

ARIZONA WATER BANKING AUTHORITY

ANNUAL REPORT
2006



Submitted

July 1, 2007

Arizona Water Banking Authority

Annual Report 2006

**Honorable Janet Napolitano
Governor of Arizona**

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July 1, 2007

The Honorable Janet Napolitano
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The Honorable Jake Flake
The Honorable Lucy Mason

Dear Governor Napolitano:

Enclosed is the Annual Report of the Arizona Water Banking Authority (AWBA) for Calendar Year 2006. The Annual Report details the amount of water stored by the AWBA, the monies received by the AWBA, the monies expended for the storage and delivery of excess CAP water and the remaining funds available to the AWBA. The Annual Report also includes a Ten-Year Plan that examines the ability of the AWBA to achieve its statutory purposes into the future.

It has been ten years since the AWBA was created by a nearly unanimous vote of the Legislature. During that time the AWBA has purchased, delivered and stored over 2.8 million acre-feet, an amount equivalent to one year's worth of Arizona Colorado River entitlement. The AWBA continues to play a pivotal role in assisting the State of Arizona in maximizing the use of its Colorado River entitlement. In 2006, the AWBA began storing with a new partner, the Gila River Indian Irrigation & Drainage District. Legislation was also passed and approved in 2006 that changed the AWBA statutes allowing the AWBA to better meet the State's obligations under the Arizona Water Settlements Act. Five years ago the AWBA entered into a partnership with Nevada to store water on their behalf. This partnership has proven beneficial to not only the AWBA and Nevada but also to Arizona as we continue to meet and discuss Colorado River operation with the other five Basin States and the Department of the Interior. By the end of 2006, the AWBA had stored a cumulative total of 413,000 acre-feet for the benefit of Nevada or approximately one-third of the State's obligation under the Amended Agreement for Interstate Water Banking.

As always, I take great pride in submitting this report detailing the accomplishments of the AWBA. The drought conditions of the last few years have stressed the importance of wise water management in Arizona and I am confident that the AWBA will continue to be a successful and important component of Arizona's water management planning for the future.

Sincerely,

Herbert R. Guenther
Chairman

CC: The Honorable Timothy Bee, President of the Arizona State Senate
The Honorable James Weiers, Speaker of the Arizona House of Representatives
The Honorable Jake Flake, Arizona State Senate
The Honorable Lucy Mason, Arizona House of Representatives

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The Arizona Water Banking Authority

Summary

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

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

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

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

The money that funds the AWBA and, specifically, water storage for the benefit of Arizona (intrastate storage) comes from three sources that are either from existing revenue sources or from fees charged to those benefiting directly from the stored water. Restrictions on the ways these monies can be used depend on the source of the monies, which currently include:

- Fees for groundwater pumping currently collected within the Phoenix, Pinal and Tucson Active Management Areas (AMA). These monies can only be used to benefit the AMA in which the fees are collected.
- A four cent *ad valorem* property tax collected in the three county CAWCD service area. These monies can only be used to benefit the county in which the tax is levied.
- A general fund appropriation received at the discretion of the Legislature.

Another source of funding is used for water storage to aid Nevada (interstate storage) and is received pursuant to the Amended Agreement for Interstate Water Banking (Amended Agreement).

A general fund appropriation of \$13.5 million was received from the Legislature in 2006 to assist the AWBA in meeting the State's obligation under the Arizona Water Settlements Act. The AWBA will begin spending this money in 2008 after the Enforceability Date (date obligations begin) of the Arizona Water Settlements Act.

In 2006, the Water Bank delivered for recharge a total of 361,220 acre-feet at a cost of \$50.2 million. Of that amount, 172,093 acre-feet was for intrastate storage at a cost of \$14.8 million and 189,127 acre-feet was for interstate storage at a cost of \$35.4 million.

From the Water Bank's inception through calendar year 2006, the AWBA has stored approximately 2,653,880 million acre-feet of credits at a cost of \$178,927,472. Of this total volume, intrastate storage totaled 2,241,246 acre-feet at a cost of \$106,300,760 and interstate storage totaled 362,634 acre-feet at a cost of \$72,626,712. 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 412,634 acre-feet available for Nevada.

Arizona Water Banking Authority Annual Report Requirement

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

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

Update

The AWBA reached a milestone in 2006 with the cumulative delivery of over 2.8 million acre-feet (MAF) of Arizona's unused Colorado River entitlement; an amount equivalent to one year of Arizona's Colorado River allocation. Of this, approximately 412,634 acre-feet will be available for Nevada's use fulfilling close to one third of Arizona's obligation to Nevada under the Amended Agreement for Interstate Banking (Amended Agreement). In 2006, storage by the AWBA assisted Arizona in using all of its 2.8 MAF entitlement (2.81 MAF).

Calendar year 2006 again began as a year of limits as the AWBA faced significant constraints with respect to water availability, funding in Pinal County, and storage capacity in the Phoenix AMA. When the 2006 Plan of Operation (Plan) was being developed, storage in Pinal County was limited by funding available to the AWBA for storage in that County using both 4 cent tax and withdrawal fees. In the Phoenix AMA several other entities were planning to utilize facilities that had previously partnered with the AWBA thus reducing the capacity available to the AWBA.

The 2006 Plan as originally approved was scheduled to deliver about 347,000 acre-feet of AWBA water storage. The 2006 Plan was amended to accommodate the addition of the AWBA's new partnership with the Gila River Indian Irrigation & Drainage District (GRIIDD). Amending the 2006 Plan increased forecasted deliveries to 419,500 acre-feet, an increase of 72,500 acre-feet. However, heavy summer monsoons led to significant changes in the water demands of certain CAP customers, including the GRIIDD, resulting in a number of requests for remarketing of scheduled water. The AWBA made every attempt to utilize the additional water that was made available, however, decreased demand and capacity constraints at underground storage facilities (USFs) resulted in the AWBA delivering 361,220 acre-feet for the year; about 14,000 acre-feet more than the original Plan and about 58,500 acre-feet less than the amended Plan. As water demand increased toward the end of the year, the AWBA scheduled additional interstate water deliveries in an effort to assist CAP in fulfilling the remarket requests. The increase in interstate banking was implemented in recognition of the financial constraints associated with intrastate storage in the Pinal and Tucson AMAs.

House Bill (HB) 2835 was signed on April 12, 2006, amending the AWBA's statutory authority to allow the AWBA to better meet the State's obligation under the Arizona Water Settlements Act (Settlements Act). HB 2835 and the AWBA's Indian firming obligations are discussed in more detail in the Activities and Projects section.

With respect to membership, there were two changes to the AWBA Commission in 2006 as shown in Figure 1. Charles Cahoy was replaced by Tom Buschatzke and Representative Weiers was replaced by Representative Mason. As a result of the election of new Central Arizona Water Conservation District (CAWCD) Board of Director members in November, 2006, Bill Perry attended his last AWBA meeting in December, 2006. By statute, the President of the CAWCD or their designee serves on the AWBA Commission. Ms. Susan Bitter Smith was elected President of the CAWCD Board in March, 2007. At the AWBA meeting on March 21, 2007, Ms. Bitter Smith designated Ms. Gayle Burns as the AWBA commission member. Additionally, there were two changes to the AWBA staff members. Tim Henley retired as AWBA Manager in May, 2006 and was subsequently rehired by the AWBA as a contract consultant. Kim Mitchell began serving as Acting Manager of the AWBA following Tim Henley's retirement.

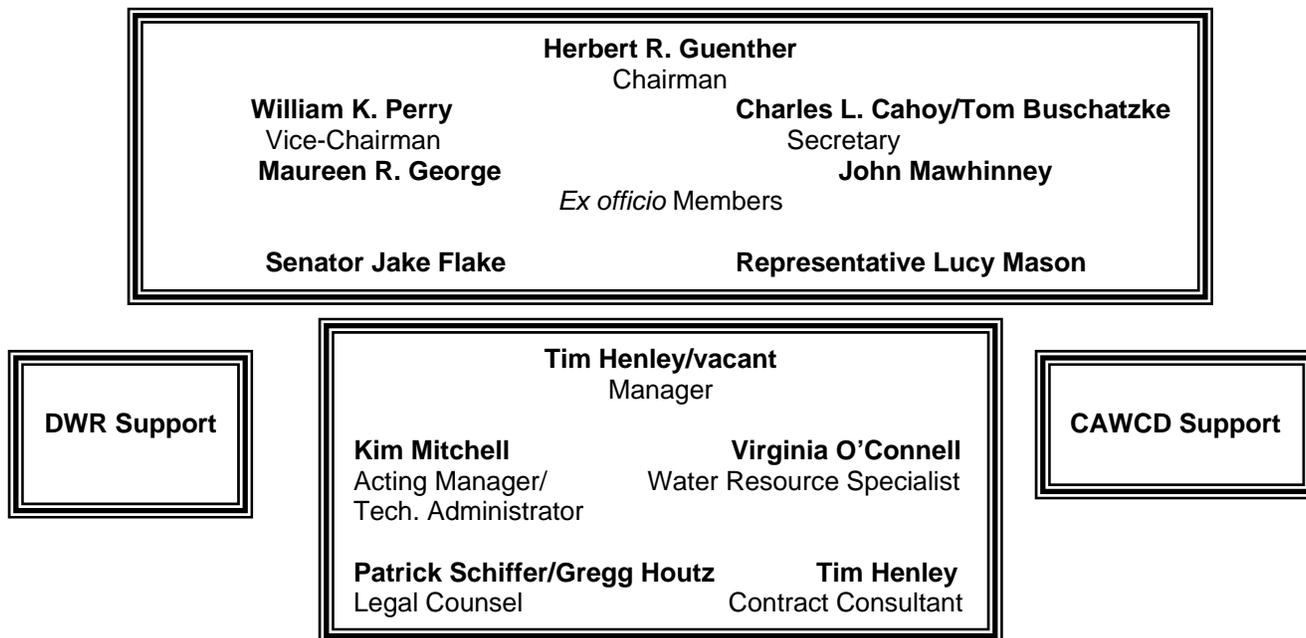


Figure 1. Arizona Water Banking Authority Organizational Chart for 2006

In 2006, the AWBA continued its quarterly meeting schedule with work-study sessions and special meetings held as needed. An Indian Firming work-study session was held on February 1, 2006 to inform Authority members of the findings and recommendations of the Indian Firming Study Commission. A special meeting was held on April 19, 2006 to take action on the Agreement between the AWBA and Gila River Indian Irrigation & Drainage District (GRIIDD) for storage of CAP water at a Groundwater Savings Facility (GSF). The Agreement was approved at the April meeting and signed by both parties on June 16, 2006. Additional discussion regarding both Indian Firming and the GRIIDD Agreement can be found in the Activities and Projects section of this report.

The AWBA staff participated in a poster session at the Colorado River Water Uses Association in Las Vegas, NV in December. The exhibit, "Arizona-Living the Vision through Planning, Partnering and Performing", focused on three areas of Arizona's resources: the Groundwater Management Act, recharge, and reuse. The exhibit was completed in conjunction with ADWR, CAWCD, Arizona Municipal Water Users Association, and the Salt River Project.

In 2006, the AWBA delivered for recharge a total of 361,220 acre-feet of water; 172,093 acre-feet for intrastate purposes and 189,127 acre-feet of water on behalf of the Southern Nevada Water Authority (SNWA). The quantity of water received by each facility is described in Appendix A and totaled 149,858 acre-feet of water in the Phoenix AMA, 144,366 acre-feet of water in the Pinal AMA, and 66,996 acre-feet in the Tucson AMA.

Total consumptive use of Colorado River water by Arizona for 2006 was approximately 2.81 million acre-feet. Distribution of that quantity was approximately 1.19 million acre-feet for direct uses along the Colorado River and CAP diversions of approximately 1.62 million acre-feet.

For more information about the Arizona Water Banking Authority, consult the AWBA web page at www.awba.state.az.us or contact Kim Mitchell (krmitchell@azwater.gov), Virginia O'Connell (voconnell@azwater.gov), or Tim Henley (tjhenley@azwater.gov), or by phone at 602-771-8487.

Activities and Projects - 2006

Arizona Water Settlements Act – Indian Firming Program

Background

In December of 2004 President Bush signed legislation approving the Arizona Water Settlements Act (Settlements Act) P.L. 108-451, settling longtime claims to water by the Gila River Indian Community (Community; GRIC) and the Tohono O'odham Nation. A key provision within the Settlements Act is the provision for enacting State legislation creating an Indian Firming Program (Firming Program) for the Community and future Indian water rights settlements. The provision authorizes the Secretary of the Interior (Secretary) and the State of Arizona (State) to develop a Firming Program to ensure that 60,648 acre-feet of non-Indian Agricultural priority CAP water made available for re-allocation to Indian tribes shall, for a 100-year period, be delivered during water shortages in the same manner as water with a municipal and industrial (M&I) priority is delivered during water shortages. Because the non-Indian Agricultural priority water has the lowest priority on the CAP system, in times of shortage this supply would be reduced or eliminated before M&I and Indian priority supplies are impacted. Therefore, in the case of reallocating non-Indian Agricultural priority water to the tribes, the parties to the Settlements Act agreed to increase the reliability (firm) of this block of water in times of shortage on the Colorado River. The importance of this provision is underscored by the clause in the Settlements Act that State legislation be enacted as part of the enforceability conditions to the Settlements Act.

The Settlements Act further identifies specific firming responsibilities for the Secretary and the State. Of the 60,648 acre-feet, the Secretary has responsibility for 28,200 acre-feet, as required by the Southern Arizona Water Rights Settlement Act (SAWRSA). The State agreed to firm 15,000 acre-feet for the Community, consistent with the Settlements Act. Responsibility for the remaining 17,448 acre-feet, which is to be dedicated for future Indian settlements, was divided equally (8,724 acre-feet each) between the Secretary and the State. Therefore, the State's total responsibility under this program is 23,724 acre-feet.

In the spring of 2005 the Arizona Legislature created the Indian Firming Study Commission (Study Commission) to develop the Firming Program for Arizona pursuant to HB 2728. The Study Commission reviewed estimated shortages, water supply availability, mechanisms for ensuring water availability to the tribes in times of shortage, and potential costs and funding availability. The Study Commission identified that to firm the State's obligation of 23,724 acre-feet of delivery during water shortages over a 100-year period, approximately 550,000 acre-feet of credits would be required.

The Study Commission concluded that the AWBA, in cooperation with ADWR and CAWCD, is the most appropriate and best-suited entity to fulfill the State's obligations described in Section 105(b) of the Settlements Act. The Study Commission recognized that in order to fulfill this role, the AWBA needed to be provided with sufficient funding or the mechanisms to develop the funding necessary to implement the Indian Firming Program on behalf of the State and recommended that the Arizona Legislature provide the AWBA with appropriate funding to do so. Additionally, the Study Commission recommended additional authorities to the AWBA to address annual Indian Firming needs.

The Study Commission presented its Final Recommendations to the Arizona Legislature in its Indian Firming Study Commission Final Report, dated January 6, 2006. The legislature acted on these recommendations by providing the AWBA the statutory authorities to act as Arizona's agent in meeting its firming obligations. HB 2835, which included the Study Commission's recommendations, was subsequently signed by Governor Napolitano on April 12, 2006.

The legislature also provided an initial appropriation of \$13.5 million in October, 2006 to assist the AWBA in meeting the State's obligation under the Settlements Act. These monies must be used to carry out state obligations related to Indian Firming and will not be expended until after the Enforceability Date of the Settlements Act. These funds were deposited into a sub-account held at the Arizona State Treasurer's Office. The AWBA was required by statute to submit information to the Joint Legislative Budget Committee (JLBC) outlining expenditure plans for the \$13.5 million. By letter dated November 29, 2006 and, upon approval by AWBA members, information was submitted to the JLBC outlining the forecasted accrual of long-term storage credits, expenditures, and percent of firming goal achieved.

New AWBA Authorities

HB 2835 authorizes the AWBA to act as the agent of the State for purposes of implementing and meeting the state's obligations related to firming the Indian settlement water supplies. This new legislation identifies the specific actions that the AWBA can implement to meet these obligations including the ability to:

- Store water in the AMAs for future recovery and delivery to the tribes in times of shortage;
- Store water on tribal lands through contractual agreements with the United States and Indian communities for future recovery;
- Enter into lease agreements with Indian communities (in partnership with another entity such as the Central Arizona Groundwater Replenishment District) for the use of Non-Indian Agricultural priority or Indian priority CAP water;
- Enter into agreements to utilize sources of water other than CAP water;
- Enter into agreements with entities authorized to import groundwater from the McMullen and Butler valley groundwater basins and the Harquahala irrigation non-expansion area;
- Use of long-term storage credits developed by the AWBA prior to the Enforceability Date, as defined in the Settlements Act;
- Enter into agreements with CAWCD to transfer long-term storage credits to CAWCD and to deliver water to the tribes in time of shortage;
- Enter into recovery agreements with other entities to recover stored water; and
- Use general fund appropriations and withdrawal fees, collected within the Phoenix, Pinal and Tucson AMAs, to store and recover water, lease Indian CAP supplies, import groundwater, and deliver water to the Indian Communities for the purposes of satisfying the State's obligation.

Throughout 2006, AWBA staff met with representatives from the U.S. Bureau of Reclamation (Reclamation) to develop an agreement to firm non-Indian agricultural priority CAP water for tribal settlements. The agreement must be executed between the AWBA and the Secretary by the Enforceability date (December 31, 2007) of the Settlements Act and accomplishes two goals: 1) identifies the obligations that must be met, and 2) develops the method for meeting the obligations between the State and Federal governments. The agreement should be available for review by the AWBA members by mid-2007 in anticipation of final approval in December 2007.

AWBA staff held a preliminary meeting with the GRIC to discuss options for meeting the State's responsibility for Indian firming. Options discussed included: 1) off-reservation underground storage of excess water, 2) direct delivery of water, and 3) long-term lease of non-Indian Agricultural priority or Indian priority CAP water. The GRIC preferred to postpone additional discussion with the AWBA until after the Secretary and AWBA executed an agreement.

Seven Basin States Agreement

Background

On February 3, 2006, the Governors' Representatives for the seven Colorado River Basin States (Basin States) sent a unanimous recommendation to the Secretary that a Basin States Alternative be included in the scope of the Environmental Impact Statement *Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead*. On April 23, 2007, Arizona and the other six Colorado River Basin States signed an historic agreement regarding a water management plan to allocate and share the water of the Colorado River. The agreement and plan have been forwarded to the Secretary as the recommended preferred alternative for the *Draft Environmental Impact Statement, Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead*.

The need to plan for water supply shortages has been accelerated by a severe eight-year drought on the Colorado River. The purposes of the plan are to minimize shortages in the Lower Colorado River Basin and avoid asking for a curtailment of water uses in the Upper Basin to meet the water delivery requirements to the Lower Basin as specified in the 1922 Colorado River Compact. The proposed water management plan is a pioneering step for the Basin States who have made tremendous progress over the last two years in setting aside contentious issues and reaching agreement regarding operation of the Colorado River system reservoirs. Using extraordinary water conservation, water supply augmentation and a coordinated operation for Lakes Mead and Powell, it is hoped that the plan will reduce the risk of shortages to Arizona and help provide a more secure water supply for all of the States. The plan includes a proposal for water shortages within Arizona that was developed by the Colorado River water users in Arizona. During times of low water supply on the River, Arizona and Nevada are the first to be shorted. The plan sets limits on the amount of shortage that Arizona has to take.

Coordinated management of the water supplies in Lakes Powell and Mead will significantly reduce the risk of shortages to Arizona. The proposed plan would cause the release of water from Lake Powell to Lake Mead if Lake Mead water is approaching shortage elevations. If Lake Mead levels are relatively high, the water would be stored in Lake Powell to be released in later years when Lake Mead is low. The reservoirs are operated somewhat independently under the current rules, so Lake Mead may be in shortage while Lake Powell is relatively full. The proposed operation balances the water supply in the reservoirs and helps to keep Lake Mead from entering shortage conditions as often as the current operations would.

Shortage Sharing Stakeholder Workgroup

In 2005, the Director established the Arizona Shortage Sharing Stakeholder Workgroup (Workgroup). The Workgroup had two goals: 1) develop a recommendation to the Director regarding the appropriate volume and implementation strategy for implementing future Colorado River shortages in

the lower basin, and 2) develop a recommendation to the Director for allocating shortages between the CAP and equivalent priority mainstream Colorado River water users.

The Colorado River water users in Arizona recommended that if shortages must be imposed on Arizona, the shortages must be manageable and shared proportionately with Nevada and Mexico. The water users in cooperation with ADWR spent many hours in 2005 and 2006 studying the impact of shortages on Arizona.

The Workgroup recommended a “tiered” shortage strategy. This tiered or stepped shortage reductions to the Lower Basin, would be triggered by key elevations in Lake Mead. Under this type of strategy Arizona’s shortage amount would range from 333,000 acre-feet to 500,000 acre-feet. If hydrologic conditions worsen and additional shortage reductions are required, the Basin States and Reclamation will reconsult.

The Director’s Shortage Stakeholder Workgroup also developed a recommendation regarding how shortages should be allocated between the CAP and equivalent priority mainstream Colorado River water users. The Workgroup recommended that the fourth priority mainstream shortage water supply be calculated by determining the percentage derived by dividing the total fourth priority mainstream entitlement (164,652 acre-feet) by the available fourth priority water supply, and then multiplying this percentage by the available fourth priority water supply after shortage reductions. The remaining fourth priority water supply, after the mainstream amount is subtracted, would be available for diversion by CAP.

The proposed Basin States’ plan includes Arizona’s recommended shortage strategy.

Arizona-Nevada Shortage Sharing Agreement

As part of the overall seven States’ Agreement, Arizona including the AWBA and Nevada agreed on how Secretarial shortage declarations of up to 500,000 acre-feet within the United States would be shared between them during an Interim Period (2008 through 2026).

Based on the stepped shortage strategy, Arizona and Nevada agree that during the Interim Period shortages shall be allocated in the following quantities: At the first step, when Lake Mead elevation is at or below 1,075 ft. and at or above 1,050 ft., then Nevada’s share of the shortage equals 13,000 acre-feet and Arizona’s share equals 320,000 acre-feet. At the second step, when Lake Mead elevation is below 1,050 ft. and at or above 1,025 ft., then Nevada’s share of the shortage equals 17,000 acre-feet and Arizona’s share equals 400,000 acre-feet. During the third step when Lake Mead’s elevation is below 1,025 ft., then Nevada’s share of the shortage equals 20,000 acre-feet and Arizona’s share equals 480,000 acre-feet.

If shortage declarations within the United States exceed the 500,000 acre-feet that Arizona and Nevada have agreed to share, then the Secretary would consult with representatives from the seven Colorado River Basin states before allocating additional shortage reductions. That consultation would be initiated anytime that the water surface elevation of Lake Mead is at or below water surface elevation 1,025 feet.

In addition to the agreement on how shortages should be allocated between the states, Southern Nevada Water Authority (SNWA) also agreed to provide to the AWBA \$8,000,000 to assist Arizona in offsetting impacts from shortages that may occur during the Interim Period. Upon receipt of these funds the AWBA will use these funds to purchase and/or store water supplies to mitigate the impact

of shortages on Arizona users. The \$8,000,000 will be transmitted to the AWBA in 2008 following adoption of the Record of Decision.

The Next Steps

The Secretary is expected to announce the preferred alternative by June 2007. The Basin States will continue to refine agreements for the implementation of the extraordinary water conservation and augmentation programs. After the preferred alternative has been announced, the Basin States will negotiate water delivery agreements with the Secretary and finalize the forbearance agreements between the states in anticipation that the Record of Decision will be in substantial conformance with the Basin States recommendations. The Secretary intends to publish the Final Environmental Impact Statement by September 2007 and adopt a Record of Decision by December 2007.

Interstate

Amended Agreement

Pursuant to the Amended Agreement for Interstate Banking (Amended Agreement), \$100 million was received from the Southern Nevada Water Authority (SNWA) in 2005 and deposited into the Nevada sub-account (Resource Account) of the Fund. Monies from this source continued to be used for interstate water banking in 2006 to meet the state's obligation under the Amended Agreement. In 2009, SNWA will begin making scheduled payments of \$23 million to the Operating Account and funds borrowed from the Resource Account will be repaid with interest.

The AWBA was able to store water for the benefit of Nevada because capacity became available when the AWBA adjusted its deliveries to the Pinal AMA to accommodate deliveries to the GRIIDD GSF. The amended 2006 Plan of Operation included the addition of the GRIIDD GSF and the reclassification of intrastate and interstate deliveries. To deliver water to the GRIIDD and pay for that water using groundwater withdrawal fees, it was necessary to shift a portion of the intrastate deliveries previously scheduled for the other three Pinal AMA GSFs to the GRIIDD GSF and interstate water was used to replace the shifted water in those three districts.

Storing water for Nevada had two main benefits in 2006; first, it allowed the AWBA to meet a portion of its obligations under the amended agreement and second, it provided the opportunity for CAP to remarket previously ordered but unused water for full price. This remarketing allows CAP to recover its cost while not having to implement the take or pay provisions in its contracts with the CAP users that reduced their requests. In addition to these benefits, the AWBA was able to offer its GSF partners CAP water at a reduced rate. This was done in recognition of the extreme importance of full utilization of Arizona's Colorado River entitlement.

Facilities that agreed to accept additional water for interstate storage did not receive interstate water until the quantity of intrastate water agreed upon in the original Plan had been delivered. The additional water stored on behalf of Nevada was stored in facilities located in all three AMAs. Storage for interstate purposes included 25,204 acre-feet of water stored at a USF in the Phoenix AMA, 128,297 acre-feet stored in three GSFs in the Pinal AMA and 35,626 acre-feet of water stored in two USFs in the Tucson AMA (see Appendix A).

The AWBA sub-account for Nevada had a balance of 412,634 acre-feet of long-term storage credits at the end of 2006. That balance was comprised of 50,000 acre-feet of credits transferred from CAWCD for storage done in the early 1990's under the demonstration project. Additionally, Nevada

earned 61,098 acre-feet of credits for storage completed in 2002, 14,162 acre-feet of credits for storage completed in 2004, 111,805 acre-feet of credits for storage in 2005, and 175,569 acre-feet for storage completed in 2006 (Table 6b).

ICUA Letter Agreement with Metropolitan Water District of Southern California

In 1992, the Metropolitan Water District of Southern California (Metropolitan) entered into an agreement (Demonstration Agreement) with the CAWCD to store Colorado River water in central Arizona. The Demonstration Agreement was amended in 1994. Pursuant to the Demonstration Agreement, Metropolitan stored 89,000 acre-feet of water in Pinal County in the early 1990s, resulting in 80,909 acre-feet of credits that Metropolitan is entitled to recover. These credits are held in CAWCD's long-term storage account.

By letter dated September 28, 2006 to CAWCD, Metropolitan requested recovery of 15,000 acre-feet of long-term storage credits in 2007 in accordance with the terms of the Demonstration Agreement. The AWBA, created after the execution of the Demonstration Agreements, is the agency of the State of Arizona expressly authorized to store Colorado River water in Arizona on behalf of California and Nevada, and is the entity that can request the Secretary release Intentionally Created Unused Apportionment (ICUA) to California and Nevada.

A Letter Agreement was entered into by Metropolitan, CAWCD, and the AWBA on December 11, 2006 that facilitates appropriate accounting of Colorado River consumptive use pursuant to the terms of the Demonstration Agreement. The Letter Agreement outlines the process by which ICUA would be made available to Metropolitan; the Agreement recognizes CAWCD is responsible for recovering the credits, the AWBA is responsible for notifying the Secretary of creation of ICUA, and Metropolitan is responsible for the diversion of ICUA. A schedule showing planned recovery of Metropolitan's requested long-term storage credits was included in the 2007 Plan of Operation.

Requests for Creation of Intentionally Created Unused Apportionment

No ICUA was developed in 2006. By letter dated September 28, 2006, Metropolitan requested development of 15,000 acre-feet of ICUA in 2007 based on credits stored pursuant to the Demonstration Agreement between Metropolitan and CAWCD. The volume of ICUA was changed to 16,804 acre-feet in CAWCD's recovery schedule for 2007. The above section provides background information concerning the Letter Agreement.

Agreement to Firm Future Supplies

The AWBA entered into an Agreement to Firm Future Supplies (Agreement to Firm) with Mohave County in 2005 to set aside credits to firm water for the Mohave County Water Authority (MCWA). Since those credits were reserved for use by an entity outside of the three county service area, CAWCD is required to charge the AWBA a fee in lieu of taxes. When the AWBA set aside these credits in 2005, the in lieu tax rate was \$20 per acre-foot. In 2006, the CAWCD commenced charging the AWBA the in lieu tax at that same rate of \$20 per acre-foot which will be paid quarterly for the next five years. This is the same schedule as the MCWA prepayments to the AWBA under the Agreement to Firm.

Recovery

CAWCD staff continued their planning efforts for the recovery of credits accrued by the AWBA. These efforts included meeting with stakeholders, beginning to develop concepts for on-river and M&I firming, and estimating recovery timelines. CAWCD staff had several meetings with AWBA staff and provided updates to AWBA members at their quarterly meetings. CAWCD completed a draft report entitled, Conceptual Plans to Recover Stored Water, May 24, 2007. CAWCD staff expect to present the draft plan to the CAWCD Board of Directors in June, 2007. In addition to their planning efforts, CAWCD entered into agreements beginning in 2007 for the recovery of credits previously stored in Pinal County for the benefit of Metropolitan.

Legislative Activity

House Bill 2835

On April 12, 2006 Governor Napolitano signed HB 2835 which amended the AWBA's statutory authority to better meet the State's obligation under the Arizona Water Settlements Act. HB 2835 incorporated recommendations made by the Study Commission in their final report submitted to Governor Napolitano on January 6, 2006. The report focused on recognizing the AWBA as the entity best suited to fulfill the State's obligations described in Section 105(b) of the Settlements Act. The Study Commission recommended that the AWBA be provided with sufficient funding to implement the Indian Firming program and be empowered by the Arizona Legislature to include programs to address this new responsibility.

House Bill 2869

HB 2869, signed by Governor Napolitano on June 21, 2006, added a new section §45-2473 to Title 45, Chapter 14, Article 4 which directs the AWBA to submit a report to the JLBC by October 1 of each year for the previous fiscal year. The report must provide an accounting of all interstate monies received and disbursed for interstate water banking purposes and monies that have been placed in an account with the Arizona State Treasurer's Office.

HB 2869 reinforces it is only the Legislature who decides how the \$100 million from Nevada will be spent by specifying that the AWBA cannot spend, encumber, lend, or in any other way use monies received pursuant to the Amended Agreement, except to pay the costs directly incurred in storing water on behalf of the State of Nevada.

Revenue Impacts

The legislature provided an initial appropriation of \$13.5 million in October, 2006 to assist the AWBA in meeting the State's obligation under the Settlements Act. These monies must be used to carry out state obligations related to Indian Firming and will not be expended until after the Enforceability Date of the Settlements Act.

The CAWCD is statutorily authorized to levy an *ad valorem* property tax in the three-county CAP service area for water storage that cannot exceed four cents per \$100 of assessed valuation and is used either for repayment or OM&R costs of the CAP. If the taxes levied are not needed for those purposes, an annual resolution of the CAWCD Board can direct them to the AWBA Fund. For the fourth year in a row, the CAWCD Board resolved that all taxes to be levied would be retained by

CAWCD. CAWCD has determined that it will use these funds to support their OM&R activities thus reducing the cost of water to the AWBA.

Agreement and Facility Permit Activity

The AWBA entered into a Water Storage Agreement with the Gila River Indian Irrigation & Drainage District for water storage at the GRIIDD GSF on June 16, 2006. The associated water storage permits for this facility were also obtained. The GSF is on Community lands and is located in both the Phoenix and Pinal AMAs, therefore two water storage permits were required for this facility. The GRIIDD GSF added an additional 56,000 acre-feet per year of storage capacity; 35,400 acre-feet for the Phoenix AMA and 17,600 acre-feet for the Pinal AMA. The GRIIDD GSF is permitted to operate through December 30, 2007. The AWBA intended to utilize monies collected from withdrawal fees to pay for deliveries to the GSF.

The AWBA also submitted one renewal application for a water storage permit in 2006. Kai Farms – Red Rock GSF was permitted in November, 2006 for a maximum storage volume of 11,231 acre-feet per annum.

2007 Annual Plan of Operation

Pursuant to the 2007 Plan, the AWBA projects recharge in excess of 375,673 acre-feet. Of this quantity, more than 167,244 acre-feet are projected to be recharged at USFs and more than 208,429 acre-feet are projected to be recharged at GSFs. The 2007 Plan of Operation is available on the AWBA website.

Media Coverage

The AWBA did not receive any direct press coverage during 2006. There was a multitude of articles on the seven-basin state discussions and Colorado River shortages.

Web Page

The AWBA has maintained a web page at www.awba.state.az.us since 1997 to provide timely and accurate information regarding the AWBA's activities to the water community. The web page contains information about the AWBA, AWBA members and staff, the AWBA's recharge partners, monthly water deliveries, AWBA announcements and scheduled meetings and meeting minutes. It also contains publications and documents that may be downloaded and provides links to other water related web sites.

In 2006, AWBA staff began working on a new website design to improve its organization and ease of use for both the public to find critical items quickly and for staff to post important announcements and other information more efficiently. Development of this new website involved first updating the existing website with additional information on recent AWBA transactions, archiving past reports, and deleting obsolete information. The next step involved creation of a new template with drop-down menus, and lastly, the transfer of information from the existing site to the new site. Development of the website continued into 2007. The new website is expected to be complete by mid-summer 2007. AWBA staff has registered for a domain name change to azwaterbank.gov.

Monies Expended from the Banking Fund

Arizona Revised Statutes § 45-2425 mandates the various sources of monies for the Water Banking Fund (Fund) that is administered by the AWBA per the statute. In 2006, 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. The fees for groundwater pumping are statutorily available to the AWBA through 2016. Long-term storage credits accrued with these monies must be used to benefit the AMA in which they were collected.
2. The CAWCD is statutorily authorized through 2016 to levy an *ad valorem* property tax in the three-county CAP service area that cannot exceed four cents per \$100 of assessed valuation and is used either for repayment or OM&R costs of the CAP. If the taxes levied are not needed for those purposes, an annual resolution of the CAWCD board can direct them to the Fund. In June of 2006, the CAWCD board resolved that all taxes to be levied for the following tax year would be retained by the CAWCD. Consequently, there were no *ad valorem* tax revenues deposited into the Fund in 2006. Money from this source must be used to benefit the county in which it was collected.
3. The Arizona Legislature provided an initial appropriation of \$13.5 million in October, 2006 to assist the AWBA in meeting the State's obligation under the Settlements Act. These monies must be used to carry out state obligations related to Indian Firming and will not be expended until after the Enforceability Date of the Settlements Act.
4. Mohave County Water Authority (MCWA) agreed to prepay the AWBA to set aside 230,280 acre-feet of credits that were transferred to a sub-account in MCWA's name pursuant to the Agreement to Firm. Since those credits were reserved for use by an entity outside the three county service area, CAWCD is required to charge the AWBA a fee in lieu of taxes. Monies collected from MCWA are used to offset these CAWCD fees which are charged at the same rate and on the same quarterly schedule as MCWA's prepayments to the AWBA.
5. Pursuant to the Agreement for Interstate Water Banking executed in 2001, \$10,053,945 was collected from the Southern Nevada Water Authority (SNWA) and used to purchase water on behalf of Nevada. Pursuant to the Amended Agreement for Interstate Water Banking (Amended Agreement), \$100 million was received from SNWA in 2005 and deposited into the Nevada sub-account (Resource Account) of the Fund. Monies from this source continued to be used for interstate water banking in 2006 to meet the state's obligation under the Amended Agreement. In 2009, SNWA will begin making scheduled payments of \$23 million to the Operating Account and funds borrowed from the Resource Account will be repaid with interest. There were no additional interstate monies deposited into the Fund in 2006.

Table 1 shows the money the AWBA collected and the money that was expended for delivery and storage of water in 2006 by source of funds. Table 2 shows the total money received, expended and remaining through December 2006 by source of funds. Any remaining money is available to be expended in subsequent years; any interest that accrues on this money is available for use.

Table 1. Monies Collected and Expended in 2006 by Source of Funds

Source of Funds	Money Collected	Money Expended
General Funds	\$0	\$0
MCWA Prepayments	\$921,120	\$921,120
Subtotal for General Funds	\$921,120	\$921,120
State Indian Firming	\$13,500,000¹	\$0
Interstate Water Banking-NV	\$0	\$35,386,306
4¢ Ad valorem Tax		
Maricopa County	\$0	\$8,498,695
Pinal County	\$0	\$405,236 ²
Pima County	\$0	\$2,714,750 ²
Subtotal for Ad valorem	\$0	\$11,618,681
Groundwater Withdrawal Fees		
Phoenix AMA	\$1,794,898	\$2,365,840
Pinal AMA	\$1,047,490	\$554,054
Tucson AMA	\$519,969	\$243,738
Subtotal for Withdrawal Fees	\$3,362,358	\$3,163,632
TOTAL	\$17,783,478	\$51,089,739

¹ Expenditures planned after the Enforceability Date of the AZ Water Settlements Act, December 31, 2007.

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

Table 2. Monies Collected and Expended through December 2006 and Monies Remaining Available

Source of Funds	Money Collected	Money Expended	Money Available ¹
General Funds	\$11,100,865	\$11,100,865	\$0
MCWA Pre-payment	\$921,120	\$921,120	\$0
Subtotal for General Fund	\$12,021,985	\$12,021,985	\$0
State Indian Firming	\$13,500,000	\$0	\$13,500,000
Interstate Water Banking-NV	\$110,053,945	\$72,626,712	\$37,427,233
4¢ Ad valorem Tax			
Maricopa County	\$97,987,858 ²	\$50,142,312	\$47,845,546 ⁴
Pinal County	\$3,634,425 ²	\$3,213,221 ³	\$421,204
Pima County	\$20,518,970 ²	\$16,019,214 ³	\$4,499,756
Subtotal for Ad valorem	\$122,141,252	\$69,374,746	\$52,766,506
Groundwater Withdrawal Fees			
Phoenix AMA	\$11,250,419 ⁵	\$11,174,317	\$76,102
Pinal AMA	\$9,973,902	\$9,146,324	\$827,578
Tucson AMA	\$5,547,938	\$5,504,507	\$43,432
Subtotal for Withdrawal Fees	\$26,772,259	\$25,825,148	\$947,111
TOTAL	\$270,989,441	\$179,848,592	\$91,140,850

¹ Money remaining in AWBA Fund or collected by CAWCD; includes monies committed for the 2007 Plan of Operation.

² Includes money collected by CAWCD.

³ Includes money expended by CAWCD and used to offset the AWBA delivery costs.

⁴ \$4.49 million remaining in the AWBA Maricopa County ad valorem tax fund.

⁵ Total money collected was decreased to reflect the \$9 million legislative transfer in FY 2004 and the \$2 million legislative transfer in FY 2005.

Long-term Storage Credits

The AWBA has established Long-term Storage Accounts with ADWR. The Phoenix AMA account number is 70-441150, the Pinal AMA account number is 70-431135, and the Tucson AMA account number is 70-411150. After receiving the AWBA's annual reports for its water storage and water transfer permits and the annual reports for the recharge facilities, ADWR calculates and issues long-term storage credits (LTSC) to the appropriate accounts. The AWBA receives credit for 95% of the recoverable quantity of stored water. The 5% that is not credited is termed the cut to the aquifer and provides additional groundwater replenishment benefits. This cut to the aquifer is mandated by statute and applies to most storage of water for long-term credit. The recoverable amount of stored water is determined by subtracting facility losses from the quantity of water delivered to the facility. After credits are issued to the account, AWBA staff allocate the credits to the appropriate sub-accounts based on source of funding. The number and distribution of LTSCs for 2006 are listed in Table 3. The cumulative totals of LTSCs accrued by the AWBA through December 2006 are listed in Table 4.

Table 3. Number and Location of Long-term Storage Credits Accrued in 2006

Location and Funding Source	Long-term Storage Credits Accrued (AF)
Phoenix AMA	
4¢ <i>Ad valorem</i> Tax	89,228
Groundwater Withdrawal Fee	28,613
General Fund	0
Interstate - Nevada	23,820
AMA Total	141,661
Pinal AMA	
4¢ <i>Ad valorem</i> Tax	6,131
Groundwater Withdrawal Fee	8,856
General Fund	0
Interstate - Nevada	118,057
AMA Total	133,043
Tucson AMA	
4¢ <i>Ad valorem</i> Tax	27,095
Groundwater Withdrawal Fee	2,418
General Fund	0
Interstate - Nevada	33,692
AMA Total	63,204
Totals by Funding Source	
4¢ <i>Ad valorem</i> Tax	122,453
Groundwater Withdrawal Fee	39,886
General Fund	0
Interstate - Nevada	175,569
TOTAL	337,908

**Table 4. Cumulative Total and Location of Long-term Storage Credits
Accrued through December 2006**

Location and Funding Source		Long-term Storage Credits Accrued (AF)
Phoenix AMA		
	4¢ <i>Ad valorem</i> Tax	986,364
	Groundwater Withdrawal Fee	184,867
	General Fund	42,316
	Interstate Water Banking - Nevada	23,820
	AMA Total	1,237,367
Pinal AMA		
	4¢ <i>Ad valorem</i> Tax	103,574
	Groundwater Withdrawal Fee	266,158
	General Fund	306,968
	Interstate Water Banking - Nevada	310,437
	AMA Total	987,138
Tucson AMA		
	4¢ <i>Ad valorem</i> Tax	219,330
	Groundwater Withdrawal Fee	77,123
	General Fund	54,546
	Interstate Water Banking - Nevada	78,376
	AMA Total	429,375
Totals by Source of Funds		
	4¢ <i>Ad valorem</i> Tax	1,309,268
	Groundwater Withdrawal Fee	528,148
	General Fund	403,830
	Interstate Water Banking - Nevada	412,634
	TOTAL	2,653,880

Since inception, the AWBA has focused its efforts on developing LTSCs for firming purposes and the AWBA has identified 2,700,000 acre-feet as reasonable to firm the CAP M&I subcontracts over the next 100 years. This would be divided as 58% to Maricopa County, 32% to Pima County and 9% to Pinal County based on a pro-rata distribution to the three counties on the basis of CAP M&I subcontracts. The AWBA has also identified 420,000 acre-feet as reasonable to firm the on-river communities over the next 100 years. In 2002, the AWBA adopted a resolution that identified on-river firming as the highest priority of use for the general fund credits and established priorities for other uses (Indian settlements, etc.). Consequently, all or part of the general fund credits could be utilized to firm on-river M&I users. It should be noted that the AWBA collects reimbursement for the replacement cost of credits used for on-river firming. As those credits are used and replaced, they can be utilized by the AWBA for other authorized purposes. Table 5 illustrates the progress made by the AWBA towards meeting its established goals.

Table 5. Identified Uses of Long-term Storage Credits Accrued through December 2006 and Percentage of AWBA Goals Achieved

Location and Objective	Goal (AF of Credits)	LTS Credits Accrued (AF)	Percent of Goal Achieved
Phoenix M&I Firming	1,566,000	986,364	63%
Phoenix Groundwater Mgmt ¹		184,867	75%
Pinal M&I Firming	243,000	103,574	43%
Pinal Groundwater Mgmt ¹		266,158	100%
Tucson M&I Firming	864,000	219,330	25%
Tucson Groundwater Mgmt ¹		77,123	34%
On-River M&I Firming ²	420,000	403,830	96% ³
Interstate Water Banking - NV	1,250,000 ⁴	412,634	33%

¹ Withdrawal fees could be utilized in addition to 4¢ *ad valorem* tax revenues for M&I firming if needed to reach firming goals.

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 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.

³ This percentage reflects full utilization of general fund credits accrued to date and would change as other objectives are identified by the AWBA.

⁴ Pursuant to the Amended Agreement for Interstate Water Banking, the AWBA has committed to have this number of long-term storage credits within the Nevada sub-account.

The average annual cost for the AWBA to obtain one acre-foot of LTSC for intrastate and interstate storage is presented in Tables 6a and 6b, respectively. Table 6a illustrates that the unit cost per LTSC for intrastate storage has increased each year the AWBA has been in operation with the exception of 2001 and 2005. Increases are typically a function of three primary factors: annual increases in the cost per acre-foot of water delivered, annual increases in the cost of storage facilities and increased percentage of total water stored in USFs. Similarly, Table 6b illustrates that the unit cost per LTSC for interstate storage has increased each year with the exception of 2006. Although the unit cost of developing interstate LTSCs is also influenced by the same factors as intrastate storage, interstate storage is additionally affected by the fluctuating cost of energy.

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

Year	Credits ¹	Funds Expended	Average Cost (per acre-foot)	% Stored in GSF: % Stored in USF
1996	None	None	\$0	0% : 0%
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	162,340	\$14,782,313	\$91.06	17% : 83%

¹ The information in this table was obtained from previous Annual Reports. Any differences between the number of credits displayed here and the total cumulative number in Table 4 are due to the on-going nature of the accounting process.

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%

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 as reserved for four purposes: firming the post-1968 Colorado River municipal and industrial (M&I) entitlements; firming the post-1968 M&I entitlements for entities outside the CAWCD service area; 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 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 2006. Credits may be distributed or exchanged for water management purposes upon request of the director of ADWR. There were no requests made for distribution or extinguishment of credits for water management purposes in 2006.

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 2006, no credits were developed or distributed under such agreements. Additionally, there was no recovery of long-term storage credits for interstate purposes in 2006.

Ten-Year Plan

Introduction

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

The ten-year plan analyzes activity for the period 2008-2017 (Table 7) and was derived using the information found in Appendices B through H. AWBA accounting for previous years can be found in the 2006 Annual Report and 2007 Plan of Operation. AWBA staff developed the ten-year plan based on the following guiding principles:

1. 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.
2. The plan covers a ten year time period beginning with the next calendar year. For example, this ten-year plan covers the time period 2008-2017.
3. The plan will be updated annually based on current priorities of the AWBA.
4. The plan is an important tool to be utilized in development of the next year's annual Plan of Operation.

Ten-Year Plan Components

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

1. Storage Partners and Storage Capacity

The AWBA currently has 15 water storage permits for GSFs with a total storage capacity of 736,846 acre-feet per year. Two of these water storage permits are for the Gila River Indian Irrigation and Drainage District (GRIIDD) GSF, which was permitted on June 16, 2006. The GSF is on community lands and is located both in the Phoenix and Pinal AMAs, therefore a separate water storage permit was required for each AMA. This GSF provided an additional 56,000 acre-feet per year of storage capacity, however it is only permitted to operate through December 30, 2007. Therefore, it is not included in this ten-year plan. However, if the District seeks to obtain a renewal of its facility permit, storage would be included in future ten-year plans. In 2007, the AWBA obtained an additional water storage permit for storage at the newly permitted Harquahala Valley Irrigation District GSF, located in the Harquahala Valley Irrigation Non-expansion Area. Storage capacity at this facility is 50,000 acre-feet per year. The AWBA is currently the only storage partner at this facility. Appendix C describes the storage partners,

Table 7. Ten-year plan

ARIZONA WATER BANKING AUTHORITY – Ten-Year Plan 2008 – 2017 (Acre-feet)																
YEAR	(a)	(b)		(c)		(d)		(e)		(f)	(g)	(h)	(i)	(j)		
	CAP Water Avail for AWBA	CAP M&I Firming (4¢ tax)		Water Management (Withdrawal Fees)		Appropriation from General Fund		Indian Settlement		Interstate Banking						
		Delivered	Credits	Delivered	Credits	Delivered	Credits	Delivered	Credits	Water Avail.	AWBA Capacity Avail.	Credits	ICUA	Remaining Credits		
Pre-Plan ^(h)	n/a	1,439,848		626,718		403,830		39,944		529,094						
2008	398,297	164,163	151,030	15,821	7,655	0	0	117,844	108,416	100,469	236,910	76,244	0	605,338		
2009	373,361	158,266	145,605	14,572	6,506	0	0	130,537	120,094	69,987	245,654	65,787	0	671,125		
2010	483,247	248,235	228,376	6,003	5,522	0	0	136,954	125,998	92,055	110,692	86,532	30,000	727,657		
2011	447,246	253,112	232,863	5,282	4,860	0	0	99,896	91,904	88,957	158,265	83,619	40,000	771,276		
2012	438,223	240,575	221,329	43,390	39,919	0	0	70,156	64,543	84,103	174,955	79,057	40,000	810,333		
2013	389,440	218,273	200,812	62,146	57,174	0	0	40,461	37,224	68,560	198,805	64,447	40,000	834,780		
2014	366,643	234,573	215,807	57,311	52,727	0	0			74,758	218,417	70,272	40,000	865,052		
2015	358,364	218,948	201,432	53,378	49,107	0	0			86,039	227,635	80,876	40,000	905,929		
2016	351,622	223,263	205,402	52,021	47,859	0	0			76,338	228,487	71,758	40,000	937,686		
2017	433,170	209,706	192,930	51,650	47,518	0	0			171,813	236,688	42,314	40,000	940,000		
TOTAL		3,435,434		945,565		403,830		588,123		1,250,000					310,000	940,000

FOOTNOTES:
 (a) See Appendix B.
 (b) See Appendix D.
 (c) See Appendix E. Includes direct delivery of 7.5 KAF of water in 2008 & 2009 to meet the Southside Replenishment obligation of 15 KAF.
 (d) See Appendix F.
 (e) See Appendix G. Includes credits accrued using withdrawal fees collected in the Phoenix & Pinal AMAs. A.R.S. §45-2491(B)(2) allows for the use of withdrawal fees after legislative appropriations for Indian firming have been expended. In addition to meeting the State Indian settlement firming obligation of 550 KAF, an additional 38,123 AF of credits are accrued to meet the State's obligation under Section 306 of the AZ Water Settlement's Act (\$3 million for Federal assistance).
 (f) Available CAP supplies minus AWBA intrastate delivery requirements.
 (g) See Appendix H.
 (h) Cumulative totals for 1997-2007; 2006 actual credits and 2007 estimated based on projected deliveries.
 (i) Assumes maximum allowable recovery pursuant to the Amended Agreement for Interstate Banking.
 (j) Credits remaining available in Nevada sub-account after recovery.

Table 8. AWBA Percentage of Goals Achieved through 2017

Location and Objective	Goal (AF of Credits)	LTS Credits Accrued (AF)¹	Percent of Goal Achieved
Phoenix M&I Firming ²	1,566,000	2,293,224	146%
Phoenix Groundwater Mgmt ³		546,655	N/A
Pinal M&I Firming ²	243,000	453,016	186%
Pinal Groundwater Mgmt ³		544,341	N/A
Tucson M&I Firming	864,000	689,225	80%
Tucson Groundwater Mgmt ³		135,247	N/A
On-River M&I Firming ⁴	420,000	403,830	96% ⁵
State Indian Firming ⁶	550,000	229,295	42%
Interstate Water Banking – NV ⁷	1,250,000	1,250,000	100%

¹Cumulative totals for 1997-2007; actual credits through 2006 and 2007 credits estimated based on projected deliveries.

²The M&I firming goal will be met in 2012.

³Pursuant to House Bill 2835, firming M&I supplies is a water management objective for the use of credits developed by groundwater withdrawal fees. With full utilization of withdrawal fees in the Tucson AMA, the percent of goal achieved through 2017 is 95%.

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.

⁵This percentage reflects full utilization of general fund credits and could change as other objectives are identified by the AWBA.

⁶A.R.S. §45-2491(B)(2) allows for the use of withdrawal fees after legislative appropriations for Indian firming have been expended. By utilizing a portion of the withdrawal fees from the Phoenix and Pinal AMAs in addition to the legislative appropriation, the goal will be met in 2013.

⁷Pursuant to the Amended Agreement for Interstate Water Banking, the AWBA has committed to accrue 1,250,000 acre-feet of credits on behalf of the Southern Nevada Water Authority. The goal will be met in 2017.

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. Most of the facility permits associated with the GSFs will expire within this ten-year plan. In most instances, the AWBA's water storage permits expire simultaneously with the partners' facility permits. Consequently, any difficulty on the part of the partners or the AWBA to obtain new permits could affect the ability of the AWBA to maintain adequate storage capacity to fulfill water banking activities. Discussions with ADWR recharge staff have indicated that there have been some changes in the process for obtaining a GSF facility permit. The rapid rate of urbanization in the AMAs has resulted in ADWR issuing GSF permits with a five-year term rather than the usual ten-year term, unless the applicant can provide evidence that development will not change their ability to store water. An increase in development may reduce the acreage available for irrigation, thus reducing the amount of water available for storage at the GSF. Furthermore, all of the agreements for water storage expire within this ten-year planning period. Impacts of this nature cannot be predicted and, although they are recognized, were not included in development of this ten-year plan.

The AWBA currently has 11 water storage permits for USFs with a total storage capacity of 841,000 acre-feet per year until 2009 and 778,500 acre-feet per year for the remainder of the planning period. Recharge volumes at the Tonopah Desert Recharge Project are reduced from 150,000 acre-feet per year to 87,500 acre-feet per year after 2009. In 2007, the AWBA obtained a water storage permit for the Southern Avra Valley Storage and Recovery Project (SAVSARP) located in the Tucson AMA, which added an additional 60,000 acre-feet to the total storage capacity. This facility is anticipated to begin operations in January of 2008. The GRUSP permit is the only facility permit that expires during this planning period.

As previously described in the GSF discussion, any difficulty in obtaining new permits could impact the capacity available to the AWBA. As the process of obtaining a new USF permit can be more complex and extensive than obtaining a new GSF permit, the possibility of impact is greater. However, impacts of this nature cannot be predicted and are not included in the analysis of this ten-year plan.

2. Recovery

This ten-year plan includes a recovery component for interstate purposes pursuant to the Amended Agreement for Interstate Water Banking (Amended Agreement). The Amended Agreement authorized Nevada to request development of intentionally created unused apportionment (ICUA), if needed, as follows: in 2007 and 2008, an amount not exceeding 20,000 acre-feet; in 2009 and 2010, an amount not exceeding 30,000 acre-feet; and in subsequent years, an amount not exceeding 40,000 acre-feet. This ten-year plan also includes a recovery component for the development of ICUA for California pursuant to the Letter Agreement between Metropolitan, CAWCD and AWBA discussed earlier. In 2007, the AWBA authorized the creation of 16,804 acre-feet of ICUA at Metropolitan's request. Additional ICUA made available during this ten-year plan is subject to approval on an annual basis as part of the AWBA Annual Plan of Operation. Of the initial 80,909 acre-feet of long-term storage credits held by CAWCD on behalf of Metropolitan, 64,105 acre-feet of credits remain available for recovery during this ten-year plan. Recovery of these credits is the responsibility of CAWCD and will occur in the Pinal AMA.

This ten-year plan does not include a recovery component for M&I firming or Indian settlements because shortages on the Colorado River are not anticipated within the scope of this ten-year plan. As a result of the on-going drought and public concern regarding reservoir levels, the CAWCD modeled Colorado River drought scenarios. The model identified a potential for shortage in 2011. Nonetheless, based on projected CAP M&I demand levels, and the fact that there will be lower priority uses available to be shorted, there will be no shortages to CAP M&I users within the scope of this ten-year plan, even with the dry year hydrology used in the model. For the same reasons, recovery for Indian firming purposes is also not anticipated in the scope of this ten-year plan.

On-river M&I users, however, may be impacted if a shortage is declared during this ten-year period and may be required to recover long-term storage credits to insure firm supplies. In preparation of such an event, the AWBA, pursuant to its Agreement to Firm with the Mohave County Water Authority (MCWA) dated February 4, 2005, assigned 230,280 acre-feet of long-term storage credits previously developed by the AWBA through general fund expenditures to the AWBA's Mohave County Water Authority sub-account. Credits from this sub-account would be used for on-river firming if necessary. The AWBA is participating with CAWCD and

ADWR in development of a general recovery plan as discussed earlier in the Update section of the Annual Report.

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 and Arizona met this goal from 2002 until 2004 and again in 2006. Another primary objective of the AWBA was meeting the M&I firming goals. By the end of 2007 the AWBA anticipates having stored over 1.4 MAF of credits for that purpose.

Central Arizona Groundwater Replenishment District (CAGRD) Replenishment Reserve

Pursuant to statute, the CAGRD must develop a 20% replenishment reserve. The CAGRD replenishment reserve shares co-equal priority for excess water with AWBA M&I firming. However, the reserve has a higher priority for excess CAP water than the AWBA's deliveries for other non-firming purposes (i.e. water management). Therefore, a component for the proposed replenishment reserve as well as the advance replenishment was included in the model for this ten-year plan.

The CAP Water Forecast Group

The group is composed of CAWCD, CAGRD, ADWR and AWBA staff and was formed to facilitate consistency and understanding between the entities with regard to assumptions used for short- and long-term Colorado River water supply, demand forecasts, and cost estimates for water storage. Portions of this ten-year plan were developed using projections obtained from the forecast group.

4. Funding

AWBA General Fund Appropriation

The AWBA has not received a general fund appropriation that was not subject to restrictions for some time. Therefore, the AWBA does not anticipate receiving general fund appropriations and did not include expenditure of these funds in this ten-year plan. However, the AWBA will continue to seek appropriations from the Legislature for future ten-year plans.

Groundwater Withdrawal Fees

In 2006, A.R.S. § 45-611(C)(3) was amended to allow the AWBA to collect groundwater withdrawal fees beyond 2016 and to allow the use of withdrawal fees collected in the Pinal AMA to be utilized for meeting the AWBA Southside Replenishment obligation. In addition, under A.R.S. § 45-2491(B)(2), groundwater withdrawal fees may also be used to accomplish Indian firming goals after expenditures of legislative appropriations. Therefore, this ten-year plan utilizes withdrawal fees to meet the State's Indian settlement obligations, as well as water management goals and includes the use of withdrawal fees beyond 2016.

Ad valorem Tax

Pursuant to A.R.S. § 48-3715.03(B), 4¢ *ad valorem* taxes levied and collected by CAWCD that are not deposited in the District fund, shall be deposited into sub-accounts held by the AWBA;

one for each of the three counties in which the taxes were collected. For the past several years, CAWCD has not deposited monies collected into these AWBA sub-accounts. As a result, the AWBA expended all available funds that remained in the Pinal and Pima County sub-accounts. CAWCD has however assisted the AWBA by offsetting AWBA water delivery and storage costs for these two counties using the 4¢ *ad valorem* tax held in its own accounts. By the end of 2007, the AWBA will have also expended all of the 4¢ *ad valorem* tax held in its Maricopa County account. Therefore, this ten-year plan relies on CAWCD to offset costs for all counties, as has been the situation for the Pinal and Pima Counties for the past several years. It is important to note that A.R.S. 48-3715.02, which 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 collections of the *ad-valorem* tax beyond 2016.

Appropriations for Indian Firming

In 2006, the AWBA received an appropriation of \$13.5 million from the Legislature to be utilized specifically for meeting the State's Indian firming obligations. This ten-year plan identifies expenditure of these funds beginning in 2008. Of these monies, a total of \$3 million is expended in the Tucson AMA for the purpose of assisting the Federal government in meeting its portion of the firming obligation under Section 306 of the Arizona Water Settlements Act (Settlements Act), P.L. 108-451, executed on December 10, 2004. A detailed discussion of the expenditure of these funds is discussed in section 6 below.

Funding for Interstate Banking

The AWBA continues to loan Nevada monies from the Resource account; the account consisting of \$100 million received from Nevada in 2005 pursuant to the Amended Agreement for Interstate Banking. By the end of 2007 this account will have a balance just under \$14 million. This ten-year plan includes the expenditure of these remaining funds and begins to utilize the annual payments of \$23 million from Nevada, scheduled to begin in 2009. The plan identifies expenditure of these funds until such time the AWBA's obligation of 1.25 million acre-feet of credits has been met.

Gifts, Grants, or Donations

At this time, the AWBA has not received any gifts, grants, or donations. However, pursuant to the Arizona-Nevada Shortage Sharing Agreement discussed under the Activities and Projects section of the Annual Report, 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 issues a Record of Decision (ROD) and ending on December 31, 2025. These monies are nonrefundable and will be paid to Arizona within 60 days after the Secretary issues the ROD. This ten-year plan does not include expenditure of these monies because the ROD has not been issued.

5. Modifications within CAP with regard to pricing and pool allocation

In May 2000, the CAWCD Board adopted a policy for marketing the non-Indian agriculture (NIA) pool of excess water. This policy established a NIA pool of 400,000 acre-feet from 2004-2016. The pool will decline to 300,000 acre-feet from 2017-2023 and to 225,000 acre-feet from 2024-2030. This use will be the highest priority use for excess water. It is recognized

that this is a factor that could impact the AWBA's ability to participate in recharge at groundwater savings facilities, however, it is difficult to predict an effect.

The CAWCD Board continues to discuss the marketing of excess water for other users including the CAGRDR replenishment and replenishment reserve, incentive recharge programs, other M&I uses and the AWBA. These discussions have centered on the recognition that policies were developed to insure full utilization of CAP and Arizona's Colorado River allocation and included subsidized water rates to encourage CAP use.

6. Participation in Indian settlements

One objective of the AWBA is assisting with the settlement of water rights claims by Indian communities within Arizona. The state of Arizona has a 100-year firming obligation under the Settlements Act. In addition, pursuant to HB 2728 executed on April 18, 2005, the AWBA has statutorily mandated responsibilities for the Southside Replenishment obligation. The Indian Firming Study Commission (Study Commission), created by the Arizona legislature to evaluate the potential alternatives for meeting these obligations, concluded that the AWBA, in cooperation with ADWR and CAWCD is the most appropriate entity to fulfill the State's firming obligations. HB 2835, which included the Study Commission's recommendations, was signed by Governor Napolitano on April 12, 2006.

As previously discussed, the Legislature appropriated \$13.5 million to the AWBA for fiscal year 2007 for the purpose of meeting the State's Indian settlement firming obligation. Expenditure of the \$13.5 million is expected to occur after the Enforceability Date (December 31, 2007) of the Settlements Act. Therefore, this ten-year plan includes a component for meeting the State's Indian settlement firming obligation, as well as the State's obligation to the Federal government under Section 306 of the Settlements Act. This ten-year plan identifies the State's \$3 million obligation to the Federal government through the accrual of long-term storage credits. It is recognized however, that the State's obligation is not limited to earning long-term storage credits and may be accomplished by other means such as in-kind goods and services. With regard to meeting the State's Indian settlement obligation, since future appropriations from the Legislature cannot be predicted, withdrawal fee expenditures from the Phoenix and Pinal AMAs have also been included in the projections in order to meet the firming goal. This includes credits that were previously earned from water stored at the GRIIDD GSF. It should be noted that if the enforceability provisions of PL108-451 are not met, the AWBA will retain full rights to the long-term storage credits developed at the GRIIDD. In addition to meeting the goals of the State's 100-year Indian firming obligation, this ten-year plan also includes a component for meeting the Southside Replenishment obligation. Direct deliveries for this purpose are identified in the first two years and are accomplished through the use of withdrawal fees collected in the Pinal AMA.

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

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

CAWCD currently has a storage facility permit application pending with ADWR for the Superstition Mountains Recharge project located in the east Salt River Valley. The proposed

annual volume for the facility is 56,500 acre-feet. 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, but does not include California. This ten-year plan indicates that the Nevada obligation could be met by 2017.

Conclusion

The ten-year plan is intended to serve as a guide to assist the AWBA in the development of the Annual Plan of Operation (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.

Appendices

APPENDIX A
Colorado River Water Deliveries for Water Banking Purposes
for Calendar Year 2006 by Partner and Active Management Area

AMA	Partner	Quantity of Water (Acre-Feet)	
		Intrastate	Interstate
PHOENIX AMA	Agua Fria Recharge Project	9,978	0
	Chandler Heights Citrus Irrigation District	168	0
	Hieroglyphic Mountains Recharge Project	10,856	0
	Tonopah Desert Recharge Project	91,127	25,204
	Gila River Indian Irrigation & Drainage District	12,525	0
	<i>Intrastate/Interstate AMA Subtotal</i>	124,654	25,204
	<i>Phoenix AMA Subtotal</i>	149,858	
PINAL AMA	Central Arizona Irrigation and Drainage District	3,300	25,238
	Hohokam Irrigation and Drainage District	3,300	32,531
	Maricopa-Stanfield Irrigation and Drainage District	3,300	70,528
	Gila River Indian Irrigation & Drainage District	6,169	0
	<i>Intrastate/Interstate AMA Subtotal</i>	16,069	128,297
	<i>Pinal AMA Subtotal</i>	144,366	
TUCSON AMA	Avra Valley Recharge Project	5,850	0
	Central Avra Valley Storage and Recovery Project	12,288	0
	Lower Santa Cruz Recharge Project	7,500	21,807
	Pima Mine Road Recharge Project	5,732	13,819
	<i>Intrastate/Interstate AMA Subtotal</i>	31,370	35,626
	<i>Tucson AMA Subtotal</i>	66,996	
TOTAL INTRASTATE & INTERSTATE DELIVERIES		172,093	189,127
TOTAL DELIVERIES		361,220	

APPENDIX B
CAP DELIVERY SCHEDULE
(Acre-feet)

Year	CAP Demands				Average Year Supply ⁵	Available for AWBA ⁶
	M&I ¹	Indian ²	Ag ³	Total ⁴		
2008	604,903	106,800	400,000	1,126,703	1,525,000	398,297
2009	614,839	121,800	400,000	1,151,639	1,525,000	373,361
2010	484,425	142,328	400,000	1,041,753	1,525,000	483,247
2011	500,826	161,928	400,000	1,077,754	1,525,000	447,246
2012	492,384	179,393	400,000	1,086,777	1,525,000	438,223
2013	516,067	204,493	400,000	1,135,560	1,525,000	389,440
2014	538,864	204,493	400,000	1,158,357	1,525,000	366,643
2015	547,143	204,493	400,000	1,166,636	1,525,000	358,364
2016	553,885	204,493	400,000	1,173,378	1,525,000	351,622
2017	572,337	204,493	300,000	1,091,830	1,525,000	433,170

- (1) Includes M&I, CAGR, CAGR replenishment reserve, Indian M&I lease and M&I incentive water.
- (2) From settlement discussions.
- (3) Based on current agricultural pool policy, includes 32,537 AF for Harquahala Valley ID.
- (4) Includes secondary excess uses of 15,000 AF/YR 2008 through 2016.
- (5) Based on average year delivery of 1,600,000 AF/YR per year minus losses.
- (6) Average year supply minus CAP demands; AWBA last priority for intrastate use.

**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					
Harquahala Valley ID	03/2011	50,000	50,000	⁵	n/a
New Magma IDD	12/2011	54,000	45,000	2005	23,863
Queen Creek ID	12/2010	28,000	3,000	2005	1,243
Salt River Project	06/2011	100,000	20,000	2004	8,000
PHOENIX – USF					
GRUSP	12/2010	200,000	15,000	2004	56,500
Agua Fria Recharge Project	05/2019	100,000	40,000	2006	9,978
Hieroglyphic Mtns.	12/2021	35,000	26,000	2006	10,856
Tonopah Desert RP	09/2025	100,000 ⁴	80,000	2006	116,331
PINAL – GSF					
Central Arizona IDD	12/2007	110,000	60,000	2006	28,538
Hohokam IDD	12/2006	55,000	50,000	2006	35,831
Maricopa-Stanfield IDD	12/2009	120,000	80,000	2006	73,828
TUCSON – GSF³					
Kai – Red Rock	12/2006	11,231	3,000	2005	461
TUCSON – USF					
Avra Valley	03/2018	11,000	7,000	2006	5,850
CAVSARP	10/2025	80,000	30,000	2006	12,288
Lower Santa Cruz	09/2019	50,000	40,000	2006	29,307
Pima Mine Road	09/2020	30,000	28,000	2006	19,551
SAVSARP	01/2028	60,000	15,000	⁵	n/a
Other Facilities Currently or Anticipated to be Available to the AWBA					
Vidler-USF	09/2020	100,000	80,000	⁵	0
West Maricopa Combine - USF	05/2021	25,000	20,000	⁵	0
Superstition Mtn.-USF	In-process	56,500	30,000	⁶	n/a

Footnotes:

- (1) As additional facilities are developed, they will be included in future plans. However, it should be recognized that availability of water and funding will likely be the limiting factors 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. Storage capacity at the proposed GRIIDD GSF is 37.52 KAF for Phoenix and 18.48KAF for Pinal.
- (3) The AWBA holds water storage permits at Chandler Heights Citrus ID (3 KAF), Maricopa Water District (18 KAF), Roosevelt Water Conservation District (100 KAF), BKW Farms (16 KAF), Kai-Avra (12 KAF) and the Tonopah (15 KAF) GSFs. These were not considered significant uses in this ten-year outlook.
- (4) Facility is permitted for 150 KAF for the first 4 years and 87.5 KAF for the next 16 years; the 100 KAF listed is a weighted average.
- (5) No deliveries to date.
- (6) Facility permit and Water Storage permit not yet issued.

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			494,505			591,588
	2008	83,339	0	0	176,952	99,545	91,581
	2009	60,993	0	0	184,741	71,888	66,137
	2010	34,487	27,590	25,383	155,260	131,971	121,413
	2011	54,526	30,653	28,201	171,896	126,342	116,235
	2012	46,275	20,059	18,454	183,608	128,444	118,169
	2013	52,117	17,279	15,896	177,912	111,966	103,008
	2014	87,290	40,000	36,800	169,694	102,481	94,282
	2015	78,613	32,000	29,440	170,958	94,565	87,000
	2016	78,295	32,000	29,440	175,411	98,260	90,399
	2017	73,376	35,228	32,410	175,135	111,829	102,883
	Total			710,529			1,582,695
	PINAL AMA²	Pre-plan ³			110,094		
2008		74,000	24,549	22,586	-	-	-
2009		69,174	32,970	30,332	-	-	-
2010		75,494	32,462	29,865	-	-	-
2011		87,385	37,576	34,570	-	-	-
2012		85,326	36,690	33,755	-	-	-
2013		87,967	37,826	34,800	-	-	-
2014		98,019	42,148	38,777	-	-	-
2015		98,963	42,554	39,150	-	-	-
2016		99,635	42,843	39,416	-	-	-
2017		100,280	43,120	39,671	-	-	-
Total				453,016			
TUCSON AMA²		Pre-plan ³			2,928		
	2008	0	0	0	66,782	40,069	36,864
	2009	0	0	0	89,013	53,408	49,135
	2010	0	0	0	93,686	56,212	51,715
	2011	0	0	0	97,569	58,542	53,858
	2012	0	0	0	100,320	55,381	50,951
	2013	0	0	0	99,083	51,203	47,107
	2014	0	0	0	97,988	49,944	45,949
	2015	0	0	0	98,049	49,828	45,842
	2016	0	0	0	98,410	50,160	46,148
	2017	0	0	0	97,602	19,529	17,966
	Total			2,928			686,297

Footnotes:

- (1) Development of M&I firming credits followed utilization of groundwater withdrawal fees.
- (2) M&I firming targets are Phoenix AMA - 1.566 MAF, Tucson AMA - 864 KAF, and Pinal AMA - 243 KAF.
- (3) Cumulative totals for 1997-2006; 2007 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			108,320			112,383
	2008	122,778	39,438	36,283	193,420	16,468	15,150
	2009	121,914	22,159	20,387	201,030	16,289	14,986
	2010	120,936	42,598	39,191	155,260	0	0
	2011	119,808	34,111	31,382	171,896	0	0
	2012	119,787	36,131	33,241	183,608	0	0
	2013	117,555	34,284	31,541	177,912	0	0
	2014	115,093	27,803	25,579	172,305	2,611	2,402
	2015	102,429	23,816	21,911	174,775	3,817	3,511
	2016	102,894	24,599	22,631	177,962	2,551	2,347
	2017	100,996	27,620	25,410	175,135	0	0
	Total			395,876			150,779
PINAL AMA	Pre-plan ²			321,849			0
	2008	120,000	46,000	35,420	-	-	-
	2009	100,821	31,647	22,215	-	-	-
	2010	103,171	27,677	25,463	-	-	-
	2011	109,564	22,179	20,404	-	-	-
	2012	108,834	23,508	21,627	-	-	-
	2013	110,694	22,728	20,909	-	-	-
	2014	120,000	21,981	20,222	-	-	-
	2015	120,000	21,037	19,354	-	-	-
	2016	120,000	20,365	18,736	-	-	-
	2017	120,000	19,720	18,142	-	-	-
	Total			544,341			0
TUCSON AMA	Pre-plan ²			3,982			80,101
	2008	2,500	2,500	2,300	72,603	5,821	5,355
	2009	2,500	2,500	2,300	93,584	4,572	4,206
	2010	2,500	2,500	2,300	97,189	3,503	3,222
	2011	2,500	2,500	2,300	100,351	2,782	2,560
	2012	2,500	2,500	2,300	103,179	2,860	2,631
	2013	2,500	2,500	2,300	101,717	2,634	2,424
	2014	2,500	2,500	2,300	100,405	2,417	2,224
	2015	2,500	2,500	2,300	100,257	2,207	2,031
	2016	2,500	2,500	2,300	100,416	2,005	1,845
	2017	2,500	2,500	2,300	99,413	1,810	1,666
	Total			26,982			108,265

- (1) Expenditure of withdrawal fees was given the highest priority.
(2) Cumulative totals for 1997-2006; 2007 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)

	Year	Groundwater Savings			Underground Storage			
		Capacity Available	Capacity Used	Credits Earned	Capacity Available	Capacity Used	Credits Earned	
PHOENIX AMA	Pre-plan ³			16,275			26,041	
	2008	83,339	0	0	176,952	0	0	
	2009	99,755	0	0	184,741	0	0	
	2010	78,337	0	0	155,260	0	0	
	2011	85,697	0	0	171,896	0	0	
	2012	83,656	0	0	183,608	0	0	
	2013	83,272	0	0	177,912	0	0	
	2014	87,290	0	0	169,694	0	0	
	2015	78,613	0	0	170,958	0	0	
	2016	78,295	0	0	175,411	0	0	
	2017	80,729	0	0	170,871	0	0	
	Total				16,275			26,041
	PINAL AMA	Pre-plan ³			306,968			
2008		120,000	0	0	-	-	-	
2009		120,000	0	0	-	-	-	
2010		120,000	0	0	-	-	-	
2011		120,000	0	0	-	-	-	
2012		120,000	0	0	-	-	-	
2013		120,000	0	0	-	-	-	
2014		120,000	0	0	-	-	-	
2015		120,000	0	0	-	-	-	
2016		120,000	0	0	-	-	-	
2017		120,000	0	0	-	-	-	
Total					306,968			
TUCSON AMA		Pre-plan ³			2,846			54,546
	2008	2,500	0	0	96,041	0	0	
	2009	2,500	0	0	103,584	0	0	
	2010	2,500	0	0	103,189	0	0	
	2011	2,500	0	0	102,351	0	0	
	2012	2,500	0	0	103,179	0	0	
	2013	2,500	0	0	101,717	0	0	
	2014	2,500	0	0	100,405	0	0	
	2015	2,500	0	0	100,257	0	0	
	2016	2,500	0	0	100,416	0	0	
	2017	2,500	0	0	99,413	0	0	
	Total				2,846			54,546

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 KAF.
- (3) Cumulative totals for 1997-2007.

APPENDIX G
Credits Developed Utilizing Indian Settlement Appropriations ^{1, 2}
(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
	2008	83,339	0	0	176,952	0	0
	2009	99,755	38,762	35,661	184,741	0	0
	2010	78,337	43,850	40,342	155,260	0	0
	2011	85,697	31,170	28,677	171,896	0	0
	2012	83,656	37,381	34,391	183,608	0	0
	2013	83,272	31,155	28,662	177,912	0	0
	2014	87,290	0	0	169,694	0	0
	2015	78,613	0	0	170,958	0	0
	2016	78,295	0	0	175,411	0	0
	2017	73,376	0	0	175,135	0	0
	Total				167,733		0
	PINAL AMA	Pre-plan			0		
2008		120,000	0	0	-	-	-
2009		120,000	19,179	17,644	-	-	-
2010		120,000	16,829	15,483	-	-	-
2011		120,000	10,436	9,601	-	-	-
2012		120,000	11,166	10,273	-	-	-
2013		120,000	9,306	8,561	-	-	-
2014		120,000	0	0	-	-	-
2015		120,000	0	0	-	-	-
2016		120,000	0	0	-	-	-
2017		120,000	0	0	-	-	-
Total				61,562			
TUCSON AMA		Pre-plan			0		
	2008	2,500	0	0	96,041	23,438	21,563
	2009	2,500	0	0	103,584	10,000	9,200
	2010	2,500	0	0	103,189	6,000	5,520
	2011	2,500	0	0	102,351	2,000	1,840
	2012	2,500	0	0	103,179	0	0
	2013	2,500	0	0	101,717	0	0
	2014	2,500	0	0	100,405	0	0
	2015	2,500	0	0	100,257	0	0
	2016	2,500	0	0	100,416	0	0
	2017	2,500	0	0	99,413	0	0
	Total			0			38,123

Footnotes:

- (1) The ten-year plan assumes the provisions of P.L. 108-451 have been met.
- (2) The State Indian firming target is 550 KAF.
- (3) 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 H
Potential Credits Developed for Interstate Water Banking¹
(Acre-feet)

Year	Available CAP Supplies²	Available AWBA Capacity³	Remaining Supply⁴	Interstate Credits⁵
Pre-plan ⁶				529,094
2008	100,469	236,910	19,358	76,244
2009	69,987	245,654	0	65,787
2010	92,055	110,692	0	86,532
2011	88,957	158,265	0	83,619
2012	84,103	174,955	0	79,057
2013	68,560	198,805	0	64,447
2014	74,758	218,417	0	70,272
2015	86,039	227,635	0	80,876
2016	76,338	228,487	0	71,758
2017	171,813	236,688	126,798	42,314
Total				1,250,000

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 individual subcontractors, contractors, and 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 as well as capacity available from other storage facilities permitted by the AWBA outside of the 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 individual subcontractors, contractors, and 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 KAF/yr; resulting stored water multiplied by an average 6% cut and loss factor.
- (6) Cumulative totals for 2002-2006; 2007 credits estimated based on projected deliveries.