

# ARIZONA WATER BANKING AUTHORITY

## ANNUAL PLAN OF OPERATION

### 2009



Herbert R. Guenther, Chairman

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# The Arizona Water Banking Authority

## Summary

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

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

- Firming (to secure) adequate water supply to municipal and industrial users in the Central Arizona Project service area and along the Colorado River in times of shortages;
- Meeting the management plan objectives of the Arizona Groundwater Code;
- Meeting the State's obligation pursuant to Indian Water Rights Settlements;
- Assisting the Colorado River fourth priority municipal and industrial users in developing credits that could be used to increase their future supplies for firming; and
- Assisting Nevada and California through interstate water banking.

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

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

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

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

In 2009, the Water Bank will store approximately 118,500 acre-feet for intrastate storage at a cost of nearly \$7 million. Presently, there is no interstate storage planned for 2009, given the reduced water available to the AWBA.

The Water Bank had received a general fund appropriation of \$13.5 million from the Legislature in 2006 to be used specifically for Indian firming. The State's budget shortfall for fiscal year 2009 resulted in a legislative transfer of \$12.4 million from the AWBA Fund.

To date, the AWBA has delivered for storage approximately 3.4 million acre-feet at a cost of \$228 million; 2.9 million acre-feet for intrastate storage at a cost of \$132 million and 522,000 acre-feet for interstate storage at a cost of \$95.7 million.

## **INTRODUCTION**

The Arizona Water Banking Authority (AWBA) was created to store Arizona's unused Colorado River water entitlement in western, central and southern Arizona to develop long-term storage credits to: (1) firm existing water supplies for municipal and industrial users (M&I) along the Colorado River and Central Arizona Project (CAP) M&I users during Colorado River shortages or CAP service interruptions; (2) help meet the water management objectives of the Groundwater Code; and (3) meet the State's obligations in the settlement of Indian water rights claims. 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 (or banking) of water is accomplished through the Underground Water Storage, Savings and Replenishment Act (UWS) enacted by the Arizona legislature in 1994 and administered by the Arizona Department of Water Resources (ADWR). Through this program, the AWBA stores renewable water that currently has no immediate, direct use 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. A GSF is a facility where the renewable water is used in place of groundwater, creating a groundwater savings. The UWS program mandates the accounting of the renewable water stored and the development of long-term storage credits. The long-term storage credits developed by the AWBA will then be utilized by the AWBA when future conditions warrant. The use of credits for the three objectives listed above may differ and is dependent on the source of funds utilized to develop them.

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. This is achieved by presenting a draft of the Plan to the Groundwater Users Advisory Councils (GUAC) for the Phoenix, Pinal and Tucson Active Management Areas (AMA) and to the county board of supervisors for counties outside of the AMA's if water storage is proposed there within the Plan. 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 caused by maintenance and fluctuations in the weather 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 not be deemed modifications to the Plan and will be addressed by staff and reported to the AWBA members on an as-needed basis.

## 2008 PLAN OF OPERATION

In 2008, the AWBA's twelfth full year of operation, the AWBA recharged approximately 251,800 acre-feet of Colorado River water. Arizona's total use of Colorado River water is forecast to be 2.77 million acre-feet (MAF) by the Bureau of Reclamation data dated November 18, 2008 (see Figure 1). In addition, Arizona developed 27,000 acre-feet of intentionally created unused apportionment (ICUA) for California, thus making full use of its entitlement of 2.8 MAF.

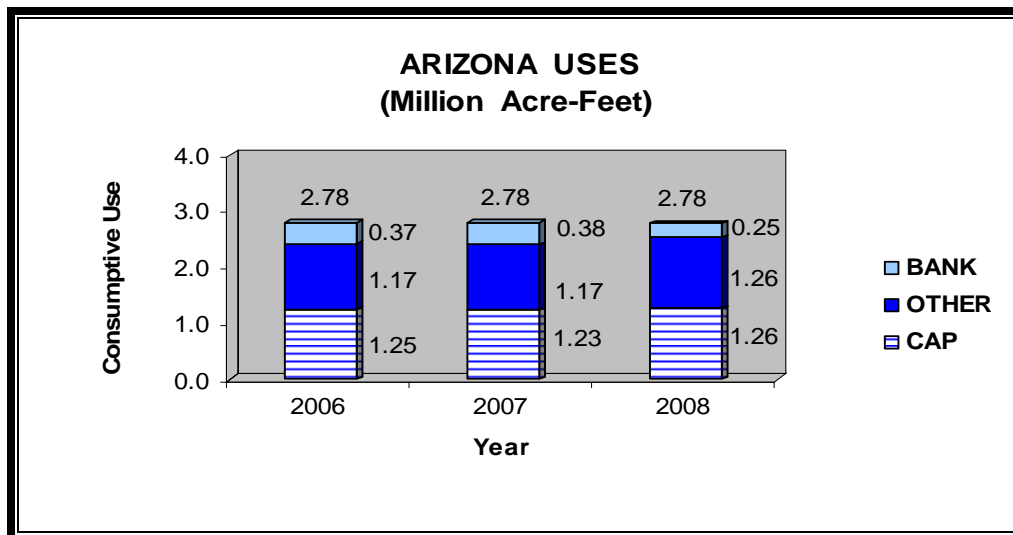


Figure 1. Recent Comparison of Colorado River Water Uses by Arizona

The Bureau of Reclamation forecasts total use of Colorado River water in the Lower Basin to be 7.57 MAF in 2008 (see Figure 2).

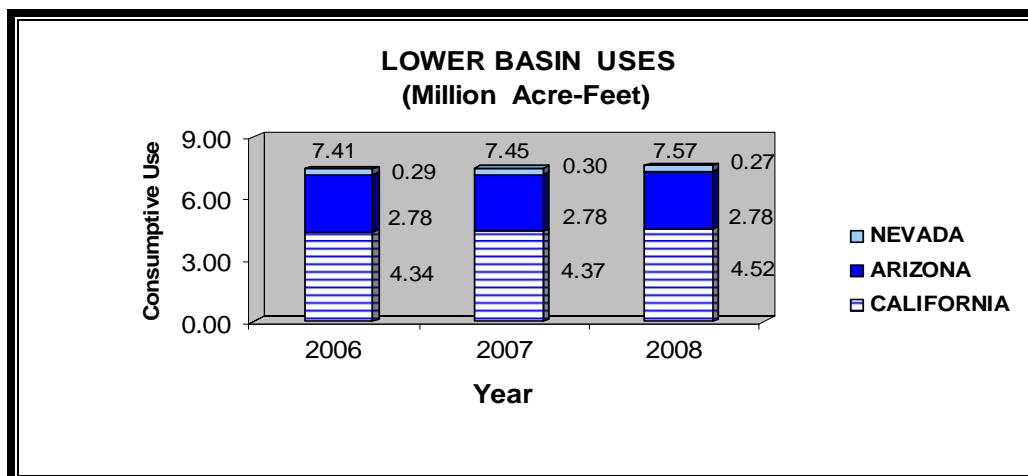


Figure 2. Recent Comparison of Lower Basin Uses of Colorado River Water

The AWBA recharged water at both USFs and GSFs in 2008. Table 1 lists the AWBA's recharge partners for 2008, the amount of water that can be stored under each AWBA water storage permit, and the amount of water delivered to the facility by the AWBA in 2008. Table 1 values are based on actual deliveries through October with November and December deliveries estimated. The amount of water delivered to a facility is always greater than the amount of long-term storage credits earned by the AWBA because credits are computed by subtracting approximately 3% for losses and 5% for a "cut to the aquifer" from the total annual deliveries. Final figures for credits earned generally become available in the middle of the following year after review of the annual reports filed with the ADWR and are reported in the AWBA's Annual Report.

**Table 1. Recharge Partners and Water Deliveries for 2008**

AMA	Facility	Type	Permit Capacity (acre-feet)	Delivered (acre-feet)		
				Intrastate	Interstate	
PHOENIX AMA	Agua Fria	USF	100,000	2,312	0	
	Hieroglyphic Mountains	USF	35,000	2,263	0	
	Tonopah Desert	USF	150,000	37,995	0	
	Chandler Heights Citrus	GSF	3,000	0	0	
	Queen Creek ID	GSF	28,000	10,500	0	
	Gila River Indian IDD	GSF	37,520	31,326	0	
	<b><i>Intrastate/Interstate AMA Subtotal</i></b>				<b>84,396</b>	<b>0</b>
	<b><i>Phoenix AMA Subtotal</i></b>					
PINAL AMA	Central Arizona IDD	GSF	110,000	57,000	3,200	
	Hohokam IDD	GSF	55,000	21,250	0	
	Maricopa-Stanfield IDD	GSF	120,000	44,800	3,200	
	Gila River Indian IDD	GSF	18,480	5,000	0	
	<b><i>Intrastate/Interstate AMA Subtotal</i></b>				<b>128,050</b>	<b>6,400</b>
	<b><i>Pinal AMA Subtotal</i></b>				<b>134,450</b>	
TUCSON AMA	Avra Valley	USF	11,000	5,626	0	
	CAVSARP	USF	80,000	5,675	0	
	Lower Santa Cruz	USF	50,000	21,615	0	
	<b><i>Intrastate/Interstate AMA Subtotal</i></b>				<b>32,916</b>	<b>0</b>
	<b><i>Tucson AMA Subtotal</i></b>				<b>34,916</b>	
<b>TOTAL INTRASTATE &amp; INTERSTATE DELIVERIES</b>				<b>245,362</b>	<b>6,400</b>	
<b>TOTAL DELIVERIES</b>				<b>251,762</b>		

The initial Plan of Operation (Plan) for 2008 proposed to deliver approximately 188,300 acre-feet of water and did not include deliveries for interstate storage. Heavy precipitation during the winter months resulted in some CAP customers turning back previously ordered water to be remarketed. The Plan was amended in the spring of 2008 to include an additional 77,500 acre-feet of water for an estimated total of 265,800 acre-feet. Of this amount, 6,400 acre-feet was remarketed full cost municipal & industrial (M&I) subcontract water, which the AWBA purchased for interstate deliveries to the Pinal AMA. By the end of the year, the AWBA delivered an estimated 251,800 acre-feet of water: 245,400 acre-feet for intrastate banking and 6,400 acre-feet for interstate banking. The reduction in deliveries from the Amended Plan was due to unexpected increased on-river uses and a step-aside by the AWBA to allow additional M&I subcontract deliveries. Figure 3 shows the acre-foot breakdown between GSFs and USFs for 2008 and a comparison between 2008 and previous years.

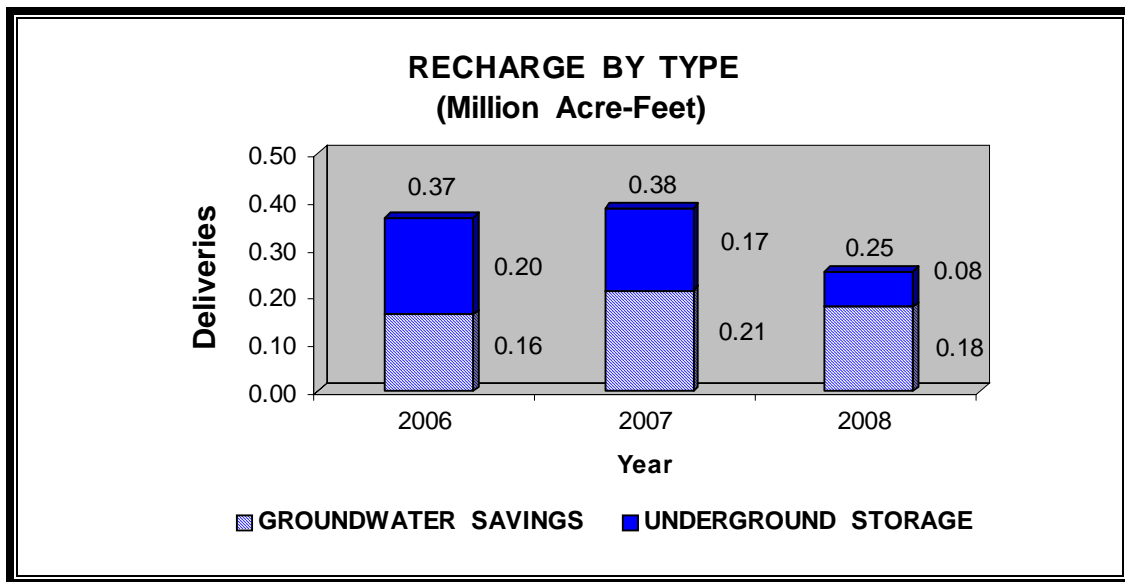


Figure 3. Recent Comparison of Annual Deliveries to GSFs and USFs

## 2009 PLAN OF OPERATION

For 2009, the AWBA will store approximately 118,500 acre-feet of intrastate water. Water storage will be occurring in facilities in all three counties. The AWBA is not planning any interstate storage in 2009.

When developing a Plan of Operation, the AWBA evaluates four critical factors: (1) the amount of unused water available to the AWBA for delivery; (2) the CAP capacity available to the AWBA for the delivery of unused water; (3) the funds available and the costs required to deliver the unused 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 for delivery to the AWBA under the existing pool structure.

The Bureau of Reclamation distributed the Draft Annual Operating Plan (AOP) for water year 2009 to the states in October of 2008. The AOP stated that the Intentionally Created Surplus (ICS) Surplus Condition is the criterion that will govern the release of water for the states in the Lower Basin during calendar year 2009. Because Arizona is not expecting to create ICS in 2009, 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. Pursuant to a letter agreement between the Metropolitan Water District of Southern California (Metropolitan), CAWCD, and the AWBA, Metropolitan has requested the recovery of 30,000 acre-feet of credits in 2009 which, when exchanged for CAP water, will create Intentionally Created Unused Apportionment (ICUA) available to California from Arizona's apportionment.

With respect to availability of CAP water, the AWBA purchases water from the category that is termed excess water. Excess water is all water available for delivery through the CAP in excess of the quantities scheduled under long-term contracts and subcontracts. The availability of excess water is determined on an annual basis. The AWBA may order any excess water not requested by another entity within the CAP service area. The AWBA shares an equal priority for water for municipal and industrial (M&I) firming with the Central Arizona Groundwater Replenishment District for replenishment reserve purposes.

The amount of CAP water available to the AWBA was again the significant limiting factor in developing the Plan. Preliminary excess water orders by CAP customers, including requests from AWBA partners, initially exceeded CAP's projected supply of 1.525 MAF by 234,000 acre-feet. This increase in water orders was due to both new customers and an increase in historic water orders by some existing CAP customers. These increased orders left no water available to the AWBA.

The CAWCD Board, in anticipation of increased excess water orders, had directed its staff to develop a comprehensive strategy for distributing excess CAP water among competing demands. In order to process water orders in a timely manner, the Board approved a temporary procedure for distribution of excess water in 2009. In the coming months, CAWCD staff will begin stakeholder participation for development of a long-term policy for distribution of excess water beginning in 2010.

For 2009, the CAWCD Board approved reserving two pools of water to ensure that recovery goals, agricultural incentive pricing goals, and Indian firming goals could be accomplished. The first pool was for 81,900 acre-feet for use at groundwater savings facilities (GSFs) participating in the agricultural incentive program. The second pool was for 45,000 acre-feet for use in assisting the State of Arizona in meeting its obligations under the Arizona Water Settlements Act. The remaining excess water was distributed based on a customer's maximum incentive recharge water order from the last three years. Customers that did not have a history of incentive recharge water use were eligible to receive a *de minimus* volume of up to 2,500 acre-feet. Any remaining water was distributed in proportion to the amount the order had been reduced.

The AWBA meets the requirements for participating in the two pools established by CAWCD. As a result, the total amount of water available for the AWBA in 2009 is approximately 118,500 acre-feet. Because of the limited availability of supplies and the criteria for requesting water under the two pools, the 2009 Plan focuses only on working toward meeting AWBA's intrastate goals and does not include delivery and storage for interstate water banking.

Given the AWBA's current position of "last-in-line" to receive water and the expectation that increased demand in excess CAP water will leave little to no water available for the AWBA, adjustments in the Water Bank's operations are needed to allow progress toward meeting the State's statutory and contractual obligations. AWBA operational adjustments will be sought through legislative changes in § 45-2427.

## II. CAP System Capacity

Under normal operating conditions, CAP can divert approximately 1.6 million acre-feet. Although the CAP is capable of delivering approximately 180,000 acre-feet per month, the available capacity does not always total that because of unique situations, i.e. the filling of Lake Pleasant in the winter months, deliveries to the western portion of the aqueduct, New Waddell Dam releases to the aqueduct in the summer months and scheduled maintenance and outages. The CAP 2009 Operating Plan has planned maintenance for the Salt River siphon the first three weeks in November of 2009. While this factor imposes some temporal limitation on deliveries, it was not a limiting factor in developing this Plan.



### III. Available Funds

The AWBA will have withdrawal fees collected in 2009, including carryover from 2008, available for use in this Plan for intrastate storage. Total withdrawal fees are estimated at \$5 million; of that amount, \$2.4 million is available for the Phoenix AMA, and approximately \$1.8 million and \$790,000 are available for the Pinal and Tucson AMAs, respectively. In addition to the withdrawal fees, AWBA Fund has a carryover balance of approximately \$213,000, including interest, available in 2009 for Indian settlements.

As in previous years, the CAWCD Board resolved to continue to retain the county *ad valorem* property taxes collected 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 the tri-county CAWCD service area. The estimated *ad valorem* tax balances available for 2009, including carryover, are: Maricopa County (\$90 million), Pinal County (\$2.49 million), and Pima County (\$9.97 million).

Funding was not a limiting factor in developing the 2009 Plan. However, because of the amount of funds collected in the Pinal and Tucson AMAs, funding availability is expected to be a consideration 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 in partnering with the AWBA and there is substantial permitted recharge capacity.

For 2009, several partners that had previously stored water for the AWBA opted again not to provide storage capacity to the AWBA because other partners wanted to utilize their facilities. However, if additional supplies become available, the AWBA still has sufficient capacity to meet its anticipated needs.

The Water Delivery Schedule (Table 2) identifies the AWBA's partners for 2009 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 based on the facility permits. The capacity available as shown does not always equate to the storage permit capacity because the storage facility operators may have agreements with other storage partners.

**Table 2**  
**Water Delivery Schedule**  
**Calendar Year 2009**  
(Acre-feet)

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>	West Maricopa Combine	25,000	0	0	0	0	0	0	0	0	0	0	0	0	0
	HIEROGLYPHIC	35,000	0	0	0	0	0	0	0	0	0	0	0	0	0
	AGUA FRIA	100,000	0	0	0	0	0	0	0	0	0	0	0	0	0
	TONOPAH DESERT	150,000	0	0	0	0	0	0	0	0	0	0	0	0	0
	TONOPAH Interstate		0	0	0	0	0	0	0	0	0	0	0	0	0
															0
<b>GSF</b>	SRP	100,000	0	0	0	0	0	0	0	0	0	0	0	0	0
	CHANDLER HGTS ID	3,000	0	0	0	0	0	0	0	0	0	0	0	0	0
	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	1,343	2,285	2,285	1,142	1,142	8,197
	TONOPAH ID	15,000	0	0	0	0	0	0	0	0	0	0	0	0	0
	GILA RIVER INDIAN IDD	37,520	0	0	0	0	1,402	5,711	10,475	8,365	5,373	0	0	0	31,326
	TOTAL INTRASTATE		0	0	0	0	1,402	5,711	10,475	9,708	7,658	2,285	1,142	1,142	39,523
	TOTAL INTERSTATE		0	0	0	0	0	0	0	0	0	0	0	0	0
<b>AMA TOTAL</b>			0	0	0	0	1,402	5,711	10,475	9,708	7,658	2,285	1,142	1,142	<b>39,523</b>
<b>PINAL AMA :</b>															
<b>GSF</b>	CAIDD	110,000	0	0	0	1,500	2,000	5,500	5,500	5,500	5,500	4,750	1,750	500	32,500
	CAIDD Interstate		0	0	0	0	0	0	0	0	0	0	0	0	0
	HOHOKAM	55,000	0	0	0	0	0	0	0	0	0	0	0	0	0
	HOHOKAM Interstate		0	0	0	0	0	0	0	0	0	0	0	0	0
	MSIDD	120,000	930	1,030	2,070	2,590	3,110	3,120	3,110	3,110	4,050	5,570	3,090	720	32,500
	MSIDD Interstate		0	0	0	0	0	0	0	0	0	0	0	0	0
	GILA RIVER INDIAN IDD	18,480	0	0	0	0	5,000	0	0	0	0	0	0	0	5,000
															70,000
	TOTAL INTRASTATE		930	1,030	2,070	4,090	10,110	8,620	8,610	8,610	9,550	10,320	4,840	1,220	70,000
	TOTAL INTERSTATE		0	0	0	0	0	0	0	0	0	0	0	0	0
<b>AMA TOTAL</b>			930	1,030	2,070	4,090	10,110	8,620	8,610	8,610	9,550	10,320	4,840	1,220	<b>70,000</b>
<b>TUCSON AMA:</b>															
<b>USF</b>	AVRA VALLEY	11,000	500	500	500	500	500	500	0	0	0	0	0	0	3,000
	PIMA MINE RD	30,000	0	0	0	0	0	0	0	0	0	0	0	0	0
	PMR Interstate		0	0	0	0	0	0	0	0	0	0	0	0	0
	LOWER SANTA CRUZ	50,000	2,000	2,000	2,000	0	0	0	0	0	0	0	0	0	6,000
	LSC Interstate		0	0	0	0	0	0	0	0	0	0	0	0	0
	CAVSARP	100,000	0	0	0	0	0	0	0	0	0	0	0	0	0
	SAVSARP	60,000	0	0	0	0	0	0	0	0	0	0	0	0	0
															9,000
<b>GSF</b>	BKW	16,615	0	0	0	0	0	0	0	0	0	0	0	0	0
	KAI FARMS (Red Rock)	11,231	0	0	0	0	0	0	0	0	0	0	0	0	0
															0
	TOTAL INTRASTATE		2,500	2,500	2,500	500	500	500	0	0	0	0	0	0	9,000
	TOTAL INTERSTATE		0	0	0	0	0	0	0	0	0	0	0	0	0
<b>AMA TOTAL</b>			2,500	2,500	2,500	500	500	500	0	0	0	0	0	0	<b>9,000</b>
<b>Outside AMA:</b>															
	HARQUAHALA VALLEY ID	50,000	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>OUTSIDE TOTAL</b>															<b>0</b>
<b>TOTAL INTRASTATE</b>			3,430	3,530	4,570	4,590	12,012	14,831	19,085	18,318	17,208	12,605	5,982	2,362	<b>118,523</b>
<b>TOTAL INTERSTATE</b>			0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>			3,430	3,530	4,570	4,590	12,012	14,831	19,085	18,318	17,208	12,605	5,982	2,362	<b>118,523</b>

## **NEW FACILITIES**

There are no new facilities for 2009; however a permit modification for the Tucson Water Central Avra Valley Storage and Recovery Project (CAVSARP) that increases the facility's storage capacity to 100,000 acre-feet per year was issued by ADWR in December of 2008. This permit modification provides an additional 20,000 acre-feet of storage capacity in the Tucson AMA. In addition, the Southern Avra Valley Storage and Recovery Project (SAVSARP), which began operations in 2008, provided an additional 60,000 acre-feet of storage capacity. If additional water supplies become available, the storage capacity available to the AWBA for 2009 at these two facilities, also known as the Clearwater Project, would be approximately 32,000 acre-feet.

## **INDIAN SETTLEMENTS**

For the second year, the Plan incorporates storage to meet the State's obligations under the Arizona Water Settlements Act (Settlements Act). As noted earlier, CAWCD created a pool of 45,000 acre-feet to assist the State in meeting its Indian firming obligations. The 2009 Plan utilizes all available water in this pool to meet the Settlements Act obligations described below.

### Indian Firming

The Settlements Act recognizes three categories where the State has firming responsibilities. The first two obligations pertain to firming of water for the Gila River Indian Community (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. The 2009 Plan includes 31,326 acre-feet of water storage deliveries for this purpose.
2. Other Tribes - The AWBA is also required to firm up to 8,724 acre-feet per year of CAP NIA priority water for future Indian Settlements. Settlements for other Indian Tribes have not been enacted at this time, thus the 2009 Plan does not include a component for this obligation.
3. Federal Assistance - The State is required 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. The Secretary and the AWBA agreed to develop long-term storage credits, which will later be transferred to the Federal government. The 2009 Plan identifies 9,000 acre-feet of deliveries in the Tucson AMA toward meeting this obligation.

### GRIC Water Settlement Program

In addition to the firming requirements of the Settlements Act, the AWBA, acting as agent for the State, is required to enter into an inter-governmental agreement (IGA) with

GRIC for direct delivery of 15,000 acre-feet of water for the purpose of establishing the Southside Replenishment Bank. A minimum of 1,000 acre-feet per year is to be delivered to the GRIC to establish this Bank. The Southside Replenishment Bank will fulfill the obligations created under the Settlements Act for protection of the Reservation from off-reservation groundwater pumping. The 2009 Plan includes 5,000 acre-feet of direct deliveries to the GRIC for this purpose anticipating the execution of the IGA.

## INTERSTATE WATER BANKING

The 2009 Plan does not include an interstate water banking component for the State of Nevada. Because of the reduced water supplies available to the Water Bank in 2009, it is important to complete intrastate water banking with the funds available to the AWBA before interstate water is offered. However, if excess water becomes available later in the year after all storage for intrastate purposes has been maximized, the AWBA could store for interstate banking to ensure that Arizona's full entitlement is diverted from the Colorado River.

## RECOVERY

The Metropolitan Water District of Southern California (Metropolitan) has requested from CAWCD the recovery of 30,000 acre-feet of long-term storage credits for 2009, leaving a balance of approximately 7,000 acre-feet of credits for future recovery. Metropolitan had indicated that if the opportunity arose, it could amend its current schedule to include additional recovery in 2009. Pursuant to the letter agreement between Metropolitan, CAWCD, and the AWBA, these credits will be recovered or exchanged and ICUA created. Table 3 identifies the planned recovery schedule for 2009.

Following Board approval of a conceptual recovery plan last year, CAWCD staff began developing detailed plans to recover stored water. CAWCD staff has continued this stakeholder process focusing on the technical details of recovery and outlining the framework for recovery agreements, with a goal of completing the planning process by the end of 2009. The recovery plan will assist the AWBA in determining appropriate locations for water storage.

**Table 3. 2009 CAWCD Recovery Schedule**

<b>Entity</b>	<b>Annual Amount (Acre-feet)</b>
Maricopa-Stanfield Irrigation & Drainage District	13,000
Central Arizona Irrigation & Drainage District	11,000
Hohokam Irrigation & Drainage District	5,000
Central Arizona Groundwater Replenishment District (credit exchange)	1,000
<b>TOTAL</b>	<b>30,000</b>

## PRICING

In June 2008, the CAWCD board adopted final water delivery rates for calendar years 2009/2010. The 2009 rate for AWBA and other M&I Incentive recharge is \$82 per acre-foot. The delivery rate equals pumping energy rate 2 (\$70 per acre-foot), plus a \$5 per acre-foot energy rate 2 catch-up component, plus 10 percent of the fixed OM&R charge (\$6.30 per acre-foot). For 2009, pumping energy rate 2 was calculated using the average of the actual or forecast above threshold energy rates for the previous three years.

In 2009, the AWBA increased the cost share for the GSF partners by \$1 to \$32 per acre-foot. Table 4 reflects the water delivery rate the CAP will charge the AWBA, the rate the GSF operators will pay for use of the AWBA's water, and the various rates the AWBA will be charged to utilize the different USFs.

The Amended Master Water Storage Agreement executed on September 19, 2006 describes the cost components that can be paid by the AWBA for storage at CAP facilities. On October 2, 2003, the CAWCD adopted a new policy regarding storage facility rates. Pursuant to the policy, the AWBA will pay an OM&R component for all water stored; that component is calculated by CAWCD annually for each AMA based on a rolling ten-year average. Additionally, for water stored for other than M&I firming purposes, the AWBA will pay a capital charge component. The capital charge is based on the total projected costs and projected storage of water over the lives of the facilities in the AMA and will not change annually unless there are significant changes in CAWCD's costs for recharge facilities in that AMA. There is no administration cost component in the facility cost because the AWBA pays the CAP administrative costs on an annual basis.

The rate established for interstate banking is \$233 per acre-foot, plus facility costs and facility capital costs.

The estimated total cost of the AWBA's 2009 Plan of Operation is just under \$7 million and includes the USF use fees and the CAP delivery rate minus the cost recovery from the GSF operator by the CAWCD.

**Table 4. 2009 Water and Facility Rates**

CAWCD delivery rate to AWBA	\$82 per acre-foot
Interstate rate	\$233 per acre-foot
Groundwater Savings Facility operator portion of delivery rate <sup>1</sup>	
Intrastate <sup>2</sup>	\$32 per acre-foot
Interstate	\$26 per acre-foot
Underground Storage Facility rate paid by AWBA	
Agua Fria Recharge Project (CAWCD) <sup>3</sup>	\$8.00 per acre-foot
Hieroglyphic Mtns. (CAWCD) <sup>3</sup>	\$8.00 per acre-foot
Tonopah Desert Recharge Project (CAWCD) <sup>3</sup>	\$8.00 per acre-foot
West Maricopa Combine	\$27.00 per acre-foot
Avra Valley (CAWCD) <sup>4</sup>	\$15.00 per acre-foot
Lower Santa Cruz (CAWCD/Pima County) <sup>4</sup>	\$15.00 per acre-foot
Pima Mine Road (CAWCD) <sup>4</sup>	\$15.00 per acre-foot
CAVSARP (Tucson Water)	TBD
SAVSARP (Tucson Water)	TBD

<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 \$50/af for intrastate deliveries and \$207/af for interstate deliveries.

<sup>2</sup> The cost share portion for the Gila River Indian Irrigation District GSF is \$20/af through 2009 and reduces the AWBA rate to \$62/af for CY 2009.

<sup>3</sup> Additional capital charge of \$15 per acre-foot for interstate storage.

<sup>4</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 long-term storage credits accrued by the AWBA and the funding sources from which they were developed. The ADWR has established accounts that track both credits and funds.

Table 5 provides estimates of the funds available to be utilized by the AWBA, including any funds carried over from previous years and an estimate of funds to be collected during the year, the funds to be utilized and the entity that holds the funds, and the credits that will accrue to those accounts based on the 2009 Plan.

**Table 5. Funding for 2009 Annual Plan of Operation**

	Funds Available (\$)		Funds Utilized (\$)		Credits (AF)
	AWBA	CAWCD	AWBA	CAWCD	
<b>Withdrawal Fees</b>					
Phoenix AMA	\$2,390,000	-	\$2,352,000	-	36,360
Pinal AMA <sup>1</sup>	\$1,775,000	-	\$1,775,000	-	25,110
Tucson AMA	\$790,000	-	\$741,000	-	6,430
<b>Four Cent Tax</b>					
Phoenix AMA	\$0	\$90,143,000	\$0	\$0	0
Pinal AMA	\$0	\$2,489,000	\$0	\$1,885,000	34,690
Tucson AMA <sup>2</sup>	\$0	\$9,973,000	\$0	\$0	0
<b>Other</b>					
<b>General</b>	\$0				
Phoenix AMA		-	\$0	-	0
Pinal AMA		-	\$0	-	0
Tucson AMA		-	\$0	-	0
<b>Indian FIRMING</b>	\$213,000				
Phoenix AMA		-	\$0	-	0
Pinal AMA		-	\$0	-	0
Tucson AMA		-	\$213,000	-	1,850
<b>Gifts, Grants, Donations</b>					
Shortage Reparations <sup>3</sup> (NV):	\$0				
Phoenix AMA		-	\$0	-	0
Pinal AMA		-	\$0	-	0
Tucson AMA		-	\$0	-	0
<b>Interstate Banking</b>					
Nevada <sup>4</sup>	\$14,338,000		\$0		0
California	(not applicable)				
	<b>Total Funds Available</b>		<b>Total Funds Expended</b>		<b>Credits</b>
	\$122,111,000		\$6,966,000		104,440

<sup>1</sup> Includes expenditures for 5,000 acre-feet of direct deliveries for establishing the Southside Replenishment Bank under the Gila River Indian Water Settlement Program.

<sup>2</sup> Includes CAWCD's capital charge recovery for costs of construction of state demonstration projects when facilities are used for interstate purposes and by entities that do not pay the 4¢ *ad valorem* tax. Revenue through 2008 is estimated to be \$1,368,863.

<sup>3</sup> Southern Nevada Water Authority (SNWA) agreed to provide \$8M to the AWBA to assist Arizona in offsetting impacts from shortages pursuant to Arizona-Nevada Shortage-Sharing Agreement. Approximately \$2.3M of these funds were expended in 2008.

<sup>4</sup> Balance available in the Interstate Resource Account.

The 2009 Plan was developed expending withdrawal fees before utilizing funds held by CAWCD. Nonetheless, the Plan results in carryover of withdrawal fees for the Phoenix and Tucson AMAs. If additional water supplies become available, these funds will be expended first. In addition, the remaining \$213,000 will be expended from the Indian Firming fund to meet a portion the AWBA's obligation under the Settlements Act.

Table 6 provides an estimate of the AWBA funds expended and the credits that have accrued to the various accounts based on the AWBA's recharge activities since inception.

**Table 6. Cumulative Totals of Long-term Storage Credits 1997-2008**

<b>FUNDING SOURCE</b>	<b>FUNDS EXPENDED</b>	<b>FUNDS AMOUNT (AF)</b>	<b>CREDITS<sup>1</sup> LOCATION</b>
<b>Withdrawal Fee</b>			
Phoenix AMA	\$14,331,423	258,820	Phoenix AMA
Pinal AMA	\$11,960,487	369,308	Pinal AMA
Tucson AMA	\$6,164,464	84,922	Tucson AMA
<b>Four Cent Tax</b>			
Maricopa County	\$59,155,884	1,112,602	Phoenix AMA
Pinal County	\$4,110,725	126,221	Pinal AMA
Pima County	\$19,071,280	249,089	Tucson AMA
<b>Other</b>			
General <sup>2</sup>	\$11,100,865	403,830	
	\$1,522,115	42,316	Phoenix AMA
	\$6,394,964	306,968	Pinal AMA
	\$3,183,786	54,546	Tucson AMA
Indian Firming	\$2,043,075	25,607	
	\$0	0	Phoenix AMA
	\$0	0	Pinal AMA
	\$2,043,075	25,607	Tucson AMA
Shortage Reparations	\$2,306,000	84,323	
	\$1,097,420	20,268	Phoenix AMA
	\$1,208,580	64,054	Pinal AMA
	\$0	0	Tucson AMA
<b>Interstate</b>			
California	(not applicable)		
Nevada <sup>3</sup>	\$95,715,818	533,536	
<b>TOTAL</b>	<b>\$225,960,021</b>	<b>3,248,257</b>	

<sup>1</sup> Actual credits used for 1997-2007; credits estimated for 2008.

<sup>2</sup> 230,280 AF of credits reserved pursuant to contract dated February 2, 2005 with Mohave County Water Authority.

<sup>3</sup> Includes 50,000 acre-feet of credits transferred from CAWCD pursuant to Amended Agreement for Interstate Water Banking.



## **PUBLIC REVIEW AND COMMENT**

The AWBA staff held meetings with the GUACs for the Phoenix, Pinal and Tucson AMAs as required by statute. The Plan was distributed to the public and was posted on the AWBA web page for public review and comment.

### Phoenix GUAC

In general, the GUAC supported the Plan as presented. There were questions concerning the *ad valorem* tax expenditures, recovery obligations for Metropolitan Water District of Southern California, and shortage-sharing funding. GUAC members voiced their support for the AWBA in proposing legislative changes that would improve the availability of excess CAP water to the Water Bank and emphasized the importance of the Water Bank's storage activities on behalf of the State of Arizona.

### Pinal GUAC

The GUAC supported the Plan as presented and raised questions concerning the legislative transfers from the AWBA fund and the priority of the numerous AWBA obligations/goals. Members expressed deep concerns about the future of the AWBA in terms of its ability to obtain sufficient supplies of excess CAP supplies for storage within the Pinal AMA. The Pinal GUAC fully supports efforts to ensure that the AWBA continues to function as intended and meet its obligations within the AMAs. The GUAC is equally supportive of efforts to enact new state legislation in 2009 to ensure that the AWBA can meet its Indian Settlement obligations, especially as they relate to the Southside Protection Zones with the Pinal AMA.

### Tucson GUAC

While expressing appreciation of the accomplishments of the Water Bank to date, GUAC members identified the compilation of problems associated with the oversubscription of water, the AWBA's "last-in-line" priority, and the slow progress in meeting Tucson's M&I firming goals. There were questions concerning recovery of water from GSFs in the Pinal AMA and the proposed distribution of excess CAP water in 2009. The GUAC supports the AWBA, ADWR, and CAWCD in proposing and implementing a legislative change to improve the availability of excess CAP water to the AWBA. Additionally, the GUAC extended an offer to continue to work with the AWBA in improving progress and achieving the M&I firming goal for Tucson and to work with CAWCD staff as they develop policy recommendations regarding AWBA's access to excess CAP supplies.