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ARIZONA WATER BANKING AUTHORITY

ANNUAL REPORT
2014

Submitted

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Arizona Water Banking Authority

Annual Report
2014

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Governor of Arizona

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Chair

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Secretary

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Acronyms and Abbreviations

ADWR	Arizona Department of Water Resources
Agreement to Firm	Agreement to Firm Future Supplies executed February 4, 2005 between the Arizona Water Banking Authority and the Mohave County Water Authority
Amended Agreement to Firm	Amended Agreement to Firm Future Supplies executed March 17, 2010.
AMA	Active Management Area
APO	Annual Plan of Operation
AWBA	Arizona Water Banking Authority
AWB Fund	Arizona Water Banking Fund
AWSA	Arizona Water Settlements Act
CAGRD	Central Arizona Groundwater Replenishment District
CAP	Central Arizona Project
CAWCD	Central Arizona Water Conservation District
Credits	Long-term storage credits
CRSS	Colorado River System Simulation Model
Decree	Consolidated Decree of the U.S. Supreme Court in *Arizona v. California*
GRIC	Gila River Indian Community
GRIIDD	Gila River Indian Irrigation and Drainage District
GSF	Groundwater Savings Facility
ICUA	Intentionally Created Unused Apportionment
Interagency Group	Interagency Recovery Planning Group
IGA	Intergovernmental Agreement
M&I	Municipal and Industrial
MAF	Million Acre-feet
MCWA	Mohave County Water Authority
NIA	Non-Indian Agricultural
Plan	Ten-Year Plan
Quantification Agreement	White Mountain Apache Tribe Water Rights Settlement Agreement
Reclamation	U.S. Bureau of Reclamation
SNWA	Southern Nevada Water Authority
SSRB	Southside Replenishment Bank
USF	Underground Storage Facility

Summary

The role of the AWBA has changed considerably since it was first established in 1996. The initial objective of the AWBA was to store Excess CAP water to mitigate the effects of future Colorado River shortages on municipal and industrial water users, provide groundwater management benefits, assist the State in the settlement of Indian water rights claims, and assist both California and Nevada through interstate banking arrangements. In time, what began as opportunities to beneficially utilize the State's full entitlement of Colorado River water ultimately grew in certain cases into obligations the AWBA must fulfill.

Since inception, the AWBA has accrued nearly 4 million acre-feet (MAF) of long-term storage credits (credits) toward achieving its various goals. Of this amount, nearly 3.4 MAF of credits are for Arizona uses and 0.6 MAF are for interstate purposes accrued on behalf of the State of Nevada. While this has been a major accomplishment, the AWBA has not yet met all of its goals and will be challenged to do so in the years ahead, given the future projections of little to no excess CAP water supplies available for AWBA storage.

Throughout 2014, AWBA activities focused on the implementation of several action items that resulted from an action planning process initiated in 2013. Aimed at prioritizing the AWBA's competing responsibilities, these action items are intended to allow the AWBA to continue to meet its objectives in the face of changing conditions, particularly diminishing water supplies. To this end, the AWBA was given new authority to purchase long-term storage credits when Excess CAP water supplies are insufficient or unavailable for AWBA use, thus giving the AWBA additional flexibility in meeting its responsibilities.

The AWBA also made considerable progress toward fulfilling its Indian settlement responsibilities. Efforts to develop a firming agreement with the Gila River Indian Community resulted in a draft agreement that was released for public review by the end of the year. In addition, the AWBA accelerated its deliveries to the Southside Replenishment Bank, bringing the total volume delivered to 10,000 acre-feet. The AWBA's plan to deliver the remaining 5,000 acre-feet in 2015 will ensure that this requiement is satisfied while water is still available to the AWBA.

Continued work with ADWR and CAWCD on the development of a plan for the recovery of AWBA credits in the future also proved fruitful. Completed in May of 2014, the Joint Recovery Plan provides the framework for how recovery will be accomplished in the future. The recovery plan is an integral component for firming water supplies. The agencies continue to work cooperatively on the future steps outlined in the plan.

These accomplishments are paramount, given the current status of future water supplies available to the AWBA. Current Colorado River water supply projections indicate an increasing probability that a shortage could be declared in the Lower Basin in 2016, an even higher probability in 2017, and a possibility that shortages could continue for the duration of the AWBA's ten-year planning period. A Colorado River shortage at any level would mean there would be no water available to the Excess CAP water pool (the supply available for AWBA use). Consequently, the AWBA's Ten-Year Plan (2016 thru 2025), relies on an approach other than traditional water storage to show how the AWBA could meet its objectives over the next ten years. The Ten-Year Plan also shows that there is a high probability that the AWBA will have a firming requirement for the very first time. However, this firming requirement would only affect the AWBA's obligation to firm Indian supplies.

Annual Report Requirements

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.

AWBA 2014 Organizational Chart

Michael J. Lacey
Chair

Maureen R. George
Vice-Chair

Clifford A. Neal
Secretary

Jim Hartdegen *(Designee)*

John Mawhinney

Ex officio Members

Speaker Andy Tobin

Senator Gail Griffin *(Designee)*

ADWR Support

Virginia O'Connell
Manager

Terri Sue C. Rossi
Technical
Administrator

Tim Henley
Contract
Consultant

Ken Slowinski and **Nicole Klobas**
Legal Counsel

CAWCD Support

There was one membership change to the AWBA Commission in 2014. In January, Chair Sandra Fabritz-Whitney announced her resignation as Director of the Department of Water Resources (ADWR). Michael J. Lacey, ADWR Deputy Director, was appointed as her replacement. There were no changes to AWBA staff.

2014 Activities

The AWBA continued its quarterly meeting schedule in 2014 with meetings on April 16, June 18, September 17, and December 3. There were two special meetings on February 14 and March 7 regarding legislation proposed by the AWBA and related amendments to the AWBA's intergovernmental agreement with the Arizona Department of Water Resources (ADWR) and the Central Arizona Water Conservation District (CAWCD). In addition, Commission members attended a joint agency workshop on recovery planning held on February 7.

Implementation of 2014 Plan of Operation

The AWBA Plan of Operation for 2014 initially identified 64,753 acre-feet of water available for delivery under CAWCD's Access to Excess policy adopted in 2009. An additional 7,268 acre-feet of water became available during the year through CAWCD's process for remarketing previously allocated CAP supplies, bringing the total to 72,021 acre-feet. Of this amount, 67,021 acre-feet was delivered for recharge and 5,000 acre-feet was delivered to the Southside Replenishment Bank. The quantity of water that was delivered to each storage facility is described in Appendix A and totaled 28,165 acre-feet in the Phoenix AMA, 14,100 acre-feet in the Pinal AMA, and 29,756 acre-feet in the Tucson AMA. The Plan did not include an interstate water banking component.

Based on the Decree accounting data, total consumptive use of Colorado River water by Arizona in 2014 was 2.77 million acre-feet (MAF) and accounted for approximately 1.14 MAF of direct uses along the Colorado River and 1.63 MAF in CAP diversions (U.S. Bureau of Reclamation, Lower Colorado River Operations, Colorado River Accounting and Water Use Report Arizona, California, Nevada – Calendar Year 2014, dated May 2015). Notable was the first ever water release volume of 7.48 MAF from Lake Powell instead of the normal release volume of 8.23 MAF, which further aggravated the declining water levels in Lake Mead. To help mitigate the downward trend toward a potential shortage declaration by the Secretary of the Interior (Secretary), CAWCD and the Southern Nevada Water Authority (SNWA) opted to again reduce their entitled diversions, leaving 18,290 and 10,384 acre-feet, respectively, in Lake Mead as system storage. Additionally, CAWCD on behalf of the Central Arizona Groundwater Replenishment District, agreed to forebear 6,827 acre-feet of water to study a pilot conservation program with the Yuma Mesa Irrigation and Drainage District. This water was also left in Lake Mead as a benefit to the system.

Action Planning

In 2013, recognizing that projected decreases in available excess CAP water supplies and increasing water storage costs would continue to put the AWBA further behind in achieving its objectives, AWBA Commission members engaged in an action planning process aimed at prioritizing AWBA responsibilities and identifying specific actions that could be taken to address its diminishing water supplies and financial resources. This process, which involved public participation and review, resulted in several recommended actions that were ultimately incorporated into and adopted as part of the AWBA's 2014 Ten-Year Plan (2015 through 2024). These actions are exemplified within the following activities:

Indian Firming Program

In 2014, AWBA staff focused heavily on developing a firming plan for the Gila River Indian Community (GRIC) since Colorado River modeling projections have shown that non-Indian agricultural (NIA) Priority CAP water supplies will be the first supplies the AWBA will need to firm. Staff also kept apprised of the status of other ongoing settlements. The AWBA concerns were mainly related to the need to firm water supplies resulting from the settlements.

Gila River Indian Community

Under the Arizona Water Settlements Act (AWSA), the AWBA, as agent for the State, has a 100-year requirement (until 2108) to firm up to 15,000 acre-feet per year of NIA Priority CAP water for the GRIC when supplies are insufficient to meet demand. The *Agreement between the Secretary and the State of Arizona for the Firming of CAP Indian Water*, executed on November 15, 2007, defines the AWBA's firming responsibilities, but also includes a provision that allows the AWBA to enter into a separate agreement with the Community to carry out its firming obligation. Discussions on developing such an agreement were initiated in mid-2013 and continued throughout 2014. A draft intergovernmental agreement (IGA) was presented at the AWBA's quarterly meeting in December. The IGA uses the AWBA Ten-Year Plan as the basis for evaluating potential future shortages and outlines the steps that must be taken by each party as the potential for shortage draws nearer. By offering alternative firming options, the IGA provides flexibility in how a firming obligation can be satisfied during a shortage year. The draft IGA was subsequently made available to the public for review and comment.

White Mountain Apache Tribe

The Claims Resolution Act of 2010, which includes the White Mountain Apache Tribe Water Rights Quantification Agreement (Quantification Agreement), was signed by President Barack Obama on December 8, 2010. Under this settlement, the AWBA is required to firm up to 3,750 acre-feet per year of NIA Priority CAP water until 2108. This obligation is part of the 8,724 acre-feet per year firming requirement identified for future settlements under AWSA. In 2012, the Arizona Legislature appropriated $2 million toward the construction of the White Mountain Apache Tribe Rural Water System, fulfilling one of the activities necessary to meet the enforceability date of April 30, 2021. Additionally, an application to approve the amended and restated Quantification Agreement was filed with the Gila River and Little Colorado River adjudication courts on April 29, 2014. A final Judgement and Decree approving the agreement was entered on December 18, 2014. Because there are also Federal requirements that must still be met, the settlement is not likely to become enforceable until 2016.

Navajo Nation/Hopi Tribe

In 2012, Councils for the Navajo Nation and Hopi Tribe voted to reject a settlement agreement for the Little Colorado River and its authorizing legislation, respectively. The settlement included an allocation of NIA Priority CAP water to the Navajo Nation for use at Window Rock that would have had an AWBA firming obligation of up to 3,205.5 acre-feet per year. Final efforts among the parties to continue negotiations to try to resolve the outstanding issues were unsuccessful. The Navajo Nation decided it would not request another stay, opting instead to litigate the lawsuit it filed against the Secretary of Interior in 2003. On June 3, 2013, the Nation filed an amended complaint with the U.S. District Court for the District of Arizona that asserts the Department of the Interior breached its fiduciary duty to the

Nation by failing to determine the Nation's rights to the waters of the Lower Colorado River. The Nation requested the court hold unlawful and set aside certain operations of the Lower Colorado River, including the guidelines for shortage and surplus conditions, interstate banking regulations and the Storage and Interstate Release Agreement (SIRA) because the Secretary failed to consider the needs of the Nation for Colorado River water. ADWR intervened as a defendant in the lawsuit on behalf of the State of Arizona. Other interveners include CAWCD and SRP, the Arizona Power Authority, Nevada, Metropolitan Water District of Southern California, Imperial Irrigation District and the Coachella Valley Water District. In 2014, ruling in favor of the parties, the Federal District Court Judge dismissed the lawsuit. The Nation appealed to the 9th Circuit Court of Appeals, but have not included the dismissal of their claim challenging interstate banking regulations and the SIRA. Briefs have been submitted by all parties and the parties are curently awaiting the scheduling of an oral argument.

Southside Replenishment Bank

In addition to the firming requirements of the AWSA, the AWBA is required to deliver 15,000 acre-feet of water to the GRIC for the purpose of establishing the Southside Replenishment Bank. The Replenishment Bank will fulfill obligations that may be created under the AWSA for protection of the Reservation from off-reservation groundwater pumping. The AWBA must deliver a minimum of 1,000 acre-feet per year to establish the Replenishment Bank. This amount was delivered each year from 2009 through 2013, for a total of 5,000 acre-feet.

Projections from Reclamation's August 2013 24-Month Study indicated there was a significant chance that a Lower Colorado River shortage could be declared in 2016. Recognizing that a shortage, if it occurred, would mean there would be no excess CAP water available for low priority CAP water users, the AWBA planned to deliver the remaining 10,000 acre-feet of water needed to complete the obligation the following two years, thus avoiding the risk of not being able to make the required deliveries. Consequently, the AWBA delivered 5,000 acre-feet of water to the GRIC in 2014. Because general fund appropriations have not been made available, Pinal AMA withdrawal fees have been used to pay for these deliveries. Cumulative expenditures through 2014 total over $1.44 million. Since hydrologic conditions have not improved, the AWBA included delivery of the remaining 5,000 acre-feet in its 2015 Plan of Operation. The AWBA submitted a proposal to ADWR requesting a general fund appropriation of $895,000 for Fiscal Year 2015-2016 to pay for these deliveries.

By memorandum dated September 30, 2014, the AWBA was informed by ADWR that there were no irrigation replenishment obligations for the 2013 reporting year. It is not anticipated that there will be irrigation replenishment obligations for the 2014 reporting year, but that information will not be available until October of 2015 and will be reported in the 2015 Annual Report.

<u>Purchase of Long-term Storage Credits</u>

The AWBA's governing statutes were amended in 2014 to allow the AWBA to purchase long-term storage credits after all available excess CAP water supplies have been scheduled for storage. This expanded authority gives the AWBA additional flexibility in meeting its responsibilities and will be key when excess CAP supplies become unavailable to the AWBA as current projections are indicating.

When purchasing credits, the AWBA may use all funding sources authorized for AWBA in-state use. The use of *ad valorem* tax funds for this purpose, however, is subject to approval by the CAWCD Board. The procedure for purchasing credits with *ad valorem* tax funds has been accordingly defined under

Amendment No. 1 to the IGA among ADWR, AWBA, and CAWCD, executed on November 18, 2014. Additionally, in developing its Plan of Operation, the AWBA must confer with ADWR and CAWCD on the potential purchase of credits, particularly if CAWCD is anticipated to be the AWBA's recovery agent for those credits.

Recovery Planning

In preparation of needing to meet a firming requirement for the first time, AWBA, CAWCD and ADWR staff, in cooperation with stakeholders, developed a recovery plan that provides a framework for the recovery of AWBA credits and the delivery of that water during future shortages. A Preface to the Joint Recovery Plan that acknowledges that the plan advances the objectives of the IGA among ADWR, AWBA, and CAWCD, was executed on May 6, 2014 and incorporated into the final plan. The agencies continue to work cooperatively on the future steps outlined in the plan. As the AWBA's primary recovery agent, CAWCD's efforts have included the evaluation of recovery infrastructure at key sites as identified in the plan and the development of recovery agreements with recovery partners. CAWCD has also established an internal recovery team to ensure coordination between departments responsible for recovery. Updates are provided quarterly at both CAWCD Board and AWBA meetings.

Modeling

AWBA staff continued meeting with staff from ADWR's Colorado River Management section and CAWCD to develop consistent baseline assumptions for the Arizona CRSS model for all the agencies to use. The model is one of the planning tools available to the AWBA to determine when shortages might occur, how deep they might be, the volume of water the AWBA may need to firm in the future, and the relevancy of the AWBA's overall firming targets. Model results in 2014 indicated that the AWBA's firming targets are within the ranges projected. The modeling process is dynamic and will continue evolving as new information becomes available.

Inter-AMA Firming

In February of 2014, the Arizona Municipal Water Users Association (AMWUA) and Southern Arizona Water Users Association (SAWUA) submitted a joint proposal for Inter-AMA water storage and firming between the Phoenix and Tucson AMAs to the AWBA, ADWR and CAWCD for consideration. The goals of the proposal are aimed at providing additional water management flexibility to both CAP M&I subcontractors and the AWBA. Under the proposal, a CAP M&I subcontractor in the Phoenix AMA could store a portion of their entitlement in the Tucson AMA at a Tucson CAP M&I subcontrator's underground storage facility (USF). In-turn, a Tucson M&I subcontractor would agree to accept the stored water in the future in lieu of a direct delivery to their USF. The water would be delivered instead to the Phoenix M&I subcontractor's treatment plant. Likewise, the AWBA could store water in the Tucson AMA for M&I firming purposes using monies collected in the Phoenix AMA to pay for the storage. The stored water would be applied toward the firming goal for the Phoenix AMA. During shortages, the water would be recovered and used in lieu of a direct delivery in the Tucson AMA. The water that would have been delivered to the Tucson AMA would instead be delivered to treatment plants in Phoenix, making the cost for recovery infrastructure more affordable for all M&I users.

To evaluate the concepts of the proposal, the City of Phoenix, Tucson Water, and Metropolitan Domestic Water Improvement District (Metro Water) have agreed to participate in a pilot phase of the program by storing a relatively small amount of water in 2015. If successful, the interested parties may want to

proceed with the second phase of the project that could include an expansion of the Clearwater and Avra Valley USFs to accommodate the additional storage. The potential expansion of these facilities would also involve the cooperation of CAWCD for operational and potential funding purposes and ADWR for regulatory purposes.

Discussions on the details of the proposal remain ongoing by all parties involved.

2015 Plan of Operation

The AWBA 2015 Plan of Operation (APO) was adopted on December 3, 2014. As in 2014, water availability was the primary limiting factor in developing the APO. This was followed by the availability of funding in the Pinal and Tucson AMAs. The volume of water available to the excess CAP pool that is shared by the AWBA, CAGRD, and Federal government was 58,726 acre-feet. The portion available for use by the AWBA was 50,448 acre-feet. Of this amount, 45,448 acre-feet will be delivered for recharge. The remaining 5,000 acre-feet will be delivered to the GRIC for the Southside Replenishment Bank, thereby completing this term of the AWSA. Deliveries for storage include 15,548 acre-feet in the Phoenix AMA, 9,600 acre-feet in the Pinal AMA, and 20,300 acre-feet in the Tucson AMA.

For the first time, the AWBA's APO also includes a component for purchasing long-term storage credits, which if succesful, could nearly double the total amount of credits accrued in 2015. The AWBA anticipates purchasing credits in both the Phoenix and Tucson AMAs in order to make further progress on the CAP M&I firming goals for these areas. Target volumes include 14,290 acre-feet for the Phoenix AMA and 14,570 acre-feet for the Tucson AMA. The AWBA's request to reserve *ad valorem* tax funds for this purpose was approved by the CAWCD Board at its December meeting. The AWBA had also anticipated purchasing up to 16,790 acre-feet of credits in the Phoenix AMA for water management purposes, including credits that could be applied toward meeting Indian settlement obligations. However, recent legislative transfers will reduce this amount. In addition to cost, careful consideration will be given to the location of the credits available for sale. [A purchase and sale agreement was executed with the City of Tucson on February 18, 2015. The agreement has a three-year term and allows for the purchase/sale of up to 15,000 acre-feet of credits per year at costs equivalent to the AWBA's cost to store water Tucson Water 's Clearwater USFs.]

Website

Staff continues to utilize the AWBA website in an effort to provide timely and accurate information to the water community regarding the AWBA's activities: www.azwaterbank.gov . The web page contains information about the AWBA, its Commission members and staff, announcements, meetings, storage facilities, water deliveries and long-term storage credits accrued. The webpage also contains documents that may be downloaded and provides links to other water-related websites.

Monies Collected and Expended from the Banking Fund

Arizona Revised Statutes §45-2425 mandates the various sources of monies for the Arizona Water Banking (AWB) Fund. The AWB Fund is administered by the AWBA. In 2014, the AWBA obtained its funding from the following sources:

1. Fees for groundwater pumping are collected within the Phoenix, Pinal and Tucson AMAs. Fees for water banking purposes are charged at $2.50 per acre-foot. Legislative changes allow for groundwater withdrawal fees to be collected and available to the AWBA beyond 2016 (A.R.S. §45-611(c)(3)). Long-term storage credits accrued with these monies must be used to benefit the AMA in which the monies were collected.
2. No *ad valorem* tax revenues were deposited into the AWB Fund in 2014. The CAWCD Board resolved that all taxes to be levied for the 2013-2014 tax year would be retained by CAWCD. However, CAWCD continues to use the ad valorem tax funds to offset AWBA water delivery and storage costs as part of the CAP operating and maintenance (O&M) costs. Money from this source must be used to benefit the county in which it was collected.
3. No general fund appropriation money was deposited in the AWB Fund in 2014.
4. Pursuant to the Agreement to Firm Future Supplies (Agreement to Firm), Mohave County Water Authority (MCWA) agreed to prepay the AWBA to set aside 230,280 acre-feet of credits that were transferred to the MCWA sub-account. Once the credits were identified for use by an entity outside of the three-county service area, CAWCD was required to charge the AWBA a fee in lieu of the 4¢ *ad valorem* tax. Monies collected from MCWA are used to offset the CAWCD fees which are charged at the same rate and on the same quarterly schedule as MCWA's prepayments to the AWBA. The final payment due under the Amended Agreement to Firm was made by MCWA in November of 2010 for the first quarter of 2011. The first prepayment under the Amended Agreement to Firm that sets aside an additional 25,894 acre-feet of credits was made in September of 2011 for the quarter beginning on October 1. As of December 2014, there are seven of the twenty payments remaining.

Table 1 shows the money the AWBA collected and the money that was expended for delivery and storage of water in 2014 by source of funds. Table 2 shows the total money received, expended and remaining through December 2014 by source of funds.

Table 1. Monies Collected and Expended in 2014 by Source of Funds

Source of Funds	Collected	Expended
General Funds	**$0**	**$0**
In-Lieu Fund – MCWA Prepayments[1]	**$95,936**	**$95,936**
State Indian Firming	**$0**	**$0**
Interstate Water Banking[2]	**$5,612**	**$0**
Shortage Reparations - Nevada	**$1,500,000**	**$1,499,993**
4¢ *Ad valorem* Tax[3]		
Maricopa County	$0	$4,314,466
Pinal County	$846,735	$937,200
Pima County	$3,031,120	$3,406,414
Subtotal for *Ad valorem*	**$3,877,855**	**$8,658,080**
Groundwater Withdrawal Fees		
Phoenix AMA	$2,243,937	$534,584
Pinal AMA	$1,431,234	$1,754,000
Tucson AMA	$449,275	$431,834
Subtotal for Withdrawal Fees	**$4,124,446**	**$2,720,418**
TOTAL	**$9,603,849**	**$12,974,426**

[1] In 2013, MCWA paid its remaining share of $22,920 in full, reducing future quarterly payments to $23,984.
[2] Amount collected is interest and $3,868 in monies recovered from Lehman Brothers bankruptcy.
[3] Monies made available from the 2013-2014 tax year and expended by CAWCD to offset AWBA delivery and storage costs as part of CAP O&M costs. Expenditures include carryover funds from previous years.

Table 2. Monies Collected and Expended through December 2014 for Water Banking Activities and Monies Remaining Available

Source of Funds	Collected	Expended	Available[1]
General Funds	**$11,100,865**	**$11,100,865**	**$0**
In-Lieu Fund - MCWA Pre-payments	**$4,955,596**	**$4,955,596**	**$0**
State Indian Firming [2]	**$2,338,171**	**$2,338,171**	**$0**
Interstate Water Banking-NV [2, 3]	**$109,322,869**	**$109,087,822**	**$235,048**
Shortage Reparations – NV [4]	**$5,999,748**	**$5,999,741**	**$7**
4¢ *Ad valorem* Tax [5]			
Maricopa County[6]	$170,352,129	$95,649,433	$74,702,695
Pinal County	$11,803,654	$11,387,361	$416,293
Pima County	$48,878,875	$45,858,281	$3,020,595
Subtotal for *Ad valorem*	**$231,034,658**	**$152,895,074**	**$78,139,583**
Groundwater Withdrawal Fees[2]			
Phoenix AMA	$23,315,657	$20,182,822	$3,132,836
Pinal AMA	$19,245,567	$18,747,895	$497,673
Tucson AMA	$8,796,644	$8,746,546	$50,098
Subtotal for Withdrawal Fees	**$51,357,868**	**$47,677,262**	**$3,680,606**
TOTAL	**$416,109,775**	**$334,054,531**	**$82,055,244**

[1] Money remaining in AWB Fund or made available by CAWCD; includes monies committed for the 2015 Plan of Operation.
[2] Total money collected was decreased to reflect legislative transfers in CY 2004, CY 2005, CY 2009-2011.
[3] Pursuant to the Third Amended and Restated Interstate Banking Agreement, monies remaining available are non-reconcilable for interstate purposes and subject to legislative authorization prior to use by the AWBA.
[4] Includes $1,948 in interest; outstanding balance from SNWA is $2,002,200.
[5] Includes monies made available and monies expended by CAWCD to offset AWBA delivery and storage costs as part of CAP O&M costs.
[6] Funds dedicated for AWBA water storage for M&I subcontract firming pursuant to CAWCD Board of Directors Resolutions adopted

Long-term Storage Credits

The AWBA has established long-term storage credit accounts with ADWR for each AMA. After receiving the AWBA's annual reports, ADWR calculates and issues credits to the appropriate accounts. The AWBA receives credit for 95 percent of the stored water after losses are taken into account. After credits are issued to the account, AWBA staff allocates the credits to the appropriate sub-accounts based on source of funding. The number and distribution of credits for 2014 are listed in Table 3. Cumulative credits accrued by the AWBA through December 2014 are listed in Table 4.

Table 3. Number and Location of Long-term Storage Credits Accrued in 2014 (AF)

Funding Source	Phoenix AMA	Pinal AMA[1]	Tucson AMA	Total
4-Cent Ad Valorem Tax	23,435	6,584	17,977	47,996
Withdrawal Fees	3,144	6,429	2,314	11,886
General Fund	-	-	-	-
Shortage Reparation	-	-	7,750	7,750
Intrastate TOTAL	**26,579**	**13,013**	**28,040**	**67,632**
Interstate - Nevada	-	-	-	-
TOTAL	**26,579**	**13,013**	**28,040**	**67,632**

[1] Additional credits may be issued upon resolution of annual reporting issues associated with GSF participants.

Table 4. Cumulative Long-term Storage Credits Accrued through December 2014 (AF)

Funding Source	Phoenix AMA	Pinal AMA	Tucson AMA	Total
4-Cent Ad Valorem Tax	1,358,825	205,214	422,292	1,986,330
Withdrawal Fees	320,679	408,459	103,306 [1]	832,445
General Fund	42,316	306,968 [2]	54,546	403,830
Other Intrastate:				
Indian Firming Appropriation	-	-	28,481	28,481
Shortage Reparation	20,642	60,507	17,822	98,970
GSF Operator Full Cost Share	-	14,125	-	14,125
Intrastate TOTAL	**1,742,462**	**995,273**	**626,477**	**3,364,181**
Interstate - Nevada	51,009	440,241 [3]	109,791	601,041
TOTAL	**1,793,471**	**1,435,514**	**736,238**	**3,965,222**

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

[2] By resolution passed in 2002, the AWBA established on-River firming as the highest priority of use for credits accrued through expenditure of general fund appropriations. Pursuant to the AWBA Agreement to Firm with MCWA dated February 4, 2005, a total of 230,280 acre-feet of credits were transferred to the AWBA long-term storage subaccount for the MCWA in 2005. An additional 25,894 acre-feet of credits have been reserved under Exhibit C the Amended Agreement to Firm, dated December 8, 2010, for a total of 256,174 acre-feet. By resolution passed in 2008, the AWBA established a replacement account for 4th priority Colorado River M&I users.

[3] Includes 50,000 acre-feet of credits transferred from CAWCD pursuant to Amended Agreement for Interstate Water Banking.

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

The AWBA has also identified 420,000 acre-feet of credits as a reasonable amount of credits to firm the on-River communities over the next 100 years. In 2002, the AWBA adopted a resolution that identified on-River firming as the highest priority of use for the general fund credits and established priorities for other uses (Indian settlements, etc.). Consequently, all or part of the general fund credits could be utilized to firm on-River M&I users. If used for this purpose, the AWBA will collect reimbursement for the replacement cost of the credits used. In 2008, the AWBA executed Resolution 2008-1 that established a long-term storage credit replacement account for 4th priority Colorado River M&I users. As credits are used and replaced, these replacement credits will be placed in a separate replacement subaccount and earmarked for the entity that reimburses the AWBA for the replacement of those credits.

Furthermore, with enforceability of the Arizona Water Settlements Act (AWSA) of 2004 in December of 2007, the AWBA, as agent for the State, assumed the obligation to firm up to 23,724 acre-feet per year of CAP NIA Priority water supplies. This water will be made available to Indian tribes as follows: 15,000 acre-feet for the Gila River Indian Community and 8,724 acre-feet for future settlements. The AWBA must firm these supplies for a 100-year period and ensure that the water is delivered in the same manner that water with an M&I priority is delivered during water shortages. In 2005, the Arizona State Legislature created an Indian Firming Study Commission (Study Commission) to develop a Firming Program for Arizona. The analysis performed by the Study Commission estimated a firming target of approximately 550,000 acre-feet: 350,000 acre-feet for the GRIC and 200,000 acre-feet for future settlements. The AWBA periodically re-evaluates these targets to ensure they are still applicable. While the AWBA has focused its efforts on the accrual of long-term storage credits, the AWBA may also to use other methods to meet this obligation including, contracting for delivery of water supplies other than excess CAP water, engaging in water exchanges, and/or entering into lease agreements with Indian communities and others.

In addition to firming, the AWSA also required that the state contribute $3 million in cash or in-kind services to assist the Secretary in meeting the Federal obligation to the Tohono O'odham Nation. Pursuant to the AWBA's firming agreement with the Secretary, the parties agreed to accomplish this requirement through the accrual of an equivalent amount of long-term storage credits that would be distributed to the Secretary during shortages. Lastly, as discussed earlier, the AWBA is required to directly deliver 15,000 acre-feet of water to the GRIC to establish the Southside Replenishment Bank.

Table 5 illustrates the progress made by the AWBA towards meeting its established goals and obligations. Progress on individual goals varies due to the availability of funds, limitations of how each funding source may be used, and storage capacity that has been available in each AMA historically.

Table 5. Identified Uses of Long-term Storage Credits Accrued through December 2014 and Percentage of AWBA Goals Achieved

Location and Objective	Funding Source	Estimated Goal	Non-Credit Goal Achieved	Credits Accrued (AF)	Goal Achieved
CAP M&I Firming	Water Storage Tax (4¢ *Ad valorem*) collected by County				
Phoenix AMA		1,566,000 AF		1,358,825	87%
Pinal AMA		243,000 AF		205,214	84%
Tucson AMA		864,000 AF		422,292	49%
On-River M&I Firming[1]	General Fund	420,000 AF		403,830	96%
Indian Settlement Obligations:					
GRIC Firming -		350,000 AF[2]		105,390[3]	30%
up to 15 KAF/year	General Fund			*0*	
	Withdrawal Fees			*105,390*	
Future Settlements -		200,000 AF[2]		0	N/A
up to 8.7 KAF/year	General Fund			*0*	
	Withdrawal Fees			*0*	
Federal Assistance (SAWRSA)-			$3,000,000	34,102	100%
$3 million	General Fund		*$2,338,171*	*28,481*	
	Tucson W/Fees		*$630,490*	*5,621*	
	Cost of Services[4]		*$31,339*	*n/a*	
Southside Replenishment Bank				10,000	67%
15 KAF direct delivery	General Fund			*0*	
	Pinal W/Fees			*10,000*	
Groundwater Management[5]					
Phoenix AMA	Withdrawal Fees collected by AMA			232,366	
Pinal AMA				188,136	
Tucson AMA				97,685	
Other:					
Shortage Reparations	Agreement with Nevada	$8,000,000	$5,999,741	98,970	75%
Pinal Redirect Credits[6]	N/A			14,125	N/A

[1] 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 Agreement to Firm dated February 4, 2005, a total of 230,280 acre-feet of credits were transferred to the AWBA long-term storage subaccount for MCWA in 2005. An additional 25,894 acre-feet of credits have been reserved under Exhibit C the Amended Agreement to Firm, dated December 8, 2010, for a total of 256,174 acre-feet.

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

[3] Credits accrued from storage at the Gila River Indian Irrigation and Drainage District GSF: Phoenix AMA 88,313 AF, Pinal AMA 17,077. Credits available for water management have been adjusted accordingly.

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

[5] Withdrawal fees could be utilized in addition to 4¢ *ad valorem* tax revenues for M&I firming if needed to reach firming goals and for Indian settlement obligations in the absence of general fund appropriations.

[6] Credits accrued from AWBA water provided to Pinal AMA GSFs at full cost to the GSF operators. These credits are currently identified for use in the Tucson AMA.

The average annual cost for the AWBA to obtain one acre-foot of credit for intrastate and interstate storage is presented in Tables 6a and 6b, respectively. Table 6a illustrates that the unit cost per credit for intrastate storage fluctuates yearly primarily based on water delivery and storage facility costs. The sigificant increase beginning 2010 is due to CAWCD's elimination of the incentive recharge rate.

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

Year	Credits[1]	Funds Expended	Average Cost (per acre-foot)	Ratio of GSF to USF
1997	296,987	$6,387,000	$21.51	85:15
1998	202,542	$7,143,000	$35.27	68:32
1999	232,142	$8,733,000	$37.61	68:32
2000	272,123	$11,163,000	$41.02	60:40
2001	275,406	$10,893,590	$39.55	62:38
2002	262,317	$13,700,300	$52.23	64:36
2003	200,168	$11,077,666	$55.34	47:53
2004	251,456	$17,855,997	$71.01	41:59
2005	85,782	$5,615,201	$65.46	58:42
2006	162,342	$14,720,277	$90.67	17:83
2007	245,221	$14,589,390	$59.49	37:63
2008	203,373	$8,168,100	$40.16	65:35
2009 [2]	99,453	$6,977,590	$70.16	76:24
2010	181,214	$26,027,947	$143.63	21:79
2011	127,605	$16,543,540	$129.65	33:67
2012	125,503	$17,314,052	$137.96	42:58
2013	72,404	$10,963,900	$151.43	31:69
2014	67,795	$12,048,490	$177.72	24:76

[1] Credit accrual information in this table is reconciled on an annual basis.
[2] Does not include credits purchased pursuant to § 45-841.01.

Table 6b illustrates the unit cost per long-term storage credit for interstate also fluctuates yearly. There has been no interstate storage since 2010.

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)	Ratio of GSF to 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	175,959	$35,386,306	$201.55	68:32
2007	114,886	$21,853,906	$190.22	91:09
2008	None	None	$0	0:0
2009	55,252	$10,781,853	$195.14	45: 55
2010	17,879	$3,825,350	$213.96	0:100

[1] Long-term Storage Credits transferred from CAWCD.

Long-term Storage Credits Distributed or Extinguished by the Authority

The long-term storage credits developed by the AWBA to date have been identified for five purposes:

- Firming CAP M&I entitlements;
- Firming the post-1968 M&I entitlements for entities outside the CAP service area;
- Firming for the State's obligation under the AWSA, including the State's Federal obligation;
- Assisting in fulfilling the water management objectives set forth in Chapter 2 of Title 45 (Arizona Revised Statutes); and
- Interstate water banking purposes pursuant to agreements with Nevada.

Credits accrued by the AWBA for firming purposes may be distributed or extinguished when the Colorado River system is declared to be in a shortage and demands exceed supply, if there is a water shortage as defined under the AWSA, or if there is an operational disruption of the CAP. There were no shortages or unplanned CAP outages, therefore, no credits were distributed or extinguished for these purposes in 2014. No credits were distributed or extinguished in 2014 for water management purposes.

Under the 1999 amendments to the AWBA legislation, the AWBA is authorized to develop credits with monies collected pursuant to water banking services agreements. In 2014, no credits were developed or distributed under such agreements. Additionally, there were no credits recovered for interstate purposes.

Ten-Year Plan

Introduction

Pursuant to A.R.S. §45-2426, the AWBA is required to prepare a Ten-Year Plan. 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 must also provide an analysis of the AWBA's ability to complete those activities. The Ten-Year Plan is not a guarantee of future credit development or distribution activities: it is prepared for planning purposes only. In any given year, the AWBA's specific activities are governed by the annual Plan of Operation.

This Ten-Year Plan analyzes potential activity for the period 2016-2025. AWBA accounting for previous years can be found in the 2013 Annual Report and 2015 Plan of Operation. The plan is an important tool to be utilized in development of 1) the next year's annual Plan of Operation and 2) policy guidelines for future AWBA activities. The Ten-Year Plan is updated annually based on current information and the priorities of the AWBA.

This Ten-Year Plan has been developed with the underlying assumption that there will be no Excess CAP water available to the AWBA during the planning period. Therefore, the Plan relies on a strategy other than traditional water storage to show how the AWBA could meet its objectives over the next ten years; one that includes the acquisition of other water supplies. Additionally, based on a water supply analysis conducted jointly by ADWR and CAP, there is a high probability that the AWBA will have a firming requirement for the very first time during this plan. This firming requirement would only affect the NIA Indian pool. At the foundation of the Ten-Year Plan, are numerous assumptions. These assumptions are presented in Appendix B.

Ten-Year Plan Components

A number of components are recognized to be important in developing the Ten-Year Plan. Three are mutually dependent and intrinsic to AWBA water storage activities and are therefore always considered: water availability, funding and storage capacity. The availability of one, or lack thereof, will ultimately affect the significance of the other two in developing the plan. For example, because of the high likelihood that there will be no Excess CAP water available to the AWBA during the next ten years, the availability of storage capacity will be less relevant. The availability of funding, however, will be of particular importance in showing how the AWBA's objectives could be accomplished during the planning period. The components, as they relate to this Ten-Year Plan, are discussed below:

1. Water Available to the AWBA

   The volume of water available to the AWBA has been decreasing since 2010 when over 200,000 acre-feet were available to the AWBA. In 2014, the AWBA stored just over 72,000 acre-feet. Under its 2015 Plan of Operation, the AWBA expects to store just over 45,000 acre-feet, the lowest volume of water available to the AWBA since its inception. This amount represents approximately 23% of the volume stored in 2010 and about 12% of the volume stored in the AWBA's highest storage year in 2007.

The AWBA, like others who use Colorado River water, is experiencing considerable uncertainty about the volume of Excess CAP water that will be available for its use. Based on the results of extensive modeling work performed by USBOR, ADWR and CAWCD, the AWBA has made a fundamental assumption that there will be no Excess CAP water available to the AWBA for this Ten-Year Plan. This is a significant departure from past plans. In fact, no Ten-Year Plan has ever projected zero water availability.

Shortage Conditions.

With the exception of 2016, there is a high probability of any level of shortage during the ten-year planning period. Under a shortage declaration, there would be no water available to CAWCD's Excess water pool, the supply that is available for AWBA use.

Table 7. Probabilities of Supply Conditions on Colorado River

Year	Probabilities %		
	Shortage Conditions	Surplus Conditions	Normal Conditions
2016	33%	0%	67%
2017	75%	0%	25%
2018	74%	3%	23%
2019	70%	6%	23%
2020	66%	10%	24%
2021	64%	13%	23%
2022	63%	16%	20%
2023	63%	20%	17%
2024	63%	22%	14%
2025	63%	24%	13%

Based on USBOR projections shown in Table 7, there is a 33% probability of any level of shortage in 2016[1]. This probability escalates to 75% in 2017 and gradually settles in at 63% for the remainder of the planning period. Although there is currently a 67% chance for normal water supply conditions in 2016, there is still uncertainty regarding end-of-year water level elevations in both Lake Powell and Lake Mead. Projections will be dependent on actual inflows into Lake Powell and side inflows into Lake Mead. If conditions are such that the release volume from Lake Powell for water year 2016 will be 7.48 MAF (Mid-elevation Release Tier), water elevation levels in Lake Mead could be at or below the 1,075 foot elevation by January 1, triggering a Colorado River shortage declaration for 2016. Because of this uncertainty and the probability of any shortage is so high throughout the planning period, the driving assumption behind the strategy in this Plan is that no Excess CAP water will be available any year.

Surplus Conditions.

While the probability of shortage is very high and is the fundamental assumption of this Ten-Year Plan, results from the USBOR CRSS April 2015 projections do project probabilities for both normal and surplus conditions. The USBOR projected a less than 10% probability of surplus conditions from 2016 through 2020. Interestingly enough, the probability of surplus starts to pick up in 2021 and exceeds the probability of normal conditions from 2023 through 2025.

[1] US BOR. Colorado River System Simulation: April 2015 Projections for 2016 through 2026

Normal Conditions.

The probability of a normal water supply condition is still high in 2016 at 67%. However, as discussed above, there is still uncertainty with regard to forecasted inflows and resulting water level elevations in Lakes Powell and Mead. The final decision about whether a shortage will be declared in 2016 will not be known until the USBOR releases its August 2015 24-Month Study. Although this Ten-Year Plan is based on an assumption that no Excess CAP water will be available, while small (< 25%), there is still a chance that normal operating conditions could prevail. Under normal conditions, the volume of excess CAP water available to the AWBA during this Ten-Year Plan could be is over 764,000 acre-feet, 45% more water than was projected in last year's Ten-Year Plan.

Table 8. CAP Delivery Schedule under Normal Supply Conditions

CAP Delivery Schedule Normal Conditions[1] (Acre-Feet)					
				Statutory Firming Pool[3]	
Year	**Total CAP Deliveries[1]**	**Federal and M&I Deliveries[2]**	**Ag Settlement Pool**	**Federal & CAGRD RR**	**AWBA**
2016	1,557,300	1,077,000	400,000	11,500	68,800
2017	1,556,300	1,131,400	300,000	17,800	107,100
2018	1,555,400	1,147,000	300,000	15,500	92,900
2019	1,554,500	1,162,500	300,000	13,100	78,900
2020	1,553,500	1,153,100	300,000	14,300	86,100
2021	1,552,300	1,168,600	300,000	12,000	71,700
2022	1,551,200	1,180,900	300,000	10,000	60,300
2023	1,550,100	1,201,400	300,000	7,000	41,700
2024	1,549,000	1,221,800	225,000	14,600	87,600
2025	1,547,900	1,242,300	225,000	11,500	69,100

[1] Volumes provided by CAWCD..

[2] Assumes non-shortage CAP supply.

[3] Assumes CAGRD uses 35,000 acre-feet per year for annual replenishment through 2019, then drops dow n to 10,000 acre-feet per year.

[4] Based on extended CAWCD Access to Excess distribution procedure (through 2019).

2. Funding

Funding for water storage that benefits Arizona (intrastate storage) comes from three sources: water storage taxes (i.e. 4¢ *ad valorem tax*), groundwater withdrawal fees and general fund appropriations. The availability of revenues from each source varies annually. Additionally, there are restrictions on how each funding source can be used. Funding for interstate banking is received at the time of storage. However, interstate storage is not expected under this Ten-Year Plan.

Water Storage Tax (4¢ ad valorem tax)

Pursuant to A.R.S. § 48-3715.03(B), *ad valorem* taxes for water storage levied and collected by CAWCD not deposited in the CAWCD fund, shall be deposited into subaccounts held by the AWBA: one for each of the three counties in which the taxes were collected. Monies have not been

deposited into the AWBA subaccounts since 2003. CAWCD has however used a portion of the funds collected to offset AWBA water delivery and storage costs as part of the O&M costs of the Project. This Ten-Year Plan relies on the continuation of this practice and assumes the tax will generate approximately $17.5 million annually with approximately $13.5 million in the Phoenix AMA, $850,000 in the Pinal AMA and around $3 million in the Tucson AMA. Due to a legislative amendment in 2015, CAWCD's authority to levy the *ad valorem* tax has been extended beyond the original expiration date of January 2017 to 2030. Therefore, this Ten-Year Plan assumes the collection of the *ad valorem* tax throughout the planning period. CAWCD is authorized to levy the tax at a rate of up to 4¢ per $100 of assessed property value through tax year 2026 and up to 3¢ for the remainder of the term. The reduction would not affect revenues in this Ten-Year Plan. Credits accrued with these funds are used to firm CAP M&I supplies during shortages.

Groundwater Withdrawal Fees

Pursuant to A.R.S. § 45-611(3), the Director of Water Resources levies and collects a groundwater withdrawal fee for water banking purposes in the three AMAs equal to $2.50 per acre-foot per year. This Plan assumes $3.6 million in withdrawal fees is collected annually with $1.7 million collected in the Phoenix AMA, 1.5 million collected in the Pinal AMA and $400,000 collected in the Tucson AMA[2]. The AWBA can utilize withdrawal fees to further the water management objectives of the AMAs, including firming for CAP M&I CAP subcontracts and implementing Indian water rights settlements when legislative appropriations are not available. When distributed or extinguished, these credits can only be used for the benefit of the AMA in which the monies were collected.

AWBA General Fund Appropriation

Pursuant to A.R.S. § 45-2423.B.10, the AWBA can submit a request for a General Fund appropriation each year. While the AWBA may request General Fund appropriations during this planning period, receipt of an appropriation cannot be expected. Absent future General Fund appropriations, any credit development for Indian firming could require the use of groundwater withdrawal fees.

3. Targeted Credit Development

Due to the underlying assumption that Excess CAP water supplies will not be available, the AWBA proposes to implement an alternative strategy for achieving its objectives. Pursuant to A.R.S. § 45-2423.B.2.a and 7.b, the AWBA may purchase long-term storage credits or obtain other sources of water after it has stored or scheduled all available Excess CAP water or when Excess CAP water is unavailable or undeliverable. This strategy focuses on "Targeted Credit Development" based on the targeted volumes described in more detail below. Still, there is a reasonable probability that excess CAP water may be available to the AWBA in 2016. Should the Colorado River be operated under normal water supply conditions in 2016 or any year during the planning period, the AWBA will continue to operate as it always has storing all Excess CAP water made available consistent with established priorities.

The bottom line value at the heart of the strategy is that in spite of potential shortages to Colorado River water supplies, the AWBA would continue to develop credits toward meeting its firming goals.

[2] Withdrawal fees collected varies from year to year. The assumed collections for the Ten-Year Plan are based on median collections between 2009 and 2014.

Under this strategy, the AWBA would establish target volumes for credit development in each AMA based on principles described in more detail below:

a. Projected Indian firming credit development targets in the Pinal and Phoenix AMAs would be based on maximizing withdrawal fee revenues.

b. Projected M&I firming and water management credit development targets would be based on maximizing financial resources in the Tucson AMA for both ad valorem and withdrawal fee revenues.

c. Projected M&I firming credit development targets would be based on meeting M&I firming goals in the Phoenix and Pinal AMAs for ad valorem revenues.

d. Credit development would be conducted through credit purchase, existing and future water services agreements for Indian firming, water supply acquisition and any other tools currently available or made available to the AWBA to develop credits.

If Excess CAP water becomes available during the planning period, the AWBA proposes to operate as it has in recent years accordingly:

a. If the volume of excess CAP water made available to the AWBA is larger than the targeted development volumes, then the AWBA would store all excess CAP water made available until funds and/or storage capacity are exhausted in a manner consistent with water storage priorities.

b. Up to 50% of the excess CAP water available would be delivered to storage facilities in the Tucson AMA limited only by funding and storage capacity.

c. Anything unused in the Tucson AMA would be divided equally between the Pinal and Phoenix AMAs.

d. Anything unused in the Pinal AMA would cascade to the Phoenix AMA until the remaining volume has been fully utilized.

e. If the volume of excess CAP water made available to the AWBA is less than targeted development volumes, then the AWBA proposes to concurrently pursue its Credit Development Strategy until the targeted volumes are reached.

Through 2015, the AWBA estimates accruing nearly 4.2 million acre-feet of credits. Table 9 identifies the estimated number of credits by fund and location.

Table 9. Existing AWBA Credits through 2015 (acre-feet)

	Phoenix AMA	Pinal AMA	Tucson AMA	Total
M&I Firming[1]	1,381,000	210,000	444,000	2,035,000
Indian Firming	88,000	17,000	34,000	139,000
Water Management [1]	344,000	412,000	100,000	856,000
Shortage Reparation	21,000	61,000	27,000	109,000
General Fund	42,000	307,000	55,000	404,000
Other	-	14,000	-	14,000
Interstate	51,000	440,000	110,000	601,000
Total	1,927,000	1,461,000	770,000	4,158,000

[1] **Credit accrual for 2015 is based on estimates of credits developed in the 2015 Annual Plan of Operation including credits developed through credit purchase.**

Because the AWBA does not anticipate receiving a general fund appropriation, the Ten-Year Plan focuses specifically on the use of withdrawal fees and *ad valorem* tax funds. The aim is to make progress on the AWBA goals for Indian and CAP M&I firming. This Plan envisions developing nearly 350,000 acre-feet of credits for CAP M&I firming, nearly 140,000 acre-feet for Indian firming and 16,000 acre-feet for meeting remaining water management objectives. If successful, this would result in the development of approximately 525,000 acre-feet of credits. As shown in Table 10, the AWBA will have accumulated nearly 4.7 million acre-feet of credits by the end of the planning period.

Table 10. Projected AWBA Credits in 2025 (acre-feet)

	Phoenix AMA	Pinal AMA	Tucson AMA	Total
M&I Firming	1,565,000	242,000	596,000	2,403,000
Indian Firming	156,000	88,000	34,000	278,000
Water Management	344,000	412,000	116,000	872,000
Shortage Reparation	21,000	61,000	27,000	109,000
General Fund	42,000	307,000	55,000	404,000
Other	-	14,000	-	14,000
Interstate	51,000	440,000	110,000	601,000
Total	2,179,000	1,564,000	938,000	4,681,000

The Ten-Year Plan's Credit Development Plan is shown in Table 11 on the following page. The AWBA percentage of goals achieved through 2025 is shown in Table 12 located on page 22.

Table 11. Credit Development Plan for 2016 through 2025 (acre-feet)

Year	Credit Development Target	Projected Indian Firming Credits			Projected M&I Firming Credits			Projected Water Management Credits		
		Phoenix AMA	Pinal AMA	Tucson AMA	Phoenix AMA	Pinal AMA	Tucson AMA	Phoenix AMA	Pinal AMA	Tucson AMA
Pre-Plan		88,000	17,000	34,000	1,381,000	210,000	444,000	344,000	412,000	100,000
2016	55,600	8,000	9,000	-	18,400	3,200	15,000	-	-	2,000
2017	57,600	8,000	8,000	-	18,400	3,200	18,000	-	-	2,000
2018	53,600	8,000	8,000	-	18,400	3,200	14,000	-	-	2,000
2019	53,600	7,000	8,000	-	18,400	3,200	15,000	-	-	2,000
2020	51,600	7,000	7,000	-	18,400	3,200	14,000	-	-	2,000
2021	51,600	6,000	7,000	-	18,400	3,200	15,000	-	-	2,000
2022	49,600	6,000	6,000	-	18,400	3,200	15,000	-	-	1,000
2023	49,600	6,000	6,000	-	18,400	3,200	15,000	-	-	1,000
2024	49,600	6,000	6,000	-	18,400	3,200	15,000	-	-	1,000
2025	50,600	6,000	6,000	-	18,400	3,200	16,000	-	-	1,000
Total	523,000	156,000	88,000	34,000	1,565,000	242,000	596,000	344,000	412,000	116,000

Table 12. AWBA Percentage of Goals Achieved through 2025

Location and Objective	Funding Source	Estimated Goal	Obligation	Non-Credit Goal/Oblig. Achieved	Credits[1] Accrued (AF)	Percent Goal/Oblig. Achieved
CAP M&I Firming	Water Storage Tax (4¢ *Ad valorem*)					
Phoenix AMA[2]		1,566,000 AF			1,565,000	100%
Pinal AMA[2]		243,000 AF			242,000	100%
Tucson AMA		864,000 AF			596,000	69%
On-River M&I Firming[3]	General Fund	420,000 AF			403,830	96%
Indian Settlement Obligations:[4]						
GRIC Firming	Withdrawal Fees	350,000 AF	up to 15,000 AF/YR		244,000	70%
Phoenix AMA					*156,000*	
Pinal AMA					*88,000*	
Future Settlements	Withdrawal Fees	200,000 AF	up to 8,724 AF/YR		*0*	0%
Federal Assistance Tucson AMA	Appropriation		$3,000,000	$3,000,000	34,102	100%
	Withdrawal Fees			*$2,338,171*	*28,481*	
	Cost of Services			*$630,490*	*5,621*	
				$31,339	*n/a*	
Southside Replenishment Bank	Pinal AMA Withdrawal Fees		15,000 AF Direct Delivery		15,000	100%
Groundwater Management	Withdrawal Fees collected by AMA					
Phoenix AMA[5]					344,000	
Pinal AMA[5]					412,000	
Tucson AMA[6]					116,000	
Other: Shortage Reparations-Nevada	Agreement with Nevada			$8,000,000	108,680	100%
Pinal Redirect Credits[7]	n/a				14,125	

[1] 1997-2014; actual credits through 2014 and estimated credits for 2015.

[2] 100% of the numeric M&I firming goal for the Phoenix and Pinal AMAs in 2025.

[3] By resolution passed in 2002, AWBA established on-river firming as the highest priority of use for credits accrued through expenditure of general fund appropriations. A total of 256,174 acre-feet of credits have been reserved pursuant to AWBA's contract with MCWA.

[4] A.R.S. §45-2491(B)(2) allows for use of withdrawal fees after legislative appropriations for Indian firming have been expended. 105,390 acre-feet of credits stored at GRIIDD are already dedicated through agreement to Indian firming. Additionally, the Ten-Year Plan assumes credits accrued from withdrawal fees in the Pinal and Phoenix AMAs in this Ten-Year Plan are applied to Indian firming. Given this assumption, 70% of the GRIC firming goals are estimated to be met by 2025.

[5] Volumes reflected include reductions due to assigning credits developed in this planning period to Indian firming.

[6] Credits currently identified for use in Tucson AMA are expected to be used for M&I firming bringing the percentage of M&I firming goal achieved in the Tucson AMA 82%. This volume also deducts the 5,621 acre-feet of credits under Federal Assistance stored using Tucson AMA withdrawal fee revenues. Also includes 234 acre-feet of credits purchased from the Tohono O'odham Nation pursuant to A.R.S. section 45-841.01.

[7] Credits accrued from AWBA water priced to Pinal AMA GSFs at full cost to the GSF operators. These credits are currently identified for use in the Tucson AMA.

A primary objective of the AWBA is meeting its Indian firming goals. In this Ten-Year Plan, the AWBA intends to maximize withdrawal fees in the Phoenix and Pinal AMAs to develop credits toward Indian firming. This Plan projects that 67,000 acre-feet of credits will be developed in the Phoenix AMA and 70,000 acre-feet in the Pinal AMA. Including the 5,621 acre-feet of withdrawal fee credits set aside for meeting the State's obligation to the Federal government under the AWSA and the 105,000 acre-feet accrued at the GRIIDD, by the end of this Plan, the AWBA will have approximately 275,000 acre-feet of credits available for meeting Indian firming requirements.

Another primary objective of the AWBA is meeting the numeric M&I firming goals. In the Phoenix and Pinal AMAs, the strategy for this Ten-Year Plan is to develop enough credits to meet 100% of the numeric goals in these AMAs using 4¢ *ad valorem* tax by the end of the Plan. In the Tucson AMA, the strategy is to maximize the use of the 4¢ *ad valorem tax*. If this strategy is achieved, the AWBA will develop enough credits to meet 69% of the numeric goal in the Tucson AMA.

For the Tucson AMA, including water management credits, the AWBA expects to reach 82% of the numeric M&I firming goal for the Tucson AMA. This dramatic increase in the percentage of the Tucson AMA M&I firming goal achieved is a direct result of the continuation of the *ad valorem tax* beyond 2016. Still, achievement of the goal for the Tucson AMA is farther behind than the other AMAs. Consequently, the AWBA had directed staff to focus on developing as many credits as possible in the Tucson area. Other water management objectives have also become more important in the Tucson AMA over time. Whether water storage or credit purchase, the AWBA continues to implement the facility location prioritization strategy requested by Tucson area interests to develop credits at Tucson Water's SAVSARP as a first priority, followed by the Pima Mine Road Recharge Project, then by the Avra Valley Recharge Project before developing any more credits at the Lower Santa Cruz Recharge Project or any of the GSFs located in the AMA.

It is important to note that while M&I and Indian firming are both identified as water management objectives, Indian firming is an obligation under the AWSA. If this Plan is fully implemented, the AWBA expects to accrue roughly 275,000 acre-feet of withdrawal fee credits for Indian firming. Absent general fund appropriations, the AWBA would need to rely on withdrawal fee credits to meet its Indian firming requirements. This Plan projects Indian firming requirements to be less than 20,000 acre-feet. Therefore, meeting a firming requirement during planning period should not cause concern. However, withdrawal fee credits used to satisfy Indian firming obligations would no longer be available for M&I firming or any other water management objective.

4. Storage Partners and Storage Capacity

Based on discussion with AWBA storage partners, the AWBA is anticipated to have 154,000 acre-feet of storage capacity available at GSFs and nearly 190,000 acre-feet of capacity available at USFs. In the event there is Excess CAP water available to the AWBA, or if the AWBA acquires other renewable supplies, the AWBA should have sufficient capacity available for storage. Details on storage partners, storage permits, and capacity available for use by the AWBA are further described in Appendix C.

A number of facility permits will expire during this Ten-Year Plan. Any difficulty in obtaining new permits could impact the capacity available to the AWBA. However, because impacts of this nature cannot be predicted, this Ten-Year Plan assumes the permits will also be renewed. In addition to

storage permits, the AWBA will also need to renew several water storage agreements. The AWBA's agreements for water storage at GSFs will expire December 31, 2021 and its Master Water Storage Agreement with CAWCD will expire December 31, 2016. Renewal of these agreements is anticipated therefore storage at these facilities was included for the full ten-year planning period.

5. Intrastate Recovery and Distribution of AWBA Credits

While a declared shortage on the Colorado River would result in the elimination of the Excess CAP pool, the level of shortage could also trigger a firming requirement for the AWBA. A firming requirement, however, would not be triggered until the reduction in supply impacts the deliveries to CAP and on-River water users for which the AWBA has a firming requirement. Based on data jointly prepared by CAWCD and ADWR staff, modelers projected between 300 and 54,000 acre-feet of firming requirement for the AWBA affecting only the NIA Indian customer class. In its analysis, the AWBA analyzed the probabilities, selected the tier representing the highest probability in a given year and selected the accompanying projected firming requirement in a given year. As illustrated in Table 13, the Tier 1 probability was the highest through 2020, Tier 2 was the highest from 2021 to 2024 and Tier 3 was the highest in 2025. Selecting the accompanying values, the AWBA projects a firming requirement of nearly 19,000 acre-feet for the NIA Indian water class over the planning period.

Table 13. Probability of Shortage by Tier and Projected Firming Requirements

	Probability of Shortage (%)				NIA Indian Firming (af)			Total AWBA Firming Volume
Year	Any	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier3	(af)
2016	0.33	33%	0%	0%	-	-	-	-
2017	0.75	71%	4%	0%	-	-	1,500	-
2018	0.74	45%	28%	1%	-	-	2,700	-
2019	0.70	36%	24%	10%	-	-	3,900	-
2020	0.66	29%	23%	14%	-	-	5,000	-
2021	0.64	21%	27%	16%	-	400	6,100	400
2022	0.63	17%	26%	21%	-	1,400	7,100	1,400
2023	0.63	13%	28%	22%	-	2,800	8,300	2,800
2024	0.63	13%	26%	25%	-	4,200	9,400	4,200
2025	0.63	11%	26%	26%	300	5,400	10,500	10,500
TOTALS					**300**	**14,200**	**54,500**	**19,300**

Source: USBOR Colorado River Simulation System: April 2015 Projections for 2016 through 2026

The AWBA has several options for firming these supplies including entering into an agreement with an entity such as CAWCD for the recovery and delivery of water or by making water available within the area of the affected water users through the extinguishment of credits (e.g. GRIC). Currently, the AWBA has 105,390 acre-feet of water stored at the Gila River Indian Irrigation and Drainage District (GRIIDD) in the Phoenix and Pinal AMAs that can be used for this purpose.

According to its firming agreement with the GRIC, the AWBA and the GRIC are required to initiate discussions about preparing for an Indian firming requirement when the Ten-Year Plan projects a firming requirement in the third year of the Ten-Year Plan's Projected Firming Plan. Since no firming requirement is projected until 2021, this provision of the IGA is not triggered. Irrespective of what the ultimate firming volume is, there are sufficient credits to cover the entire range of potential firming requirements with nearly 260,000 acre-feet assuming the development of credits during the plan. At a minimum, the plan is prepared to recover up to 105,000 acre-feet from credits already stored at the GRIIDD.

It should also be noted that in addition to the uncertainties regarding hydrologic conditions on the Colorado River, there are also uncertainties within the CAP system that could affect the AWBA's firming requirements. Increased water delivery costs during shortages, drought-related conservation, or changes in customer ordering patterns could all play a role in the amount of water that is available to the NIA Indian pool and ultimately the volume of water the AWBA will need to firm.

Table 14. Projected Firming Plan (in acre-feet) 2016 through 2025

		Firming Requirement				Balance of Indian Firming Credits			
Year	Projected Firming Requirement	NIA Indian	On-River	M&I	Total	Phoenix AMA	Pinal AMA	Tucson AMA	Total
Pre-Plan	-	-	-	-	-	88,000	17,000	34,102	139,102
2016	-	-	-	-	-	96,000	26,000	34,102	156,102
2017	-	-	-	-	-	104,000	34,000	34,102	172,102
2018	-	-	-	-	-	112,000	42,000	34,102	188,102
2019	-	-	-	-	-	119,000	50,000	34,102	203,102
2020	-	-	-	-	-	126,000	57,000	34,102	217,102
2021	400	400	-	-	400	131,600	64,000	34,102	229,702
2022	1,400	1,400	-	-	1,400	136,200	70,000	34,102	240,302
2023	2,800	2,800	-	-	2,800	139,400	76,000	34,102	249,502
2024	4,200	4,200	-	-	4,200	141,200	82,000	34,102	257,302
2025	10,500	10,500	-	-	10,500	136,700	88,000	34,102	258,802
Total	19,300	19,300	-	-	19,300	136,700	88,000	34,102	258,802

6. Interstate Water Storage and Requests for Intentionally Created Unused Apportionment (ICUA)

Pursuant to earlier interstate water banking agreements, 601,041 acre-feet of credits are already held in the Southern Nevada Water Authority (SNWA) account. Under the Third Amended and Restated Agreement for Interstate Water Banking, the AWBA no longer has an obligation to accrue future long-term storage credits to be held in the SNWA account. As in the original agreement, all future delivery and storage costs are born by SNWA and are on a "pay-as-you-go" basis.

Additionally, this Ten-Year Plan assumes that SNWA will not request ICUA during the planning period[3]. The Third Amended and Restated Agreement for Interstate Water Banking authorizes Nevada to request development of ICUA, as follows: in the initial year, an amount not exceeding 20,000 acre-feet; the second year, an amount not exceeding 30,000 acre-feet and in all subsequent years, an amount not exceeding 40,000 acre-feet. Existing credits must be recovered by December 31, 2063. Future credits must be recovered within 50 years of the date of storage with the oldest credits recovered first. The agreement terminates when all credits (i.e. existing and future) have been recovered.

Conclusions and Recommendations

The Ten-Year Plan is intended to serve as a guide to assist the AWBA in the development of its Annual Plan of Operation in which the AWBA is required to plan its activities for 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 and the funding and water supply available to the AWBA. Several conclusions can be reached given this Ten-Year Plan:

1) Hydrologic conditions on the Colorado River have reached the point where Excess CAP water can no longer be relied upon.
2) Given hydrologic conditions on the Colorado River, the AWBA will likely distribute credits for the first time during this planning period.
3) Firming requirements for this planning period are small in volume and affect only Indian firming. The AWBA has sufficient existing credits stored at the GRIIDD to meet the volume projected by the AWBA and even most conservative volume of potential firming requirement of 54,000 acre-feet.
4) With the extension of the 4¢ ad valorem tax past 2016, funding for M&I firming is no longer a limiting factor in the Pinal and Phoenix AMAs for water storage.
5) The Phoenix and Pinal AMA M&I firming goals are achieved in this planning period and without the use of water management credits.
6) While the M&I firming goal in Tucson is not met during this planning period, the extension of the 4¢ ad valorem tax increases the percentage of goal achieved in Tucson AMA by 15% over earlier plans. Including the use of water management credits, 82% of the M&I firming goal could be met by the end of the planning period.
7) Per agreement with CAWCD, the AWBA is only entitled to use current year ad valorem tax monies to purchase credits.
8) Per resolutions passed by the CAWCD Board since 2009, the AWBA can use approximately $75 million to offset costs associated with storage of water and acquisition of water rights.
9) Withdrawal fee revenues will be the only source of funding for meeting the State's obligation for Indian firming thus limiting the AWBA's ability to assist in other water management objectives.

[3] Communication with Southern Nevada Water Authority dated May 20, 2015.

10) Withdrawal fee revenues in the Phoenix and Pinal AMAs are a limiting factor allowing the AWBA to only develop an average of roughly 14,000 acre-feet of credits per year.
11) Interstate storage using Arizona's entitlement is unlikely during this planning period.
12) Requests for ICUA are also unlikely during this planning period.

Based on these conclusions, staff recommends the following potential actions:

1) Continue focusing on making progress on Indian firming specifically by:
    a. Finalizing and implementing agreements with GRIC.
    b. Developing and implementing agreements with White Mountain Apache Tribe.
2) Continue focusing on developing credits using strategies that do not rely upon Excess CAP water.
3) Meet and confer with CAWCD and ADWR staff to evaluate conditions on the Colorado River relative to water available to the AWBA and potential firming requirements.
4) Meet and confer with CAWCD and ADWR staff to develop an annual credit purchase plan for incorporation into the AWBA Annual Plan of Operation and to secure a resolution from the CAWCD Board reserving funds to support that plan.
5) Meet and confer with CAWCD and ADWR staff to extend the existing IGA beyond December 31, 2018, incorporate recent amendments into the IGA, and make any other agreements necessary to ensure cooperative relationships moving forward.
6) Renew its Master Water Storae Agreement with CAWCD before December 31, 2016.
7) Continue working with CAWCD and ADWR to implement the next steps in the Joint Recovery Plan.
8) Establish policy on how shortage reparation credits will be used.
9) Continue to evaluate the Inter-AMA storage proposal prepared by the Arizona Municipal Water Users Association and the Southern Arizona Water Users Association.
10) Develop a public outreach program to support AWBA future operations.

APPENDICES

APPENDIX A – EXCESS CAP WATER WATER DELIVERIERS FOR WATER BANKING PURPOSES FOR CALENDAR YEAR 2014 BY PARTNER AND ACTIVE MANAGEMENT AREA

	Partner	Quantity of Water (Acre-feet)	
		Intrastate	Interstate
PHOENIX AMA	Agua Fria Recharge Project	3,917	0
	Hieroglyphics Mountain Recharge Project	4,968	0
	Superstition Mountains Recharge Project	4,502	
	Tonopah Desert Recharge Project	13,548	
	Queen Creek Irrigation District	1,230	0
	Intrastate/Interstate AMA Subtotal	***28,165***	***0***
	Phoenix AMA Subtotal	***28,165***	
PINAL AMA	Central Arizona Irrigation & Drainage District	1,700	0
	Hohokam Irrigation & Drainage District	5,700	0
	Maricopa-Stanfield Irrigation & Drainage District	6,700	0
	Southside Replenishment Bank	5,000	0
	Intrastate/Interstate AMA Subtotal	***19,100***	***0***
	Pinal AMA Subtotal	***19,100***	
TUCSON AMA	Avra Valley Recharge Project	624	0
	Lower Santa Cruz Recharge Project	9,856	0
	SAVSARP	15,380	0
	Cortaro-Marana Irrigation District	1,852	0
	Pima Mine Road	2044	0
	Intrastate/Interstate AMA Subtotal	***29,756***	***0***
	Tucson AMA Subtotal	***29,756***	
TOTAL INTRASTATE & INTERSTATE DELIVERIES		**77,021**	**0**
TOTAL DELIVERIES		**77,021**	

APPENDIX B. **ASSUMPTIONS UNDERLYING THE TEN-YEAR PLAN**

1. Water Resources
   a. Excess CAP water will not be available for AWBA purposes during the Ten-Year Plan.
   b. 2015 credits are estimated by AWBA.
   c. The White Mountain Apache settlement is enforceable in 2016 and deliveries begin in 2017.
   d. Firming requirements are based on data jointly produced by CAP and ADWR modelers.
   e. CAWCD's CAP Recharge Facility Priority Policy adopted May 2, 2013 and CAWCD's Procedure for Distributing Excess CAP Water for the Period of 2015 through 2019 adopted March 6, 2014 continue through 2025.
2. Financial
   a. CAWCD's adopted 2015-2016 rate schedule is utilized and assumes a 3%[1] increase in such rates from 2022 through 2025.
   b. Cost to store at groundwater savings facilities is based on the rates shown in Table 4 of the 2015 Plan of Operation held constant.
   c. Cost to store at non-CAWCD facilities in Tucson is based on rates established in the water storage agreements with Tucson Water.
   d. Ad valorem revenues are based on projections prepared by CAWCD.
   e. Use of ad valorem revenues are consistent with the joint CAWCD, ADWR and AWBA intergovernmental agreement.
   f. Withdrawal fee revenues are based on the five year median withdrawal fee collections held constant throughout the plan.
   g. Budget is based on the projected cost of developing credits as though the AWBA received Excess CAP water directly.
   h. No general fund appropriations.
   i. No legislative transfer of funds.

[1] The 3% increase from 2021 through 2024 is consistent with current financial analyses prepared by CAWCD.

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

Name of Facility[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 – GSF[3]					
Queen Creek Irrigation District	Dec-15	28,000	6,000	2013	2,009
New Magma Irrigation & Drainage District	Jul-17	54,000	0	2012	23,866
Subtotal for Phoenix AMA - GSF		***82,000***	***6,000***		
PHOENIX – USF					
Agua Fria Recharge Project	May-19	100,000	15,000	2013	10,210
Granite Reef Underground Storage Project		93,000	10,000	2004	52,645
Hieroglyphic Mountains Recharge Project	Dec-21	35,000	15,000	2013	1,054
Tonopah Desert Recharge Project	Sep-25	150,000	100,000	2013	12,897
Superstition Mountains Recharge Project	Jan-28	25,000	8,000	2013	4,857
Subtotal for Phoenix AMA - USF		***403,000***	***138,000***		
PINAL – GSF					
Central Arizona Irrigation & Drainage District	Dec-17	110,000	60,000	2013	6,695
Hohokam Irrigation & Drainage District[4]	Oct-12	55,000	20,000	2013	6,333
Maricopa-Stanfield Irrigation &Drainage District	Dec-19	120,000	60,000	2013	6,600
Subtotal for Pinal AMA - GSF		***285,000***	***140,000***		
TUCSON – GSF					
BKW Farms	Sep-14	14,316	1,000	2012	200
Cortaro-Marana Irrigation District	Mar-19	20,000	5,000	2013	1,953
Kai-Farms – Red Rock	Nov-16	11,231	2,000	2012	1,851
Subtotal for Tucson AMA - GSF		***45,547***	***8,000***		
TUCSON – USF					
Avra Valley Recharge Project	Mar-18	11,000	1,000	2012	774
CAVSARP	Dec-28	100,000	0	2012	51
Lower Santa Cruz Recharge Project	Feb-19	50,000	25,000	2013	9,300
Pima Mine Road Recharge Project	Sep-20	30,000	7,000	2013	2067
SAVSARP	Jan-28	60,000	15,000	2013	13,255
Subtotal for Tucson AMA - USF		***251,000***	***48,000***		
ALL AMAs - GSF		**412,547**	**154,000**		
ALL AMAs - USF		**654,000**	**186,000**		

[1] As additional facilities are developed, they will be included in future plans.

[2] This does not reflect the actual "permitted" volume for these facilities; instead for the purposes of this plan, staff relied on average historical storage volumes and potential for future storage. Capacity available to the AWBA at the Avra Valley Recharge Project is based on the operator's estimated annual averages for the

[3] The AWBA also holds a water storage permit at Tonopah Irrigation District GSF (15,000 AF), however use of the facility was not considered significant in this Ten-Year Plan.

[4] Permit renewal application pending with ADWR.