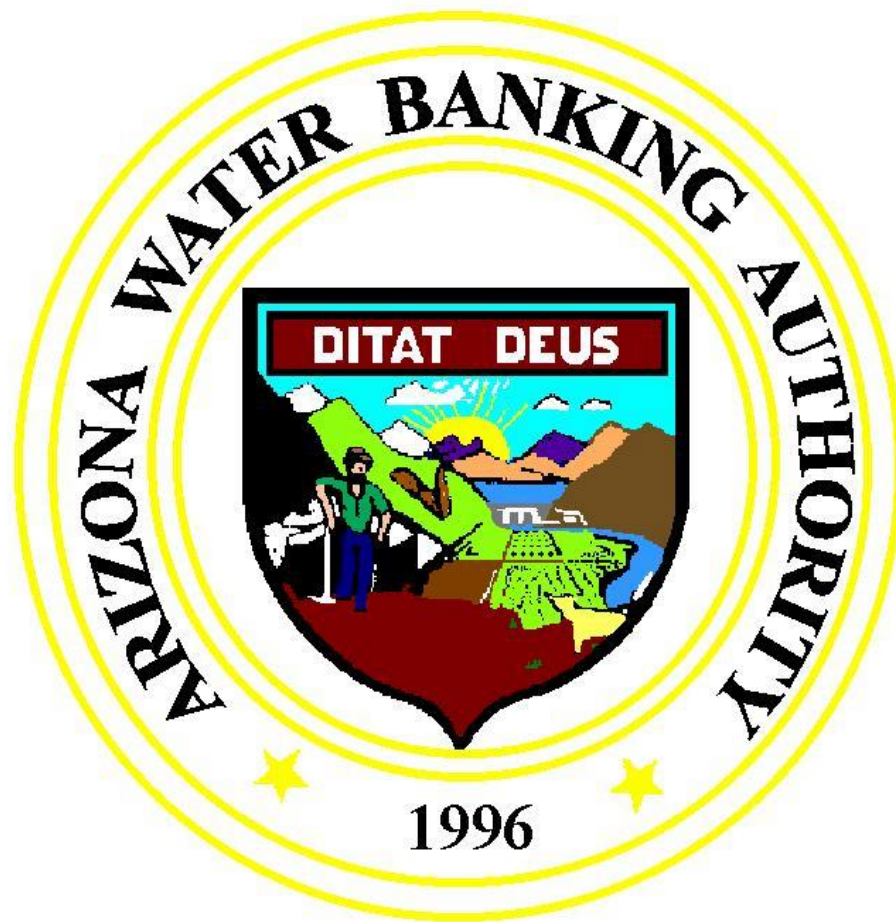


**ARIZONA WATER BANKING AUTHORITY**  
**ANNUAL PLAN OF OPERATION**

**2014**



Sandra A. Fabritz-Whitney, Chairman

December 2013

# The Arizona Water Banking Authority

## Summary

The Arizona Water Banking Authority (AWBA) was created in 1996 to store the unused portion of Arizona's annual entitlement of Colorado River water. This water is delivered through the Central Arizona Project (CAP) aqueduct as excess CAP water and stored by the AWBA in the aquifers of central and southern Arizona. By storing this water, the AWBA accrues long-term storage credits that can be recovered in the future to provide back-up (firmed) supplies during shortages or to make water available pursuant to interstate banking contracts. Credits can also be extinguished to manage groundwater supplies and improve aquifer health. By storing this water, the AWBA not only assists the state in utilizing its full 2.8 million acre-feet entitlement but also secures a dependable water supply necessary to ensure the state's long-term prosperity.

From inception through 2013, over 4.1 million acre-feet (MAF) of excess CAP water has been delivered for AWBA storage. The cost to deliver and store this water totaled approximately \$315 million and represents 3.5 MAF for Arizona uses (\$206 million) and 594,000 acre-feet in support of interstate banking with Nevada (\$109 million). Additionally, 5,000 acre-feet of water has been delivered directly to the Gila River Indian Community at a cost of \$614,000 for establishing the Southside Replenishment Bank, a state requirement under the Arizona Water Settlements Act.

The money that funds the AWBA comes from three primary sources: general fund appropriations received at the discretion of the legislature, groundwater withdrawal fees collected in the Phoenix, Pinal, and Tucson Active Management Areas (AMA), and *ad valorem* property taxes of up to four cents per \$100 of assessed valuation levied and collected by the Central Arizona Water Conservation District (CAWCD) within its service area. 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 the ways the AWBA may utilize these revenues for meeting its firming goals and obligations. Interstate banking costs for Nevada, the AWBA's only interstate partner at this time, are paid for by Nevada at the time storage occurs.

The amount of excess CAP water available to the AWBA and other lower priority users has decreased substantially the last few years because of an increase in demand from higher priority M&I and Indian CAP water users. This reduction has been directly reflected in the amount of water available to the excess pool created by CAWCD for use by the AWBA, CAGR, and the federal government. For 2014, the volume available for this pool is roughly 84,400 acre-feet. The portion that is available for use by the AWBA is 64,753 acre-feet. Of this amount, the AWBA will store 59,753 acre-feet of water at a cost of \$10.4 million and directly deliver 5,000 acre-feet of water for the Southside Replenishment Bank at a cost of \$830,000. There is no interstate storage planned for 2014.

The objective of the 2014 Plan of Operation is to utilize limited resources in a way that balances the need to make progress on M&I firming goals, such as for the Tucson AMA, with the AWBA's Indian settlement responsibilities and water management objectives.

## INTRODUCTION

The AWBA was created to store Arizona's unused Colorado River water entitlement in central and southern Arizona to develop long-term storage 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. Changes in the AWBA's enabling legislation in 1999 authorized the AWBA to participate in other water banking activities, however, no new water banking activities are included in this annual Plan of Operation.

The AWBA's storage of water is accomplished through the Underground Water Storage, Savings and Replenishment Act enacted by the Arizona legislature in 1994 and administered by the Arizona Department of Water Resources (ADWR). Through this program, the AWBA stores unused renewable water supplies in either underground storage (USF) or groundwater savings (GSF) facilities. A USF is a facility that allows water to physically be added to an aquifer (direct storage), while a GSF is a facility where the water is used in lieu of groundwater, creating a groundwater savings (indirect storage). The program mandates the accounting of the water stored and the development of long-term storage (LTS) credits. The LTS credits developed will then be distributed by the AWBA when future conditions warrant. The use of LTS credits for the first three objectives listed 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. A draft of the Plan was presented at meetings of the Groundwater Users Advisory Councils (GUAC) for the Phoenix, Pinal and Tucson AMAs. Presentation of the draft Plan must be made at publicly-noticed open meetings at which members of the public are permitted to provide comment. 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.

## 2013 PLAN OF OPERATION

The AWBA had approximately 60,700 acre-feet of Colorado River water available for use in 2013. Arizona is forecast to use its full entitlement of 2.8 MAF (see Figure 1).

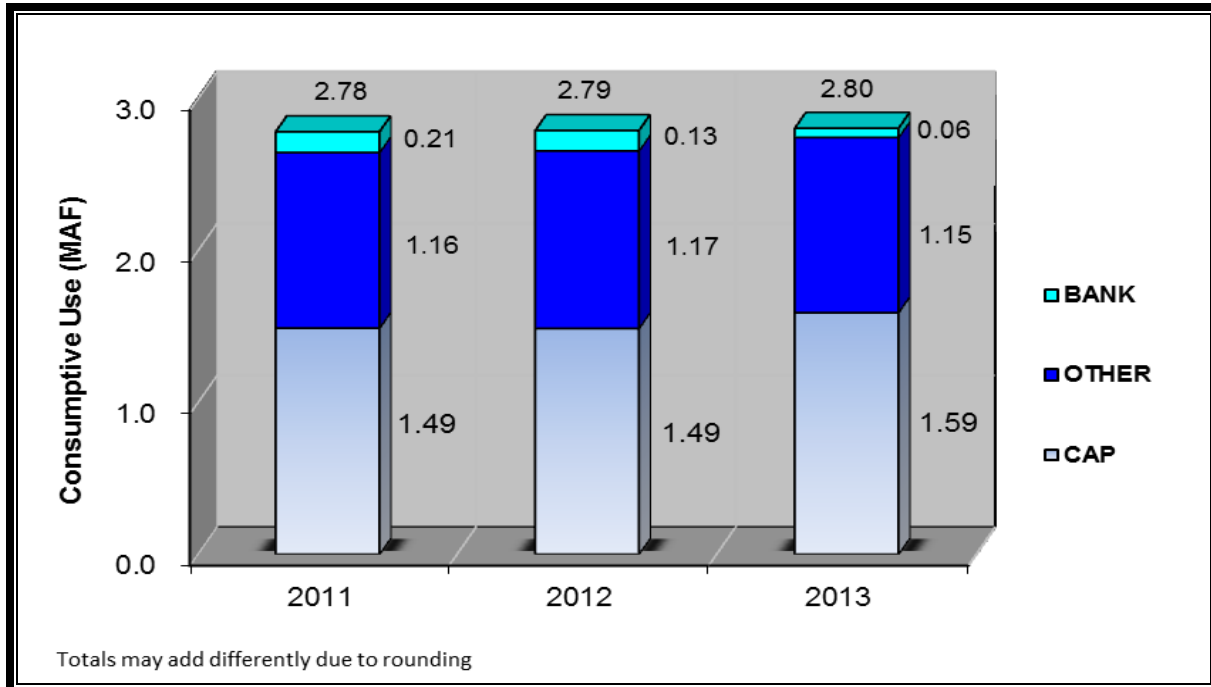


Figure 1. Recent Comparison of Colorado River Water Uses by Arizona

Forecasted direct use of Colorado River water in the Lower Basin is 7.46 MAF in 2013 as of November 22, 2013 (see Figure 2).

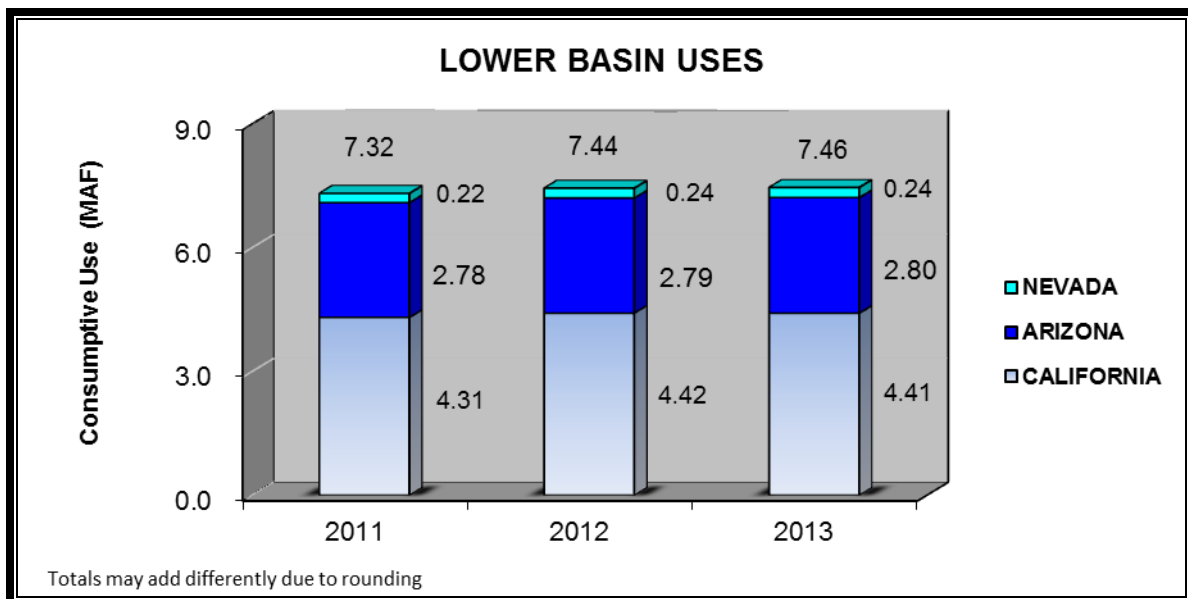


Figure 2. Recent Comparison of Lower Basin Uses of Colorado River Water

The AWBA recharged 59,701 acre-feet of water at both USFs and GSFs in 2013. Table 1a lists the AWBA's recharge partners for 2013, 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 2013. 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 Partners and Water Storage Deliveries for 2013**

AMA	Facility	Type	Permit Capacity (acre-feet)	Delivered* (acre-feet)		
				Intrastate	Interstate	
PHOENIX AMA	Tonopah Desert	USF	150,000	0	0	
	Agua Fria	USF	100,000	8,178	0	
	Hieroglyphic Mtns.	USF	35,000	1,000	0	
	Superstition Mtns.	USF	25,000	4,509	0	
	Queen Creek ID	GSF	28,000	2,930	0	
	<b><i>Intrastate/Interstate AMA Subtotal</i></b>				<b>16,617</b>	<b>0</b>
	<b><i>Phoenix AMA Subtotal</i></b>				<b>16,617</b>	
PINAL AMA	Central Arizona IDD	GSF	110,000	6,600	0	
	Hohokam IDD	GSF	55,000	6,600	0	
	Maricopa-Stanfield IDD	GSF	120,000	6,600	0	
	<b><i>Intrastate/Interstate AMA Subtotal</i></b>				<b>19,800</b>	<b>0</b>
	<b><i>Pinal AMA Subtotal</i></b>				<b>19,800</b>	
TUCSON AMA	Avra Valley	USF	11,000	0	0	
	Lower Santa Cruz	USF	50,000	6,047	0	
	SAVSARP	USF	60,000	13,284	0	
	Pima Mine Road	USF	30,000	2,000	0	
	Cortaro-Marana ID	GSF	20,000	1,953	0	
	<b><i>Intrastate/Interstate AMA Subtotal</i></b>				<b>23,284</b>	<b>0</b>
	<b><i>Tucson AMA Subtotal</i></b>				<b>23,284</b>	
<b>TOTAL INTRASTATE &amp; INTERSTATE DELIVERIES</b>					<b>0</b>	
<b>TOTAL RECHARGE DELIVERIES</b>				<b>59,701</b>		

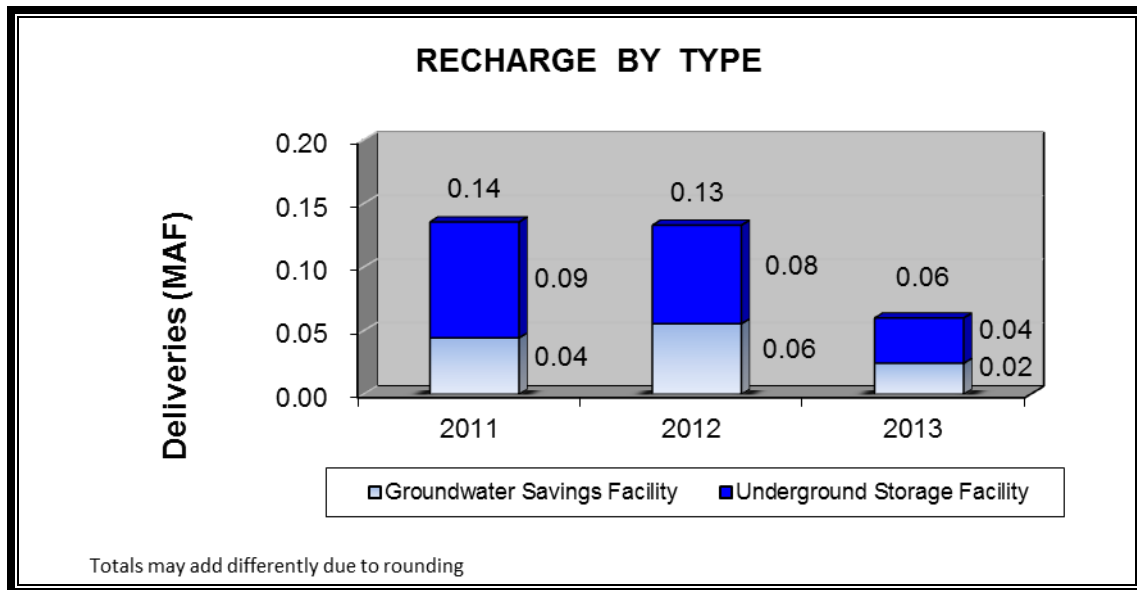
\* November and December deliveries estimated

In addition to recharge deliveries, 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 may 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 any replenishment obligations created as a result 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 2013.

**Table 1b. Replenishment Deliveries**

Southside Replenishment Activities	2013 Deliveries (acre-feet)	Cumulative Deliveries (acre-feet)
Replenishment Obligations	0	0
Replenishment Bank	1,000	5,000
<b>TOTAL DIRECT DELIVERIES</b>	<b>1,000</b>	<b>5,000</b>

The 2013 Plan identified 51,546 acre-feet of scheduled water deliveries for recharge purposes. Additional water became available to the AWBA during the year from CAP customers that had turned back water. As a result, the AWBA recharged an estimated 59,701 acre-feet of water: Figure 3 identifies the storage breakdown between GSFs and USFs for 2013 and provides a comparison between 2013 and the two previous years.



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

## 2014 PLAN OF OPERATION

The AWBA is scheduled to recharge 59,753 acre-feet of intrastate water in 2014. Water storage will be occurring in facilities in all three counties. The AWBA will also deliver 5,000 acre-feet of water for the Southside Replenishment Bank. The AWBA's total deliveries for 2014 will be approximately 64,753 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. The amount of water available to the AWBA for 2014 is the limiting factor for this Plan.

### 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 2014 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 2014. Because Arizona is not creating or requesting ICS, the State will operate under normal conditions, which allows 2.8 MAF of water available for use within Arizona. Arizona's on-river use is forecast to be 1.2 MAF, leaving approximately 1.6 MAF available for diversion by CAP.

For 2014, the AWBA will purchase water from the Excess CAP water pool that is available for use by the AWBA and CAGRDR. The CAGRDR 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 of Directors (Board) establishes the volume available in this pool annually. Because of continuing demand from higher priority users, the quantity available in this pool for 2014 is 84,408 acre-feet.

Subtracting the projected uses for the CAGRDR replenishment reserve (8,274 acre-feet) and Reclamation (11,381 acre-feet), leaves a remaining balance of 64,753 acre-feet for the AWBA. Water availability is the primary limiting factor in developing the 2014 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 will be available for delivery by CAP in 2014. 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 withdrawal fees collected in 2014 and some funds carried over from the Phoenix and Pinal AMAs from 2013 available for use in this Plan. Total withdrawal fees are estimated at \$5.5 million and include \$2.7 million for the Phoenix AMA, \$2.4 million for the Pinal AMA and \$400,000 for the Tucson AMA.

As in previous years, the CAWCD Board resolved to retain the *ad valorem* property taxes collected in its three-county service area and not transfer those revenues to the AWBA 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 2014 Plan are: Maricopa County (\$12.8 million), Pinal County (\$800,000), and Pima County (\$3.1 million).

Funding was not a limiting factor in developing the Plan given the amount of water that is available for AWBA use. If additional water becomes available, funding could limit the amount of water that can be stored in the Pinal AMA. The amount of funds collected in both the Pinal and Tucson AMAs is expected to be a limiting factor in these areas in the future.

## IV. Available Storage Facility Capacity

AWBA staff conferred with facility operators to discuss their delivery schedules and their continued interest in participating with the AWBA. These discussions confirmed that there was significant interest from facility operators in all three AMAs in partnering with the AWBA. If additional supplies become available, the AWBA still has sufficient capacity to meet its anticipated needs. Storage capacity is therefore not a limiting factor for this Plan.

The Water Delivery Schedule (Table 2) identifies the AWBA's partners for 2014 and the amount of water scheduled to be recharged. 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 recharge deliveries, Table 2 also identifies the amount of water scheduled for meeting the AWBA's Southside Replenishment obligations.



## **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. A total of \$4.5 million of these funds have been expended since the agreement was executed 2008. The AWBA will expend an additional \$1.5 million to store water in the Tucson AMA in 2014.

## **NEW FACILITIES**

There are no new recharge facilities identified in the 2014 Plan.

**Table 2  
Water Delivery Schedule (Acre-Feet)  
Calendar Year 2014**

AWBA-Recharge Sites		Permitted Capacity (AF)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
<b>PHOENIX AMA :</b>															
<b>USF</b>	HIEROGLYPHIC MTN	35,000	500	500	500	500	0	0	0	0	0	0	0	0	2,000
	AGUA FRIA	100,000	500	500	500	500	1,500	647	0	0	0	0	0	0	4,147
	TONOPAH DESERT	150,000	0	0	0	0	0	0	0	0	0	0	0	0	0
	SUPERSTITIION MTNS	35,000	1,000	1,000	1,000	1,500	0	0	0	0	0	0	0	0	4,500
															10,647
<b>GSF</b>	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
	TONOPAH ID	15,000	0	0	0	0	0	0	0	0	0	0	0	0	0
															5,230
<b>AMA TOTAL INTRASTATE</b>			2,000	2,000	2,000	2,500	1,500	647	0	1,230	2,000	1,000	1,000	0	15,877
<b>PINAL AMA :</b>															
<b>GSF</b>	CAIDD	110,000	0	0	3,000	2,000	700	0	0	0	0	0	0	0	5,700
	HOHOKAM	55,000	0	0	0	0	0	2,000	2,000	1,700	0	0	0	0	5,700
	MSIDD	120,000	400	500	900	900	900	500	200	200	400	400	300	100	5,700
															17,100
<b>AMA TOTAL INTRASTATE</b>			400	500	3,900	2,900	1,600	2,500	2,200	1,900	400	400	300	100	17,100
<b>TUCSON AMA:</b>															
<b>USF</b>	AVRA VALLEY	11,000	0	0	0	0	0	0	0	0	0	0	300	700	1,000
	LOWER SANTA CRUZ	50,000	1,000	1,000	1,000	0	0	0	0	0	1,000	1,000	1,500	0	6,500
	PIMA MINE ROAD	30,000	0	0	0	0	0	0	0	0	0	1,000	500	544	2,044
	CAVSARP	100,000	0	0	0	0	0	0	0	0	0	0	0	0	0
	SAVSARP	60,000	2,000	2,000	2,000	2,000	0	0	0	0	1,000	1,000	2,000	2,000	14,000
															23,544
<b>GSF</b>	CORTARO-MARANA ID	20,000	0	0	0	0	482	1,000	1,000	750	0	0	0	0	3,232
	KAI FARMS (Red Rock)	11,231	0	0	0	0	0	0	0	0	0	0	0	0	0
	BKW Farms	14,316	0	0	0	0	0	0	0	0	0	0	0	0	0
															3,232
<b>AMA TOTAL INTRASTATE</b>			3,000	3,000	3,000	2,000	482	1,000	1,000	750	2,000	3,000	4,300	3,244	26,776
<b>TOTAL INTRASTATE</b>			5,400	5,500	8,900	7,400	3,582	4,147	3,200	3,880	4,400	4,400	5,600	3,344	59,753
<b>TOTAL INTERSTATE</b>			0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL RECHARGE</b>			5,400	5,500	8,900	7,400	3,582	4,147	3,200	3,880	4,400	4,400	5,600	3,344	59,753
<b>DIRECT DELIVERY (Non-Storage):</b>															
	Southside Replenishment Bank		0	5,000	0	0	0	0	0	0	0	0	0	0	5,000
	Southside Replenishment Obligation		0	0	0	0	0	0	0	0	0	0	0	0	0
	<b>TOTAL DIRECT</b>		0	5,000	0	0	0	0	0	0	0	0	0	0	5,000
<b>TOTAL DELIVERIES</b>			5,400	10,500	8,900	7,400	3,582	4,147	3,200	3,880	4,400	4,400	5,600	3,344	64,753

## INDIAN SETTLEMENTS

The Plan does not specifically identify storage to meet the State's 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 2014. There are also no long term system outages anticipated that would reduce deliveries to CAP customers. Therefore, there is no obligation for the AWBA to firm Indian supplies under this Plan.

The Settlements Act recognizes three categories where the State has firming responsibilities. The first two obligations pertain to firming of 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 CAP NIA priority water be made available to the GRIC during shortages. The AWBA did not receive a general fund appropriation for 2014 to assist in meeting this obligation. Withdrawal fees may be utilized for Indian firming purposes after appropriated funds are expended. The 2014 Plan does not identify expenditures specifically for this purpose. However, credits accrued through the use of withdrawal fees could be used to meet this obligation if necessary.
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. Since 2009, the AWBA has delivered this amount each year, creating a cumulative 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. While a good winter snow pack and ample runoff could ease these projections, a shortage, if it occurs, would mean there would be no excess CAP water available for low priority CAP water users such as the AWBA. To avoid the risk of not being able to make the minimum delivery required, the AWBA is planning to deliver the remaining 10,000 acre-feet of water needed to complete the obligation during the next two years. The 2014 Plan therefore includes 5,000 acre-feet of direct deliveries to the GRIC at a cost of \$830,000. If hydrologic conditions improve, the AWBA will re-evaluate the amount of water that is delivered in 2015. Cumulative costs through 2014 total \$1,444,000.

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

Pursuant to A.R.S. § 45-841.01, the Tohono O'dham Nation (Nation) must offer ten percent of the 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 2014, 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.

## **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 2014.

## **RECOVERY**

Recovery of AWBA long term storage credits is not anticipated in this Plan.

Staff representatives for ADWR, CAWCD and the AWBA continue to meet to develop a Joint Recovery Plan that will identify 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 created by that recovery. While the actual recovery of AWBA credits for CAP M&I priority subcontract firming is not projected for several decades, recovery for interstate, Indian CAP NIA priority , and on-River domestic supplies may occur sooner so a better understanding of how that recovery is expected to occur will be very beneficial. As the staffs continue these efforts they will seek input from all interested parties. If recovery for firming of Indian CAP NIA priority water and fourth priority domestic supplies along the River is necessary, potential opportunities to provide this firming exist.

## PRICING

In June 2013, the CAWCD Board approved its water delivery rate schedule for calendar years 2014/2015. The AWBA rate for recharge is equivalent to the rate for excess M&I water at \$166 per acre-foot, an increase of \$22 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 2014 for the GSF partners in the Phoenix and Pinal AMAs is \$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 2014 for the Tucson AMA will be \$16 per acre-foot.

Table 3 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. While no interstate banking is anticipated in this Plan, the rate established for interstate banking is \$189 per acre-foot, plus facility costs and facility capital costs.

**Table 3. 2014 Water and Facility Rates**

<b>Recharge</b>	<b>Cost per Acre-foot</b>
CAWCD delivery rate to AWBA for water storage	\$166
Interstate rate	\$189
Groundwater Savings Facility operator cost share rate <sup>1</sup>	
Intrastate	
Phoenix and Pinal AMAs	\$34
Tucson AMA	\$16
Interstate	\$26
Underground Storage Facility rate paid by AWBA	
CAWCD – Phoenix Facilities <sup>2</sup>	\$8
CAWCD – Tucson Facilities <sup>3</sup>	\$15
Avra Valley Recharge Project	\$15.45
Clearwater Facility (CAVSARP/SAVSARP)	\$15.62
<b>Direct Deliveries</b>	
CAWCD rate to AWBA for Southside Replenishment Bank deliveries	\$166

<sup>1</sup> 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 \$132/af for intrastate deliveries to the Phoenix and Pinal AMAs, \$150/af to the Tucson AMA, and \$163/af for interstate deliveries.

<sup>2</sup> Additional capital charge of \$15 per acre-foot for interstate storage.

<sup>3</sup> Additional capital charge of \$9 per acre-foot for interstate storage.

## 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. The ADWR maintains the accounting of the credits. The AWBA accounts for the expenditure of the funds utilized from the Water Banking Fund. CAWCD accounts for the expenditure of the 4 cent tax and reports that expenditure to the AWBA.

The estimated total cost of the AWBA's 2014 Plan is approximately \$10.4 million. Table 4 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 2014 Plan.

**Table 4. Funding for 2014 Annual Plan of Operation**

	Estimated Funds Available		Estimated Funds Utilized		Estimated Credits
	AWBA	CAWCD <sup>1</sup>	AWBA	CAWCD	(AF)
<b>Withdrawal Fees</b>					
Phoenix AMA	\$2,700,000	-	\$675,000	-	3,880
Pinal AMA <sup>2</sup>	\$2,440,000	-	\$2,287,200	-	10,160
Tucson AMA	\$400,000	-	\$167,000	-	860
<b>Four Cent Tax</b>					
Phoenix AMA	\$0	\$12,800,000	\$0	\$1,868,000	10,730
Pinal AMA	\$0	\$800,000	\$0	\$800,000	5,580
Tucson AMA <sup>3</sup>	\$0	\$3,100,000	\$0	\$3,100,000	16,010
<b>Other</b>					
<b>General</b>	\$0				
Phoenix AMA		-	\$0	-	0
Pinal AMA		-	\$0	-	0
Tucson AMA		-	\$0	-	0
<b>Shortage Reparations (NV):</b>	\$1,500,000				
Phoenix AMA		-	\$0	-	0
Pinal AMA		-	\$0	-	0
Tucson AMA		-	\$1,500,000	-	7,760
<b>TOTALS</b>	<b>\$23,740,000</b>		<b>\$10,397,200</b>		<b>54,980</b>

<sup>1</sup> The figures shown are estimates provided by CAWCD staff, and are based on amounts anticipated to be collected during the 2014 tax year. 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.

<sup>2</sup> Includes expenditure for 5,000 acre-feet of direct deliveries to establish the Southside Replenishment Bank under the Gila River Indian Water Settlement Program.

<sup>3</sup> 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.

The 2014 Plan was developed to prioritize storage in the Tucson AMA primarily to make progress on the M&I firming goal for that AMA. Expenditures in the Tucson AMA total \$4,767,000. Nearly all funds estimated to be collected in 2014 were utilized, including \$1.5 million in shortage reparation funds. The remaining water supplies were divided between the Phoenix and Pinal AMAs. As with the Tucson AMA, nearly all funds

available for the Pinal AMA, including withdrawal fees carried over from the previous year, are expended under the Plan and total \$3,087,200. Expenditures include \$830,000 in withdrawal fees to pay for deliveries to the Southside Replenishment Bank. Funds utilized in the Phoenix AMA total \$2,543,000 and include a portion of both the withdrawal fees and four cent tax monies estimated to be available.

Table 5 provides an estimate of the AWBA funds expended and the location of the credits accrued since inception through 2013.

**Table 5. Cumulative Long-term Storage Credits 1997-2013**

<b>FUNDING SOURCE</b>	<b>FUNDS EXPENDED</b>	<b>CREDITS <sup>1</sup> AMOUNT (AF)</b>	<b>LOCATION</b>
<b>Withdrawal Fee</b>			
Phoenix AMA	\$19,774,700	299,130	Phoenix AMA
Pinal AMA	\$17,012,800	402,270	Pinal AMA
Tucson AMA <sup>2</sup>	\$8,301,400	100,930	Tucson AMA
<b>Four Cent Tax</b>			
Maricopa County	\$88,979,500	1,339,880	Phoenix AMA
Pinal County	\$10,450,200	198,500	Pinal AMA
Pima County	\$41,942,000	400,950	Tucson AMA
<b>Other</b>			
General Fund <sup>3</sup>	\$11,100,900	403,830	
	\$1,522,100	42,320	Phoenix AMA
	\$6,395,000	306,970	Pinal AMA
	\$3,183,800	54,550	Tucson AMA
Indian Firming Appropriation	\$2,338,200	28,480	
	\$0	0	Phoenix AMA
	\$0	0	Pinal AMA
	\$2,338,200	28,480	Tucson AMA
Shortage Reparations	\$4,499,700	91,280	
	\$1,099,300	20,640	Phoenix AMA
	\$1,708,600	60,510	Pinal AMA
	\$1,691,800	10,130	Tucson AMA
Pinal Redirect <sup>4</sup>	N/A	14,130	Pinal AMA
<b>Interstate</b>			
Nevada <sup>5</sup>	\$109,087,900	600,650	
	\$11,444,400	51,010	Phoenix AMA
	\$71,508,200	439,850	Pinal AMA
	\$26,135,300	109,790	Tucson AMA
<b>TOTAL</b>	<b>\$313,487,300</b>	<b>3,880,030</b>	

<sup>1</sup> Actual expenditures and credits for 1997-2012; 2013 estimated.

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

<sup>3</sup> 256,174 AF of credits reserved pursuant to contract with Mohave County Water Authority.

<sup>4</sup> 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.

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

Table 6 identifies the progress expected to be made on the AWBA's goals and obligations through 2014.

**Table 6. Projected Percent of Goals and Obligations Achieved through 2014**

Location and Objective	Funding Source	Goal	Obligation	Non-Credit Goal/Oblig. Achieved	Credits Accrued (AF)	Percent Goal/Oblig. Achieved
<b>Phoenix AMA</b> M&I Firming Groundwater Mgmt <sup>1</sup>	Ad valorem tax Withdrawal Fees	1,566,000 AF			1,350,610 303,010	86%
<b>Pinal AMA</b> M&I Firming Groundwater Mgmt <sup>1</sup>	Ad valorem tax Withdrawal Fees	243,000 AF			204,080 412,430	84%
<b>Tucson AMA</b> M&I Firming Groundwater Mgmt <sup>1,2</sup>	Ad valorem tax Withdrawal Fees	864,000 AF			416,960 96,170	48% 59%
<b>On-River M&amp;I Firming</b> <sup>3</sup>	General Fund	420,000 AF			403,830	96% <sup>4</sup>
<b>Indian Settlements:</b> GRIC Firming	Withdrawal Fees	350,000 AF <sup>5</sup>	up to 15,000 AF/YR		0	0%
Future Settlements	Withdrawal Fees	200,000 AF <sup>5</sup>	up to 8,724 AF/YR		0	0%
Federal Assistance Tucson AMA	Appropriation Withdrawal Fees Cost of Services <sup>6</sup>		\$3,000,000	\$3,000,000 \$2,338,171 \$630,490	34,102 28,481 5,621	100%
Southside Repl. Bank	Withdrawal Fees		15,000 AF Direct Delivery		10,000	67%
<b>Other:</b> Shortage Reparations- Nevada Pinal Redirect Credits <sup>7</sup>	Gifts, Grants, Donations N/A	\$8,000,000		\$6,000,000	99,030 14,125	75% N/A

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

<sup>2</sup> Includes 234 AF credits acquired from the Tohono O'odham Nation pursuant to §45-841. 01.

<sup>3</sup> By resolution passed in 2002, the AWBA established on-river firming as the highest priority of use for credits accrued through expenditure of general fund appropriations. 256,174 AF are of credits reserved pursuant to contract with Mohave County Water Authority.

<sup>4</sup> This percentage reflects full utilization of general fund credits accrued to date and would change as other objectives are identified by the AWBA.

<sup>5</sup> Based on estimates from the Indian Firming Study Commission Report dated January 6, 2006.

<sup>6</sup> Include \$14,883 and \$16,456 deducted for payment of cost of services for FY08 and FY09, respectively.

<sup>7</sup> Credits accrued from 15,000 AF of water that was scheduled for the Tucson AMA and redirected to the Pinal AMA for storage at GSFs. These credits are currently identified for M&I firming in the Tucson AMA and would meet 1% of the firming goal.



## **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. The Plan was also distributed to the public via email and made available on the AWBA web page for public review and comment. The GUACs supported the Plan and had no requests for changes to it.

In the Phoenix AMA, GUAC members inquired if there were limitations on the amount of withdrawal fees that could be expended from the Phoenix and Pinal AMAs for firming Gila River Indian Community supplies given that the reservation straddles both AMAs. Staff indicated there were no imposed limits. Absent general fund monies, the AWBA has proposed utilizing withdrawal fee credits for the Phoenix and Pinal AMAs that have been accrued on reservation first. Pinal AMA withdrawal fees would then primarily be used to firm GRIC supplies, while Phoenix AMA withdrawal fees would be used for firming future Indian settlements, including the White Mountain Apache lessees.

There were also questions regarding the likelihood that withdrawal fees collected in the Phoenix AMA would not be fully utilized because of the reduction in supplies available to the AWBA. Staff noted that any funds remaining at this time would be available to purchase additional water that typically becomes available to the AWBA throughout the year. The AWBA may also utilize withdrawal fees to acquire other sources of water if CAP water is not available and are the only funds currently available for meeting Indian settlement obligations. Furthermore, if CAWCD's authority to levy the four-cent *ad valorem* tax is not renewed, withdrawal fees will likely be the only funding source available to the AWBA if and when those funds are no longer available to offset AWBA costs.

In the Pinal AMA, there were comments in support of the AWBA's plan to make progress on the Southside Replenishment Bank responsibilities. In the Tucson AMA, members responded positively and expressed appreciation on the AWBA's efforts to focus storage in that AMA. The Metropolitan Domestic Water Improvement District also endorsed the AWBA's efforts to increase storage in the Tucson AMA, particularly at underground storage facilities that have existing or planned recovery systems (see attached letter).



November 27, 2013

Ms. Virginia O'Connell, Manager  
Arizona Water Banking Authority  
3550 North Central Avenue, Second Floor  
Phoenix, Arizona 85012

**Re: Draft 2014 Plan of Operation**

Dear Ms. O'Connell:

Thank you for the opportunity to comment on the Draft 2014 Annual Plan of Operation for the Arizona Water Banking Authority (AWBA). By early 2014, the Metropolitan Domestic Water Improvement District's (District) engineering consultant will be finished with a pipeline routing and recovery well study for the Avra Valley Recharge Project (AVRP). The project's goal is to support on-going regional water resources management efforts within the Tucson Active Management Area (AMA) by 1) minimizing groundwater overdraft within our Metro-Main service area through recovery of District stored water at AVRP, and 2) having a recovery system that can directly access AWBA's M&I firmed water during Colorado River shortages or CAP system interruptions. For these reasons, the District supports AWBA's draft 2014 Plan of Operation that includes storage at AVRP.

The District also endorses AWBA's decision to increase the volume of storage in the TAMA at underground storage facilities with existing or planned recovery systems. The draft 2014 plan recommends 17,044 acre-feet of storage at AVRP, Pima Mine Road, and SAVSARP or about 12 percent more storage than in 2013. The District hopes storage by AWBA at these facilities will further increase when expansion of recharge capacity occurs.

Again, thank you for the opportunity to comment on the draft plan. Please call me at (520) 575-8100, if you have any questions on the District's comments.

Sincerely,

A handwritten signature in black ink that reads "Mike Block". The signature is written in a cursive, flowing style.

Michael W. Block  
Water Resources Manager

MWB/mwb

c: Warren Tenney