# ARIZONA WATER BANKING AUTHORITY ANNUAL PLAN OF OPERATION 2003



Joseph C. Smith, Chairman

December 2002

## 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) assist in the settlement of American 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 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. Projected deliveries under this Plan are likely optimistic if current weather conditions do not abate. Nonetheless, it is believed to be reasonable to approve such a Plan in order to insure that the AWBA has scheduled and purchased any additional water that could become available in the course of the 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.

#### 2002 PLAN OF OPERATION

In 2002, the AWBA's sixth full year of operation, the AWBA recharged almost 346,000 acre feet of Colorado River water and Arizona's total use of Colorado River water was forecast to be 2.80 million acre feet. The AWBA has played a significant role in bringing Arizona to the first year of full utilization of their normal year entitlement of 2.8 million acre feet (see Figure 1).

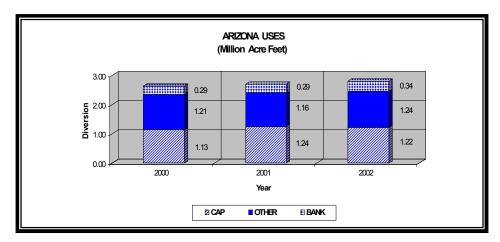


Figure 1

Total use of Colorado River water in the Lower Basin is forecast to be approximately 8.40 million acre feet in 2002 (see Figure 2) based on Bureau of Reclamation data dated November 21, 2002.

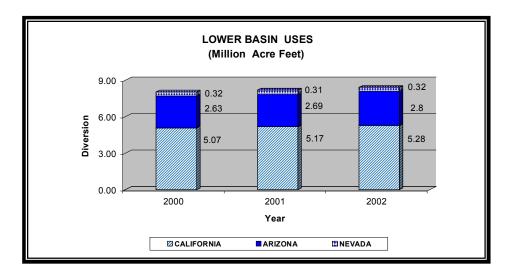


Figure 2

The AWBA recharged water at both USFs and GSFs in 2002. Table 1 lists the AWBA's recharge partners for 2002, 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 2002. Table 1 values are based on actual deliveries through October with November and December's 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 3-5% 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

| AMA       | Facility               | Туре | Permit Capacity | Amount Delivered |
|-----------|------------------------|------|-----------------|------------------|
|           | GRUSP                  | USF  | 200,000 AF      | 43,467 AF        |
|           | Agua Fria              | USF  | 100,000 AF      | 35,230 AF        |
| Phoenix   | Chandler Hts Citrus ID | GSF  | 3,000 AF        | 908 AF           |
| Piloeilix | Queen Creek ID         | GSF  | 28,000 AF       | 8,604 AF         |
|           | New Magma IDD          | GSF  | 54,000 AF       | 47,708 AF        |
|           | SRP                    | GSF  | 200,000 AF      | 11,200 AF        |
|           | MSIDD                  | GSF  | 120,000 AF      | 53,686 AF        |
| Pinal     | CAIDD                  | GSF  | 110,000 AF      | 28,766 AF        |
|           | Hohokam ID             | GSF  | 55,000 AF       | 55,755 AF        |
|           | Avra Valley (CAP)      | USF  | 11,000 AF       | 6,629 AF         |
| Tucson    | Lower Santa Cruz (CAP) | USF  | 30,000 AF       | 28,917 AF        |
| Tucson    | Pima Mine Road (CAP)   | USF  | 30,000 AF       | 23,395 AF        |
|           | Kai-Red Rock           | GSF  | 11,231 AF       | 1,718 AF         |
| Total     |                        |      | 952,231 AF      | 345,983 AF       |

The Plan was amended in June in response to the loss of the general fund appropriation. The amended Plan included the first interstate storage on behalf of Nevada. Pursuant to the amended 2002 Plan almost 346,000 acre feet of water was delivered. Of that amount, almost 64,000 acre feet were stored on behalf of Nevada utilizing the GSFs in Pinal County.

While the Plan originally had projected approximately equal storage at USFs and GSFs, the historical trend of a greater amount of storage at GSF's continued in 2002. This was primarily due to the opportunity to offset additional groundwater pumping by the irrigation districts as a result of the dry weather conditions. Due to the GSF partner's increased need for water, the AWBA was able to participate to a greater extent than originally projected. Figure 3 shows the acre foot break down between GSFs and USFs for 2002 and a comparison between 2002 and previous years.

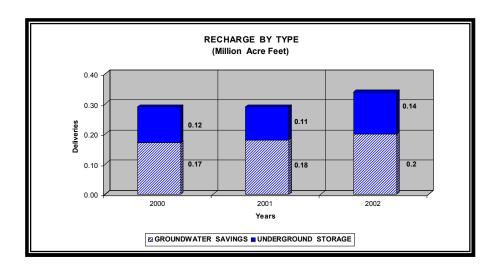


Figure 3

#### 2003 PLAN OF OPERATION

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. However, due to the unique circumstances expected in 2003 with regard to higher priority CAP water requests, the 2003 Plan took the critical factors into consideration but was not limited by them. In order to allow the greatest flexibility to fully utilize Arizona's full entitlement, the 2003 Plan was developed based on the possibility that higher priority users would not fully utilize their requested deliveries, thus making water available for the AWBA later in the year. Nonetheless, it is important to recognize the potential limits in the event that higher priority users fully utilize their requests.

#### 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 published the final draft Annual Operating Plan (AOP) for water year 2003 on October 10, 2002. The 2003 AOP prescribes that Arizona will be limited to 2.8 million acre feet whether under the parameters of the Interim Surplus Guidelines or a normal declaration. It is anticipated that the three Lower Basin states will fully utilize their respective allocations. Based on projections, Arizona's on-river use is forecast to be 1.204 million acre feet, leaving 1.596 million acre feet available for diversion by CAP. CAP's original forecast for CAP diversions for 2003 was 1.616 million acre feet, however, after

meeting with the Bureau of Reclamation, the number was decreased to 1.596 million acre feet based on projected on-river demand. Additionally, as CAP could bear the burden for inadvertent overruns by Arizona, it is possible that their Colorado River diversions may be decreased towards the end of the year if it appears Arizona will exceed 2.8 million acre feet. Conversely, there exists the possibility of increased CAP diversions if on-river uses are less than expected. Nonetheless, for the first year since the AWBA's inception, the amount of water available to be diverted by the CAP within Arizona's 2.8 million acre foot allocation was a limiting factor.

With regard to availability of CAP water, the AWBA purchases water from the category that is termed excess water. Excess water is generally recognized to be all water available for delivery through the CAP, regardless of Secretarial declaration of condition, that exceeds the quantities scheduled under long-term contracts and subcontracts. The availability of excess water is determined on an annual basis. In 2003, and until 2004, the AWBA has available to it any water not requested by another entity within Arizona. The CAP is in the process of developing a new policy regarding agricultural and excess water that will become effective in 2004.

With a 1.596 million acre foot diversion, the CAP 2003 Operating Plan accommodates the delivery of approximately 1.58 million acre feet of water. CAP's plan delivers approximately 1.41 million acre feet of water to entities with a higher priority than the AWBA. If these requests are fully utilized this would leave less than 175,000 acre feet of excess water available for the AWBA. Because the AWBA has adequate funds and there is available storage capacity in excess of 175,000 acre feet, water availability could also be a limiting factor if other higher priority users fully utilize their requests.

In the event the AWBA is limited to 175,000 acre feet, the priority for AWBA deliveries will be the GSFs. Additionally, if the AWBA's water supply is limited, the Plan would not include storage at the Granite Reef Underground Storage Project (GRUSP) for the first time since inception. This is a result of the Phoenix AMA's request to utilize USFs in the western part of the AMA for water management purposes. However, if water becomes available as a result of the Salt River Project not fully utilizing their higher priority request, that water would be first offered for storage at GRUSP.

# II. <u>CAP System Capacity</u>

Under normal operating conditions during a normal water supply year, CAP diverts approximately 1.5 million acre feet. However, CAP staff believe that 1.8 million acre feet can be safely moved through the system. Nonetheless, there are areas within the system that can become bottlenecks depending on the magnitude of deliveries downstream. In 2003, the CAP identified a bottleneck at the New River siphon in June and July due to the high downstream demand. This bottleneck essentially eliminated AWBA deliveries in those two months and was thus, a limiting factor in development of the Plan. Again, the magnitude of

this limiting factor is dependent on the utilization of water by higher priority entities.

#### III. Available Funds

The funds available to the AWBA in 2003 will be from the county *ad valorem* property tax and groundwater pumping fees only. The total amount of revenue available, including carryover from previous years, is almost \$46 million. Of that amount, \$36.1 million is available in Maricopa County, almost \$8 million in Pima County and \$1.7 million in Pinal County. Given the costs associated with the delivery of water and the continued policy of GSF operators paying \$21 of the water delivery costs to their facilities, the \$36.1 million and the \$8 million are adequate to fund the Plan in Maricopa and Pima Counties, respectively. The availability of funds will limit storage in Pinal County in 2003. For more information about the cost of the Plan, please refer to the pricing section.

The AWBA is statutorily mandated to reserve long-term storage credits accrued with general fund appropriation revenues for the benefit of M&I users of Colorado River water outside the CAP service area. By policy, the AWBA identified 420,000 acre feet as the number of credits needed for this on-river firming. In 2002, the AWBA passed a resolution identifying on-river firming as the highest priority of use of credits developed with the general fund appropriation. In 2003, there are no general fund revenues available to the AWBA. The absence of a general fund appropriation means that no on-river firming credits will be developed in 2003. To date, approximately 387,000 acre feet of credits for on-river firming have been developed.

## IV. Available Storage Facility Capacity

In September, AWBA staff met with facility operators to discuss their delivery schedules and confirm their continued interest in participating with the AWBA. These discussions confirmed that there was significant interest in partnering with the AWBA and there was substantial permitted recharge capacity but, as in the past, previous commitments to other partners somewhat limited the availability of both the GSFs and the USFs to the AWBA.

As the AWBA had sufficient facility capacity to store all of the remaining CAP water available, storage facility capacity was not a limiting factor in development of the 2003 Plan. However, based on the quantity of water and funding available, the AWBA could not meet all of the requests from its partners.

Table 2 shows the AWBA's 2003 delivery schedule. Line One of this table provides estimates of the CAP's monthly deliveries to its M&I, agricultural, incentive recharge, and Indian customers. These deliveries have a scheduling priority over the AWBA's deliveries. These estimates do not include deliveries to New Waddell Dam.

Line Two shows the operational capacity of the CAP available after it makes its priority deliveries and its deliveries to New Waddell Dam. Although the CAP is capable of

|             |         |                              |                  |                 |        |            | Т          | able 2       | 1       |              |              |              |              |                     |              |              |                 |            |
|-------------|---------|------------------------------|------------------|-----------------|--------|------------|------------|--------------|---------|--------------|--------------|--------------|--------------|---------------------|--------------|--------------|-----------------|------------|
| 1           |         |                              |                  | AR              | IZOI   | N A        | WAT        | ER I         | BAN     | KING         | A U          | тно          | RITY         |                     |              |              |                 |            |
|             |         |                              |                  |                 |        | W          | ater De    | livery S     | Schedul | е            |              |              |              |                     |              |              |                 | 2002       |
|             |         |                              |                  |                 |        |            | Calenda    | ar Year 2    | 2003    |              |              |              |              |                     |              |              |                 | Deliveries |
| (ACRE-FEET) |         |                              |                  |                 |        |            |            | (AF <b>)</b> |         |              |              |              |              |                     |              |              |                 |            |
|             |         |                              |                  |                 | Jan    | Feb        | Mar        | Apr          | May     | Jun          | Jul          | Aug          | Sep          | Oct                 | Nov          | Dec          | Total           | ,          |
| 1           | Es      | stimated CAP Deliveries + Lo | osses :          |                 | 48,200 | 57,800     | 110,500    | 138,000      | 167,700 | 208,600      | 212,100      | 183,600      | 97,100       | 80,500              | 53,600       | 48,700       | 1,406,400       |            |
| l '         | (       | M&I, Indian, Ag Pools 1, 28  | 3, Incentive     | e Recharge)     |        |            |            |              |         |              |              |              |              |                     |              |              |                 |            |
| 2           | Availab | le Excess CAP Capacity for A | AWBA :           |                 | 15,600 | 16,400     | 23,500     | 27,000       | 18,100  | 250          | 250          | 17,600       | 13,300       | 12,800              | 14,400       | 15,600       | 174,800         |            |
|             |         |                              |                  | Requested       |        |            |            |              |         |              |              |              |              |                     |              |              |                 |            |
|             |         | · ·                          | Capacity         | Capacity        |        |            |            |              |         |              |              |              |              |                     |              |              |                 |            |
|             |         |                              | (AF)             | (AF)            |        |            |            |              |         |              |              |              |              |                     |              |              |                 |            |
| 1           | LA P    | PAZ COUNTY:                  |                  |                 |        |            |            |              |         |              |              |              |              |                     |              |              |                 |            |
| 3           | USF     | VIDLER                       | 100,000          | 0               | 0      | 0          | 0          | 0            | 0       | 0            | 0            | 0            | 0            | 0                   | 0            | 0            | 0               |            |
|             | РНОВ    | ENIX AMA:                    |                  |                 |        |            |            |              |         |              |              |              |              |                     |              |              |                 |            |
| 4           | USF     | GRUSP                        | 200,000          | 25,900          | 0      | 0          | 0          | 0            | 0       | 3,800        | 3,800        | 3,800        | 3,800        | 3,800               | 3,800        | 3,100        | 25,900          | 43,467     |
| 5           |         | HIEROGLYPHIC MTN.            | 35,000           | 28,400          | 2,000  | 2,500      | 2,500      | 1,500        | 0       | 3,000        | 3,000        | 3,000        | 3,000        | 2,750               | 2,650        | 2,500        | 28,400          | 0          |
| 6           |         | AGUA FRIA                    | 100,000          | 36,000          | 1,500  | 500        | 500        | 2,000        | 2,250   | 4,250        | 4,250        | 4,250        | 4,000        | 4,000               | 4,250        | 4,250        | 36,000          | 35,230     |
| 7           | GSF     |                              | 3,000            | 1,117           | 50     | 100        | 140        | 100          | 100     | 152          | 125          | 125          | 125          | 100                 | 0            | 0            | 1,117           | 908        |
| 8           |         | MARICOPA WTR DIST.           | 18,000           | 4,600           | 0      | 0          | 0          | 0            | 0       | 0            | 0            | 0            | 2,050        | 2,550               | 0            | 0            | 4,600           | 0          |
| 9           |         | NEW MAGMA                    | 54,000           | 32,900          | 1,800  | 1,800      | 0          | 7,500        | 4,000   | 0            | 0            | 5,500        | 4,300        | 3,500               | 2,500        | 2,000        | 32,900          | 47,708     |
| 10          |         | QUEEN CREEK                  | 28,000           | 2,843           | 0      | 0          | 0          | 0            | 0       | 0            | 0            | 2,091        | 0            | 0                   |              | 752          | 2,843           | 8,604      |
| 11          |         | ROOSEVELT WCD                | 100,000          | 12,500          | 0      | 0          | 2,500      | 5,000        | 2,500   | 0            | 0            | 2,500        | 0            | 0                   | 0            | 0            | 12,500          | 0          |
| 12          |         | SRP<br>TONOPAH ID            | 200,000          | 11,000          | 1,100  | 1,100<br>0 | 1,100<br>0 | 1,100<br>0   | 1,100   | 0            | 0            | 1,100        | 1,100        | 1,100               | 1,100        | 1,100        | 11,000          | 11,200     |
| 13          |         |                              | 15,000           | 0               | 0      | <u> </u>   | <u> </u>   | U            | 0       | 0            | 0            | 0            | 0            | 0                   | 0            | 0            | U               |            |
| 1           |         | LAMA:                        |                  |                 |        |            |            |              |         |              |              |              |              |                     |              |              |                 |            |
| 14          |         | CAIDD                        | 110,000          | 5,500           | 0      | 0          | 0          | 0            | 0       | 0            | 0            | 500          | 3,000        | 1,000               | 500          | 500          | 5,500           | 28,766     |
| 15          |         | HOHOKAM                      | 55,000           | 27,075          | 1,700  | 3,475      | 8,000      | 5,300        | 5,600   | 0            | 0            | 3,000        | 0            | 0                   | 0            | 0            | 27,075          | 55,755     |
| 16          |         | MSIDD                        | 120,000          | 10,950          | 1,120  | 1,130      | 2,320      | 2,570        | 2,000   | 0            | 0            | 1,030        | 780          | 0                   | 0            | 0            | 10,950          | 53,686     |
| 17          | INTER   |                              |                  |                 |        |            |            |              |         |              |              |              |              |                     |              |              |                 |            |
| 40          |         | SON AMA:                     | 44.000           | 4.070           |        |            |            |              |         |              |              |              |              | 070                 |              |              | 4 070           |            |
| 18<br>19    |         | AVRA VALLEY<br>CAVSARP       | 11,000<br>60,000 | 4,270<br>10.000 | 0<br>0 | 0          | <u> </u>   | 0            | 0       | 600<br>1.000 | 600<br>1.500 | 600<br>1,500 | 600<br>1,500 | 670<br>1.500        | 600<br>1.500 | 600<br>1.500 | 4,270<br>10,000 | 6,629      |
| 20          |         | PIMA MINE ROAD               | 30,000           | 28,225          | 2.600  | 2.025      | 2.600      | 0            | 0       | 3,000        | 3,000        | 3,000        | 3,000        | 3,000               | 3,000        | 3,000        | 28,225          | 23,395     |
| 21          |         | LOWER SANTA CRUZ             | 30,000           | 29,955          | 3,500  | 3,500      | 3,500      | 1,955        | 0       | 2,500        | 2,500        | 2,500        | 2,500        | 2,500               | 2,500        | 2,500        | 29,955          | 28,917     |
| 22          | GSF     |                              | 11,231           | 2.000           | 0,500  | 0,500      | 3,300      | 1,900        | 500     | 2,500        | 2,500        | 250          | 500          | <u>2,500</u><br>500 | 250          | 2,500        | 2,000           | 1.718      |
| 23          |         | BKW                          | 16,615           | 1,250           | 200    | 250        | 400        | 0            | 000     | 0            | 0            | 0            | 200          | 100                 | <u>50</u>    | 50           | 1,250           | 1,710      |
| 24          |         | TAL (USF + GSF):             |                  | 274,485         | 15,570 | 16,380     | 23,560     | 27,025       | 18,050  | 18,302       | 18,775       | 34,746       | 30,455       | 27,070              |              |              | 274,485         | 345,983    |

25 Remaining CAP Capacity: 30 20 (60) (25) 50 (18,052) (18,525) (17,146) (17,155) (14,270) (8,300) (6,252) (99,685)

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. During the fall and winter months, the capacity available to the AWBA is constrained because the CAP is making deliveries to Lake Pleasant. In June and July, capacity is constrained at the New River siphon due to the high volume of downstream demand.

Lines Three through Twenty-three represent the AWBA's 2003 Plan of Operation. This section identifies the AWBA's partners for 2003 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 and the amount of that capacity that is available to the AWBA in 2003. The capacity available does not always equal the storage permit capacity because the storage facility operators may have agreements with other storage partners. Line Twenty-four lists the total amount of AWBA storage scheduled for the year 2003. Line Twenty-five lists the CAP capacity remaining after the AWBA's deliveries are scheduled. The negative values in the second half of the year are a result of the AWBA developing the 2003 Plan to maximize utilization of water that may be unused by higher priority customers. Because higher priority users would likely decrease their CAP water use if there is a wet winter, that water has been included in the latter part of the year. If unused water does not become available, the AWBA deliveries would be limited to the point that line Twenty-five is approximately zero.

No recovery is scheduled in 2003. The AWBA will continue to work with CAWCD to pursue recovery concepts in 2003 and beyond. Pending the outcome of on-going discussions in California, the Metropolitan Water District of Southern California (MWD) has indicated they might request the recovery and delivery of Intentionally Created Unused Apportionment (ICUA) in 2003 based on credits developed under a previous agreement with CAWCD. If MWD actually makes such a request, agreements would need to be developed and executed and this Plan would be amended to accommodate the recovery and creation of ICUA.

#### **NEW FACILITIES**

The BKW Farms, Inc. groundwater savings facility is located in the Avra Valley subbasin of the Tucson AMA. The GSF was permitted to the Central Arizona Water Conservation District in January 1999 with a maximum volume of 16,614.6 acre feet. Prior storage has been done at the GSF by the City of Tucson, however, 2003 is the first year AWBA storage is planned.

#### INTERSTATE WATER BANKING

The Plan does not include an interstate water banking component. However, in the event that conditions change and the opportunity to store water on behalf of Nevada

presents itself, the Plan may be amended to include interstate water banking as was done in 2002.

## **PRICING**

On June 20, 2002, the CAWCD board adopted final water delivery rates for 2003. The rate for AWBA and other M&I Incentive recharge will be \$54 per acre foot. The delivery rate is the pumping energy rate 2 component (\$48 per acre foot) plus 10 percent of the fixed OM&R charge (\$3.50 per acre foot) plus a component to recover lost revenues from federal deliveries (\$2.00 per acre foot). The components of the rate are the same as those in the 2001 and 2002 rates. For 2003, the pumping energy rate 2 was calculated using the average of the actual or forecast above threshold energy rates for the previous three years.

The AWBA's policy of recovering \$21 from its groundwater savings facility partners will continue for 2003. Table 3 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.

Table 3

| 2003 Water and Facility Rates – Intrastate                     |                       |  |  |  |  |  |  |
|--|-----------------------|--|--|--|--|--|--|
| CAP's delivery rate to AWBA                                    | \$54 per acre foot    |  |  |  |  |  |  |
| Groundwater Savings Facility operator portion of delivery rate | \$21 per acre foot 1  |  |  |  |  |  |  |
|  |                       |  |  |  |  |  |  |
| Underground Storage Facility rate paid by AWBA                 |                       |  |  |  |  |  |  |
| GRUSP (SRP)  | \$18.05 per acre foot |  |  |  |  |  |  |
| Avra Valley (CAP)  | \$24.70 per acre foot |  |  |  |  |  |  |
| CAVSARP (Tucson Water)   | \$11.71 per acre foot |  |  |  |  |  |  |
| Hieroglyphic Mtns. (CAP)                                       | \$9.10 per acre foot  |  |  |  |  |  |  |
| Pima Mine Road (CAP)   | \$7.00 per acre foot  |  |  |  |  |  |  |
| Lower Santa Cruz (CAP/Pima County)                             | \$10.90 per acre foot |  |  |  |  |  |  |
| Agua Fria Recharge Project (CAP)                               | \$4.30 per acre foot  |  |  |  |  |  |  |

<sup>&</sup>lt;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 \$33/af.

The Master Water Storage Agreement executed on July 1, 2002 mandates the cost components paid by the AWBA for storage at CAP facilities. Costs for storage at CAP facilities can include capital costs, costs of operating, maintaining and monitoring, water transportation costs and other costs determined necessary by CAP. There is no administration cost component in the facility cost because the AWBA pays the CAP administrative costs on an annual basis.

For GRUSP, the cost is comprised of an annual administration component, a component for use of the SRP interconnection facility, a transportation component and a general facility component. For CAVSARP, the cost includes an administration component, a capital component and an operations and maintenance component.

The estimated total cost of the AWBA's 2003 Plan of Operation is almost \$13.7 million which includes the USF use fees and the CAP delivery rate minus cost recovery from the GSF operator by the CAWCD.

# **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 4 provides estimates of the funds available including funds carried over from previous years and an estimate of funds to be collected during the year, the funds to be expended, and the credits that will accrue to those accounts based on the 2003 Plan.

Table 4

| 2003 PLAN OF OPERATION   |   |   |  |  |  |  |  |  |
|--|---|---|--|--|--|--|--|--|
|  | FUND  | ING <sup>1</sup>  | CREDITS <sup>2</sup>                       |  |  |  |  |  |
|  | AVAILABLE   | EXPENDED  | AMOUNT                                     | LOCATION                                   |  |  |  |  |
| Withdrawal Fee Phoenix AMA Tucson AMA Pinal AMA  Four Cent Tax Maricopa County Pima County | \$14,933,117<br>\$4,091,180<br>\$1,407,781<br>\$21,180,808<br>\$3,900,677 | \$7,488,115<br>\$3,876,510<br>\$1,136,325<br>\$0<br>\$889,693 | 142,000<br>58,000<br>32,000<br>0<br>13,000 |  |  |  |  |  |
| Pinal County Other General Fund  | \$300,000<br>\$0  | \$300,000<br>\$0<br>\$0<br>\$0<br>\$0                         | 8,000<br>0<br>0 AF<br>0 AF<br>0 AF         | Pinal AMA Phoenix AMA Tucson AMA Pinal AMA |  |  |  |  |
| California<br>Nevada   | (not applicable)<br>(not applicable)                                      |   |  |  |  |  |  |  |
| TOTAL  | \$45,813,562  | \$13,690,644  | 253,000                                    |  |  |  |  |  |

<sup>&</sup>lt;sup>1</sup> Does not include groundwater savings facility partners' payment. The AWBA's partners make payments directly to the CAWCD.

Since inception, the AWBA has primarily utilized only the general fund and county ad valorem property tax revenues to purchase and store water. In 2003, the AWBA will fund the Plan almost entirely through expenditure of groundwater withdrawal fees. While developing firming credits using the ad valorem tax revenues has been the AWBA's emphasis in the past, it is now believed that developing credits for water management purposes is appropriate.

Although no specific management issues have been identified by the AMA's, several, including provision of credits to facilitate Indian water rights settlements, are on the horizon. On September 24, 2002, the Arizona Water Settlements Act of 2002 was introduced into Congress. Although introduction of the bill is merely the first step, it is recognized that use of long-term storage credits developed by the AWBA could be a component of the legislation.

Table 5 provides an estimate of the funds expended and the credits that will accrue to various accounts based on the AWBA's recharge activities since its inception.

Table 5

| CUMULATIVE TOTALS 1997-2002 |                       |              |             |  |  |  |  |  |
|-----------------------------|-----------------------|--------------|-------------|--|--|--|--|--|
|                             | CREDITS 1             |              |             |  |  |  |  |  |
|                             | EXPENDED              | AMOUNT       | LOCATION    |  |  |  |  |  |
|                             |                       |              |             |  |  |  |  |  |
| Withdrawal Fee              |                       |              |             |  |  |  |  |  |
| Phoenix AMA                 | \$2,600,000           | 46,000       | Phoenix AMA |  |  |  |  |  |
| Tucson AMA                  | \$0                   | 0            | Tucson AMA  |  |  |  |  |  |
| Pinal AMA                   | \$4,971,116           | 177,969      | Pinal AMA   |  |  |  |  |  |
|                             |                       |              |             |  |  |  |  |  |
| Four Cent Tax               |                       |              |             |  |  |  |  |  |
| Maricopa County             | \$29,041,976          | 708,183 AF   | Phoenix AMA |  |  |  |  |  |
| Pima County                 | \$8,286,172           | 130,765 AF   |             |  |  |  |  |  |
| Pinal County                | \$1,719,983           | 72,884 AF    |             |  |  |  |  |  |
| •                           |                       |              |             |  |  |  |  |  |
| Other                       |                       |              |             |  |  |  |  |  |
| General Fund                | \$10,695,000          | 372,678 AF   |             |  |  |  |  |  |
|                             | \$2,054,489           | 61,612 AF    | Phoenix AMA |  |  |  |  |  |
|                             | \$2,325,112           | 39,748 AF    | Tucson AMA  |  |  |  |  |  |
|                             | \$6,315,399           | 271,318 AF   | Pinal AMA   |  |  |  |  |  |
|                             | Ţ =,= 1 =, = <b>0</b> | ,            |             |  |  |  |  |  |
| California                  |                       |              |             |  |  |  |  |  |
| Nevada                      | \$7,938,500           | 58,000       |             |  |  |  |  |  |
| TOTAL                       | \$65,252,747          | 1,566,479 AF |             |  |  |  |  |  |

<sup>&</sup>lt;sup>2</sup> Estimate based on historical average losses for each facility minus the 5% cut to the aquifer.

<sup>1</sup> Actual credits used for 1997-2001; credits estimated for 2002

## **PUBLIC REVIEW AND COMMENT**

The AWBA staff held meetings in conjunction with the GUACs for the Phoenix, Pinal and Tucson AMAs as required by the AWBA's enabling legislation. Additionally, the Plan was discussed at a Tucson IPAG meeting in December and was posted on the AWBA web page for review and comment.

#### Phoenix GUAC

In general, the GUAC supported the Plan and had no requests for changes to it. The GUAC requested that the AWBA focus on storage in the West Salt River Valley to assist in meeting water management goals. Finally, the GUAC requested that the AWBA identify a process that would use withdrawal fees to fund a regional recharge and recovery plan.

# Pinal GUAC

General discussion regarding the Plan included: the addition of new partners not present in the first distributed draft; the distribution of water between the irrigation districts as limited by available funds; and the possibility of interstate water banking. There was also discussion and questions regarding CAP's new agricultural pool policy that begins in 2003 and the continuation of the \$21 per acre foot cost-share. Like the Phoenix GUAC, the Pinal GUAC requested that the AWBA identify a process that could use withdrawal fees to fund a regional recharge and recovery plan.

## **Tucson GUAC**

The Tucson GUAC had no specific comments regarding the Plan. There was general discussion and questions regarding the reason for decreased storage in the Pinal AMA, differences in facility fees, how AWBA staff administration fees are paid and the possibility of interstate water banking. The GUAC also had questions regarding the status of the California 4.4 plan.