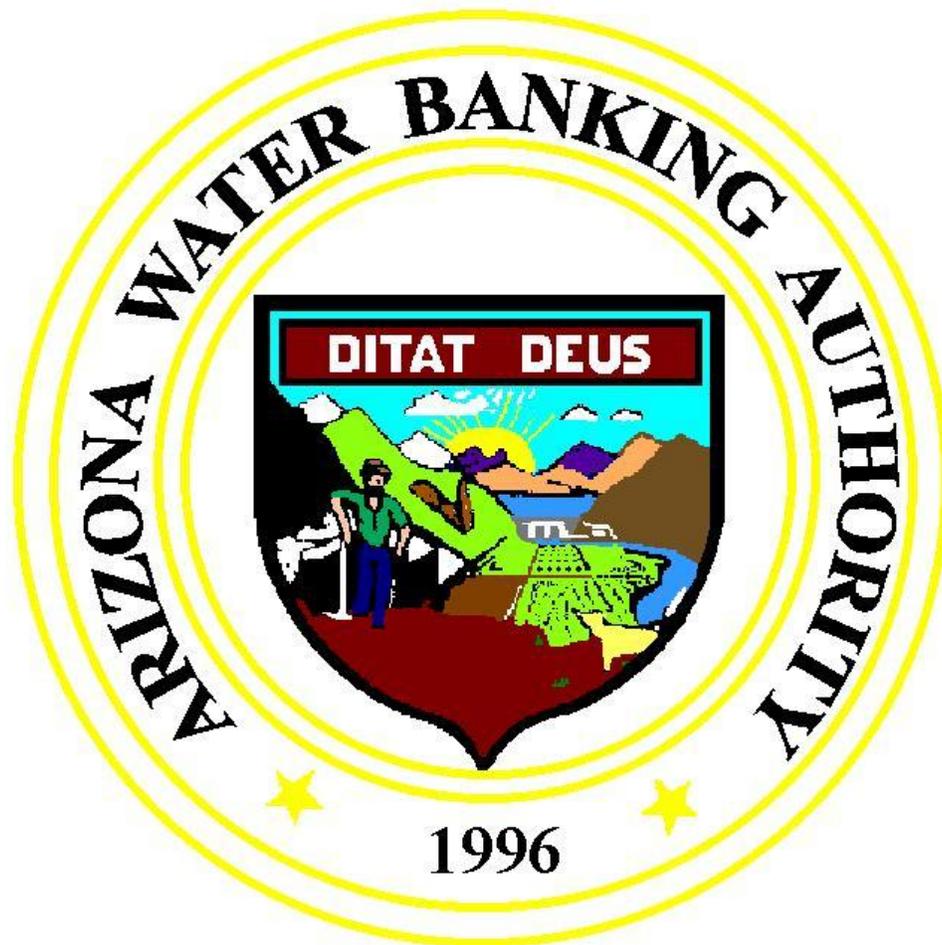


ARIZONA WATER BANKING AUTHORITY

ANNUAL REPORT
2010



Submitted

July 1, 2011

Arizona Water Banking Authority

Annual Report 2010

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

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*Chairman***

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

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The Honorable Steve Pierce
The Honorable Andy Tobin

July 1, 2011

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

Dear Governor Brewer:

Enclosed is the Annual Report of the Arizona Water Banking Authority (AWBA). The Annual Report details the activities of the AWBA for calendar year 2010, including the volume of water stored, the monies received and expended from the AWBA fund for the delivery and storage of excess CAP water and the remaining AWBA fund balances 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.

This Annual Report is the 15th Annual Report submitted by the AWBA and many things have changed since the first year of AWBA operations. The AWBA still plays an important role in insuring that Arizona maximizes use of its Colorado River entitlement, however, this year's Ten-Year Plan shows that both the availability of water, and in some areas such as the Tucson Active Management Area, funding may impact the ability of the AWBA to meet some of its obligations. The 1996 Annual Report stated that "The Authority was envisioned to take unused Colorado River water and store that water in Arizona for future use..." and through 2010 over 3.5 million acre-feet of water has been stored for this purpose. Lastly, the 1996 Annual Report envisioned the possibility of water storage in Arizona to benefit our sister states in the Lower Basin. The AWBA has entered into agreements for both storage and recovery of water for Nevada. Through 2010 over 600,000 acre-feet has been stored on Nevada's behalf.

I am pleased to submit this report detailing the accomplishments of the AWBA. I am proud of the accomplishments of the AWBA over the last 15 years and am confident the AWBA will continue to be an important component of Arizona's water future.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sandra Fabritz-Whitney', written in a cursive style.

Sandra Fabritz-Whitney
Chairman

CC: The Honorable Russell Pearce, President of the Arizona State Senate
The Honorable Andy Tobin, Speaker of the Arizona House of Representatives
The Honorable Steve Pierce, Arizona State Senate

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Acronyms and Abbreviations

ADWR	Arizona Department of Water Resources
AF	Acre-foot
Agreement to Firm	Agreement to Firm Future Supplies executed February 4, 2005 between the Arizona Water Banking Authority and the Mohave County Water Authority
Amended Agreement to Firm	Amended Agreement to Firm Future Supplies executed March 17, 2010.
AMA	Active Management Area
AWBA	Arizona Water Banking Authority
AWB Fund	Arizona Water Banking Fund
AWSA	Arizona Water Settlements Act
CAGR D	Central Arizona Groundwater Replenishment District
CAP	Central Arizona Project
CAWCD	Central Arizona Water Conservation District
GSF	Groundwater Savings Facility
ICUA	Intentionally Created Unused Apportionment
IGA	Intergovernmental Agreement
JLBC	Joint Legislative Budget Committee
M&I	Municipal and Industrial
MAF	Million acre-feet
MCWA	Mohave County Water Authority
MDWID	Metropolitan Domestic Water Improvement District
Metropolitan	Metropolitan Water District of Southern California
NIA	Non-Indian Agriculture
Plan	Annual Plan of Operation
Reclamation	U.S. Bureau of Reclamation
Recovery Agreement	Recovery Agreement executed June 9, 2010 among the Arizona Water Banking Authority, the Central Arizona Water Conservation District, the Southern Nevada Water Authority and the Colorado River Commission of Nevada
Second Amended Agreement	Second Amended Agreement for Interstate Water Banking signed December 9, 2010 between the Arizona Water Banking Authority and the Southern Nevada Water Authority and the Colorado River Commission of Nevada
SNWA	Southern Nevada Water Authority
SSRB	Southside Replenishment Bank
USF	Underground Storage Facility
WMAT	White Mountain Apache Tribe

Summary

The Arizona Water Banking Authority (AWBA) was created in 1996 to store the unused portion of Arizona's annual allocation of Colorado River water. Until the AWBA was created, Arizona had not fully utilized its 2.8 million acre-foot (MAF) allocation of Colorado River water and the state's leaders recognized that leaving a portion of Arizona's allocation in the river was a lost opportunity. The AWBA was created to provide assurances that water users within the state had secure, long-term water supplies.

The AWBA stores Colorado River water that would have otherwise been unused to accomplish the following goals:

- To firm (insure the availability of) water supplies for municipal and industrial users in the Central Arizona Water Conservation District (CAWCD) service area and along the Colorado River in times of shortages;
- To fulfill the management plan objectives of the Arizona Groundwater Code;
- To assist in the settlement of Indian water rights claims; and
- To assist Nevada and California through interstate water banking.

Each year, the AWBA pays the water delivery and storage costs to bring Colorado River water into Central and Southern Arizona through the Central Arizona Project (CAP) canal. The water is either stored underground in aquifers (direct recharge) at underground storage facilities (USF) or is used by irrigation districts in lieu of pumping groundwater (indirect or in lieu recharge) at groundwater savings facilities (GSF). The AWBA accrues a long-term storage credits that can be recovered and used in the future during times of a shortage in supply, either by Arizona or by Nevada.

The funding for water storage that benefits Arizona (intrastate storage) comes from three sources. There are restrictions regarding the manner in which these funds can be expended based 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.
- A general fund appropriation received at the discretion of the Legislature.

In addition to these three sources of funding, an additional \$8 million for intrastate storage was made available from the Southern Nevada Water Authority (SNWA) pursuant to the Arizona-Nevada Shortage Sharing Agreement. This fund, referred to as the Shortage Reparation Fund, is intended to assist Arizona in storing water to offset impacts from Colorado River shortages that may occur during the Interim Period (2008 through 2026). Water was stored in 2010 using just under \$700,000 in Shortage Reparation Funds. In addition to the funding sources for intrastate storage, the AWBA also uses funds provided by Nevada pursuant to the Second Amended Agreement for Interstate Water Banking (2nd Amended Agreement) to create credits for the benefit of Nevada.

In calendar year 2010, the AWBA delivered for recharge a total of 211,712 acre-feet at a cost of \$29.9 million. Of that amount, 192,712 acre-feet were for intrastate storage at a cost of \$26.1 million

and 19,000 acre-feet were for interstate storage at a cost of \$3.8 million. The AWBA paid for the delivery of 1,000 acre-feet to the Gila River Indian Community for the Southside Replenishment Bank (SSRB) as mandated by the intergovernmental agreement between the AWBA and the Gila River Indian Community.

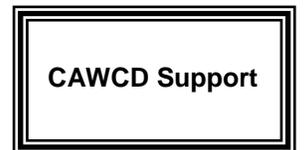
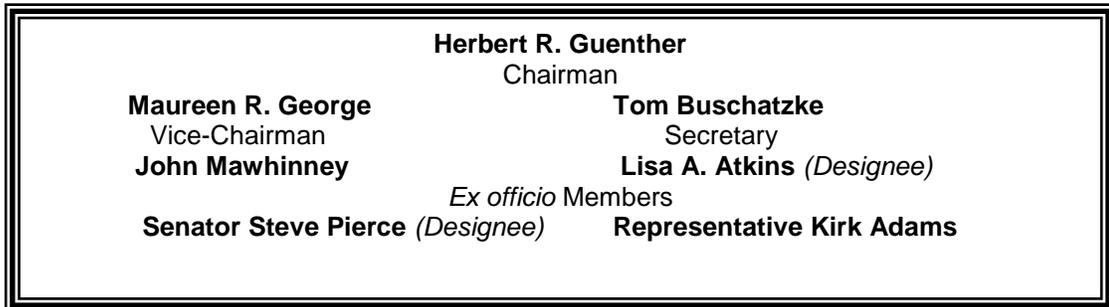
From inception through calendar year 2010, the AWBA has accrued approximately 3,515,926 acre-feet of credits at a cost of \$272,164,583. Of this total volume, intrastate credits totaled 2,965,275 acre-feet at a cost of \$163,076,761 or \$55.00 per acre-foot and interstate credits totaled 550,651 acre-feet at a cost of \$109,087,822 or \$198.10 per 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 600,651 acre-feet of credits available for Nevada.

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.

Organizational Chart



Update

On June 4, 2009, the CAWCD Board adopted the Procedure to Distribute Excess Water in 2010 through 2014. This policy, also termed Access to Excess, was developed due to the ever-increasing demand for water in the Excess class. The policy created four pools, one of which is 175,000 acre-feet shared between the AWBA, the Central Arizona Groundwater Replenishment District (CAGR) for replenishment reserve, and the Bureau of Reclamation (Reclamation) for Indian firming.

The original AWBA Plan of Operation for 2010 (Plan) identified 152,600 acre-feet available for intrastate storage from within the 175,000 acre-foot pool. There was no component for interstate storage in the original Plan due to limitations on water. In September, due to decreased demands along the Colorado River and the remarketing of previously allocated CAP supplies, CAWCD was able to make additional water available to the AWBA. The AWBA approved an Amended Plan that included an additional 57,000 acre-feet. The Amended Plan included 19,000 acre-feet scheduled for interstate storage to be done in the Phoenix and Tucson AMAs and utilized all storage facility capacity available to the AWBA. In 2010, the AWBA delivered 211,712 acre-feet of water for storage, 192,712 acre-feet for intrastate storage and 19,000 acre-feet for interstate storage. Additional information regarding water deliveries is provided later in this section.

In 2010, the AWBA continued its quarterly meeting schedule with meetings on March 17, June 16, September 15, and December 8, 2010. There were no special meetings held by the AWBA. AWBA staff attended recovery planning meetings at CAWCD that continued throughout 2010. CAWCD's most recent efforts focused on methods for recovering long-term storage credits and identification of recovery opportunities within the Phoenix, Pinal and Tucson Active Management Areas. At the August 2010 meeting, CAWCD staff briefed attendees on CAWCD's *Draft Guiding Principles for Recovery of Stored CAP Water* that outlined basic recovery concepts. It is anticipated that refinement of those concepts and development of recovery policies will continue in 2011.

There were no membership changes within the AWBA Commission in 2010 which is the time period covered by this Annual Report. [While Chairman Guenther served in 2010, he retired in January 2011 and Sandra Fabritz-Whitney was appointed Director of the Arizona Department of Water Resources (ADWR) and became the new Chair of the AWBA]. Senator Steve Pierce continued to serve as *ex officio* member pursuant to his designation by President of the Senate, Robert Burns. Speaker of the House of Representatives, Kirk Adams, also continued serving as *ex officio* member of the Commission. Lisa Atkins continued to serve in her role as designee of Susan Bitter Smith, President of the CAWCD Board. The AWBA was greatly saddened by the loss of Gregg Houtz who passed away on July 29, 2010. Ajita Athalye joined the AWBA staff part-time in June. Ms. Athalye will serve as a financial assistant to the AWBA.

The continuing struggle within Arizona to balance the budget impacted the Arizona Water Banking (AWB) Fund in 2010. House Bill 2001 (7th Special Session of the 49th Legislature) was signed into law on March 18, 2010. This bill addressed budget reductions and additional transfers for fiscal years 2009-2010 and 2010-2011 necessary to provide support and maintenance for state agencies. The total impact to the AWB Fund over the two fiscal years was \$5.65 million. Of this, \$5 million was from the Nevada Resource subaccount.

The CAWCD Board filed a petition for special action with the Arizona Supreme Court which claimed that the legislative transfer of funds from the AWB Fund's Nevada Resource subaccount was unconstitutional. This petition was denied by the Supreme Court without comment, consequently, the

CAWCD Board authorized attorneys to refile the lawsuit in Superior Court on February 3, 2010. [This case is titled LC2010-000468 and as of June 1, 2011, a final order had not yet been issued by Judge Kreamer. However, in April 2011, the court indicated that it would grant CAWCD's Motion for Summary Judgement].

In 2010, the AWBA delivered for recharge a total of 211,712 acre-feet of water for intrastate purposes and a total of 19,000 acre-feet were delivered for storage on behalf of the SNWA. The interstate credits accrued through 2010 are estimated at 600,651 acre-feet and fulfills about 48 percent of Arizona's obligation to Nevada under the 2nd Amended Agreement. The quantity of water received by each facility is described in Appendix A and totaled 92,460 acre-feet of water in the Phoenix AMA, 35,830 acre-feet of water in the Pinal AMA, and 83,422 acre-feet in the Tucson AMA.

In addition to the 2010 deliveries, 8,159 acre-feet of Intentionally Created Unused Apportionment (ICUA) were 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 third time, ICUA was certified in 2010. In June, 2010, the AWBA certified the creation of 27,504 acre-feet of ICUA in 2009.

Based on the Decree accounting data, total consumptive use of Colorado River water by Arizona for 2010 was 2.78 MAF. Distribution of the 2.78 MAF was approximately 1.13 MAF for direct uses along the Colorado River and CAP diversions of approximately 1.65 MAF (U.S. Bureau of Reclamation, Lower Colorado River Operations, Colorado River Accounting and Water Use Report – 2010, dated May 2011). In 2010, storage by the AWBA assisted Arizona in using its entitlement to Colorado River water.

For additional information regarding the AWBA, please see the AWBA website at www.azwaterbank.gov or contact Virginia O'Connell (voconnell@azwater.gov), Gerry Wildeman (glwildeman@azwater.gov) or Tim Henley (tjhenley@azwater.gov), or by phone at 602-771-8487.

Activities and Projects - 2010

Interstate Banking

Interstate water banking in Arizona continued to evolve in 2010 primarily as a result of the overall economic climate. The AWBA sub-account for Nevada had a balance of 600,651 acre-feet of long-term storage credits at the end of 2010. 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 2010 is displayed in Table 6b.

Letter Amendment to the Second Amended Agreement for Interstate Water Banking

The 2nd Amended Agreement, that was developed to address the evolving nature of interstate water banking, was approved in April 2009. The 2nd Amended Agreement included a subarticle that permitted modification of certain subarticles of the agreement to accommodate changing economic and hydrologic circumstances. As an example of changing circumstances, in both 2009 and 2010, there was agreement that it was unlikely the AWBA would store water for the SNWA, therefore the contractual payment schedule had been modified.

However, as 2010 drew to an end, it was recognized that the hydrologic conditions in the Colorado River had not improved. Current projections by Reclamation indicated a strong probability that the elevation of Lake Mead would decline over the following two years. Under the current Colorado River operational guidelines, the Secretary of the Interior will declare a shortage when the elevation of Lake Mead drops below 1075 feet. Additionally, recognizing its current operational limit is elevation 1050 feet, SNWA was in the process of constructing a lower intake. Consequently, the AWBA and SNWA agreed that it was appropriate to evaluate interstate water banking over the next several years and make some longer term modifications to the 2nd Amended Agreement.

As a result of the evaluation, the parties agreed that it was prudent for the AWBA to forego additional interstate water banking for SNWA through 2014 and for SNWA to forego requests for development of ICUA in the same time frame. The assumption was that this would assist in maintaining a higher elevation in Lake Mead. Additionally, in light of the operational adjustments and the fiscal needs of SNWA associated with construction of the new intake, the parties agreed that the payment dates in the 2nd Amended Agreement would be extended by six years. The result is that SNWA's obligation to make ten payments of \$23 million would resume in 2015 and end in 2024. The letter agreement to make operational adjustments and modify the payment schedule in the 2nd Amended Agreement was executed on December 9, 2010 and superseded all previous letter agreements.

Recovery Agreement

In addition to the operational parameters discussed above, the parties to the 2nd Amended Agreement and the CAWCD also initiated discussions in 2009 regarding details associated with recovery of long-term storage credits stored for both interstate and intrastate purposes. The Recovery Agreement Among the Arizona Water Banking Authority, the Central Arizona Water Conservation District, the Southern Nevada Water Authority and the Colorado River Commission of Nevada (Recovery Agreement), identifying the process for future recovery and providing for direct financial arrangements between SNWA and CAWCD for future recovery actions, was executed on June 9, 2010. Specifically, the Recovery Agreement established a recovery planning process that will initiate in 2015, mandated three years notice prior to actual recovery, addressed other entities use of CAWCD

recovery facilities, described the recovery mechanisms and provided for the SNWA and CAWCD to enter into separate agreements that address the financial components of recovery.

Interstate Water Banking Report

Since 2006, the AWBA has been required to submit a report to the Joint Legislative Budget Committee (JLBC) pursuant to A.R.S. § 45-2473. This report must be submitted by October 1 for the previous fiscal year if the AWBA was owed or received any monies pursuant to an interstate water banking agreement. The report shall account for all of the money received or disbursed pursuant to an interstate water banking agreement. By letter dated September 21, 2010, the AWBA transmitted the Interstate Water Banking Report for Fiscal Year 2009-2010 to the JLBC as required. A report that accounts for the distribution of interstate monies for the time period July 1, 2010 through June 30, 2011 will be submitted in October of 2011.

Amended 2010 Plan of Operation

The 2010 Plan of Operation did not include interstate storage on behalf of SNWA due to limited water availability. However, through CAWCD's remarketing process, 57,000 acre-feet of water became available to the AWBA. Consequently, the 2010 Plan was amended on September 15, 2010 to include the additional water. Planned utilization of the water included 38,000 acre-feet for storage for intrastate purposes and 19,000 acre-feet for interstate purposes with interstate storage being done in the Phoenix and Tucson AMAs. By the end of calendar year 2010, the AWBA was able to store 19,000 acre-feet of water on Nevada's behalf.

The AWBA sub-account for Nevada had a balance of 600,651 acre-feet of long-term storage credits at the end of 2010. Of that balance, 50,000 acre-feet of credits were transferred from CAWCD for water that was stored in the early 1990's. Annual interstate storage for 2002 through 2010 is shown in Table 6b.

Acquisition of Additional Water Supplies

Discussions regarding the potential acquisition of additional water supplies to meet the AWBA's obligation to SNWA continued through calendar year 2010. At the December 16, 2009 AWBA meeting, an update on the issue was provided and the Authority was informed that additional work would entail hiring a consultant. At the meeting, CAWCD indicated that they could potentially hire the consultant because the scope of work would be very similar to a scope of work needed by CAWCD for use by the CAGR. In January 2010, CAWCD contracted with Tom Carr, a recent ADWR retiree with extensive experience working with Colorado River communities, to complete the evaluation through June 2010.

At the March, 2010 AWBA meeting, Mr. Carr provided a progress report on the scope of work that included description and screening of potential water supplies, meetings and interviews with potential partners or stakeholders, and identification of mechanisms for acquiring the supplies. The progress report includes a summary of potential water supplies, a general schedule of when CAGR will need the additional supplies, a summary of the volume needed by AWBA to meet the interstate obligation to SNWA, and next steps.

Later in the year, as the Navajo-Hopi Indian Settlement discussions progressed, it became apparent that the AWBA's needs may be different than CAWCDs and may include acquiring additional supplies to meet Indian firming obligations. Consequently, the AWBA requested ADWR contract with Mr. Carr

to assist the AWBA in identifying opportunities for acquiring additional supplies. The scope of work in this contract included: advise AWBA on availability and suitability of water supplies to meet AWBA obligations; prepare reports and presentations to Authority; conduct interviews regarding availability of water supplies; facilitate public meetings; and advise and assist with preparation of agreements and contracts. The AWBA planned a special Water Supply Workshop for January 10, 2011 that included a presentation regarding the consultant's initial findings.

Intentionally Created Unused Apportionment

Requests and Development

For the fourth year, ICUA was developed in 2010 for Metropolitan Water District of Southern California (Metropolitan). In December, 2009 the AWBA notified Reclamation that an estimated 8,663 acre-feet of ICUA would be created in 2010. By year's end, an estimated 8,159 acre-feet of ICUA was developed through recovery of long-term storage credits from wells within three irrigation districts in Pinal County: Central Arizona Irrigation and Drainage District; Maricopa-Stanfield Irrigation & Drainage District; and Hohokam Irrigation and Drainage District and the exchange of the recovered water with same districts their CAP water. The development of ICUA in 2010 fully utilized the long-term storage credits earned by Metropolitan in Arizona. Below is a table summarizing the ICUA developed for the benefit of Metropolitan. Unless an interstate water banking agreement is executed with entities in California in the future, there will be no additional development of ICUA for California.

Development of ICUA for the Benefit of Metropolitan

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
2010	8,159	-	8,159	-
Total	74,026	6,883	80,909	-

Certification

AWBA is required to certify the creation of ICUA to the Secretary of the Interior, Metropolitan, and CAWCD in the year following development of the ICUA. Following ADWR's review of the 2009 annual reports and verification of the recovery of long-term storage credits, in a letter dated June 11, 2010, the AWBA certified the creation of 27,504 acre-feet of ICUA for 2009.

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 Mohave County Water Authority (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 the 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 the 4¢ *ad valorem* tax. CAWCD refers to this cost component as the property tax equivalent. The property tax equivalent for 2005 was \$20 per acre-foot. The AWBA has utilized monies collected from MCWA to make the property tax equivalent payments to CAWCD. The final payment due under the Agreement to Firm was made by MCWA in November of 2010 for the first quarter of 2011.

Due to the acquisition of additional Colorado River entitlements by the MCWA and their desire to include these new supplies within the Agreement to Firm, the AWBA approved a resolution and executed an amended agreement. Resolution 2010-1 of the Authority established the procedure by which fourth priority on-river M&I water users not party to the Agreement to Firm can participate in a firming agreement with the AWBA and establishes that the agreements would be similar to the Agreement to Firm. This resolution was adopted at the March 17, 2010 AWBA meeting.

The Amended Agreement to Firm Future Supplies (Amended Agreement to Firm) was also approved at the same meeting; it had been previously approved by the MCWA on March 9, 2010. The Amended Agreement to Firm included a new exhibit, Exhibit C, which was developed based on Resolution 2010-1 and included the addition of the MCWA and an increased firming obligation for Bullhead City and Lake Havasu City. Exhibit C reserved an additional 25,894 acre-feet of credits for those entities. The Amended Agreement to Firm was considered fully executed with the execution of Exhibit C on December 8, 2010. Pre-payment for the new volume firming by Exhibit C will begin July 1, 2011.

Indian Firming Program

White Mountain Apache Tribe

The White Mountain Apache Tribe (WMAT) Water Rights Quantification Act signed on December 8, 2010 ratified the earlier quantification agreement that had been executed in January of 2009. Of significance to the AWBA is the State of Arizona's obligation to firm 3,750 acre-feet of the WMAT's CAP Non-Indian Agriculture (NIA) Priority water for one hundred years, beginning January 1, 2008. This firming volume is part of the state's obligation to firm 8,724 acre-feet of water associated with future Indian water rights settlements under the Arizona Water Settlements Act (AWSA).

Specifically, the AWBA, on behalf of the state, must firm the 3,750 acre-feet of water to a priority equivalent to CAP M&I Priority water so that during declared Colorado River shortages the WMAT CAP NIA Priority water will be delivered in the same manner as non-firmed CAP M&I Priority water. The AWBA's obligation is tied to the enforceability date; no firming is required until after enforceability. The deadline to meet the conditions necessary to achieve enforceability of the agreement is April 30, 2021.

Northeastern Arizona Indian Water Rights Settlement

At the beginning of 2010, the Navajo and Hopi Tribes were still negotiating in an effort to reach consensus on the components of the settlement agreement. Additionally, the other parties to the agreement had not yet reached consensus. Specifically, the State of Arizona expressed concerns

about signing the agreement until the source of funds that would be used to meet the state's obligation had been identified. The state's obligation under this settlement represented a significant addition to the state's already existing Indian firming obligation. This is significant to the AWBA because the AWBA has assumed the state's obligations in earlier Indian settlements and could be required to assume this additional obligation. Throughout 2010, discussions associated with this settlement remained on-going and no agreements were executed.

Southside Replenishment Bank

In 2009, the AWBA entered into an intergovernmental agreement (IGA) with the Gila River Indian Community for direct delivery of water for the purpose of establishing the SSRB as mandated by the AWRSA. The first requisite delivery was made in 2009. In 2010, an additional 1,000 acre-feet of water were delivered pursuant to the IGA bringing the total volume of the SSRB to 2,000 acre-feet. By memorandum dated September 23, 2010, the AWBA was informed by ADWR that there were no irrigation replenishment obligations for the 2009 reporting year. It is not anticipated that there will be irrigation replenishment obligations for the 2010 reporting year, but that information will not be available until later in 2011 and will be reported in the 2011 Annual Report.

2011 Plan of Operation

Pursuant to the 2011 Plan approved December 8, 2010, projected deliveries for the AWBA are 136,441 acre-feet for intrastate storage and 1,000 acre-feet for direct delivery to the Gila River Indian Community for the SSRB. Of the quantity to be delivered for intrastate storage, 108,886 acre-feet are projected to be recharged at USFs and 27,555 acre-feet at GSFs. The 2011 Plan is the second plan of operation that included differing cost share structures for GSF partners based on AMA. The cost share for GSF partners in the Tucson AMA was \$15 per acre-foot and in the Phoenix and Pinal AMAs it was \$33 per acre-foot. There was no interstate storage planned for 2011. If opportunities for interstate storage arise, the 2011 Plan would require amendment to permit interstate water banking.

Agreement and Facility Permit Activity

The AWBA executed one new agreement for water storage in 2010. The water storage agreement for the Avra Valley Recharge project was executed with Metropolitan Domestic Water Improvement District (MDWID) on December 20, 2010. This new agreement was necessary because the MDWID purchased the facility from the CAWCD.

The AWBA submitted applications to renew three water storage permits on September 29, 2010. The facilities and volumes for which applications were made were: Queen Creek Irrigation District (28,000 acre-feet); Central Arizona Irrigation and Drainage District (110,000 acre-feet); and Maricopa-Stanfield Irrigation and Drainage District (120,000 acre-feet). The water storage permits were not issued in 2010.

Website

Staff continue to utilize the AWBA website in the effort to provide timely and accurate information regarding the AWBA's activities to the water community: 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.

Monies Expended from the Banking Fund

Arizona Revised Statutes §45-2425 mandates the various sources of monies for the AWB Fund that is administered by the AWBA per the statute. In 2010, 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 2010. In June of 2009, 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 money was deposited in the AWB Fund in 2010.
4. Pursuant to the Agreement to Firm, MCWA agreed to prepay the AWBA to set aside 230,280 acre-feet of credits that were transferred to the MCWA sub-account. Once the 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 the 4¢ *ad valorem* tax. Monies collected from MCWA are used to offset the CAWCD fees which are charged at the same rate and on the same quarterly schedule as MCWA's prepayments to the AWBA. The final payment due under the Agreement to Firm was made by MCWA in November of 2010 for the first quarter of 2011. Prepayments under the Amended Agreement to Firm do not begin until 2011.
5. The rate charged by CAP for AWBA Interstate Recharge water deliveries is comprised of four different components, three of which are reconcilable. The reconciliation of this rate for the 2009 interstate deliveries was completed in 2010 and yielded a refund to the AWBA which was utilized to pay for the 2010 interstate water deliveries. No additional funds were needed from SNWA to fund 2010 interstate water deliveries.
6. The AWBA utilized \$691,823 in Shortage Reparation Funds made available by SNWA upon request.

Table 1 shows the money the AWBA collected and the money that was expended for delivery and storage of water in 2010 by source of funds. Table 2 shows the total money received, expended and remaining through December 2010 by source of funds.

Table 1. Monies Collected and Expended in 2010 by Source of Funds

Source of Funds	Money Collected	Money Expended
General Funds	\$0	\$0
In-Lieu Fund – MCWA Prepayments	\$921,120	\$921,120
State Indian Firming	\$0	\$0
Interstate Water Banking - Nevada		
Nevada Resource ¹	\$14,629	\$0
Operating ¹	\$12,241	\$3,825,350
Subtotal for Interstate	\$26,870	\$3,825,350
Shortage Reparations - NV	\$691,823	\$691,823
4¢ Ad valorem Tax²		
Maricopa County	\$0	\$11,312,248
Pinal County	\$0	\$1,819,600
Pima County	\$0	\$9,709,265
Subtotal for <i>Ad valorem</i>	\$0	\$22,841,113
Groundwater Withdrawal Fees		
Phoenix AMA	\$1,623,923	\$1,006,943
Pinal AMA	\$1,233,351	\$1,381,400
Tucson AMA	\$438,467	\$224,668
Subtotal for Withdrawal Fees	\$3,295,741	\$2,613,011
TOTAL	\$4,935,554	\$30,892,417

¹ Amount collected is interest .

² Money expended by CAWCD to offset the AWBA delivery costs.

Table 2. Monies Collected and Expended through December 2010 and Monies Remaining Available

Source of Funds	Money Collected	Money Expended	Money Available ¹
General Funds	\$11,100,865	\$11,100,865	\$0
In-Lieu Fund - MCWA Pre-payments	\$4,605,600	\$4,605,600	\$0
State Indian Firming²	\$2,338,171	\$2,338,171	\$0
Interstate Water Banking-NV			
Pre-Amended Agreement	\$10,053,945	\$10,053,945	\$0
Nevada Resource ²	\$86,594,126	\$86,589,032	\$5,094 ³
Operating	\$12,697,697	\$12,444,845	\$252,852
Subtotal for Interstate	\$109,345,768	\$109,087,822	\$257,946
Shortage Reparations - NV	\$2,999,748	\$2,999,748	\$0.00
4¢ Ad valorem Tax⁴			
Maricopa County	\$181,231,014	\$72,402,805	\$108,828,209
Pinal County	\$8,144,184	\$7,433,465	\$710,719
Pima County	\$35,919,857	\$30,792,650	\$5,127,208
Subtotal for <i>Ad valorem</i>	\$225,295,054	\$110,628,919	\$114,666,135
Groundwater Withdrawal Fees			
Phoenix AMA ²	\$15,794,206	\$15,766,819	\$27,388
Pinal AMA ²	\$13,464,814	\$13,450,567	\$14,248
Tucson AMA ²	\$7,175,903	\$7,017,673	\$158,231
Subtotal for Withdrawal Fees	\$36,434,924	\$36,235,058	\$199,866
TOTAL	\$392,120,125	\$276,996,183	\$115,123,941

¹ Money remaining in AWB Fund or collected by CAWCD; includes monies committed for the 2011 Plan of Operation.

² Total money collected was decreased to reflect legislative transfers in CY 2004, CY 2005, CY 2009, and CY 2010.

³ Interest accrued prior to, but deposited after Legislative transfer in CY 2010.

⁴ Includes money collected and money expended by CAWCD to offset the AWBA delivery costs.

The AWBA continued to suffer severe impacts from legislative transfers in calendar year 2010 with a series of transfers totaling over \$5.6 million. Of this, \$5 million was from the Nevada Resource subaccount. Legislative transfers from the AWBA's inception through the end of fiscal year 2010-2011 total approximately \$47.9 million. Of this, approximately \$19.65 million was transferred from the Nevada Resource subaccount. The remaining \$28.25 million was transferred from the AWB Fund subaccounts that are used to store intrastate water including Indian firming. Throughout this process, AWBA staff continued to produce extensive spreadsheets and alternative scenarios for Authority members to enable them to evaluate the administrative and operational impacts of the legislative transfers on the AWBA's activities.

Long-term Storage Credits

The AWBA has established long-term storage credit accounts with ADWR for each AMA. After receiving the AWBA's annual reports, ADWR calculates and issues long-term storage credits to the appropriate accounts. The AWBA receives credit for 95 percent of the stored water. After credits are issued to the account, AWBA staff allocates the credits to the appropriate sub-accounts based on source of funding. The number and distribution of long-term storage credits for 2010 are listed in Table 3. The cumulative totals of long-term storage credits accrued by the AWBA through December 2010 are listed in Table 4.

Table 3. Number and Location of Long-term Storage Credits Accrued in 2010

Location and Funding Source		Long-term Storage Credits Accrued (acre-feet)
Phoenix AMA		
	4¢ <i>Ad valorem</i> Tax	75,830
	Groundwater Withdrawal Fee	6,744
	General Fund	0
	Indian Firming	0
	Shortage Reparations	0
	Interstate - Nevada	4,721
	AMA Total	87,295
Pinal AMA		
	4¢ <i>Ad valorem</i> Tax	15,162
	Groundwater Withdrawal Fee	11,105
	General Fund	0
	Indian Firming	0
	Shortage Reparations	4,396
	Interstate - Nevada	0
	AMA Total	30,663
Tucson AMA		
	4¢ <i>Ad valorem</i> Tax	62,217
	Groundwater Withdrawal Fee	1,430
	General Fund	0
	Indian Firming	0
	Shortage Reparations	1,227
	Interstate - Nevada	13,157
	AMA Total	78,031
Totals by Funding Source		
	4¢ <i>Ad valorem</i> Tax	153,210
	Groundwater Withdrawal Fee	19,279
	General Fund	0
	Indian Firming	0
	Shortage Reparations	5,623
	Interstate - Nevada	17,878
	TOTAL	195,989

Table 4. Cumulative Total and Location of Long-term Storage Credits Accrued through December 2010

Location and Funding Source	Long-term Storage Credits Accrued (acre-feet)
Phoenix AMA	
4¢ <i>Ad valorem</i> Tax	1,218,657
Groundwater Withdrawal Fee	268,985
General Fund	42,316
Indian Firming	0
Shortage Reparations	20,642
Interstate Water Banking - Nevada	51,008
AMA Total	1,601,608
Pinal AMA	
4¢ <i>Ad valorem</i> Tax	168,419
Groundwater Withdrawal Fee	373,231
General Fund	306,968
Indian Firming	0
Shortage Reparations	60,181
Interstate Water Banking - Nevada	439,851
AMA Total	1,348,651
Tucson AMA	
4¢ <i>Ad valorem</i> Tax	329,034
Groundwater Withdrawal Fee ¹	92,587
General Fund	54,546
Indian Firming	28,481
Shortage Reparations	1,227
Interstate Water Banking - Nevada	109,791
AMA Total	615,666
Totals by Source of Funds	
4¢ <i>Ad valorem</i> Tax	1,716,111
Groundwater Withdrawal Fee	734,803
General Fund ²	403,830
Indian Firming	28,481
Shortage Reparations	82,050
Interstate Water Banking – Nevada ³	600,651
TOTAL	3,565,925

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

² 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 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. An additional 25,894 acre-feet of credits have been reserved under Exhibit C the Amended Agreement to Firm, dated December 8, 2010, for a total of 256,174 acre-feet. By resolution passed in 2008, the AWBA established a replacement account for 4th priority Colorado River M&I users.

³ Includes 50,000 acre-feet of credits transferred to SNWA.

Since inception, the AWBA has focused its efforts on developing long-term storage credits for firming purposes. The AWBA has identified 2,700,000 acre-feet of credits as a reasonable amount of credits to firm the CAP M&I subcontracts over the next 100 years. This volume is divided based on a pro-rata distribution by county based on CAP M&I subcontracts as follows: 58 percent Maricopa County; 32 percent Pima County; and 9 percent Pinal County.

The AWBA has also identified 420,000 acre-feet of credits as reasonable amount of credits 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 will collect reimbursement for the replacement cost of credits used for on-river firming. In 2008, the AWBA executed Resolution 2008-1 that established a long-term storage credit replacement account for 4th 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 AWBA 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 2012-2021 and are subject to potential shortages discussed under recovery in the plan. For obligations that are not met in the ten-year plan, 2022 estimated costs were assumed when calculating the amount remaining to meet the goals.

As described in the Ten-Year Plan section of this report most of the firming 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 70 percent of the Tucson AMA firming goal will have been met by 2021. 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 \$500,000 per year), the firming goal would not be met until well beyond 2025. Therefore, estimated rates for 2022 were used to calculate the total remaining costs for the Tucson AMA firming goal. Expenditures under the ten-year plan for the Tucson AMA are estimated at \$31 million, utilizing *ad valorem* tax monies (\$26 million) and withdrawal fees (\$5 million), and the remaining costs, which would be limited to the use of withdrawal fees, are estimated at \$42 million for a total cost of \$73 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.

Although funding is not the limiting factor for meeting the Nevada contract obligation, the same assumption was used to calculate the remaining interstate costs because the amount of water available for this purpose after 2021 is not known. Interstate storage costs for the ten-year plan are estimated at \$23 million, which results in a cumulative balance of 652,851 acre-feet of credits. Utilizing 2022 rates to calculate the costs for accruing the remaining 597,149 acre-feet of credits, assuming average USF/GSF storage costs, would cost an additional \$112 million for a total cost of \$134 million.

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 GSF, could be used to meet the remaining 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 2010 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 ¹ Remaining Costs (\$ Million)
Phoenix AMA M&I Firming Groundwater Mgmt ²	<i>Ad valorem</i> tax Withdrawal Fees	1,566,000 AF			1,218,657 268,985	78% 95%	\$49
Pinal AMA M&I Firming Groundwater Mgmt ²	<i>Ad valorem</i> tax Withdrawal Fees	243,000 AF			168,419 373,231	69% 223%	\$5
Tucson AMA M&I Firming Groundwater Mgmt ²	<i>Ad valorem</i> tax Withdrawal Fees	864,000 AF			329,034 86,966	38% 48%	\$26 \$47
On-River M&I Firming³	General Fund	420,000 AF			403,830	96% ³	\$1.9
Indian Settlements: GRIC Firming Phoenix AMA Pinal AMA	Withdrawal Fees	350,000 AF ⁴	up to 15,000 AF/YR		0 ⁵	0%	\$11
Future Settlements	Withdrawal Fees	200,000 AF ⁴	up to 8,724 AF/YR		0 ⁵	N/A	\$19
Federal Assistance SAWRSA	Appropriation Withdrawal Fees Cost of Services ⁶		\$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		2,000	13%	\$1.8
Interstate Water Banking - NV	Contract with Nevada		1,250,000 AF ⁷		600,651	48%	\$134
Shortage Repairs- Nevada	Gifts, Grants, Donations	\$8,000,000		\$2,999,748	82,050	37%	\$5

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

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

³ 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. An additional 25,894 acre-feet of credits have been reserved under Exhibit C the Amended Agreement to Firm, dated December 8, 2010, for a total of 256,174 acre-feet.

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

⁵ No credits have been dedicated for this purpose but Withdrawal Fee Credits could be used if a shortage were to occur.

⁶ Expenditures include \$14,883 and \$16,456 deducted for payment of cost of services for FY 08 and FY 09, respectively.

⁷ 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 long-term storage credit for intrastate and interstate storage is presented in Tables 6a and 6b, respectively. Table 6a illustrates that the unit cost per credit for intrastate storage fluctuate yearly. CAWCD establishes the cost for delivery and storage of excess water. The significant increase for 2010 is due CAWCD eliminating the incentive recharge cost structure.

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

Year	Credits ¹	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 ²	97,540	\$6,977,590	\$71.54	76% : 24%
2010	178,111	\$26,027,947	\$146.13	21% : 79%

¹ Information in this table is reconciled on an annual basis.

² Does not include credits purchased pursuant to § 45-841.01.

Table 6b illustrates the unit cost per long-term storage credit for interstate als fluctuate yearly. No interstate storage occurred in 2008.

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

Year	Credits	Funds Expended	Average Cost (per acre-foot)	% Stored in GSF: % Stored in USF
2002	61,098	\$8,617,393	\$141.04	100% : 0%
2003	50,000 ¹			
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%
2010	17,879	\$3,825,350	\$213.96	0% : 100%

¹ Long-term Storage Credits transferred from CAWCD.

Long-term Storage Credits Distributed or Extinguished by the Authority

The long-term storage credits developed by the AWBA to date have been identified for five purposes: firming CAP M&I entitlements; firming the post-1968 M&I entitlements for entities outside the CAP service area; firming for the Federal obligation under the AWRSA; 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 2010. No credits were distributed or extinguished in 2010 for water management purposes.

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 2010, no credits were developed or distributed under such agreements.

The AWBA did not recover or distribute any credits in 2010, however, CAWCD did recover long-term storage credits held by CAWCD on behalf of Metropolitan. A total of 8,159 acre-feet of credits were recovered by CAWCD, extinguished from their long-term storage account and delivered to the irrigation districts in Pinal County in lieu of a portion their CAP agricultural pool water.

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 (Table 7) analyzes activity for the period 2012-2021 and was derived using the information found in Appendices A through J. AWBA accounting for previous years can be found in the 2009 Annual Report and 2011 Plan of Operation. AWBA staff developed the ten-year plan based on the following guiding principles:

1. Legislative transfers from the AWB 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 2012-2021.
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: 1) the next year's annual Plan of Operation and 2) policy guidelines for future AWBA activities.

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 nine water storage permits for GSFs with a total permitted storage capacity of 427,547.7 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 applied to the Tucson AMA in 2009 and 2010. Therefore GSF storage has been included in this ten-year plan for the Tucson AMA.

All 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. The AWBA will still pursue renewals of

its permits and agreements with those GSF operators who are interested in potential future partnerships with the AWBA.

The AWBA currently has nine water storage permits for USFs with a total permitted storage capacity of 561,000 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. However, the actual capacity used by these entities could be limited by the availability of water to those entities. The ten-year plan assumes that sufficient storage capacity exists to store the amount of water assumed to be 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, six of the USF permits will expire within this ten-year plan. 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 and the permits were assumed to be renewed.

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

ARIZONA WATER BANKING AUTHORITY – Ten-Year Plan																
2012 – 2021																
(Acre-feet)																
YEAR	(a) CAP Water Avail for AWBA	(b) CAP M&I Firming (4¢ tax)		(c) Water Management (Withdrawal Fees)		(d) Appropriation from General Fund		(e) Shortage Reparations (\$8 Million)		(f) Indian Settlement		(g) (h) (i) (j) (k) Interstate Banking				
		Del.	Credits	Del.	Credits	Del.	Credits	Del.	Credits	Del.	Credits	Water Avail.	AWBA Capacity Avail.	Credits	ICUA	Remaining Credits
Pre-Plan ^(h)	n/a	1,818,855		560,418		403,830		82,630		225,646				600,651		
2012	149,000	119,981	111,582	4,566	3,316	0	0	0	0	24,453	22,742	0	159,700	0	0	600,651
2013	148,000	119,412	111,053	4,452	3,211	0	0	0	0	24,136	22,446	0	166,000	0	0	600,651
2014	147,000	117,980	109,721	4,508	3,263	0	0	0	0	24,512	22,796	0	178,100	0	0	600,651
2015	146,000	117,448	109,226	4,425	3,185	0	0	0	0	24,127	22,438	0	179,000	0	0	600,651
2016	145,000	116,044	107,921	4,452	3,211	0	0	0	0	24,504	22,788	0	179,900	0	0	600,651
2017	144,000	101,785	94,660	4,414	3,175	0	0	0	0	24,499	22,784	13,302	193,102	12,371	0	600,651
2018	143,000	101,862	94,732	4,376	3,140	0	0	0	0	24,496	22,781	12,265	192,965	11,406	0	613,022
2019	142,000	101,939	94,803	4,339	3,105	0	0	0	0	24,495	22,780	11,227	192,827	10,441	20,000	624,428
2020	141,000	102,016	94,590	4,302	3,071	0	0	0	0	24,494	22,742	10,188	192,688	9,475	30,000	614,869
2021	140,000	102,092	94,660	4,266	3,037	0	0	0	0	24,495	22,743	9,147	192,547	8,507	40,000	594,344
TOTAL		2,841,803		592,132		403,830		82,630		452,686				652,851		

FOOTNOTES:

- (a) Assumes AWBA Pool of 175KAF less CAGR projected replenishment reserve and Bureau of Reclamation Indian firming uses. See Appendix B.
- (b) See Appendix D.
- (c) See Appendix E. Includes direct delivery of 1,000 AF of water each year to the Southside Replenishment Bank.
- (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 1997-2011; 2010 are actual credits and 2011 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 annual recovery as described in the Second Amended Agreement.
- (k) Credits remaining available in Nevada sub-account after recovery.

Table 8. AWBA Percentage of Goals Achieved through 2021

Location and Objective	Funding Source	Goal	Obligation	Non-Credit Goal/Oblig. Achieved	Credits ¹ Accrued (AF)	Percent Goal/Oblig. Achieved
Phoenix AMA M&I Firming ² Groundwater Mgmt ³	<i>Ad valorem</i> tax Withdrawal Fees	1,566,000 AF			2,138,563 118,855	137%
Pinal AMA M&I Firming ² Groundwater Mgmt ³	<i>Ad valorem</i> tax Withdrawal Fees	243,000 AF			220,575 220,510	91% 182%
Tucson AMA M&I Firming Groundwater Mgmt ³	<i>Ad valorem</i> tax Withdrawal Fees	864,000 AF			482,665 121,351	56% 70%
On-River M&I Firming⁴	General Fund	420,000 AF			403,830	96%
Indian Settlements⁵ GRIC Firming Phoenix AMA Pinal AMA	Withdrawal Fees	350,000 AF ⁶	up to 15,000 AF/YR		350,000 88,313 261,687	100%
Future Settlements	Withdrawal Fees	200,000 AF ⁶	up to 8,724 AF/YR		200,000	100%
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	13,000	0	87%
Interstate Water Banking - NV	Contract with Nevada		1,250,000 AF		652,851	52%
Shortage Repairs-Nevada	Gifts, Grants, Donations	\$8,000,000		\$2,999,748	82,050	37%

¹1997-2011; actual credits through 2010 and estimated credits for 2011 based on projected deliveries.

²The M&I firming goal for the Phoenix AMA is met in 2015. Firming goals may be exceeded if monies, water, and capacity are available.

³Pursuant 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, 70% of the Tucson AMA firming goal will be met by 2021. Existing withdrawal fee credits can be used to meet the Pinal AMA firming goal.

⁴By 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.

⁵A.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 59% of the GRIC and 64% of the future settlement firming goals are estimated to be met in 2021. 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.

⁶Based 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. The Second Amended Agreement authorizes Nevada to request development of ICUA, 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 all 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. Model analyses based on Reclamation's Colorado River System Simulation model indicate that by the end of the ten years there is approximately a one-in-four chance (25 percent probability) that shortages may occur. Using Arizona's assumptions in the model the probability of shortage could be reduced to approximately 10-15 percent. Shortages occur near the end of the period and the probability is low enough that a shortage delivery scenario was not evaluated in this ten-year plan. Under CAWCD's policy for distributing Excess water (Appendix J), shortages would first be applied to the M&I users in the excess pool. Absent this policy, the AWBA has the lowest priority for CAP water so any reduction in CAP supplies would impact the AWBA first.

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. If shortages do occur, they would most likely reduce excess CAP supply available for storage. However, a shortage could require the recovery of credits to meet some other firming obligations. 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 recover credits 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, recognizing the lead time to implement recovery, plans should be developed and put in place. AWBA, CAWCD and interested parties continue to evaluate recovery options and analyze 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 2011 the AWBA anticipates having stored over 1.8 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 ten-year plan does not include the expenditure of general fund appropriations.

Groundwater Withdrawal Fees

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, to implement the settlement of water rights claims by Indian communities in Arizona and to meet the AWBA SSRB obligation. This ten-year plan utilizes withdrawal fees to accrue long term storage credits and for the purchase of CAP water for the purpose of establishing the SSRB.

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 CAWCD 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. Any recovery needed to meet the AWBA's Indian firming obligations during shortages would require the use of withdrawal fee credits.

Funding for Interstate Banking

Provisions in the Second Amended Agreement allow the AWBA and the 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, 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, December 2007, and ending on December 31, 2025. The AWBA utilized a portion of these funds in 2008 for purchase and storage of CAP water. A final plan for the use of these funds has not yet been adopted by the Authority; therefore further expenditure of these funds has not been included in 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, 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 CAWCD's policy is effective through 2014, this ten-year plan assumes a similar policy will be in effect 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, updated in June of 2011, 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 AWRSA. The AWBA also has statutorily mandated responsibilities for the SSRB.

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 Gila River Indian Irrigation and Drainage District GSF. The AWBA retains full rights to the credits developed at the 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 initial SSRB obligation of 15,000 acre-feet. The AWBA will have delivered 3,000 acre-feet for this purpose by the end of 2011 and has identified an additional 10,000 acre-feet of deliveries under this plan, 1,000 acre-feet each year, leaving 2,000 acre-feet that must be delivered after 2021. 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 17, 2011. 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 percent, or 652,851 acre-feet of credits of the 1,250,000 acre-feet of credits needed to meet the Nevada obligation, could be created by 2021.

Although this ten-year plan identifies storage for interstate purposes beginning in 2017, 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 there is limited water 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 may not be sufficient Excess CAP water to meet the state's obligation to Nevada.
- 2) Funding becomes a limiting factor in both Pinal and Pima County.
- 3) The magnitude 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 farming.

Appendices

APPENDIX A
Colorado River Water Deliveries for Water Banking Purposes
for Calendar Year 2010 by Partner and Active Management Area

	Partner	Quantity of Water (Acre-feet)	
		Intrastate	Interstate
PHOENIX AMA	Agua Fria Recharge Project	2,604	
	Hieroglyphic Mountain Recharge Project	5,002	
	Tonopah Desert Recharge Project	79,545	5,000
	Queen Creek Irrigation District	309	0
	<i>Intrastate/Interstate AMA Subtotal</i>	87,460	5,000
	<i>Phoenix AMA Subtotal</i>	92,460	
	PINAL AMA	Central Arizona Irrigation and Drainage District	13,196
Hohokam Irrigation and Drainage District		7,000	0
Maricopa-Stanfield Irrigation and Drainage District		15,634	0
<i>Intrastate/Interstate AMA Subtotal</i>		35,830	0
<i>Pinal AMA Subtotal</i>		35,830	
TUCSON AMA	Avra Valley Recharge Project	3,777	546
	Lower Santa Cruz Recharge Project	20,645	8,454
	CAVSARP	0	5,000
	SAVSARP	41,000	0
	Cortaro-Marana Irrigation District	4,000	0
	<i>Intrastate/Interstate AMA Subtotal</i>	69,422	14,000
	<i>Tucson AMA Subtotal</i>	83,422	
TOTAL INTRASTATE & INTERSTATE DELIVERIES		192,712	19,000
TOTAL DELIVERIES		211,712	

Appendix B						
CAP Delivery Schedule						
(Acre-feet)						
Year	Total CAP Deliveries¹	M&I²	Indian³	Ag⁴	Banking Pool⁵	
					Federal & CAGR	AWBA
2012	1,525,000	759,000	366,000	400,000	26,000	149,000
2013	1,525,000	748,100	376,900	400,000	27,000	148,000
2014	1,525,000	746,600	378,400	400,000	28,000	147,000
2015	1,525,000	745,100	379,900	400,000	29,000	146,000
2016	1,525,000	743,600	381,400	400,000	30,000	145,000
2017	1,525,000	842,100	382,900	300,000	31,000	144,000
2018	1,525,000	840,600	384,400	300,000	32,000	143,000
2019	1,525,000	839,100	385,900	300,000	33,000	142,000
2020	1,525,000	837,600	387,400	300,000	34,000	141,000
2021	1,525,000	836,100	388,900	300,000	35,000	140,000

¹ Based on average diversion, less losses

² Includes excess CAP, and federal water used by M&I users through leases, exchanges and assignments

³ Includes on & off-reservation deliveries for Indian uses (including recharge)

⁴ Ag settlement pool water, including deliveries made to the Harquahala INA

⁵ Based on a planning assumption that CAWCD's current Access to Excess policy is extended

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

AMA and Facility Type ¹	Facility Permit Expiration	Facility Permitted Capacity (AF)	Capacity Available to AWBA ² (AF)	Year Water Last Stored	Volume of Water Last Stored (AF)
PHOENIX – GSF³					
Queen Creek ID	12/2015	28,000	7,000	2010	309
PHOENIX – USF					
Agua Fria Recharge Project	05/2019	100,000	5,000	2010	2,604
Hieroglyphic Mtns.	12/2021	35,000	5,000	2010	5,002
Tonopah Desert RP	09/2025	150,000	100,000	2010	79,545
West Maricopa Combine - USF	05/2021	25,000	5,000	4	0
PINAL – GSF					
Central Arizona IDD	12/2017	110,000	60,000	2010	13,196
Hohokam IDD	10/2012	55,000	20,000	2010	7,000
Maricopa-Stanfield IDD	12/2019	120,000	60,000	2010	15,634
TUCSON – GSF					
Cortaro-Marana ID	11/2013	20,000	5,000	2010	4,000
Kai-Farms – Red Rock	11/2016	11,231	2,000	2009	1,893
TUCSON – USF					
Avra Valley	03/2018	11,000	2,000	2010	4,323
CAVSARP	12/2028	100,000	10,000	2010	5,000
Lower Santa Cruz	02/2019	50,000	25,000	2010	29,099
Pima Mine Road	09/2020	30,000	5,000	2009	16
SAVSARP	01/2028	60,000	20,000	2010	41,000
Other Facilities Currently or Anticipated to be Available to the AWBA					
Superstition Mtn.-USF	01/2028	56,500 ⁵	10,000	6	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. Capacity available to the AWBA at the Avra Valley facility decreases 900 AF by 2021.
- (3) The AWBA also holds water storage permits at New Magma ID (54,000 AF), Tonopah ID (15,000 AF), and BKW Farms (16,000 AF) 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 25,000 AF per year.
- (6) Water Storage Permit application pending.

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

	Year	Groundwater Savings			Underground Storage		
		Capacity Available ⁴	Capacity Used	Credits Earned	Capacity Available ⁴	Capacity Used	Credits Earned
PHOENIX AMA²	Pre-plan ³			529,779			739,951
	2012	1,589	0	0	101,823	76,747	71,374
	2013	796	0	0	102,735	90,173	83,861
	2014	723	0	0	101,826	88,511	82,315
	2015	809	0	0	101,990	87,097	81,000
	2016	1,035	0	0	101,683	82,622	76,838
	2017	0	0	0	101,785	101,785	94,660
	2018	0	0	0	101,862	101,862	94,732
	2019	0	0	0	101,939	101,939	94,803
	2020	0	0	0	102,016	102,016	94,590
	2021	0	0	0	102,092	102,092	94,660
	Total			529,779			1,608,784
	PINAL AMA²	Pre-plan ³			175,444		
2012		116,635	17,566	16,336	-	-	-
2013		116,833	7,545	7,016	-	-	-
2014		128,439	7,529	7,002	-	-	-
2015		128,574	7,574	7,044	-	-	-
2016		128,279	8,315	7,733	-	-	-
2017		128,216	0	0	-	-	-
2018		128,141	0	0	-	-	-
2019		128,066	0	0	-	-	-
2020		127,990	0	0	-	-	-
2021		127,913	0	0	-	-	-
Total				220,575			
TUCSON AMA²		Pre-plan ³			11,188		
	2012	3,434	3,434	3,194	56,200	22,234	20,678
	2013	3,548	3,548	3,299	61,500	18,147	16,877
	2014	3,492	3,492	3,248	61,600	18,448	17,156
	2015	3,575	3,575	3,325	61,500	19,202	17,858
	2016	3,548	3,548	3,299	61,400	21,560	20,050
	2017	3,586	0	0	61,300	0	0
	2018	3,624	0	0	61,200	0	0
	2019	3,661	0	0	61,100	0	0
	2020	3,698	0	0	61,000	0	0
	2021	3,734	0	0	60,900	0	0
	Total			27,553			455,112

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 – 243,000 AF, and Tucson AMA – 864,000 AF.
- (3) Cumulative totals for 1997-2011; 2011 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 ¹
(Acre-feet)

	Year	Groundwater Savings			Underground Storage		
		Capacity Available ³	Capacity Used	Credits Earned	Capacity Available ³	Capacity Used	Credits Earned
PHOENIX AMA	Pre-plan ²			145,644			133,914
	2012	7,000	5,411	5,033	110,500	8,677	8,069
	2013	7,000	6,204	5,770	110,500	7,765	7,221
	2014	6,000	5,277	4,908	110,500	8,674	8,067
	2015	6,000	5,191	4,828	110,500	8,510	7,914
	2016	6,000	4,965	4,617	110,500	8,817	8,200
	2017	5,000	5,000	4,650	110,500	8,715	8,105
	2018	5,000	5,000	4,650	110,500	8,638	8,033
	2019	5,000	5,000	4,650	110,500	8,561	7,962
	2020	5,000	5,000	4,636	110,500	8,484	7,866
	2021	5,000	5,000	4,636	110,500	8,408	7,795
	Total			194,022			213,146
	PINAL AMA	Pre-plan ²			382,768		
2012		128,000	11,365	9,640	-	-	-
2013		128,000	11,167	9,455	-	-	-
2014		140,000	11,561	9,822	-	-	-
2015		140,000	11,426	9,696	-	-	-
2016		140,000	11,721	9,971	-	-	-
2017		140,000	11,784	10,029	-	-	-
2018		140,000	11,859	10,098	-	-	-
2019		140,000	11,934	10,168	-	-	-
2020		140,000	12,010	10,239	-	-	-
2021		140,000	12,087	10,311	-	-	-
Total				482,197			0
TUCSON AMA		Pre-plan ²			4,877		
	2012	7,000	3,566	3,316	56,200	0	0
	2013	7,000	3,452	3,211	61,500	0	0
	2014	7,000	3,508	3,263	61,600	0	0
	2015	7,000	3,425	3,185	61,500	0	0
	2016	7,000	3,452	3,211	61,400	0	0
	2017	7,000	3,414	3,175	61,300	0	0
	2018	7,000	3,376	3,140	61,200	0	0
	2019	7,000	3,339	3,105	61,100	0	0
	2020	7,000	3,302	3,071	61,000	0	0
	2021	7,000	3,266	3,037	60,900	0	0
	Total			36,591			90,381

- (1) Expenditure of withdrawal fees was given the highest priority.
(2) Cumulative totals for 1997-2011; 2011 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^{1,2}
(Acre-feet)

PHOENIX AMA	Year	Groundwater Savings			Underground Storage		
		Capacity Available	Capacity Used	Credits Earned	Capacity Available	Capacity Used	Credits Earned
	Pre-plan ³			16,275			26,041
2012	1,589	0	0	101,823	0	0	
2013	796	0	0	102,735	0	0	
2014	723	0	0	101,826	0	0	
2015	809	0	0	101,990	0	0	
2016	1,035	0	0	101,683	0	0	
2017	0	0	0	101,785	0	0	
2018	0	0	0	101,862	0	0	
2019	0	0	0	101,939	0	0	
2020	0	0	0	102,016	0	0	
2021	0	0	0	102,092	0	0	
Total			16,275			26,041	

PINAL AMA	Year	Groundwater Savings			Underground Storage		
		Capacity Available	Capacity Used	Credits Earned	Capacity Available	Capacity Used	Credits Earned
	Pre-plan ³			306,968			
2012	128,000	0	0	-	-	-	
2013	128,000	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	-	-	-	
2021	140,000	0	0	-	-	-	
Total			306,968				

TUCSON AMA	Year	Groundwater Savings			Underground Storage		
		Capacity Available	Capacity Used	Credits Earned	Capacity Available	Capacity Used	Credits Earned
	Pre-plan ³			2,846			51,700
2012	7,000	0	0	56,200	0	0	
2013	7,000	0	0	61,500	0	0	
2014	7,000	0	0	61,600	0	0	
2015	7,000	0	0	61,500	0	0	
2016	7,000	0	0	61,400	0	0	
2017	7,000	0	0	61,300	0	0	
2018	7,000	0	0	61,200	0	0	
2019	7,000	0	0	61,100	0	0	
2020	7,000	0	0	61,000	0	0	
2021	7,000	0	0	60,900	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 1997-2011.

APPENDIX G
Credits Developed Utilizing Funds Dedicated for Shortage Reparations ¹
(Acre-feet)

PHOENIX AMA	Year	Groundwater Savings			Underground Storage		
		Capacity Available ²	Capacity Used	Credits Earned	Capacity Available	Capacity Used	Credits Earned
	Pre-plan ³				4,590		
2012	1,589	0	0	101,823	0	0	0
2013	796	0	0	102,735	0	0	0
2014	723	0	0	101,826	0	0	0
2015	809	0	0	101,990	0	0	0
2016	1,035	0	0	101,683	0	0	0
2017	0	0	0	101,785	0	0	0
2018	0	0	0	101,862	0	0	0
2019	0	0	0	101,939	0	0	0
2020	0	0	0	102,016	0	0	0
2021	0	0	0	102,092	0	0	0
Total				4,590			16,051

PINAL AMA	Year	Groundwater Savings			Underground Storage		
		Capacity Available ²	Capacity Used	Credits Earned	Capacity Available	Capacity Used	Credits Earned
	Pre-plan ³				60,782		
2012	128,000	0	0	-	-	-	-
2013	128,000	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	-	-	-	-
2021	140,000	0	0	-	-	-	-
Total				60,782			

TUCSON AMA	Year	Groundwater Savings			Underground Storage		
		Capacity Available ²	Capacity Used	Credits Earned	Capacity Available	Capacity Used	Credits Earned
	Pre-plan ³				0		
2012	7,000	0	0	56,200	0	0	0
2013	7,000	0	0	61,500	0	0	0
2014	7,000	0	0	61,600	0	0	0
2015	7,000	0	0	61,500	0	0	0
2016	7,000	0	0	61,400	0	0	0
2017	7,000	0	0	61,300	0	0	0
2018	7,000	0	0	61,200	0	0	0
2019	7,000	0	0	61,100	0	0	0
2020	7,000	0	0	61,000	0	0	0
2021	7,000	0	0	60,900	0	0	0
Total				0			1,205

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 1997-2011.

APPENDIX H
Credits Developed Utilizing Indian Settlement Appropriations ¹
(Acre-feet)

	Year	Groundwater Savings			Underground Storage		
		Capacity Available	Capacity Used	Credits Earned	Capacity Available	Capacity Used	Credits Earned
PHOENIX AMA	Pre-plan			0			0
	2012	1,589	0	0	101,823	0	0
	2013	796	0	0	102,735	0	0
	2014	723	0	0	101,826	0	0
	2015	809	0	0	101,990	0	0
	2016	1,035	0	0	101,683	0	0
	2017	0	0	0	101,785	0	0
	2018	0	0	0	101,862	0	0
	2019	0	0	0	101,939	0	0
	2020	0	0	0	102,016	0	0
	2021	0	0	0	102,092	0	0
	Total				0		0
	PINAL AMA	Pre-plan			0		
2012		128,000	0	0	-	-	-
2013		128,000	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	-	-	-
2021		140,000	0	0	-	-	-
Total				0			
TUCSON AMA		Pre-plan			0		
	2012	7,000	0	0	56,200	0	0
	2013	7,000	0	0	61,500	0	0
	2014	7,000	0	0	61,600	0	0
	2015	7,000	0	0	61,500	0	0
	2016	7,000	0	0	61,400	0	0
	2017	7,000	0	0	61,300	0	0
	2018	7,000	0	0	61,200	0	0
	2019	7,000	0	0	61,100	0	0
	2020	7,000	0	0	61,000	0	0
	2021	7,000	0	0	60,900	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 Banking¹
(Acre-feet)

Year	Available CAP Supplies²	Available AWBA Capacity³	Remaining Supply⁴	Interstate Credits⁵
Pre-plan ⁶				600,651
2012	0	159,700	0	0
2013	0	166,000	0	0
2014	0	178,100	0	0
2015	0	179,000	0	0
2016	0	179,900	0	0
2017	13,302	193,102	0	12,371
2018	12,265	192,965	0	11,406
2019	11,227	192,827	0	10,441
2020	10,188	192,688	0	9,475
2021	9,147	192,547	0	8,507
Total				652,851

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 2002-2011; 2011 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.