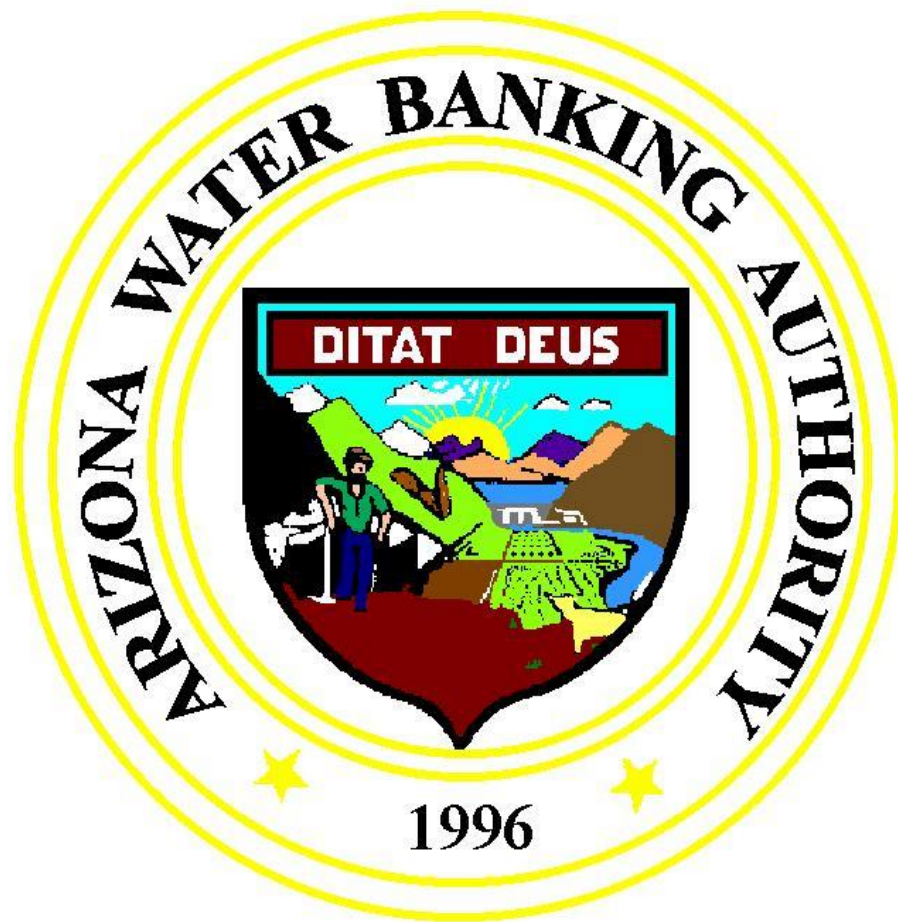


ARIZONA WATER BANKING AUTHORITY
ANNUAL PLAN OF OPERATION
2015



Michael J. Lacey, Chair

December 2014

SUMMARY

The role of the AWBA has changed considerably since its inception in 1996. The AWBA was initially established to utilize the unused portion of Arizona's annual Colorado River entitlement. In doing so, the AWBA's objectives were to store the water to protect Arizona water users against future shortages, to provide groundwater management benefits, and finally to assist both California and Nevada through interstate banking. Over time, as the AWBA's objectives have been clarified, its responsibilities have expanded in some cases to obligations and in all cases to the development of a resource relied upon by many water providers to create a reliable water supply.

During its eighteen years of operation, the AWBA has developed, at the cost of \$218 million, approximately 3.4 million acre-feet (MAF) of long-term storage credits, 2.5 MAF specifically to provide back-up supplies during shortages to certain Arizona cities and Indian communities and over 830,000 acre-feet of credits for groundwater management benefits. Still, to be fully prepared to meet its current obligations and responsibilities, the AWBA will need to develop another 1.1 MAF of credits or their equivalent. Additionally, to establish the Southside Replenishment Bank, a State requirement under the Arizona Water Settlements Act, the AWBA has delivered 10,000 acre-feet of excess CAP water to the Gila River Indian Community at a cost just over \$1.4 million. Finally, the AWBA has developed approximately 550,000 acre-feet of credits for Nevada's use at a cost to Nevada of \$109 million. In addition to these credits, another 50,000 acre-feet of credits previously accrued by CAWCD have been applied for interstate purposes bringing the total amount of credits available to Nevada to just over 600,000 acre-feet.

Because of increased demands from higher priority CAP water users, the amount of excess CAP water available to the AWBA has been decreasing. For 2015, the volume available to the AWBA is 50,448 acre-feet. Of this amount, the AWBA will store 45,448 acre-feet of water at a cost of \$8 million and directly deliver 5,000 acre-feet of water for the Southside Replenishment Bank at a cost of \$895,000. There is no interstate storage planned for 2015.

In response to its expanding responsibilities and as the reality of shortage has become more imminent, the AWBA's governing statutes were amended in 2014 authorizing the AWBA to purchase long-term storage credits. In order to continue making progress and to prepare itself to meet its responsibilities, the AWBA anticipates purchasing credits in both the Phoenix and Tucson AMA utilizing 4-cent tax revenues and withdrawal fees. Additionally, the AWBA is considering, for the first time, the concept of storage for inter-AMA firming. While this plan does not include storage for inter-AMA firming, as this concept further develops, the 2015 plan could be amended to include this as a component.

Consistent with the AWBA's direction in its 2013 Annual Report, the 2015 Plan of Operation continues to focus on meeting the M&I firming goals in the Tucson AMA and completing its deliveries to the Southside Replenishment Bank. Related to this second focus, the AWBA is attempting to secure a general fund appropriation.

INTRODUCTION

The AWBA was initially created in 1996 to store Arizona's unused Colorado River water entitlement in central and southern Arizona to develop long-term storage credits (credits) to: (1) firm existing water supplies for Colorado River and CAP M&I water users during Colorado River shortages or CAP service interruptions; (2) help meet the water management objectives of the Groundwater Code; (3) meet the State's obligations in the settlement of Indian water rights claims; and (4) assist Nevada and California through interstate banking. The AWBA's enabling legislation has been amended over time allowing it to store other renewable supplies and to purchase credits on top of excess CAP water supplies. The 2015 Plan does not include the storage of other renewable supplies, however, it does propose the purchase of credits.

Although the AWBA can utilize general fund appropriations to conduct its business, in recent years the only funds available to the AWBA have been groundwater withdrawal fees collected in the Active Management Areas (AMA) and *ad valorem* property taxes levied and collected by the Central Arizona Water Conservation District (CAWCD). The availability of these funds for AWBA use varies both on an annual basis and by the amounts collected within each AMA/County. There are also restrictions on how the AWBA may utilize these revenues to meet its firming responsibilities. The costs to store water for Nevada, the AWBA's only interstate partner at this time, are paid by Nevada at the time storage occurs.

The AWBA's storage of water is accomplished through the Underground Water Storage, Savings and Replenishment Program that is administered by the Arizona Department of Water Resources (ADWR). Through this program, the AWBA stores renewable water supplies in either underground storage (USF) or groundwater savings (GSF) facilities, also referred to as indirect storage. The program mandates an accounting of the water stored and the corresponding long-term storage credits accrued. The credits will be distributed by the AWBA when future conditions warrant. The use of the credits is dependent on the source of funds utilized to develop the credits.

The AWBA is required by statute to approve an annual Plan of Operation (Plan) by January 1 of each year. Prior to approval of the final Plan, the AWBA is required to solicit public comment. Presentation of the draft Plan must be made at publicly-noticed open meetings at which members of the public are permitted to provide comment. A draft of the Plan was presented at meetings of the Groundwater Users Advisory Councils (GUAC) for the Phoenix, Pinal and Tucson AMAs. The AWBA also makes the Plan available on its web page and accepts public comment in writing up to the time the final draft Plan is presented for approval.

The Plan is intended to govern the operations of the AWBA over the course of the entire calendar year. The AWBA recognizes that day-to-day adjustments in the normal operations of the CAP or the individual storage facilities may affect the actual monthly deliveries made on behalf of the AWBA. If the adjustments do not impact the overall annual delivery projections contained in the Plan, they will be addressed by staff and reported to the AWBA members on an as-needed basis.

2014 PLAN OF OPERATION

The AWBA had 74,297 acre-feet of Colorado River water available for use in 2014. This amount includes just over 9,500 acre-feet of water turned back by other CAP customers. Arizona also plans to leave up to 30,000 acre-feet of unused apportionment in Lake Mead as a benefit to the system. Additionally, CAWCD on behalf of the the Central Arizona Groundwater Replenishment District, agreed to forebear 9,000 acre-feet of water to study a Pilot Conservation Program with the Yuma Mesa Irrigation and Drainage District. Arizona’s estimated use of Colorado River water in 2014 is 2.77 MAF (see Figure 1).

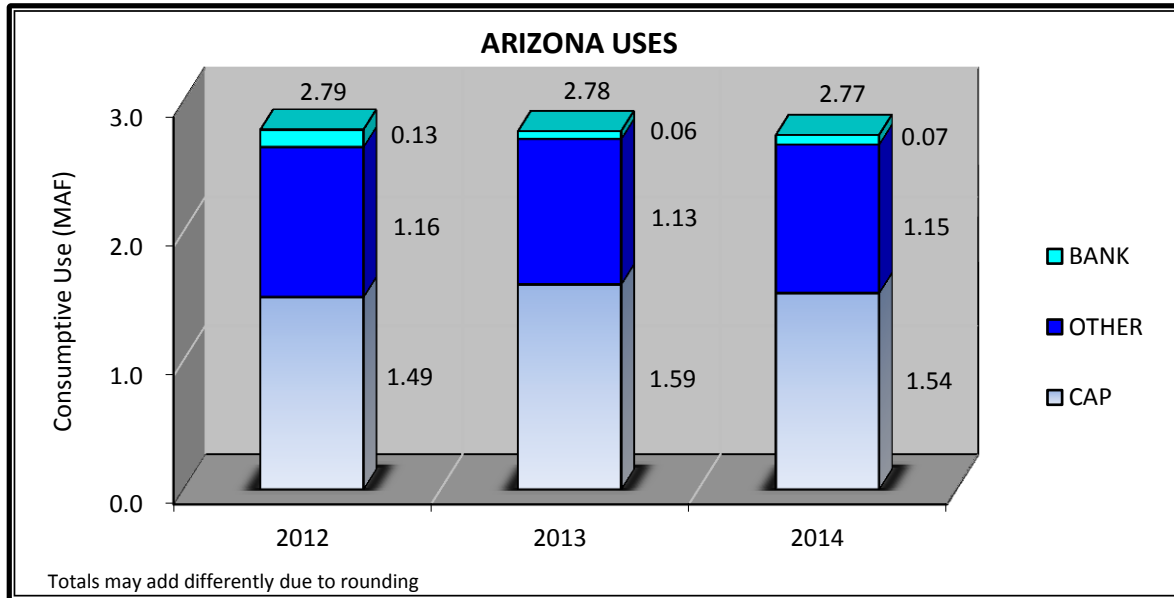


Figure 1. Recent Comparison of Colorado River Water Uses by Arizona

Forecasted direct use of Colorado River water in 2014 in the Lower Basin is 7.5 MAF as of November 17, 2014 (see Figure 2).

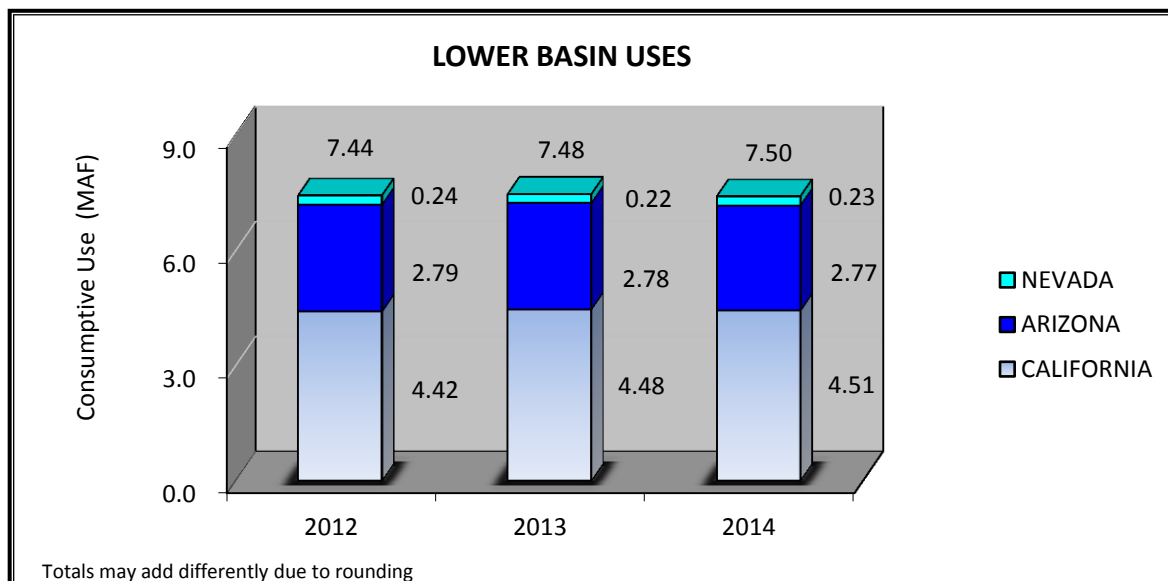


Figure 2. Recent Comparison of Lower Basin Uses of Colorado River Water

The AWBA stored water at both USFs and GSFs in 2014. Table 1a lists the AWBA's recharge partners for 2014, the amount of water that can be stored under each of the AWBA's water storage permits, and the amount of water delivered to the facility for the AWBA in 2014. The amount of water delivered to a facility is always greater than the amount of long-term storage credits accrued by the AWBA because credits are computed by subtracting approximately 1% to 3% for losses and 5% for a "cut to the aquifer" from the total annual deliveries. Final figures for credits accrued generally become available in the middle of the following year after review of the annual reports filed with the ADWR. These numbers are reported in the AWBA's Annual Report.

Table 1a. Recharge Facilities and Water Storage Deliveries for 2014

AMA	Facility	Type	AWBA Permit Capacity (acre-feet)	Delivered* (acre-feet)		
				Intrastate	Interstate	
PHOENIX AMA	Tonopah Desert	USF	150,000	11,183	0	
	Agua Fria	USF	100,000	3,680	0	
	Hieroglyphic Mtns.	USF	35,000	4,467	0	
	Superstition Mtns.	USF	25,000	4,502	0	
	Queen Creek ID	GSF	28,000	1,589	0	
	<i>Intrastate/Interstate AMA Subtotal</i>				25,421	0
	<i>Phoenix AMA Subtotal</i>				25,421	
PINAL AMA	Central Arizona IDD	GSF	110,000	1,700	0	
	Hohokam IDD	GSF	55,000	5,700	0	
	Maricopa-Stanfield IDD	GSF	120,000	6,700	0	
	<i>Intrastate/Interstate AMA Subtotal</i>				14,100	0
	<i>Pinal AMA Subtotal</i>				14,100	
TUCSON AMA	Avra Valley	USF	11,000	900	0	
	Lower Santa Cruz	USF	50,000	9,600	0	
	SAVSARP	USF	60,000	15,380	0	
	Pima Mine Road	USF	30,000	2,044	0	
	Cortaro-Marana ID	GSF	20,000	1,852	0	
	<i>Intrastate/Interstate AMA Subtotal</i>				29,776	0
	<i>Tucson AMA Subtotal</i>				29,776	
TOTAL INTRASTATE & INTERSTATE DELIVERIES				69,297	0	
TOTAL RECHARGE DELIVERIES				69,297		

* November and December deliveries estimated

The AWBA also delivered water to meet the requirements of the Gila River Indian Community Water Settlement Program (Settlement Program). In 2009, the AWBA entered into an intergovernmental agreement (IGA) with the Gila River Indian Community that identifies the procedure for delivering water for meeting a replenishment obligation and for establishing the Southside Replenishment Bank identified in the Settlement Program. While these deliveries do not accrue long-term storage credits that can be recovered in the future, the Replenishment Bank receives a credit for each acre-foot of water delivered. The Replenishment Bank can be used as an option for offsetting a replenishment obligation that is incurred because of pumping limitations identified in the Arizona Water Settlements Act (Settlements Act) for the Southside Protection Zones. Table 1b identifies the amount of water the AWBA delivered to the Replenishment Bank since 2009. There was no replenishment obligation in 2014.

Table 1b. Southside Replenishment Activities through 2014

Southside Replenishment Activities	2014 Obligations/Deliveries (acre-feet)	Cumulative Obligations/Deliveries (acre-feet)
Replenishment Obligations	0	0
Replenishment Bank Deliveries	5,000	10,000
TOTAL DIRECT DELIVERIES	5,000	10,000

The 2014 Plan initially identified 59,753 acre-feet of scheduled water deliveries for recharge purposes. Additional water became available to the AWBA later in the year from CAP customers that turned back water. As a result, the AWBA recharged an estimated 69,297 acre-feet of water. Because of heavy monsoon precipitation, 9,380 acre-feet of the 25,562 acre-feet originally scheduled for GSFs was redirected for storage at USFs. Figure 3 identifies the storage breakdown between GSFs and USFs for 2014 and provides a comparison between 2014 and the two previous years.

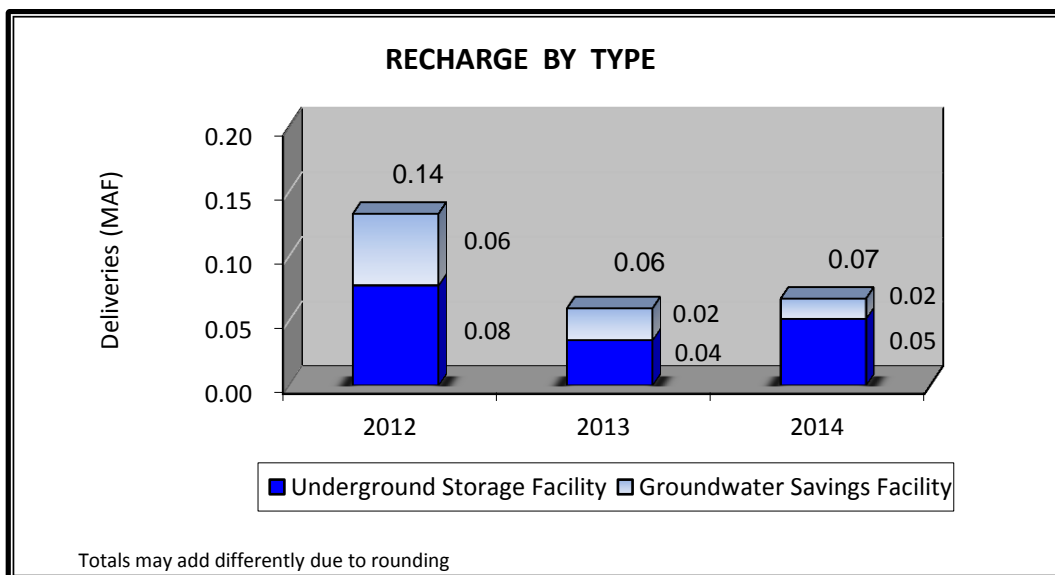


Figure 3. Recent Comparison of Annual Deliveries to GSFs and USFs

Table 2 provides an estimate of funds expended for water storage and the location of the credits accrued through 2014.

Table 2. Cumulative Long-term Storage Credits 1997-2014

Funding Source	Phoenix AMA		Pinal AMA		Tucson AMA		Total ¹	
	Funds Expended	Credits Accrued	Funds Expended	Credits Accrued	Funds ² Expended	Credits Accrued	Funds Expended	Credits Accrued
Withdrawal Fees	\$ 20.3	321,247	\$ 17.4	406,400	\$ 9	103,328	\$ 48	830,974
Ad valorem Tax	\$ 95.1	1,355,317	\$ 11.3	207,373	\$ 46	421,991	\$ 152	1,984,690
General Fund ³	\$ 1.5	42,316	\$ 6.4	306,968	\$ 3	54,546	\$ 11	403,830
Indian Appropriation	\$ -	-	\$ -	-	\$ 2	28,481	\$ 2	28,481
Shortage Reparations	\$ 1.1	20,642	\$ 1.7	60,507	\$ 3	17,753	\$ 6	98,902
Pinal Redirect ⁴		-	\$ -	14,125	\$ -	-	\$ -	14,125
Subtotal	\$ 118.0	1,739,522	\$ 36.8	995,373	\$ 63	626,099	\$ 218	3,360,994
Interstate - Nevada ⁵	\$ 11.4	51,009	\$ 71.5	440,241	\$ 26	109,791	\$ 109	601,041
Total	\$ 129.4	1,790,531	\$ 108.3	1,435,614	\$ 90	735,890	\$ 327	3,962,035

¹ Actual expenditures and credits for 1997-2013; 2014 estimated.

² Includes expenditure of \$22,698 in withdrawal fees for the assignment of 234 acre-feet of credits to the AWBA from the Tohono O'odham Nation pursuant to §45-841.01.

³ A total of 256,174 acre-feet of credits reserved for the Mohave County Water Authority pursuant to the Amended Agreement to Firm Future Supplies

⁴ Credits accrued from water scheduled for the Tucson AMA and redirected to the Pinal AMA for storage at GSFs. Facility operators paid 100% of the water delivery rate.

⁵ Includes 50,000 acre-feet of credits transferred from CAWCD pursuant to Amended Agreement for Interstate Banking.

2015 PLAN OF OPERATION

The AWBA plans to recharge 45,448 acre-feet of water in 2015. Water storage will occur in all three counties. The AWBA will also deliver 5,000 acre-feet of water to the Gila River Indian Reservation for the Southside Replenishment Bank. The AWBA's total deliveries for 2015 will be 50,448 acre-feet. The AWBA is not planning any interstate storage.

When developing its Plan of Operation, the AWBA evaluates four critical factors: (1) the amount of water available to the AWBA for delivery; (2) the CAP canal capacity available to the AWBA for the delivery of water; (3) the funds available and the costs required to deliver the water; and (4) the capacity available for use by the AWBA at the various recharge facilities. In addition to these critical factors, the AWBA takes into consideration recommendations made by

the Groundwater Users Advisory Councils (GUAC) of the three AMAs regarding water management objectives and priorities for storage.

I. Water Availability

The factor of water availability consists of two parts: (1) the amount of water available on the Colorado River for diversion by the CAP within Arizona's allocation; and (2) the amount of CAP water available to the AWBA for delivery under the existing pool structure.

The proposed Annual Operating Plan (AOP) for water year 2015 distributed by the Bureau of Reclamation (Reclamation) stated that the Intentionally Created Surplus (ICS) Condition is the criterion that will govern the release of water for the states in the Lower Basin during calendar year 2015. Because Arizona is proposing to create up to 100,000 acre-feet of ICS, an estimated 2.7 MAF of water will be available for use within Arizona. Arizona's on-river use is forecast to be roughly 1.2 MAF, leaving approximately 1.5 MAF available for diversion by CAP.

For 2015, the AWBA will purchase excess CAP water from the Statutory Firming Pool made available for use by the AWBA, CAGR, and Bureau of Reclamation pursuant to the CAWCD Board of Directors (Board) policy approved on March 6, 2014. The CAGR uses this pool to create its replenishment reserve and has an equal priority to the AWBA when using it for that purpose. The Federal government may also order water from this pool for meeting its Indian firming obligations. The CAWCD Board establishes the volume available in this pool on an annual basis. The quantity available in this pool for 2015 is 58,726 acre-feet.

Subtracting the projected uses for the CAGR replenishment reserve (3,245 acre-feet) and Reclamation (5,033 acre-feet), leaves a remaining balance of 50,448 acre-feet for the AWBA. Water availability is the primary limiting factor in developing the 2015 Plan.

II. CAP System Capacity

CAP system capacity is approximately 1.8 MAF. Under normal operating conditions, CAP diverts approximately 1.6 MAF of water. Reclamation estimates that this amount would be available for delivery by CAP in 2015. This amount includes the volume of water to be delivered for the AWBA. Because there is still capacity available in the CAP aqueduct to deliver additional supplies, capacity within the CAP for the delivery of AWBA water is not a limiting factor in this Plan.

III. Available Funds

The AWBA will have an estimated \$6.7 million in withdrawal fee revenues available for use in 2015. Of this amount, \$4.7 million is estimated to be available for the Phoenix AMA, \$1.5 million for the Pinal AMA, and \$450,000 for the Tucson AMA. Revenues include funds collected in 2015 and funds carried over from 2014.

As in previous years, the CAWCD Board resolved to retain the *ad valorem* property taxes collected in its three-county service area and not to deposit any of those revenues into the Arizona Water Banking Fund. Property tax revenues retained by CAWCD can be used to offset the cost of AWBA water deliveries in CAWCD's service area. Estimated funds available from CAWCD for the 2015 Plan are: Maricopa County (\$14 million), Pinal County (\$800,000), and Pima County (\$4.5 million).

With the exception of the Pinal AMA, funding was not a limiting factor in developing the 2015 Plan given the amount of water that is available for AWBA use. If more water becomes available during the year, funding will also be a limiting factor in the Tucson AMA.

IV. Available Storage Facility Capacity

AWBA staff conferred with facility operators to discuss the availability of storage capacity at their facilities and their continued interest in participating with the AWBA. These discussions confirmed that there was significant interest from facility operators in all three AMAs. Because of those discussions, the AWBA is pursuing new permits to store water at the Granite Reef Underground Storage Project (GRUSP) and the Salt River Project GSF in the Phoenix AMA. In the Tucson AMA, storage capacity was used according to the preference expressed by Tucson CAP M&I subcontractors who had requested that the AWBA prioritize storage for firming at locations with existing recovery capabilities. If additional supplies become available, the AWBA will have sufficient capacity to meet its anticipated needs although capacity remaining available in the Tucson AMA will be limited to locations of least priority. While storage capacity is not a limiting factor for this Plan, the use of additional capacity in the Pinal and Tucson AMAs is still subject to the availability of funds.

The Water Delivery Schedule (Table 3) identifies the storage sites for the AWBA's partners for 2015 and the amount of water scheduled for storage. The second column in this section identifies the AWBA's water storage permit capacities for each facility, which are based on the maximum permitted storage amounts of the facilities. The actual storage capacities available to the AWBA do not typically equal the AWBA's permitted volume because the storage facility operators may have agreements with other storage partners. In addition to storage deliveries, Table 3 also identifies the amount of water scheduled for meeting the AWBA's Southside Replenishment obligations.

**Table 3
Water Delivery Schedule (Acre-Feet)
Calendar Year 2015**

AWBA-Storage Sites		Permitted Capacity (AF)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
PHOENIX AMA :															
USF	AGUA FRIA	100,000	0	0	0	500	2,500	0	0	0	0	1,818	0	0	4,818
	GRUSP ¹	93,000	0	0	0	0	0	0	0	0	0	500	500	500	1,500
	HIEROGLYPHIC MTN	35,000	0	0	700	700	0	0	0	0	600	0	0	0	2,000
	SUPERSTITION MTNS	35,000	0	0	0	1,000	1,000	0	0	0	0	0	0	0	2,000
	TONOPAHA DESERT	150,000	0	0	0	0	0	0	0	0	0	0	0	0	0
															10,318
GSF	NEW MAGMA	54,000	0	0	0	0	0	0	0	0	0	0	0	0	0
	QUEEN CREEK	28,000	0	0	0	0	0	0	0	1,230	2,000	1,000	1,000	0	5,230
	TONOPAHA ID	15,000	0	0	0	0	0	0	0	0	0	0	0	0	0
															5,230
AMA TOTAL INTRASTATE			0	0	700	2,200	3,500	0	0	1,230	2,600	3,318	1,500	500	15,548
PINAL AMA :															
GSF	CAIDD	110,000	0	0	0	0	0	3,000	200	0	0	0	0	0	3,200
	HOHOKAM	55,000	0	0	0	0	0	1,600	1,600	0	0	0	0	0	3,200
	MSIDD	120,000	200	300	500	500	500	300	200	200	200	200	100	0	3,200
															9,600
AMA TOTAL INTRASTATE			200	300	500	500	500	4,900	2,000	200	200	200	100	0	9,600
TUCSON AMA:															
USF	AVRA VALLEY	11,000	0	0	0	0	0	0	0	0	450	450	450	450	1,800
	LOWER SANTA CRUZ	50,000	0	0	1,000	0	0	0	0	0	0	1,000	0	0	2,000
	PIMA MINE ROAD	30,000	0	0	500	0	0	0	0	0	0	0	0	0	500
	CAVSARP	100,000	0	0	0	0	0	0	0	0	0	0	0	0	0
	SAVSARP	60,000	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	0	1,000	1,300
															18,300
GSF	CORTARO-MARANA ID	20,000	0	0	0	0	0	0	0	500	0	0	0	0	500
	KAI FARMS (Red Rock)	11,231	0	0	0	0	500	500	0	0	0	0	0	0	1,000
	BKW Farms	14,316	0	0	0	0	0	0	0	0	200	200	100	0	500
															2,000
AMA TOTAL INTRASTATE			1,300	1,300	2,800	1,300	1,800	1,800	1,300	1,800	1,950	1,650	1,550	1,750	20,300
TOTAL INTRASTATE															
			1,500	1,600	4,000	4,000	5,800	6,700	3,300	3,230	4,750	5,168	3,150	2,250	45,448
TOTAL INTERSTATE			0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL RECHARGE			1,500	1,600	4,000	4,000	5,800	6,700	3,300	3,230	4,750	5,168	3,150	2,250	45,448
DIRECT DELIVERY (Non-Storage):															
	Southside Replenishment Bank		0	0	1,250	0	0	0	0	0	1,250	1,250	0	1,250	5,000
	Southside Replenishment Obligation		0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL DIRECT		0	0	1,250	0	0	0	0	0	1,250	1,250	0	1,250	5,000
TOTAL DELIVERIES			1,500	1,600	5,250	4,000	5,800	6,700	3,300	3,230	6,000	6,418	3,150	3,500	50,448

¹ Water storage at this facility is conditional on issuance of a water storage permit from ADWR.

INDIAN SETTLEMENTS

The Plan does not specifically identify water storage for meeting future State firming obligations under the Settlements Act; however, it does incorporate replenishment deliveries required under the Gila River Indian Community (GRIC) Settlement Program.

Indian FIRMING

CAP supplies will not be shorted in 2015 and no long-term system outages are anticipated that would reduce deliveries to CAP customers. Therefore, the AWBA has no obligation to firm Non-Indian Agricultural (NIA) Priority CAP water supplies in 2015.

The Settlements Act recognizes three categories where the State has firming responsibilities. The first two obligations pertain to firming of NIA Priority CAP water for the GRIC and other Arizona tribes in times of shortage for a 100-year period; the third obligation pertains to providing assistance to the Secretary of the Interior (Secretary) in carrying out obligations of the Southern Arizona Water Rights Settlement Act.

1. GRIC - The AWBA must ensure that up to 15,000 acre-feet per year of NIA Priority CAP water be made available to the GRIC during shortages. The AWBA anticipates developing and utilizing long term storage credits or their equivalent to meet this obligation. The AWBA did not receive a general fund appropriation for fiscal year (FY) 2015 to assist in meeting this obligation. While the 2015 Plan does not identify expenditures specifically for Indian firming, withdrawal fees may be used for this purpose after appropriated funds are expended, therefore credits accrued from this funding source in 2015 may be used to meet this obligation if necessary. To date, the only credits identified specifically for meeting this obligation are 105,390 acre-feet of withdrawal fee credits accrued from water previously stored at the Gila River Indian Irrigation and Drainage District GSF.
2. Other Tribes - The AWBA is also required to firm up to 8,724 acre-feet per year of CAP NIA priority water for other Indian Settlements. The White Mountain Apache Tribe has entered into a settlement which requires the AWBA to firm 3,750 acre feet per year of the 8,724 acre-feet CAP NIA priority water. As with the GRIC obligation, no general fund appropriations were made available for this purpose. However, credits developed under this plan using withdrawal fees could be used for this purpose if needed. Settlements for other Indian Tribes have not been enacted at this time.
3. Federal Assistance - The AWBA has completed the State obligation to contribute \$3 million in cash or in-kind services to assist the Secretary in meeting the Federal obligation to the Tohono O'odham Nation. This obligation was met by accruing an equivalent amount of LTS credits that will be distributed to the Secretary during shortages.

Southside Replenishment Bank

In addition to the firming requirements of the Settlements Act, 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 the obligations created under the Settlements Act 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. The AWBA delivered this amount 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 in 2014 and 2015, 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, bringing the total delivered to 10,000 acre-feet. Because general fund appropriations have not been made available for this purpose, Pinal AMA withdrawal fees, including all funds carried over from previous years, have been used to pay for these deliveries, which collectively total \$1.44 million. Since hydrologic conditions have not improved, the AWBA intends to deliver the remaining 5,000 acre-feet in 2015. The AWBA is requesting a general fund appropriation for \$895,000 in FY 2016 to pay for these deliveries.

Assignment of Long-term Storage Credits by the Tohono O'odham Nation

Pursuant to A.R.S. § 45-841.01, the Tohono O'odham Nation (Nation) must offer ten percent of any credits they accrue at the Mission Mine Complex to the AWBA at a price per acre-foot that is equal to the AWBA's delivery and storage costs at the time of sale. If the Nation offers the AWBA credits in 2015, the AWBA will evaluate the offer to determine if it is reasonable to purchase those credits. While these credits may be used for M&I firming or for water management purposes, there is a restriction that the credits not be recovered within five miles of the exterior boundary of the reservation.

SHORTAGE REPARATION FUNDS

The Southern Nevada Water Authority (SNWA) agreed to provide \$8 million to the AWBA to assist Arizona in offsetting impacts from shortages pursuant to the Arizona-Nevada Shortage-Sharing Agreement. Approximately \$6 million has been expended since the agreement was executed 2008. The AWBA will expend the remaining \$2 million to store water in the Tucson AMA in 2015.

INTERSTATE WATER BANKING

The AWBA, SNWA, and CRCN executed a Third Amended and Restated Agreement for Interstate Banking on May 20, 2013. The amended agreement removed the AWBA's obligation to accrue 1.25 MAF of long-term storage on behalf of SNWA. Under the amended agreement,

storage for interstate purposes will be determined by the parties on an annual basis and may include the storage of Nevada's unused apportionment. Storage will be paid for by Nevada on a pay-as-you-go basis. There is no interstate storage planned for Nevada in 2015. Additionally, SNWA has not requested the development of intentionally created unused apportionment (ICUA) for 2015.

STORAGE FOR INTER-AMA FIRING

The Arizona Municipal Water Users Association (AMWUA) and Southern Arizona Water Users Association (SAWUA) have developed a proposal for Inter-AMA water storage and firming between the Phoenix and Tucson AMAs. The goal of the proposal is to provide additional water management flexibility to CAP M&I subcontractors and the AWBA. Under the proposal, a CAP M&I subcontractor in the Phoenix AMA could store a portion of its entitlement in the Tucson AMA at a Tucson CAP M&I subcontractor's 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, which 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 is 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 will 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.

Although certain CAP M&I subcontractors have expressed an interest in participating in 2015 with the AWBA in the Inter-AMA firming program as a pilot storage and recovery partner, they were not prepared to do so at this time. Therefore, the Plan does not include a component to store water for Inter-AMA firming in 2015. A reconsideration by M&I subcontractors to participate during the following year could be addressed as an amendment to the 2015 Plan.

PRICING

In June of 2014, the CAWCD Board approved its water delivery rate schedule for calendar years 2015/2016. The AWBA rate for recharge is equivalent to the rate for excess M&I water at \$179 per acre-foot, an increase of \$13 per acre-foot from the previous year.

Groundwater pumping costs in the Phoenix, Pinal and Tucson AMAs vary depending on energy sources used and the location of wells, i.e. depth to water. The AWBA cost share in 2015 for the GSF partners in the Phoenix and Pinal AMAs will remain at \$34 per acre-foot. Based on the range of groundwater pumping costs and cost shares paid by other partners, it was determined the cost share in 2015 for the Tucson AMA will also remain the same at \$16 per acre-foot. Table 4 reflects the water delivery rate CAWCD will charge the AWBA, the cost share GSF operators pay, and the rates the AWBA pays to utilize different USFs. When storing water for other than M&I firming and water management purposes at CAWCD recharge facilities, the AWBA also pays a facility capital charge. There is no administrative cost component in the facility cost because the AWBA pays the CAWCD administrative costs on an annual basis.

Table 4. 2015 Water and Facility Rates

Recharge	Cost per Acre-foot
CAWCD delivery rate to AWBA for water storage	\$179
Groundwater Savings Facility operator cost share rate ¹	
Phoenix and Pinal AMAs	\$34
Tucson AMA	\$16
Underground Storage Facility rate paid by AWBA	
CAWCD – Phoenix Facilities	\$9
CAWCD – Tucson Facilities	\$15
Avra Valley Recharge Project	\$15.91
Clearwater Facility (CAVSARP/SAVSARP)	\$16.09
Granite Reef Underground Storage Project ²	\$15.00
Direct Deliveries	
CAWCD rate to AWBA for Southside Replenishment Bank deliveries	\$179

¹ This rate is paid directly to CAP by the GSF operators and is not available as revenue to the AWBA. The AWBA's rate for delivery of in lieu water is thus reduced to \$145/af for intrastate deliveries to the Phoenix and Pinal AMAs and \$163/af to the Tucson AMA.

² Subject to execution of water storage agreement between Salt River Project and AWBA.

PURCHASE OF LONG-TERM STORAGE CREDITS

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, thus providing the AWBA with additional flexibility in meeting its responsibilities. When purchasing credits, the AWBA may use all funding sources authorized for AWBA use, however, the use of *ad valorem* tax funds for this purpose is subject to approval by the CAWCD Board. Additionally, in developing its Plan for the following year, the AWBA must confer with the ADWR and CAWCD on the potential purchase of credits, particularly if CAWCD is anticipated to be the AWBA's recovery agent for those credits.

For 2015, the AWBA is proposing to purchase credits using *ad valorem* tax funds collected in Maricopa and Pima Counties to make further progress on the CAP M&I firming goals for the Phoenix and Tucson AMAs, respectively. Accordingly, the AWBA will request that the CAWCD Board reserve funds for this purpose from monies collected in each of these counties during the 2015 tax year. The AWBA is presently negotiating an agreement to purchase credits in the Tucson AMA at costs equal to that of the AWBA's 2015 storage costs and is aiming for similar arrangements in the Phoenix AMA. In addition to cost, careful consideration will also be given to the location of the credits that are available for sale. The AWBA will also seek opportunities to purchase credits in the Phoenix AMA for water management purposes, including credits that can be applied toward meeting Indian settlement obligations.

RECOVERY

Recovery of AWBA long-term storage credits for firming purposes or for the development of ICUA is not anticipated in 2015.

Staff representatives for ADWR, CAWCD and the AWBA, in cooperation with stakeholders, have developed a recovery plan that identifies the duties and responsibilities of the parties as they relate to recovery of the AWBA's long-term storage credits and delivery of the water during shortage events. While the recovery of AWBA credits for CAP M&I priority subcontract firming is not projected until the 2035-2045 planning period, recovery for interstate, Indian CAP NIA priority, and on-River domestic supplies may occur sooner. If recovery for firming of Indian CAP NIA priority water and Colorado River fourth priority domestic supplies is necessary, potential opportunities to provide this firming exist.

ACCOUNTING

The AWBA's enabling legislation required the development of an accounting system that allows the tracking of all credits accrued by the AWBA and the funding sources from which they were developed. ADWR maintains the accounting of the credits, the AWBA accounts for the expenditure of the funds utilized from the Water Banking Fund, and CAWCD accounts for the expenditure of the *ad valorem* tax monies and reports that expenditure to the AWBA.

The estimated water delivery and storage costs for the AWBA's 2015 Plan total approximately \$8.9 million and includes \$2.7 for the Phoenix AMA, \$1.4 million for the Pinal AMA and \$3.9 for the Tucson AMA. Additionally, the AWBA anticipates expending up to \$9.6 million to purchase existing long-term storage credits; up to \$6.5 million in the Phoenix AMA (\$3 million in Maricopa *ad valorem* tax funds and \$3.5 million in withdrawal fees) and just under \$3.1 million in Pima County *ad valorem* tax funds in the Tucson AMA. Table 5 provides estimates of the funds available to the AWBA, the funds to be utilized, the entity that holds the funds, and the credits estimated to accrue to those accounts based on the 2015 Plan.

The 2015 Plan was developed to prioritize storage in the Tucson AMA to make progress on the M&I firming goal for that AMA. All funds estimated to be available in 2015 are utilized, including \$2 million in shortage reparation funds. The remaining water supplies were divided between the Phoenix and Pinal AMAs based on funding availability. All available funds are used in the Pinal AMA except for \$895,000 in withdrawal fees that are reserved to pay for deliveries to the Southside Replenishment Bank should the Legislature not appropriate funds for this purpose. If monies are appropriated, the withdrawal fees would be available for additional storage. The Plan anticipates utilizing all withdrawal fees collected in the Phoenix AMA and a portion of the *ad valorem* tax monies collected in Maricopa County. There are funds and storage capacity available to store additional water in the Phoenix AMA if it becomes available.

Table 5. Funding for 2015 Annual Plan of Operation

Funding Source	Estimated Funds Available		Estimated Funds Utilized		Estimated Credits (AF)	
	AWBA	CAWCD ¹	AWBA	CAWCD	Water Storage	LTSC Purchase
Withdrawal Fees						
Phoenix AMA ²	\$4,700,000	-	\$4,700,000	-	6,280	16,790
Pinal AMA ³	\$1,500,000	-	\$592,000	-	3,800	0
Tucson AMA ⁴	\$450,000	-	\$450,000	-	2,180	0
Four Cent Tax						
Phoenix AMA ⁵	\$0	\$14,000,000	\$0	\$4,532,000	8,180	14,290
Pinal AMA	\$0	\$800,000	\$0	\$800,000	5,130	0
Tucson AMA ⁶	\$0	\$4,500,000	\$0	\$4,500,000	6,990	14,570
Other:						
General Fund⁷	\$895,000					
Phoenix AMA		-	\$0	-	0	0
Pinal AMA		-	\$895,000	-	0	0
Tucson AMA		-	\$0	-	0	0
Shortage Reparations	\$2,002,000					
Phoenix AMA		-	\$0	-	0	0
Pinal AMA		-	\$0	-	0	0
Tucson AMA		-	\$2,002,200	-	9,710	0
	Total Funds Available		Total Funds Expended		LTS Credits	
	\$28,847,000		\$18,471,200		42,270	45,650

¹ The figures shown are estimates provided by CAWCD staff based on anticipated collections during the 2015 tax year. The amount shown for Tucson includes \$1.4 million in carry over funds. If utilization is greater than estimated, there may be additional funds held by CAWCD that could be made available at the discretion of the CAWCD Board of Directors.

² Includes up to \$3.5 million toward the potential purchase of credits for water management purposes.

³ \$895,000 in estimated available funds held in reserve to pay for Southside Replenishment Bank deliveries if the Legislature does not appropriate funds for that purpose.

⁴ Estimates include revenue from CAWCD's capital charge for construction of state demonstration projects when facilities are used for interstate purposes and by entities that do not pay the 4¢ *ad valorem* tax.

⁵ Includes up to \$3 million toward the potential purchase of credits for M&I firming.

⁶ Includes just under \$3.1 million toward the potential purchase of credits for M&I firming.

⁷ Availability of funds subject to appropriation by the Legislature in 2015.

Table 6 identifies the progress expected to be made on the AWBA's goals and obligations through 2015. Proposed credit purchases were not included in the totals due to the uncertainty in the acquisition of those credits. Though if successful, progress on the M&I firming goals for the Phoenix and Tucson AMAs could increase to 88% (1,377,787 AF) and 51% (443,488 AF), respectively.

Table 6. Projected Percent of Goals and Obligations Achieved through 2015

Location and Objective	Funding Source	Estimated Goal	Non-Credit Goal Achieved	Credits Accrued (AF)	Goal Achieved
CAP M&I Firming	Water Storage Tax (4¢ <i>Ad valorem</i>) collected by Pinal and Tucson Counties	1,566,000 AF		1,363,497	87%
Phoenix AMA		243,000 AF		212,503	87%
Tucson AMA		864,000 AF		428,918	50%
On-River M&I Firming¹	General Fund	420,000 AF		403,830	96%
Indian Settlement Obligations:					
GRIC Firming ² <i>up to 15 KAF/yr</i>	General Fund Withdrawal Fees	350,000 AF ³		105,390 0 105,390	30%
Future Settlements - <i>up to 8.7 KAF/yr</i>	General Fund Withdrawal Fees	200,000 AF ³		0	N/A
Federal Assistance (SAWRSA)- <i>\$3 million</i>	General Fund Tucson W/Fees Cost of Services ⁴		\$3,000,000 \$2,338,171 \$630,490 \$31,339	34,102 28,481 5,621 n/a	100%
Southside Repl. Bank - <i>15 KAF direct delivery</i>	General Fund Pinal W/Fees			15,000 0 15,000	100%
Groundwater Management⁵					
Phoenix AMA Pinal AMA Tucson AMA ⁶	Withdrawal Fees collected by AMA			239,214 195,119 99,887	
Other:					
Shortage Reparations	Agreement with Nevada	\$8,000,000	\$8,000,000	108,604	100%
Pinal Redirect Credits ⁷	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 of the Amended Agreement to Firm, dated December 8, 2010, for a total of 256,174 acre-feet.

² Credits accrued and reserved for firming pursuant to the Agreement between the AWBA and the Gila River Indian Irrigation and Drainage District of the Gila River Indian Community for storage of Central Arizona Project Water at a GSF, executed June 16, 2006. Credits include 88,313 AF accrued in the Phoenix AMA and 17,077 AF accrued in the Pinal AMA. Credits available for water management have been adjusted accordingly.

³ Based on estimates from the Indian Firming Study Commission Report dated January 6, 2006.

⁴ Expenditures include \$14,883 and \$16,456 deducted for payment of cost of services for FY08 and FY09, respectively.

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

⁶ Includes 234 AF of credits acquired from the Tohono O'odham Nation pursuant to § 45-841.01.

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

PUBLIC REVIEW AND COMMENT

AWBA staff presented the Plan to the public in conjunction with the Groundwater Users Advisory Councils (GUAC) meetings for the Phoenix, Pinal and Tucson AMAs as required by statute. Council members supported the Plan and there were no requested changes.

In the Phoenix AMA, GUAC members had questions regarding the type of long-term storage credits the AWBA anticipated purchasing in the Phoenix AMA, specifically if they belonged to public or private entities. In response, staff indicated that the type of credit could not be identified at this time since staff was not currently engaged in discussions for credit purchase in the Phoenix AMA. While there are known private entities that have credits available for sale, the AWBA would be interested in any potential opportunities, private or public, so long as those credits are reasonably priced and in a location that is suitable for future recovery.

In the Pinal AMA, there were comments in support of the AWBA's plan to complete the State's obligation of establishing the Southside Replenishment Bank. There were concerns if the AWBA had sufficient funds available to make the final 5,000 acre-feet in deliveries if State General Funds are not appropriated for this purpose.

In the Tucson AMA, members responded positively and expressed appreciation on the AWBA's efforts over the last several years to focus storage in that AMA. In addition, Metro Water reaffirmed its commitment to become a recovery partner with CAWCD. Specifically, its Board of Directors adopted a 10-year Capital Improvement Program, financial plan, and schedule for the completion of the AVRCP CAP Recharge, Recovery and Delivery System in April of this year. Consistent with this planning process, the Board adopted an increase in its Water Resource Utilization Fee and approved hiring a consultant to ensure that prior to the purchase of any properties necessary to implement the AVRCP CAP Recharge, Recovery, and Delivery System, which includes recovery well sites, that the properties can actually be used for their intended purpose. Lastly, Metro Water has expressed their interest in becoming a partner for inter-AMA firming in 2015.