bank). The SSR Bank will fulfill the obligations created under the Settlements Act for protection of the Reservation from off-reservation groundwater pumping.

## 2010 Annual Plan of Operation

Pursuant to the 2010 Plan approved in December, 2009, projected deliveries for the AWBA are 153,600 acre-feet. Of this quantity, 110,345 acre-feet are projected to be recharged at USFs and 45,255 acre-feet at GSFs; 1,000 acre-feet are scheduled for direct delivery to the Gila River Indian Community to establish the Southside Replenishment Bank. No interstate storage is planned for 2010. The 2010 Plan of Operation is available on the AWBA website.

## Website

Staff continue to update the AWBA website to provide timely and accurate information regarding the AWBA's activities to the water community: [www.azwaterbank.gov](http://www.azwaterbank.gov) . The web page contains information about the AWBA, Commission members and staff, announcements, meetings, storage facilities and water deliveries. It also contains documents that may be downloaded and provides links to other water-related websites.

## Legislative Transfers from the Arizona Water Banking Fund

The AWBA continued to suffer severe impacts from continued legislative transfers in calendar year 2009 with a series of transfers totaling over \$18 million. Of this, approximately \$13.9 million was from the Nevada Resource subaccount. Legislative transfers from the AWBA's inception through calendar year 2010 as presently identified total approximately \$48.5 million. Of this, approximately \$19.4 million was transferred from the Nevada Resource subaccount. The specific legislative transfers for 2009 and 2010 are provided below.

Throughout this process, AWBA staff continued to produce extensive spreadsheets and alternative scenarios for Commission members to evaluate operational aspects of the Water Bank during these legislative transfers. Changes in revenue, spending assumptions and sources of transfers were assessed to determine the associated impacts to various subaccounts and water deliveries.

At a Special AWBA Meeting, held April 28, 2009, the AWBA Commission directed staff to draft a position statement in letter format to the Governor and members of the Legislature that identified impacts of transfers to the AWBA and that supported lessening fiscal impacts to the Arizona Department of Water Resources without affecting the AWBA. The position statement letter was hand-delivered to Governor Brewer and legislative members.

Again on November 12, 2009, the AWBA held a Special Meeting in response to ADWR's budget reduction submittal to the Governor's Office of Strategic Planning and Budget. The proposed plan included a reduction to the Arizona Water Banking (AWB) Fund of approximately \$785,000 to meet the target reduction for non-appropriated funds. Following direction from the Commission, another letter was hand-delivered to Governor Brewer and legislative members that addressed AWBA's relationship to ADWR, the impacts of further budget cuts on the AWBA's ability to meet its obligations, and that AWBA are included in further discussions regarding the AWB Fund.

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### *CALENDAR YEAR 2009 TRANSFERS (~ \$18.1 MILLION):*

SB 1001 signed February 1, 2009 specifically identified \$12.6 million to be transferred from the AWB Fund [Sec. 4(A)(47) \$9,196,600; Sec. 5(A)(36) \$387,300; Sec. 14 \$3,000,000]. An additional transfer of \$130,700 was identified by JLBC in March, 2009 pursuant to SB 1001 [Sec. 7]. Total legislative transfer from the AWB Fund pursuant to SB 1001 was \$12,714,600 (Phx AMA - \$2,006,322; Pinal AMA - \$1,993,362; and Tucson AMA - \$150,000).

SB 1188 and HB 2643 ("Trailer bill" making revisions to SB 1188) signed July 1, 2009 transferred an additional \$5.4 million from the Nevada Resource subaccount [Sec. 56 \$5,400,000 from interest earnings on the AWB Fund].

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### *CALENDAR YEAR 2010 TRANSFERS - PRESENTLY IDENTIFIED (~\$6.3 MILLION):*

SB 1001 signed December 23, 2009 identified \$684,700 to be transferred from the AWB Fund in 2010 (Transfer deadline 1/15/10).

HB 2001 signed March 18, 2010 identified further transfers of \$5,654,000 from the AWB Fund for FYs 2009-10 and 2010-11 [Sec. 112 \$301,700; Sec. 113 \$198,200, \$154,100, and \$5,000,000]. Transfers identify deadlines of 4/15/10 and 7/15/10. These transfers will be discussed in detail in the 2010 Annual Report.

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## Monies Expended from the Banking Fund

Arizona Revised Statutes §45-2425 mandates the various sources of monies for the Arizona Water Banking (AWB) Fund that is administered by the AWBA per the statute. In 2009, the AWBA obtained its funding from the following sources:

1. Fees for groundwater pumping are collected within the Phoenix, Pinal and Tucson AMAs. Fees for water banking purposes are charged at \$2.50 per acre-foot. Legislative changes allow for groundwater withdrawal fees to be collected and available to the AWBA beyond 2016 (A.R.S. §45-611(c)(3)). Long-term storage credits accrued with these monies must be used to benefit the AMA in which they were collected.
2. No *ad valorem* tax revenues were deposited into the AWB Fund in 2009. In June of 2008, the CAWCD board again resolved that all taxes to be levied for the following tax year would be retained by the CAWCD. All *ad valorem* monies previously held in the AWB Fund have now been expended. Money from this source must be used to benefit the county in which it was collected.
3. No General Fund Appropriation was deposited in the AWB Fund in 2009.
4. Mohave County Water Authority (MCWA) agreed to prepay the AWBA to set aside 230,280 acre-feet of credits that were transferred to a sub-account in MCWA's name pursuant to the Agreement to Firm. Since those credits were reserved for use by an entity outside the three-county service area, CAWCD is required to charge the AWBA a fee in lieu of taxes. Monies collected from MCWA are used to offset these CAWCD fees which are charged at the same rate and on the same quarterly schedule as MCWA's prepayments to the AWBA.
5. Pursuant to the Second Amended Agreement for Interstate Water Banking, the Southern Nevada Water Authority (SNWA) deposited \$12,685,000 in the AWB Fund for the purchase, delivery and storage of Excess CAP water on behalf of Nevada. Following receipt of interstate invoices, the AWBA transferred funds to CAWCD to pay for the Excess CAP water.

Table 1 shows the money the AWBA collected and the money that was expended for delivery and storage of water in 2009 by source of funds. Table 2 shows the total money received, expended and remaining through December 2009 by source of funds. Except for the monies remaining in the Nevada Resource Subaccount, which were swept from the AWB Fund in April 2010, any remaining money is available to be expended in subsequent years including any interest accrued.

**Table 1. Monies Collected and Expended in 2009 by Source of Funds**

Source of Funds	Money Collected	Money Expended
<b>General Funds</b>	<b>\$0</b>	<b>\$0</b>
<b>In-Lieu Fund – MCWA Prepayments</b>	<b>\$921,120</b>	<b>\$921,120</b>
<b>State Indian Firming<sup>1</sup></b>	<b>\$38,706</b>	<b>\$304,817</b>
<b>Interstate Water Banking - Nevada</b>		
Nevada Resource <sup>1</sup>	\$196,437	\$2,468,041
Operating	\$12,685,456	\$8,313,813
Subtotal for Interstate	<b>\$12,881,893</b>	<b>\$10,781,853</b>
<b>Shortage Reparations - NV</b>	<b>\$0</b>	<b>\$0</b>
<b>4¢ Ad valorem Tax<sup>2</sup></b>		
Maricopa County	\$0	\$2,322,756
Pinal County	\$0	\$1,838,000
Pima County	\$0	\$1,656,121
Subtotal for <i>Ad valorem</i>	<b>\$0</b>	<b>\$5,816,877</b>
<b>Groundwater Withdrawal Fees</b>		
Phoenix AMA	\$1,673,776	\$46,200
Pinal AMA	\$1,587,385	\$270,000
Tucson AMA	\$456,892	\$670,394
Subtotal for Withdrawal Fees	<b>\$3,718,053</b>	<b>\$986,594</b>
<b>TOTAL</b>	<b>\$17,363,336</b>	<b>\$18,811,262</b>

<sup>1</sup> Amount shown is interest earnings.

<sup>2</sup> Money expended by CAWCD to offset the AWBA delivery costs.

**Table 2. Monies Collected and Expended through December 2009 and Monies Remaining Available**

Source of Funds	Money Collected	Money Expended	Money Available <sup>1</sup>
<b>General Funds</b>	<b>\$11,100,865</b>	<b>\$11,100,865</b>	<b>\$0</b>
<b>In-Lieu Fund - MCWA Pre-payments</b>	<b>\$3,684,480</b>	<b>\$3,684,480</b>	<b>\$0</b>
<b>State Indian Firming<sup>2</sup></b>	<b>\$2,338,171</b>	<b>\$2,338,171</b>	<b>\$0</b>
<b>Interstate Water Banking-NV</b>			
Pre-Amended Agreement	\$10,053,945	\$10,053,945	\$0
Nevada Resource <sup>2</sup>	\$91,560,964	\$86,894,714	\$4,666,250 <sup>3</sup>
Operating	\$12,685,456	\$8,313,812	\$4,371,644
Subtotal for Interstate	<b>\$114,300,365</b>	<b>\$105,262,472</b>	<b>\$9,037,894</b>
<b>Shortage Reparations - NV</b>	<b>\$2,307,925</b>	<b>\$2,307,925</b>	<b>\$0</b>
<b>4¢ Ad valorem Tax<sup>4</sup></b>			
Maricopa County	\$159,635,389	\$61,090,557	\$98,544,832
Pinal County	\$6,892,854	\$5,613,865	\$1,278,989
Pima County	\$31,833,644	\$21,083,385	\$10,750,260
Subtotal for <i>Ad valorem</i>	<b>\$198,361,887</b>	<b>\$87,787,806</b>	<b>\$110,574,080</b>
<b>Groundwater Withdrawal Fees</b>			
Phoenix AMA <sup>2</sup>	\$14,760,483	\$14,759,876	\$607
Pinal AMA <sup>2</sup>	\$12,231,463	\$12,069,167	\$162,296
Tucson AMA <sup>2</sup>	\$6,801,237	\$6,793,004	\$8,233
Subtotal for Withdrawal Fees	<b>\$33,793,183</b>	<b>\$33,622,047</b>	<b>\$171,136</b>
<b>TOTAL</b>	<b>\$365,886,876</b>	<b>\$246,103,766</b>	<b>\$119,783,110</b>

<sup>1</sup> Money remaining in AWB Fund or collected by CAWCD; includes monies committed for the 2010 Plan of Operation.

<sup>2</sup> Total money collected was decreased to reflect legislative transfers in CY 2004, CY 2005, and CY 2009.

<sup>3</sup> Legislative transfer in CY 2010 depletes NV Resource subaccount entirely; Balance = \$0.

<sup>4</sup> Includes money collected and money expended by CAWCD to offset the AWBA delivery costs.

## Long-term Storage Credits

The AWBA has established long-term storage credit (LTSC) accounts with ADWR. The Phoenix AMA account number is 70-441150, the Pinal AMA account number is 70-431135, and the Tucson AMA account number is 70-411150. After receiving the AWBA's annual reports for its water storage and water transfer permits and the annual reports for the recharge facilities, ADWR calculates and issues LTSCs to the appropriate accounts. The AWBA receives credit for 95% of the recoverable quantity of stored water. The 5% that is not credited is termed the cut to the aquifer and provides additional groundwater replenishment benefits. This cut to the aquifer is mandated by statute and applies to most storage of water for long-term credit. The recoverable amount of stored water is determined by subtracting facility losses from the quantity of water delivered to the facility. After credits are issued to the account, AWBA staff allocate the credits to the appropriate sub-accounts based on source of funding. The number and distribution of LTSCs for 2009 are listed in Table 3. The cumulative totals of LTSCs accrued by the AWBA through December 2009 are listed in Table 4.

**Table 3. Number and Location of Long-term Storage Credits Accrued in 2009**

Location and Funding Source	Long-term Storage Credits Accrued (AF)
<b>Phoenix AMA</b>	
4¢ Ad valorem Tax	36,087
Groundwater Withdrawal Fee	878
General Fund	0
Indian Firming	0
Shortage Reparations	0
Interstate - Nevada	22,467
<b>AMA Total</b>	<b>59,432</b>
<b>Pinal AMA</b>	
4¢ Ad valorem Tax	32,398
Groundwater Withdrawal Fee	2,755
General Fund	0
Indian Firming	0
Shortage Reparations	0
Interstate - Nevada	24,607
<b>AMA Total</b>	<b>59,759</b>
<b>Tucson AMA</b>	
4¢ Ad valorem Tax	16,910
Groundwater Withdrawal Fee	6,023
General Fund	0
Indian Firming	2,725
Shortage Reparations	0
Interstate - Nevada	8,178
<b>AMA Total</b>	<b>33,836</b>
<b>Totals by Funding Source</b>	
4¢ Ad valorem Tax	85,394
Groundwater Withdrawal Fee	9,656
General Fund	0
Indian Firming	2,725
Shortage Reparations	0
Interstate - Nevada	55,252
<b>TOTAL</b>	<b>153,027</b>

**Table 4. Cumulative Total and Location of Long-term Storage Credits Accrued through December 2009**

Location and Funding Source	Long-term Storage Credits Accrued (AF)
<b>Phoenix AMA</b>	
4¢ <i>Ad valorem</i> Tax	1,142,827
Groundwater Withdrawal Fee	262,241
General Fund	42,316
Indian Firming	0
Shortage Reparations	20,642
Interstate Water Banking - Nevada	46,287
<b>AMA Total</b>	<b>1,514,313</b>
<b>Pinal AMA</b>	
4¢ <i>Ad valorem</i> Tax	153,257
Groundwater Withdrawal Fee	362,126
General Fund	306,968
Indian Firming	0
Shortage Reparations	55,786
Interstate Water Banking - Nevada	439,851
<b>AMA Total</b>	<b>1,317,988</b>
<b>Tucson AMA</b>	
4¢ <i>Ad valorem</i> Tax	266,817
Groundwater Withdrawal Fee <sup>1</sup>	91,157
General Fund	54,546
Indian Firming	28,481
Shortage Reparations	0
Interstate Water Banking - Nevada	96,634
<b>AMA Total</b>	<b>537,635</b>
<b>Totals by Source of Funds</b>	
4¢ <i>Ad valorem</i> Tax	1,562,902
Groundwater Withdrawal Fee	715,524
General Fund <sup>2</sup>	403,830
Indian Firming	28,481
Shortage Reparations	76,427
Interstate Water Banking - Nevada	582,772
<b>TOTAL</b>	<b>3,369,936</b>

<sup>1</sup> Includes 234 acre-feet of credits purchased from the Tohono O’odham Nation pursuant to § 45-841.01.

<sup>2</sup> By resolution passed in 2002, the AWBA established on-river firming as the highest priority of use for credits accrued through expenditure of general fund appropriations. Pursuant to the AWBA Agreement to Firm with the Mohave County Water Authority (MCWA) dated February 4, 2005, a total of 230,280 acre-feet of credits were transferred to the AWBA long-term storage subaccount for the MCWA in 2005. By resolution passed in 2008, the AWBA established a replacement account for 4<sup>th</sup> priority Colorado River M&I users.

Since inception, the AWBA has focused its efforts on developing LTSCs for firming purposes and the AWBA has identified 2,700,000 acre-feet of LTSCs as reasonable to firm the CAP M&I subcontracts over the next 100 years. This volume would be divided as 58% to Maricopa County, 32% to Pima County and 9% to Pinal County based on a pro-rata distribution to the three counties on the basis of CAP M&I subcontracts. The AWBA has also identified 420,000 acre-feet of LTSCs as reasonable to firm the on-river communities over the next 100 years. In 2002, the AWBA adopted a resolution that identified on-river firming as the highest priority of use for the general fund credits and established priorities for other uses (Indian settlements, etc.). Consequently, all or part of the general fund credits

could be utilized to firm on-river M&I users. It should be noted that the AWBA collects reimbursement for the replacement cost of credits used for on-river firming. In 2008, the AWBA executed Resolution 2008-1 that establishes a LTSC replacement account for 4<sup>th</sup> priority Colorado River M&I users. As credits are used and replaced, these replacement credits will be placed in a separate replacement subaccount and be earmarked for the entity that reimburses the Water Bank for the replacement of those credits. Table 5 illustrates the progress made by the AWBA towards meeting its established goals.

Table 5 also identifies the estimated remaining costs for meeting the AWBA's goals and obligations. These estimates are developed based on the assumptions contained in the AWBA's ten-year plan for 2011-2020 and are subject to potential shortages discussed under recovery in the Ten-Year Plan. For obligations that are not met in the ten-year plan, 2021 estimated costs were assumed when calculating the amount remaining to meet the goals. As illustrated in Table 8 of the ten-year plan, most of the goals will be met during the next ten years. Those not met include the Tucson AMA and on-river M&I firming goals, and the Nevada contract obligation. Approximately 74% of the Tucson AMA firming goal will have been met by 2020. Since all of the *ad valorem* tax monies will have been expended by 2016, the AWBA will need to rely on withdrawal fees to meet the remainder of this firming goal. Because revenue from withdrawal fees is limited in the Tucson AMA (less than \$500k/yr), the firming goal would not be met until well beyond 2025. Therefore, estimated rates for 2021 were used to calculate the total remaining costs for the Tucson AMA firming goal. Expenditures under the ten-year plan are estimated at \$28 million, utilizing *ad valorem* tax monies (\$23 million) and withdrawal fees (\$5 million), and the remaining costs are estimated at \$37 million for a total cost of \$65 million. Likewise, because it is not known if or when the AWBA will receive general fund appropriations in the future, the same method was applied to calculate the remaining on-river firming costs. It was also assumed that storage for on-river firming purposes would be at GSFs. However, because funding is not the limiting factor for meeting the Nevada contract obligation, a different assumption was used. Interstate storage costs for the ten-year plan are estimated at \$17 million. It was assumed that at least 60,000 acre-feet could be stored annually at the Pinal GSFs beyond 2020 until the contract obligation is met. Using this assumption, the remaining costs after 2020 are estimated at \$89 million with the obligation being met by 2030. Lastly, the remaining costs for meeting the Indian firming goals were estimated by assuming that because the M&I firming goals could be met using *ad valorem* taxes and only a portion of existing withdrawal fee credits from the Pinal AMA, all withdrawal fee credits accrued in the Phoenix and Pinal AMAs in the next ten years would be applied toward meeting these goals. Existing withdrawal fee credits in the Pinal AMA and credits accrued from storage at the Gila River Indian Irrigation and Drainage District (GRIIDD) GSF, could be used to meet the remaining GRIC firming goal. Existing withdrawal fee credits from the Phoenix AMA could be used to meet the firming goal for future Indian settlements. Because funding has already been expended for these credits, they were not included in the calculation for remaining costs.

**Table 5. Identified Uses of Long-term Storage Credits Accrued through December 2009 and Percentage of AWBA Goals Achieved**

Location and Objective	Funding Source	Goal	Obligation	Non-Credit Goal/Oblig. Achieved	Credits Accrued (AF)	Percent Goal/Oblig. Achieved	Estimated <sup>1</sup> Remaining Costs (\$ Million)
<b>Phoenix AMA</b> M&I Firming Groundwater Mgmt <sup>2</sup>	<i>Ad valorem</i> tax Withdrawal Fees	1,566,000 AF			1,142,827 262,241	73% 90%	\$62
<b>Pinal AMA</b> M&I Firming Groundwater Mgmt <sup>2</sup>	<i>Ad valorem</i> tax Withdrawal Fees	243,000 AF			153,257 362,126	63% 212%	\$5
<b>Tucson AMA</b> M&I Firming Groundwater Mgmt <sup>2</sup>	<i>Ad valorem</i> tax Withdrawal Fees	864,000 AF			266,817 85,536	31% 41%	\$23 \$42
<b>On-River M&amp;I Firming<sup>3</sup></b>	General Fund	420,000 AF			403,830	96% <sup>3</sup>	\$1.9
<b>Indian Settlements:</b> GRIC Firming Phoenix AMA Pinal AMA	Withdrawal Fees	350,000 AF <sup>4</sup>	up to 15,000 AF/YR		0	0%	\$11
Future Settlements	Withdrawal Fees	200,000 AF <sup>4</sup>	up to 8,724 AF/YR		0	N/A	\$19
Federal Assistance SAWRSA	Appropriation Withdrawal Fees Cost of Services <sup>5</sup>		\$3,000,000	\$3,000,000 \$2,338,171 \$630,490 \$31,339	34,101 28,480 5,621 n/a	100%	-
Southside Repl. Bank	Withdrawal Fees		15,000 AF Direct Delivery		1,000	7%	\$2
<b>Interstate Water Banking - NV</b>	Contract with Nevada		1,250,000 AF <sup>6</sup>		582,772	47%	\$106
<b>Shortage Repairs- Nevada</b>	Gifts, Grants, Donations	\$8,000,000		\$2,307,925	76,427	29%	\$5.7

<sup>1</sup> Based on the ten-year plan and an assumed rate escalation of 1% for water storage costs after 2016.

<sup>2</sup> Withdrawal fees could be utilized in addition to 4¢ *ad valorem* tax revenues for M&I firming if needed to reach firming goals.

<sup>3</sup> By resolution passed in 2002, the AWBA established on-river firming as the highest priority of use for credits accrued through expenditure of general fund appropriations. Pursuant to the AWBA Agreement to Firm with the Mohave County Water Authority (MCWA) dated February 4, 2005, a total of 230,280 acre-feet of credits were transferred to the AWBA long-term storage subaccount for the MCWA in 2005.

<sup>4</sup> Based on estimates from the Indian Firming Study Commission Report dated January 6, 2006.

<sup>5</sup> Expenditures include \$14,883 and \$16,456 deducted for payment of cost of services for FY 08 and FY 09, respectively.

<sup>6</sup> Pursuant to the Second Amended Agreement for Interstate Water Banking, the AWBA has committed to have this number of long-term storage credits within the Nevada subaccount.

The average annual cost for the AWBA to obtain one acre-foot of LTSC for intrastate and interstate storage is presented in Tables 6a and 6b, respectively. Table 6a illustrates that the unit cost per LTSC for intrastate storage fluctuate yearly. The unit cost per LTSC generally trended up since inception of the AWBA to 2006, decreased in 2007 and 2008, and then increased again in 2009. Increases are typically a function of three primary factors: annual increases in the cost per acre-foot of water delivered, annual increases in the cost of storage facilities and the mix of storage between USFs and GSFs. Decreases are typically a function of annual decreases in the cost per acre-foot of water delivered and the mix of storage between USFs and GSFs. Similarly, Table 6b illustrates that the unit cost per LTSC for interstate storage increased each year between 2002 and 2005, decreased in 2006 and 2007, and increased slightly in 2009 from 2007. No interstate storage occurred in 2008. Although the unit cost of developing interstate LTSCs is also influenced by the same factors as intrastate storage, interstate storage is additionally affected by the fluctuating cost of energy.

**Table 6a. Average Annual Cost for the AWBA to Obtain a Long-term Storage Credit for Intrastate Storage**

Year	Credits <sup>1</sup>	Funds Expended	Average Cost (per acre-foot)	% Stored in GSF: % Stored in USF
1997	296,987	\$6,387,000	\$21.51	85% : 15%
1998	202,542	\$7,143,000	\$35.27	68% : 32%
1999	232,142	\$8,733,000	\$37.61	68% : 32%
2000	272,123	\$11,163,000	\$41.02	60% : 40%
2001	275,406	\$10,893,590	\$39.55	62% : 38%
2002	262,317	\$13,700,300	\$52.23	64% : 36%
2003	200,168	\$11,077,666	\$55.34	47% : 53%
2004	251,456	\$17,855,997	\$71.01	41% : 59%
2005	85,782	\$5,615,201	\$65.46	58% : 42%
2006	162,132	\$14,720,277	\$90.79	17% : 83%
2007	245,221	\$15,641,702	\$63.79	37% : 63%
2008	203,129	\$8,168,100	\$40.21	65% : 35%
2009 <sup>2</sup>	97,540	\$6,977,590	\$71.54	76% : 24%

<sup>1</sup> Information in this table is reconciled on an annual basis.

<sup>2</sup> Does not include credits purchased pursuant to § 45-841.01.

**Table 6b. Average Annual Cost for the AWBA to Obtain a Long-term Storage Credit for Storage on Behalf of Nevada**

<b>Year</b>	<b>Credits</b>	<b>Funds Expended</b>	<b>Average Cost (per acre-foot)</b>	<b>% Stored in GSF: % Stored in USF</b>
2002	61,098	\$8,617,393	\$141.04	100% : 0%
2003	50,000 <sup>1</sup>			
2004	14,162	\$2,899,647	\$204.75	66% : 34%
2005	111,805	\$25,723,366	\$230.07	65% : 35%
2006	175,569	\$35,386,306	\$201.55	68% : 32%
2007	114,886	\$21,853,906	\$190.22	91% : 09%
2008	None	None	\$0	0% : 0%
2009	55,252	\$10,781,853	\$195.14	45% : 55%

<sup>1</sup> Long-term Storage Credits transferred from CAWCD.

## **Long-term Storage Credits Distributed or Extinguished by the Authority**

The long-term storage credits (LTSCs) developed by the AWBA to date have been identified for five purposes: firming CAP municipal and industrial (M&I) entitlements; firming the post-1968 M&I entitlements for entities outside the CAP service area; firming for the Federal obligation under the Settlements Act; fulfilling the water management objectives set forth in Chapter 2 of Title 45 (Arizona Revised Statutes); and for interstate water banking purposes pursuant to agreements with Nevada. Credits created by the AWBA for firming purposes may be distributed or extinguished when the Colorado River system is deemed to be in a shortage or if there is an operational disruption of the CAP. There were no shortages or unplanned CAP operational problems, therefore, no credits were distributed or extinguished for these purposes in 2009. While credits have been developed using withdrawal fees, which are credits that can be used for water management purposes, no credits were distributed or extinguished in 2009.

Under the 1999 amendments to the AWBA legislation, the AWBA is authorized to develop credits with monies collected pursuant to water banking services agreements. In 2009, no credits were developed or distributed under such agreements.

There was recovery of LTSCs previously stored by CAWCD on behalf of Metropolitan in 2009. These credits were recovered by CAWCD and extinguished from their long-term storage account.

# Ten-Year Plan

## Introduction

Preparation of the ten-year plan is statutorily mandated. The ten-year plan must include a description of any water banking activities the AWBA intends to undertake in addition to the three primary AWBA functions of firming for M&I supplies, assisting in Indian water rights settlements, and fulfilling state water management objectives. The ten-year plan is presented in Table 7. The ten-year plan must also provide an analysis of the AWBA's ability to complete those activities. This analysis is provided in Table 8. The ten-year plan is not a guarantee of future storage activities and is completed for planning purposes only. In any given year, the AWBA's activities are governed by the annual Plan of Operation.

The ten-year plan analyzes activity for the period 2011-2020 (Table 7) and was derived using the information found in Appendices B through J. AWBA accounting for previous years can be found in the 2008 Annual Report and 2010 Plan of Operation. AWBA staff developed the ten-year plan based on the following guiding principles:

1. Legislative transfers from the Arizona Water Banking Fund no longer occur.
2. The intent of the plan is to evaluate if the AWBA can engage in water banking activities beyond the scope of the currently established AWBA role and to what extent.
3. The plan covers a ten-year time period beginning with the next calendar year. For example, this ten-year plan covers the time period 2011-2020.
4. The plan is updated annually based on current priorities of the AWBA.
5. The plan is an important tool to be utilized in development of the next year's annual Plan of Operation.

## Ten-Year Plan Components

The following factors are recognized to be important elements in developing the model used to generate the ten-year plan. Inclusion or exclusion of a specific factor or component of a factor was based on whether the extent of the effect of the factor could be predicted over the planning period, and whether the factor was anticipated to be at issue over the planning period.

### 1. Storage Partners and Storage Capacity

The AWBA currently has 11 water storage permits for GSFs with a total permitted storage capacity of 627,547 acre-feet per year. Because most of the GSF operators in the Phoenix AMA have not partnered with the AWBA in the past several years, storage at these facilities has not been included in this ten-year plan. However, even though storage has also been limited at Tucson AMA GSFs, storage is anticipated during the next 10 years because of the different cost share adopted for the Tucson AMA in 2009. Therefore GSF storage has been included in this ten-year plan for the Tucson AMA.

Most of the GSF permits will expire within this ten-year plan. In most instances, the AWBA's water storage permits and agreements will also expire. Although the AWBA has not stored water at many of these GSFs in the past few years, it will still pursue renewals of its permits

and agreements with those GSF operators who are interested in potential future partnerships with the AWBA. By renewing these permits it could potentially provide additional storage capacity when needed.

The AWBA currently has 11 water storage permits for USFs with a total permitted storage capacity of 711,000 acre-feet per year. Storage capacity available to the AWBA, primarily at CAWCD operated facilities, has decreased over the last few years because of storage by other participants. Storage capacity could continue to decline as additional entities contract with CAWCD and are issued water storage permits by ADWR. Storage by these entities however, would still be limited by the availability of water. Sufficient storage capacity is anticipated in this ten-year plan given the amount of water available to the AWBA under CAWCD's policy for distributing Excess CAP water. However, it is possible the location of AWBA storage could be affected in the future. In addition, several of these USF permits will expire toward the latter part of the next ten years. Any difficulty in obtaining new permits could also impact the capacity available to the AWBA. However, impacts of this nature cannot be predicted and were discounted in the analysis of this ten-year plan.

As with the GSFs, all of the agreements for water storage at these USFs will expire within this ten-year planning period. Although the AWBA has current water storage permits for the GRUSP and Vidler USFs, the AWBA's water storage agreements with these facility operators have expired. Thus storage at these two facilities has not been included in this ten-year plan.

Appendix C describes the storage partners, storage permits, and capacity available for use by the AWBA. It also identifies the partners that the AWBA included in development of this ten-year plan.

**Table 7. Ten-year plan**

<b>ARIZONA WATER BANKING AUTHORITY – Ten-Year Plan</b>																
<b>2011 – 2020</b>																
<b>(Acre-feet)</b>																
<b>YEAR</b>	<b>(a) CAP Water Avail for AWBA</b>	<b>(b) CAP M&amp;I Firming (4¢ tax)</b>		<b>(c) Water Management (Withdrawal Fees)</b>		<b>(d) Appropriation from General Fund</b>		<b>(e) Shortage Reparations (\$8 Million)</b>		<b>(f) Indian Settlement</b>		<b>(g) (h) (i) (j) (k) Interstate Banking</b>				
		Del.	Credits	Del.	Credits	Del.	Credits	Del.	Credits	Del.	Credits	Water Avail.	AWBA Capacity Avail.	Credits	ICUA	Remaining Credits
Pre-Plan <sup>(h)</sup>	n/a	1,676,322		559,055		403,830		82,219		212,696				582,772		
2011	144,316	115,912	107,798	4,770	3,507	0	0	0	0	23,634	21,979	0	115,684	0	0	582,772
2012	142,625	93,939	87,363	9,770	3,507	0	0	21,592	20,080	17,324	16,111	0	119,353	0	0	562,772
2013	139,421	90,289	83,969	9,651	3,395	0	0	16,328	15,185	17,013	15,822	0	133,641	0	0	532,772
2014	135,650	100,962	93,895	3,710	3,450	0	0	0	0	25,305	23,533	0	182,524	0	0	492,772
2015	131,839	103,545	96,297	3,622	3,369	0	0	0	0	24,672	22,945	0	187,161	0	0	492,772
2016	128,067	99,377	92,421	3,651	3,395	0	0	0	0	25,039	23,286	0	191,333	0	0	492,772
2017	126,688	79,958	74,361	3,610	3,358	0	0	0	0	25,236	23,469	17,884	212,696	16,632	0	509,405
2018	126,472	76,864	71,484	3,570	3,321	0	0	0	0	25,014	23,263	21,024	215,052	19,552	20,000	508,957
2019	122,778	76,702	71,333	3,531	3,284	0	0	0	0	25,021	23,339	17,524	215,246	16,298	30,000	525,254
2020	120,322	76,753	71,498	3,492	3,248	0	0	0	0	25,029	23,422	15,048	215,226	13,995	40,000	539,249
<b>TOTAL</b>		2,526,741		592,889		403,830		117,484		429,865				649,249		

**FOOTNOTES:**

(a) Assumes AWBA Pool of 175KAF less CAGR projected replenishment reserve uses. See Appendix B.

(b) See Appendix D.

(c) See Appendix E. Includes direct delivery of 1,000 AF of water in 2011 and 6,000 AF of water in 2012 and 2013 to meet the remaining Southside Replenishment obligation of 13,000 AF.

(d) See Appendix F.

(e) See Appendix G.

(f) See Appendix H. A.R.S. §45-2491(B)(2) allows for the use of withdrawal fees after legislative appropriations for Indian firming have been expended. Withdrawal fee credits accrued in the Phoenix and Pinal AMAs could be utilized to meet this obligation. The Pre-Plan amount includes credits accrued from storage at the GRIIDD GSF and withdrawal fee credits accrued in the Phoenix and Pinal AMAs since 2008. The State Indian settlement firming obligation is estimated at 550,000 AF. In addition, 34,102 AF of credits have been accrued to meet the State’s obligation under Section 306 of the AZ Water Settlement’s Act (\$3 million for Federal assistance).

(g) Available AWBA CAP supplies minus intrastate deliveries.

(h) See Appendix I.

(i) Cumulative totals for 1997-2010; 2009 are actual credits and 2010 are estimated based on projected deliveries.

(j) Pursuant to the Recovery Agreement among the AWBA, CAWCD, SNWA, and CRCN executed June 9, 2010, recovery is anticipated to begin on or after 2018. The Plan assumes maximum allowable recovery.

(k) Credits remaining available in Nevada sub-account after recovery.

**Table 8. AWBA Percentage of Goals Achieved through 2020**

Location and Objective	Funding Source	Goal	Obligation	Non-Credit Goal/Oblig. Achieved	Credits <sup>1</sup> Accrued (AF)	Percent Goal/Oblig. Achieved
<b>Phoenix AMA</b> M&I Firming <sup>2</sup> Groundwater Mgmt <sup>3</sup>	<i>Ad valorem</i> tax Withdrawal Fees	1,566,000 AF			1,789,152 113,043	114%
<b>Pinal AMA</b> M&I Firming <sup>2</sup> Groundwater Mgmt <sup>3</sup>	<i>Ad valorem</i> tax Withdrawal Fees	243,000 AF			220,622 203,570	91% 175%
<b>Tucson AMA</b> M&I Firming Groundwater Mgmt <sup>3</sup>	<i>Ad valorem</i> tax Withdrawal Fees	864,000 AF			516,969 121,982	60% 74%
<b>On-River M&amp;I Firming<sup>4</sup></b>	General Fund	420,000 AF			403,830	96%
<b>Indian Settlements<sup>5</sup></b> GRIC Firming Phoenix AMA Pinal AMA	Withdrawal Fees	350,000 AF <sup>6</sup>	up to 15,000 AF/YR		350,000 88,313 261,687	100%
Future Settlements	Withdrawal Fees	200,000 AF <sup>6</sup>	up to 8,724 AF/YR		200,000	N/A
Federal Assistance SAWRSA	Appropriation Withdrawal Fees		\$3,000,000	\$3,000,000	34,126	100%
Southside Repl. Bank	Withdrawal Fees		15,000 AF Direct Delivery	15,000 AF	0	100%
<b>Interstate Water Banking - NV</b>	Contract with Nevada		1,250,000 AF		649,249	52%
<b>Shortage Repairs-Nevada</b>	Gifts, Grants, Donations	\$8,000,000		\$8,000,000	117,484	100%

<sup>1</sup> 1997-2010; actual credits through 2009 and estimated credits for 2010 based on projected deliveries.

<sup>2</sup> The M&I firming goal for the Phoenix AMA is met in 2017. Firming goals may be exceeded if monies, water, and capacity are available.

<sup>3</sup> Pursuant to House Bill 2835, firming M&I supplies is a water management objective for the use of credits developed by groundwater withdrawal fees. Utilizing withdrawal fee credits, 74% of the Tucson AMA firming goal will be met by 2020. Existing withdrawal fee credits can be used to meet the Pinal AMA firming goal.

<sup>4</sup> By resolution passed in 2002, the AWBA established on-river firming as the highest priority of use for credits accrued through expenditure of general fund appropriations. Pursuant to the AWBA Agreement to Firm with the Mohave County Water Authority (MCWA) dated February 4, 2005, a total of 230,280 acre-feet of credits were transferred to the AWBA long-term-storage sub-account for the MCWA in 2005.

<sup>5</sup> A.R.S. §45-2491(B)(2) allows for the use of withdrawal fees after legislative appropriations for Indian firming have been expended. By utilizing credits accrued from storage at the GRIIDD and credits accrued from withdrawal fees in the Pinal and Phoenix AMAs in this ten-year plan, about 56% of the GRIC and 64% of the future settlement firming goals are estimated to be met in 2020. Existing withdrawal fee credits from the Pinal and Phoenix AMAs were used to meet the remainder of the firming goals for the GRIC and future settlements, respectively.

<sup>6</sup> Based on estimates from the Indian Firming Study Commission Report dated January 6, 2006. The AWBA is required to firm up to 23,724 acre-feet per year during shortages. If the firming goal has been underestimated, there are additional withdrawal fee credits available in the Phoenix and Pinal AMAs to meet this obligation.

## 2. Recovery

This ten-year plan includes a recovery component for interstate purposes pursuant to the Second Amended Agreement for Interstate Water Banking (Amended Agreement). The Amended Agreement authorized Nevada to request development of Intentionally Created Unused Apportionment (ICUA), if needed, as follows: in the initial year, an amount not exceeding 20,000 acre-feet; the second year, an amount not exceeding 30,000 acre-feet; and in subsequent years, an amount not exceeding 40,000 acre-feet.

The water supply for this ten-year plan includes only normal year deliveries and does not include any shortage year deliveries. ADWR and CAWCD staff work cooperatively on long-range shortage projections. ADWR's model analysis, which is based on the Bureau's Colorado River System Simulation (CRSS) model using Arizona's assumptions regarding Upper Basin depletions, indicates that by the end of the ten years there is approximately a one-in-four chance that shortages are possible. That probability occurs near the end of the period and is low enough that a shortages delivery scenario does not need to be included in this ten-year plan. If shortages do occur however, they would most likely reduce the CAP supply available for storage. Under CAWCD's policy for distributing Excess water (Appendix J), shortages would first be applied to the M&I pool. Absent this policy, the AWBA has the lowest priority for CAP water so any reduction in CAP supplies would impact the AWBA first. A shortage could also cause the recovery of credits to meet firming obligations. It is not likely that credits would have to be recovered to firm CAP M&I supplies because there should be enough lower priority CAP water to absorb any shortage to CAP during the next ten years. On-river M&I deliveries and NIA water being delivered pursuant to Indian settlements could be at risk but not until late in the ten-year period. If reductions to the on-river M&I users occur those reductions could trigger the need to firm M&I on-river supplies. In addition to the recovery required for the on-river users, the AWBA might be required to recover credits to meet its obligation for Indian firming. However absent shortages, the only recovery planned for this ten-year plan is for interstate purposes. Even though recovery for shortages is not anticipated for this ten-year plan, any additional recovery provisions should be put in place due to the lead time needed. Next year's plan will include additional evaluation of recovery and analysis of impacts of shortage on Excess CAP water supply.

## 3. Water management objectives

The early activities of the AWBA were focused on achieving the goal of full utilization of Arizona's Colorado River allocation. With the exception of 2005, Arizona has been meeting this goal since 2002. Another primary objective of the AWBA is meeting the M&I firming goals. By the end of 2010 the AWBA anticipates having stored over 1.68 million acre-feet (MAF) of credits for that purpose. The ten-year plan again shows that meeting the goal set for firming Tucson AMA supplies is problematic.

## 4. Funding

### *AWBA General Fund Appropriation*

The AWBA has not received a general fund appropriation that was not subject to restrictions since 2001. Consequently, the AWBA does not anticipate receiving general fund appropriations and did not include expenditure of these funds in this ten-year plan.

### *Groundwater Withdrawal Fees*

In 2006, the statutes concerning the collection and utilization of credits accrued through the expenditure of groundwater withdrawal fees by the AWBA had been amended subject to the enforceability of the Arizona Water Settlements Act (Settlements Act) P.L. 108-451, which became effective December 14, 2007. Under A.R.S. §45-2457(B)(6), in addition to meeting the water management objectives of the AMAs in which the fees were collected, the AWBA may also utilize withdrawal fees to meet the M&I demands of CAP subcontractors and to implement the settlement of water rights claims by Indian communities in Arizona. A.R.S. §45-2491(B)(2) further clarifies that groundwater withdrawal fees however, may only be used to accomplish Indian firming goals after the expenditure of any legislative appropriations. Furthermore, A.R.S. §45-611(C)(3) was amended to allow the AWBA to collect groundwater withdrawal fees beyond 2016 and to allow fees collected in the Pinal AMA to be utilized for meeting the AWBA Southside Replenishment obligation. This ten-year plan utilizes withdrawal fees beyond 2016 for the accrual of credits and for the purchase of CAP water for the purpose of establishing the Southside Replenishment Bank.

### *Ad valorem Tax*

Pursuant to A.R.S. §48-3715.03(B), 4¢ *ad valorem* taxes levied and collected by CAWCD that are not deposited in the District fund, shall be deposited into subaccounts held by the AWBA; one for each of the three counties in which the taxes were collected. CAWCD has not deposited monies collected into these AWBA subaccounts since 2003. The AWBA has since expended all available funds that remained in its subaccounts. CAWCD has however assisted the AWBA by offsetting AWBA water delivery and storage costs using the 4¢ *ad valorem* tax held in its own accounts. This ten-year plan relies on the continuation of CAWCD offsetting the AWBA's costs. It is important to note that A.R.S. §48-3715.02, which provides CAWCD the authority to levy the *ad valorem* tax for water storage, will be repealed effective January 2, 2017. Therefore this ten-year plan does not include collection of the *ad-valorem* tax beyond 2016.

### *Appropriations for Indian Firming*

This ten-year plan does not include any general fund appropriations for Indian firming and therefore relies on the expenditure of withdrawal fees for meeting Indian firming obligations.

### *Funding for Interstate Banking*

Provisions in the Amended Agreement allow the AWBA and the Southern Nevada Water Authority (SNWA) to revise the annual payment schedule to provide operational flexibility. When water is not available for interstate storage this flexibility benefits both the AWBA and SNWA. Water supplies for interstate storage are expected to be minimal during this ten-year plan. When interstate storage occurs, monies will be deposited in the Operating Account by SNWA and will be used for those deliveries.

## *Gifts, Grants, or Donations*

Pursuant to the Arizona-Nevada Shortage-Sharing Agreement discussed under the **Activities and Projects** section, Nevada will provide to the AWBA \$8 million in order to assist Arizona in offsetting impacts that may occur during the Interim Period; the period beginning on the date the Secretary of the Interior issued the Record of Decision (ROD), December 2007, and ending on December 31, 2025. The AWBA began utilizing a portion of these funds in 2008 for the purchase and storage of CAP water and will expend the remainder of these funds under this ten-year plan.

### 5. Modifications within CAWCD with regard to pricing and pool allocation

Because of the demand for Excess CAP water CAWCD adopted a policy in June, 2009 that established four separate pools, in addition to the NIA pool, which was established by previous policy, thereby accounting for all Excess CAP water (see Appendix J). The NIA pool is a pool of 400,000 acre-feet which declines to 300,000 acre-feet in 2017 and remains there for the remainder of the ten-year plan. While the new policy is limited to the next five years, this ten-year plan assumes the policy will continue for the entire ten-year period. The AWBA's water availability was determined by subtracting the CAGR's projected storage amounts for replenishment reserve purposes from the shared pool of 175,000 acre-feet identified in the policy. This ten-year plan also incorporates CAWCD's 2011/2012 rate schedule, adopted in June of 2010, which no longer includes incentive recharge water.

### 6. Participation in Indian settlements

One objective of the AWBA is assisting with the settlement of water rights claims by Indian communities within Arizona. The State of Arizona has a 100-year firming obligation under the Settlements Act. In addition, pursuant to HB 2728 executed on April 18, 2005, the AWBA has statutorily mandated responsibilities for the Southside Replenishment obligation.

This ten-year plan includes a component for meeting the State's Indian settlement firming obligation. Since future appropriations from the Legislature cannot be expected, withdrawal fee credits from the Phoenix and Pinal AMAs could be used to meet this obligation while still maintaining credits for other water management purposes. This includes credits that were previously accrued from water stored at the GRIIDD GSF. It is important to note that the AWBA will retain full rights to the credits developed at the GRIIDD GSF until such time the credits are dedicated specifically for meeting the State's Indian firming obligation.

This ten-year plan also includes a component for meeting the Southside Replenishment obligation of establishing the Southside Replenishment Bank totaling 15,000 acre-feet. The AWBA will have delivered 2,000 acre-feet for this purpose by the end of 2010 and has identified the remaining deliveries in the first three years of the ten-year plan. Withdrawal fees collected in the Pinal AMA are used to meet this obligation.

### 7. New recharge facilities and/or expanded capacities at existing facilities

The AWBA completed a revised inventory of existing storage facilities in the state as required by A.R.S. §45-2452, which was approved by the Authority on March 22, 2006. The revised inventory was utilized to develop this ten-year plan.

CAWCD was issued an underground storage facility permit from ADWR to operate the Superstition Mountains Recharge project located in the east Salt River Valley in January 2008. The project will be built in two phases. Phase one is expected to be operational by the third quarter of 2011 and has a permitted storage capacity of 25,000 acre-feet per year. Phase two of the project, if built, would increase the permitted storage capacity to 56,500 acre-feet per year. The AWBA expects to utilize capacity at this facility once constructed and has therefore included it in this ten-year plan.

#### 8. Interstate banking

The ten-year plan includes an interstate water banking component for Nevada and indicates that only 52%, or 649,249 acre-feet of credits of the 1,250,000 acre-feet of credits needed to meet the Nevada obligation, could be created by 2020.

Although this ten-year plan identifies storage for interstate purposes in the last four years, it is not certain that water will be available for this purpose if the amount of water available in the AWBA's pool is less than predicted. In contrast, it is also possible that additional water could become available for interstate banking due to unanticipated precipitation or decreased water orders by other CAP customers. Nevada could also make its unused apportionment available to the AWBA for storage in Arizona. These events cannot be foreseen however, and are therefore not included in this plan.

Given that little to no water is available for interstate banking, the AWBA Commission has directed staff to pursue opportunities with CAWCD to increase CAP supplies through the acquisition of additional water supplies. Some of the supplies being assessed include Colorado River water, mainstream tribal leases, and excess recharge credits and may require AWBA to pursue new legislation. Any additional supplies that become available would be addressed as part of the AWBA's Annual Plan of Operation and succeeding ten-year plans.

### Conclusion

The ten-year plan is intended to serve as a guide to assist the AWBA in the development of the Annual Plan. The AWBA is required to develop a Plan for activities to be undertaken the following calendar year. As part of the Annual Report, the ten-year plan is reviewed and updated annually. Therefore, it is possible that the ten-year plan may change significantly depending on the goals set by the AWBA. Several conclusions that could be reached given this ten-year plan are:

- 1) There might not be sufficient Excess CAP water to meet the state's obligation to Nevada.
- 2) Available funding becomes a limiting factor in both Pinal and Pima County.
- 3) The amount of carryover funds in Maricopa County could become an issue in future years.
- 4) Absent future appropriations, withdrawal fees will become the principle source of funding for Indian firming.

# Appendices

**APPENDIX A**  
**Colorado River Water Deliveries for Water Banking Purposes**  
**for Calendar Year 2009 by Partner and Active Management Area**

PHOENIX AMA	Partner	Quantity of Water (Acre-Feet)	
		Intrastate	Interstate
	Tonopah Desert Recharge Project	0	23,781
	Queen Creek Irrigation District	3,622	0
	Gila River Indian Irrigation & Drainage District	35,288	0
	<b><i>Intrastate/Interstate AMA Subtotal</i></b>	<b>38,910</b>	<b>23,781</b>
	<b><i>Phoenix AMA Subtotal</i></b>	<b>62,691</b>	
PINAL AMA	Central Arizona Irrigation and Drainage District	20,000	5,663
	Maricopa-Stanfield Irrigation and Drainage District	20,000	20,931
	<b><i>Intrastate/Interstate AMA Subtotal</i></b>	<b>40,000</b>	<b>26,594</b>
	<b><i>Pinal AMA Subtotal</i></b>	<b>66,594</b>	
TUCSON AMA	Avra Valley Recharge Project	3,001	570
	Lower Santa Cruz Recharge Project	6,074	4,010
	Pima Mine Road Recharge Project	16	4,069
	CAVSARP	11,599	0
	SAVSARP	4,525	0
	Kai Farms-Red Rock	1,893	0
	<b><i>Intrastate/Interstate AMA Subtotal</i></b>	<b>27,108</b>	<b>8,649</b>
	<b><i>Tucson AMA Subtotal</i></b>	<b>35,757</b>	
<b>TOTAL INTRASTATE &amp; INTERSTATE DELIVERIES</b>		<b>106,018</b>	<b>59,024</b>
<b>TOTAL DELIVERIES</b>		<b>165,042</b>	

**APPENDIX B**  
**CAP DELIVERY SCHEDULE**  
(Acre-feet)

Year	CAP Demands				Average Year Supply <sup>4</sup>	Available for AWBA <sup>5</sup>
	M&I <sup>1</sup>	Indian <sup>2</sup>	Ag <sup>3</sup>	Total		
2011	853,376	127,308	400,000	1,380,684	1,525,000	144,316
2012	845,359	137,016	400,000	1,382,375	1,525,000	142,625
2013	838,855	146,724	400,000	1,385,579	1,525,000	139,421
2014	832,918	156,432	400,000	1,389,350	1,525,000	135,650
2015	827,159	166,002	400,000	1,393,161	1,525,000	131,839
2016	821,361	175,572	400,000	1,396,933	1,525,000	128,067
2017	913,169	185,143	300,000	1,398,312	1,525,000	126,688
2018	903,153	195,375	300,000	1,398,528	1,525,000	126,472
2019	897,079	205,143	300,000	1,402,222	1,525,000	122,778
2020	889,277	215,400	300,000	1,404,678	1,525,000	120,322

- (1) Includes M&I, CAGR, CAGR replenishment reserve, and Indian M&I lease.  
(2) From CAWCD demand forecast.  
(3) Based on current agricultural pool policy, includes 32,537 AF for Harquahala Valley ID.  
(4) Based on average year delivery of 1,600,000 AF/YR per year minus losses.  
(5) Assumes AWBA Pool of 175KAF less CAGR projected replenishment reserve uses.

**APPENDIX C  
STORAGE FACILITIES AVAILABLE TO THE AWBA  
(as used in the Ten-Year Plan)**

AMA and Facility Type <sup>1</sup>	Facility Permit Expiration	Facility Permitted Capacity (AF)	Capacity Available to AWBA <sup>2</sup> (AF)	Year Water Last Stored	Volume of Water Last Stored (AF)
<b>PHOENIX – GSF<sup>3</sup></b>					
Queen Creek ID	12/2010	28,000	7,000	2009	3,622
<b>PHOENIX – USF</b>					
Agua Fria Recharge Project	05/2019	100,000	5,000	2008	2,313
Hieroglyphic Mtns.	12/2021	35,000	5,000	2008	1,264
Tonopah Desert RP	09/2025	150,000	100,000	2009	23,781
West Maricopa Combine - USF	05/2021	25,000	5,000	<sup>4</sup>	0
<b>PINAL – GSF</b>					
Central Arizona IDD	12/2017	110,000	60,000	2009	25,663
Hohokam IDD	10/2012	55,000	20,000	2008	18,525
Maricopa-Stanfield IDD	12/2009	120,000	60,000	2009	40,931
<b>TUCSON – GSF</b>					
Cortaro-Marana ID	11/2013	20,000	5,000	<sup>4</sup>	0
Kai-Farms – Red Rock	11/2016	11,231	2,000	2009	1,893
<b>TUCSON – USF</b>					
Avra Valley	03/2018	11,000	5,000	2009	3,571
CAVSARP	12/2028	100,000	22,000	2009	11,599
Lower Santa Cruz	02/2019	50,000	25,000	2009	20,866
Pima Mine Road	09/2020	30,000	5,000	2009	4,085
SAVSARP	01/2028	60,000	10,000	2009	4,525
<b>Other Facilities Currently or Anticipated to be Available to the AWBA</b>					
Superstition Mtn.-USF	01/2028	56,500 <sup>5</sup>	10,000	<sup>6</sup>	n/a

Footnotes:

- (1) As additional facilities are developed, they will be included in future plans.
- (2) This does not reflect the actual “permitted” volume for these facilities; instead for the purposes of this plan, staff relied on average historical storage volumes and potential for future storage.
- (3) The AWBA holds water storage permits at Salt River Project (100 KAF), Roosevelt Water Conservation District (100 KAF), New Magma ID (54 KAF), Tonopah ID (15 KAF), and BKW Farms (16 KAF) GSFs. These were not considered significant uses in this ten-year outlook.
- (4) No deliveries to date.
- (5) Phase one of the facility is permitted for 25KAF/YR.
- (6) Water Storage Permit application to be submitted to ADWR upon construction of the facility.

**APPENDIX D**  
**Credits Developed for M&I Firming Utilizing the 4¢ Tax <sup>1</sup>**  
(Acre-feet)

	Year	Groundwater Savings			Underground Storage		
		Capacity Available <sup>4</sup>	Capacity Used	Credits Earned	Capacity Available <sup>4</sup>	Capacity Used	Credits Earned
<b>PHOENIX AMA<sup>2</sup></b>	Pre-plan <sup>3</sup>			529,477			650,981
	2011	1,210	1,022	950	50,173	48,603	45,201
	2012	1,768	775	721	49,661	39,381	36,625
	2013	945	945	879	57,106	56,684	52,716
	2014	1,050	1,050	976	66,860	66,860	62,180
	2015	1,233	841	782	73,722	68,337	63,553
	2016	1,612	774	720	73,303	61,784	57,459
	2017	900	900	837	76,398	76,398	71,050
	2018	750	750	697	75,851	75,851	70,542
	2019	750	750	697	75,926	75,926	70,611
	2020	750	750	699	76,000	76,000	70,797
	Total			537,435			1,251,715
	<b>PINAL AMA<sup>2</sup></b>	Pre-plan <sup>3</sup>			171,317		
2011		113,484	9,137	8,497	-	-	-
2012		105,122	8,040	7,477	-	-	-
2013		107,195	7,915	7,361	-	-	-
2014		128,785	8,749	8,137	-	-	-
2015		128,873	9,236	8,589	-	-	-
2016		128,546	9,939	9,244	-	-	-
2017		128,466	0	0	-	-	-
2018		128,385	0	0	-	-	-
2019		128,303	0	0	-	-	-
2020		128,221	0	0	-	-	-
Total				220,622			
<b>TUCSON AMA<sup>2</sup></b>		Pre-plan <sup>3</sup>			9,221		
	2011	3,230	0	0	63,500	57,150	53,150
	2012	3,230	0	0	53,512	45,743	42,541
	2013	3,349	0	0	55,334	24,745	23,013
	2014	3,290	0	0	63,500	24,302	22,601
	2015	3,378	0	0	63,500	25,131	23,371
	2016	3,349	0	0	63,900	26,880	24,998
	2017	3,390	0	0	63,500	2,660	2,474
	2018	3,430	0	0	63,500	263	245
	2019	3,469	0	0	63,500	26	24
	2020	3,508	0	0	63,500	3	2
	Total			9,221			507,742

Footnotes:

- (1) Development of M&I firming credits followed utilization of other funds in the Arizona Water Banking Fund.
- (2) M&I firming targets are Phoenix AMA - 1.566 MAF, Pinal AMA - 243 KAF, and Tucson AMA - 864 KAF.
- (3) Cumulative totals for 1997-2010; 2010 credits estimated based on projected deliveries.
- (4) The capacity available is based on the capacity remaining at the USFs and GSFs after all higher priority demands have been met.

**APPENDIX E**  
**Credits Developed for Meeting AMA Water Management Goals**  
**Utilizing Withdrawal Fees <sup>1</sup>**  
(Acre-feet)

	Year	Groundwater Savings			Underground Storage		
		Capacity Available <sup>3</sup>	Capacity Used	Credits Earned	Capacity Available <sup>3</sup>	Capacity Used	Credits Earned
<b>PHOENIX AMA</b>	Pre-plan <sup>2</sup>			145,672			128,068
	2011	7,000	5,790	5,385	58,500	8,327	7,744
	2012	7,000	5,106	4,748	58,500	8,839	8,221
	2013	7,000	5,950	5,534	65,000	7,894	7,342
	2014	7,000	5,950	5,534	75,000	8,140	7,570
	2015	6,000	4,767	4,433	82,500	8,778	8,163
	2016	6,000	4,388	4,081	82,500	9,197	8,553
	2017	6,000	5,100	4,743	85,000	8,602	8,000
	2018	5,000	4,250	3,952	85,000	9,149	8,508
	2019	5,000	4,250	3,952	85,000	9,074	8,508
	2020	5,000	4,250	3,959	85,000	9,000	8,508
	Total			192,721			208,635
	<b>PINAL AMA</b>	Pre-plan <sup>2</sup>			375,527		
2011		124,000	10,516	8,850	-	-	-
2012		114,500	9,378	3,142	-	-	-
2013		116,364	9,169	2,947	-	-	-
2014		140,000	11,215	10,430	-	-	-
2015		140,000	11,127	10,348	-	-	-
2016		140,000	11,454	10,652	-	-	-
2017		140,000	11,534	10,726	-	-	-
2018		140,000	11,615	10,802	-	-	-
2019		140,000	11,697	10,878	-	-	-
2020		140,000	11,779	10,955	-	-	-
Total				465,257			0
<b>TUCSON AMA</b>		Pre-plan <sup>2</sup>			4,892		
	2011	7,000	3,770	3,507	63,500	0	0
	2012	7,000	3,770	3,507	53,512	0	0
	2013	7,000	3,651	3,395	55,334	0	0
	2014	7,000	3,710	3,450	63,500	0	0
	2015	7,000	3,622	3,369	63,500	0	0
	2016	7,000	3,651	3,395	63,900	0	0
	2017	7,000	3,610	3,358	63,500	0	0
	2018	7,000	3,570	3,321	63,500	0	0
	2019	7,000	3,531	3,284	63,500	0	0
	2020	7,000	3,492	3,248	63,500	0	0
	Total			38,726			89,111

- (1) Expenditure of withdrawal fees was given the highest priority.  
(2) Cumulative totals for 1997-2010; 2010 credits estimated based on projected deliveries.  
(3) The capacity available is based on the capacity remaining at the USFs and GSFs after all higher priority demands have been met.

**APPENDIX F**  
**Credits Developed Utilizing Annual General Fund Appropriations<sup>1,2</sup>**  
(Acre-feet)

	Year	Groundwater Savings			Underground Storage			
		Capacity Available	Capacity Used	Credits Earned	Capacity Available	Capacity Used	Credits Earned	
<b>PHOENIX AMA</b>	Pre-plan <sup>3</sup>			16,275			26,041	
	2011	1,210	0	0	50,173	0	0	
	2012	1,894	0	0	49,661	0	0	
	2013	1,050	0	0	57,106	0	0	
	2014	1,050	0	0	66,860	0	0	
	2015	1,233	0	0	73,722	0	0	
	2016	1,612	0	0	73,303	0	0	
	2017	900	0	0	76,398	0	0	
	2018	750	0	0	75,851	0	0	
	2019	750	0	0	75,926	0	0	
	2020	750	0	0	76,000	0	0	
	Total				16,275			26,041
	<b>PINAL AMA</b>	Pre-plan <sup>3</sup>			306,968			
2011		124,000	0	0	-	-	-	
2012		124,000	0	0	-	-	-	
2013		124,000	0	0	-	-	-	
2014		140,000	0	0	-	-	-	
2015		140,000	0	0	-	-	-	
2016		140,000	0	0	-	-	-	
2017		140,000	0	0	-	-	-	
2018		140,000	0	0	-	-	-	
2019		140,000	0	0	-	-	-	
2020		140,000	0	0	-	-	-	
Total					306,968			
<b>TUCSON AMA</b>		Pre-plan <sup>3</sup>			2,846			51,700
	2011	7,000	0	0	60,250	0	0	
	2012	7,000	0	0	63,500	0	0	
	2013	7,000	0	0	63,500	0	0	
	2014	7,000	0	0	63,500	0	0	
	2015	7,000	0	0	63,500	0	0	
	2016	7,000	0	0	63,500	0	0	
	2017	7,000	0	0	63,900	0	0	
	2018	7,000	0	0	63,500	0	0	
	2019	7,000	0	0	63,500	0	0	
	2020	7,000	0	0	63,500	0	0	
	Total				2,846			51,700

Footnotes:

- (1) The ten-year plan does not include a component for General Fund appropriations.
- (2) The on-river M&I firming target is 420,000 AF.
- (3) Cumulative totals for 1997-2010.

**APPENDIX G**  
**Credits Developed Utilizing Funds Dedicated for Shortage Reparations <sup>1</sup>**  
(Acre-feet)

PHOENIX AMA	Year	Groundwater Savings			Underground Storage		
		Capacity Available <sup>2</sup>	Capacity Used	Credits Earned	Capacity Available	Capacity Used	Credits Earned
	Pre-plan <sup>3</sup>			4,590			16,051
2011	1,210	0	0	50,173	0	0	
2012	1,894	126	117	49,661	1,978	1,839	
2013	1,050	105	97	57,106	421	392	
2014	1,050	0	0	66,860	0	0	
2015	1,233	0	0	73,722	0	0	
2016	1,612	0	0	73,303	0	0	
2017	900	0	0	76,398	0	0	
2018	750	0	0	75,851	0	0	
2019	750	0	0	75,926	0	0	
2020	750	0	0	76,000	0	0	
Total			4,804			18,282	

PINAL AMA	Year	Groundwater Savings			Underground Storage		
		Capacity Available <sup>2</sup>	Capacity Used	Credits Earned	Capacity Available	Capacity Used	Credits Earned
	Pre-plan <sup>3</sup>			60,386			
2011	124,000	0	0	-	-	-	
2012	124,000	9,500	8,835	-	-	-	
2013	124,000	7,636	7,101	-	-	-	
2014	140,000	0	0	-	-	-	
2015	140,000	0	0	-	-	-	
2016	140,000	0	0	-	-	-	
2017	140,000	0	0	-	-	-	
2018	140,000	0	0	-	-	-	
2019	140,000	0	0	-	-	-	
2020	140,000	0	0	-	-	-	
Total			76,322				

TUCSON AMA	Year	Groundwater Savings			Underground Storage		
		Capacity Available <sup>2</sup>	Capacity Used	Credits Earned	Capacity Available	Capacity Used	Credits Earned
	Pre-plan <sup>3</sup>			0			1,192
2011	7,000	0	0	63,500	0	0	
2012	7,000	0	0	63,500	9,988	9,289	
2013	7,000	0	0	63,500	8,166	7,594	
2014	7,000	0	0	63,500	0	0	
2015	7,000	0	0	63,500	0	0	
2016	7,000	0	0	63,900	0	0	
2017	7,000	0	0	63,500	0	0	
2018	7,000	0	0	63,500	0	0	
2019	7,000	0	0	63,500	0	0	
2020	7,000	0	0	63,500	0	0	
Total			0			18,075	

Footnotes:

- (1) \$8 million received from Nevada pursuant to the Arizona-Nevada Shortage-Sharing Agreement to assist Arizona in offsetting the impacts of shortages during the Interim Period.
- (2) The capacity available is based on the capacity remaining at the USFs and GSFs after all higher priority demands have been met.
- (3) Cumulative totals for 1997-2010.

**APPENDIX H**  
**Credits Developed Utilizing Indian Settlement Appropriations <sup>1</sup>**  
(Acre-feet)

	Year	Groundwater Savings			Underground Storage		
		Capacity Available	Capacity Used	Credits Earned	Capacity Available	Capacity Used	Credits Earned
<b>PHOENIX AMA</b>	Pre-plan			0			0
	2011	1,210	0	0	50,173	0	0
	2012	1,894	0	0	49,661	0	0
	2013	1,050	0	0	57,106	0	0
	2014	1,050	0	0	66,860	0	0
	2015	1,233	0	0	73,722	0	0
	2016	1,612	0	0	73,303	0	0
	2017	900	0	0	76,398	0	0
	2018	750	0	0	75,851	0	0
	2019	750	0	0	75,926	0	0
	2020	750	0	0	76,000	0	0
	Total			0			0
<b>PINAL AMA</b>	Pre-plan			0			
	2011	124,000	0	0	-	-	-
	2012	124,000	0	0	-	-	-
	2013	124,000	0	0	-	-	-
	2014	140,000	0	0	-	-	-
	2015	140,000	0	0	-	-	-
	2016	140,000	0	0	-	-	-
	2017	140,000	0	0	-	-	-
	2018	140,000	0	0	-	-	-
	2019	140,000	0	0	-	-	-
	2020	140,000	0	0	-	-	-
	Total			0			
<b>TUCSON AMA</b>	Pre-plan			0			28,481
	2011	7,000	0	0	63,500	0	0
	2012	7,000	0	0	63,500	0	0
	2013	7,000	0	0	63,500	0	0
	2014	7,000	0	0	63,500	0	0
	2015	7,000	0	0	63,500	0	0
	2016	7,000	0	0	63,900	0	0
	2017	7,000	0	0	63,500	0	0
	2018	7,000	0	0	63,500	0	0
	2019	7,000	0	0	63,500	0	0
	2020	7,000	0	0	63,500	0	0
	Total			0			28,481

Footnotes:

- (1) The State Indian firming target is estimated at 550,000 AF.
- (2) Credits accrued through the expenditure of \$3 million for assisting Federal government in meeting its firming obligation under Section 306 of the Arizona Water Settlements Act.

**APPENDIX I**  
**Potential Credits Developed for Interstate Water Banking<sup>1</sup>**  
(Acre-feet)

<b>Year</b>	<b>Available CAP Supplies<sup>2</sup></b>	<b>Available AWBA Capacity<sup>3</sup></b>	<b>Remaining Supply<sup>4</sup></b>	<b>Interstate Credits<sup>5</sup></b>
Pre-plan <sup>6</sup>				582,772
2011	0	115,684	0	0
2012	0	119,353	0	0
2013	0	133,641	0	0
2014	0	162,524	0	0
2015	0	167,161	0	0
2016	0	171,333	0	0
2017	17,884	192,696	0	16,632
2018	21,024	195,052	0	19,552
2019	17,524	195,246	0	16,298
2020	15,048	195,226	0	13,995
<b>Total</b>				<b>649,249</b>

Footnotes:

- (1) The AWBA has an obligation to have 1,250,000 acre-feet of credits for the SNWA.
- (2) Water available for Interstate Banking is calculated by subtracting the water delivered and stored by the AWBA for intrastate water banking from the total water supply available for the AWBA (see Appendix B).
- (3) Reflects the unused capacity available to the AWBA at USFs and GSFs in the Phoenix, Pinal, and Tucson AMAs. Additional capacity may be available at individual facilities based on the utilization by individual water storage permit holders.
- (4) Remaining supplies after subtracting the water delivered and stored by the AWBA for intrastate water banking and water delivered for interstate water banking.
- (5) Based on the Available Supplies or the Available AWBA Capacity, whichever is less, available funding and an annual limitation of 200,000 AF/YR.
- (6) Cumulative totals for 2002-2010; 2010 credits estimated based on projected deliveries.

## **APPENDIX J**

### **CAWCD PROCEDURE TO DISTRIBUTE EXCESS WATER IN 2010 THROUGH 2014 Adopted June 4, 2009**

Staff has worked with stakeholders to develop procedures that balance competing interests for the limited supply of Excess CAP water. The outcome of this "Access to Excess" process is a Staff Proposal that relies, where possible, on consensus among the stakeholders.

From the total available Excess supply, the Agricultural Settlement Pool is filled first, and is not subject to "Access to Excess" provisions. The Staff Proposal then creates four separate pools, in effect for a five year period (2010 through 2014). The pools are: AWBA & CAGRDR Replenishment Reserve; CAGRDR Annual Replenishment; Municipal; Industrial & Other.

The AWBA and CAGRDR Replenishment Reserve share a pool of a fixed volume of 175,000 acre-feet (AWBA/RR pool). Allocation within this pool is set as part of the existing annual AWBA-CAWCD coordination and public meetings. AWBA may use the water for any authorized purpose.

The pool established for the CAGRDR's annual replenishment is capped at 35,000 acre-feet. The remaining volume is split evenly between a Municipal pool and an Industrial & Other pool. Water not used by the AWBA or CAGRDR in either of their pools is split between the Municipal pool and the Industrial & Other pool.

The Municipal Pool is for public & private water providers. Access within the pool incorporates two different approaches: historic use, and equal shares. Historic use is based on each provider's maximum use (Incentive plus Full Cost Excess) between 2005 and 2009. In the first year (2010), historic use is the primary allocation mechanism (90%), with a small volume (10%) apportioned equally. By the fifth year (2014), the two approaches have equal weighting.

The Industrial & Other pool is open to all other users, but is broken into two tiers—Industrial Tier (direct use or users storing water for a specific project) and Remarketer Tier (users storing water for future credit resale). All of the orders for the Industrial Tier users will be filled before allocating and filling orders for the Remarketer Tier. Access within the pool is based on a three year rolling average of actual water deliveries for each entity. Small users (orders less than 1,000 acre feet/year) will receive their full order as long as that order is not greater than in the previous three years.