

# ARIZONA WATER BANKING AUTHORITY

ANNUAL REPORT  
1999



Submitted

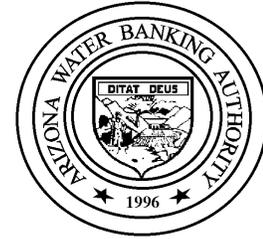
July 1, 2000

# Arizona Water Banking Authority

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#### AUTHORITY MEMBERS

Rita Pearson Maguire,  
Chairman  
Tom Griffin, Vice-Chairman  
Bill Chase, Secretary  
George Renner  
Richard S. Walden

#### EX OFFICIO MEMBERS

Representative Gail Griffin  
Senator Ken Bennett

June 28, 2000

The Honorable Jane Dee Hull  
Governor of Arizona  
1700 West Washington Street  
Phoenix, Arizona 85007

Dear Governor Hull:

Enclosed is the fourth Annual Report describing the operation of the Arizona Water Banking Authority (AWBA) for calendar year 1999. The Annual Report details the amount of water stored by the AWBA, the monies expended from the banking fund, the remaining funds available to the AWBA and a ten-year analysis of the ability of the AWBA to achieve its goals. It also provides updated information on AWBA activities and an overview of the significant achievements of the past year.

The AWBA's Study Commission completed its work in 1998 and recommended changes to the AWBA's enabling legislation that would expand the scope of the AWBA's water service activities. During 1999, those changes were realized when House Bill 2463 was signed into law. Another significant development that occurred in 1999 was the promulgation of the final rule for "Offstream Storage of Colorado River Water and Development and Release of Intentionally Created Unused Apportionment in the Lower Division States" by the Secretary of the Department of the Interior. Promulgation of this federal rule was the first step toward enabling the AWBA to recharge water in Arizona for interstate purposes in the Lower Basin of the Colorado River.

Nineteen ninety-nine was a highly successful year for the AWBA. The AWBA recharged approximately 251,000 acre feet of water in Maricopa, Pinal and Pima Counties through recharge at seven groundwater savings facilities and four underground storage facilities. The AWBA anticipates recharging at two new underground storage facilities in the year 2000.

I continue to be proud of the accomplishments of the AWBA and I am confident that the AWBA will continue to be a critical tool to achieve Arizona's water policy goals.

Sincerely,

Rita Pearson Maguire  
Chairman

# **Arizona Water Banking Authority**

## **Annual Report 1999**

**Honorable Jane Dee Hull  
Governor of Arizona**

### **Members**

**Rita Pearson Maguire  
*Chairman***

**Thomas E. Griffin  
*Vice-chairman***

**William L. Chase  
*Secretary***

**George Renner  
*Member***

**Richard S. Walden  
*Member***

***Ex officio*  
Senator Ken Bennett  
Representative Gail Griffin**

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## Message from the Chairman



**Rita Pearson Maguire**,  
Director of the Arizona  
Department of Water  
Resources and Chair-  
man of the AWBA.

Each year I anticipate this opportunity to convey my personal thoughts regarding the Arizona Water Banking Authority (AWBA). This fourth year of operation of the AWBA is no exception.

Nineteen ninety-nine has been another successful year for the AWBA as it has continued to recharge Colorado River water within Arizona that would have otherwise gone unused. The recharge resulted in long-term storage credits being developed for firming of municipal and industrial supplies for the river communities and within the tri-county Central Arizona Project service area and fulfilling the water management objectives set forth by the Groundwater Management Act. The AWBA utilized both groundwater savings and underground storage facilities to recharge approximately 251,000 acre feet of water.

The AWBA has continued to evolve in both scope and purpose since its inception in 1996. Changes to the authorities and function of the AWBA were proposed by the Arizona Water Banking Authority Study Commission and ultimately submitted for legislative approval in the form of House Bill 2463. H.B. 2463 was signed into law on April 1, 1999. The amendments to the AWBA's enabling legislation expanded the authority of the AWBA by allowing our services to be utilized by additional entities. The expanded role of the AWBA allows for loaning of previously developed credits and development of long-term storage credits for others. The AWBA has not yet entered into any water banking activities under our expanded authority, however, it is recognized that the AWBA can provide statewide benefit through participation in these activities.

As interstate water banking becomes a reality, the AWBA will once again be at the forefront of developing sound water management policy that insures protection of Arizona's long-term water supply. On October 29, 1999, the Secretary of the Department of the Interior published the final rule regarding offstream storage of Colorado River water and the release of intentionally created unused apportionment. I presented my determination that the rule met the state statutory criteria on January 26, 2000. The AWBA then advised staff to initiate exploratory discussions regarding interstate banking with both California and Nevada. It is anticipated that discussions regarding interstate banking will continue throughout the coming year.

In 1999 the AWBA made great strides toward achieving its goals and providing the citizens of the state of Arizona with the peace of mind that results from knowing that the AWBA is committed to sound water policy. In the coming years, the AWBA will continue making decisions and participating in activities that insure that a high quality of life will continue well into the future.

## Arizona Water Banking Authority Annual Report Requirement

Arizona Revised Statutes § 45-2426 mandates that the Arizona Water Banking Authority (AWBA) file an annual report with the Governor, President of the Senate and Speaker of the House of Representatives on or before July 1 of each year for the previous calendar year. The report is required to be a full and complete account of the AWBA's transactions and proceedings and must include the following:

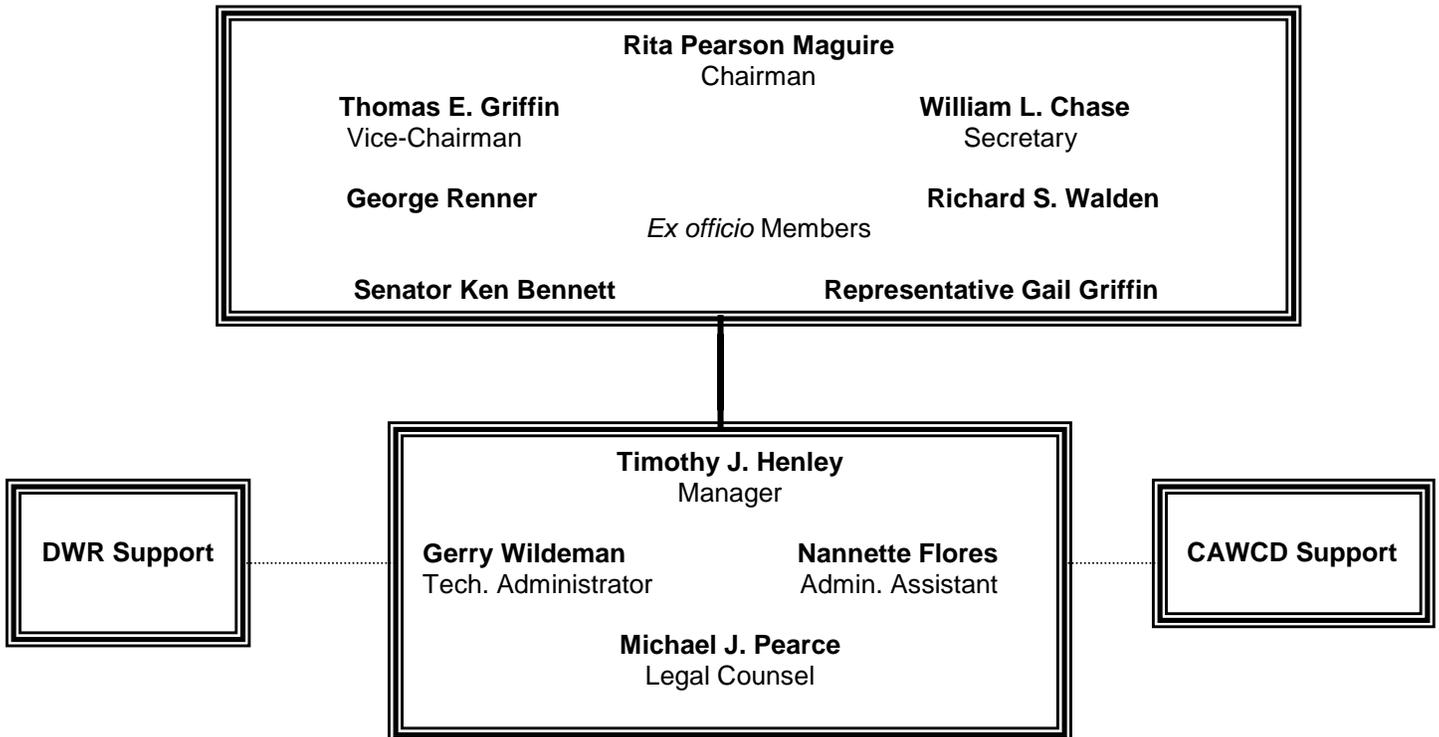
1. An accounting of all monies expended from the banking fund.
2. An accounting of all monies in the banking fund remaining available to the AWBA.
3. The amount of water stored by the AWBA.
4. The number of long-term storage credits distributed or extinguished by the AWBA.
5. The purposes for which long-term storage credits were distributed or extinguished by the AWBA.
6. A description of the water banking services and interstate water banking to be undertaken by the AWBA during the following ten year period and a projection of the capacity of the AWBA during that period to undertake those activities in addition to storing Colorado River water brought into the state through the CAP for all of the following purposes:
  - a. Protecting this state's municipal and industrial water users against future water shortages on the Colorado River and disruptions of operation of the CAP.
  - b. Fulfilling the water management objectives of the state.
  - c. Making water available to implement the settlement of water rights claims by Indian communities within Arizona.
7. Any other matter determined by the authority to be relevant to the policy and purposes of the AWBA.

## Members of the Arizona Water Banking Authority



Pictured above from left to right: Richard S. Walden, Thomas E. Griffin, Rita Pearson Maguire, George Renner and William L. Chase

## Organizational Chart



## Arizona Department of Water Resources Support Staff



Windy Han, Marge Nunley and Marion Woodward

Arizona Department of Water Resources staff perform a variety of administrative duties for the AWBA. These duties include: preparation of monthly and year-end financial reports and reconciliation of AWBA accounts; payment of invoices; payment of AWBA purchase order invoices; payment of travel claims for AWBA staff and commissioners; and preparation of payroll for AWBA staff.

Other ADWR staff also provide assistance to the AWBA staff in the course of completing their duties. These individuals are responsible for assisting with Geographic Information Systems (GIS) applications, assisting with production of AWBA publications and news releases and acting as the legislative liaison for the AWBA.



GIS Analyst Roberto Chavez

## Central Arizona Project Support Staff



Brian Henning

Brian Henning is the Control Systems Supervisor in Water Operations at the Central Arizona Project. Brian supports AWBA staff in planning, scheduling and implementing the annual plan of operation by determining excess CAP aqueduct capacities available for recharge deliveries, developing delivery schedules and providing additional technical support as needed.

Jodi Gould is the Customer Service Administrator in the Water Operations Department. Jodi provides administrative support to the AWBA by calculating and posting water deliveries to AWBA partners, gathering forecast data, coordinating annual water delivery schedules, developing payment schedules, and tracking storage permit entitlements against actual use.



Jodi Gould

## Update

During the previous calendar year, the AWBA continued to work to accomplish its mission of utilizing the unused portion of Arizona's Colorado River allotment for recharge and development of long-term storage credits for Arizona's future use. The recharge that is done by the AWBA utilizes Colorado River water that would otherwise not be used within Arizona.

Two new members joined the AWBA in 1999. Mr. George Renner replaced Mr. Grady Gammage in March when he was elected the new president of the Central Arizona Water Conservation District (CAWCD). The Honorable Ken Bennett was appointed *ex officio* member by Arizona Senate President Brenda Burns in August. Senator Bennett represents Legislative District 1 and replaces former *ex officio* member Pat Conner. Complete biographies of the two newest AWBA members can be found on the AWBA web page.

In 1999 the AWBA held regular meetings at the Arizona Department of Water Resources (ADWR) to insure that the public stay apprised of their activities. These meetings were held monthly until June of 1999 when a quarterly meeting schedule was adopted. In addition to these regularly scheduled meetings, special meetings of the AWBA or AWBA subcommittees can be called when there are special issues that require input and discussion. In 1999 special meetings of the General Fund Appropriation Subcommittee and the Recovery Subcommittee were called on May 28 and April 29, respectively. There were also staff level meetings held with other states' representatives and entities interested in becoming recharge partners.

In it's May 28 meeting, the General Fund Appropriation Subcommittee prepared a resolution which stated that the AWBA shall consider the potential impact to the municipal and industrial users of Colorado River water outside the Central Arizona Project (CAP) service area prior to committing to provide water for use in the implementation of Indian water rights settlements or for other purposes. The AWBA adopted the resolution on June 16, 1999.

The Recovery Subcommittee held a recovery workshop on April 29 to initiate discussion regarding future water recovery efforts. At the workshop, representatives from WestLand Resources, an environmental consulting firm retained by the Authority, made a presentation regarding the recovery related data they had compiled into a CD-ROM. The CD-ROM prepared by WestLand contains a GIS database that includes information regarding well location, location and size of canals and pipelines, geology, water providers and service areas, areas of poor quality and other information for the Phoenix and Tucson Active Management Areas. Throughout 1999, WestLand continued to update the database through coordination with entities such as cities, water districts and the Bureau of Reclamation. It is perceived that there will be significantly more activity of the Recovery Subcommittee in the year 2000.

The AWBA Pricing Committee, comprised of CAWCD and AWBA board members, met a number of times in 1998 and 1999 in the process of developing new water delivery rates. On July 1, 1999, the CAP board of directors adopted the 2000 water rate schedule which was the first rate schedule to include two pumping energy rates. Energy Rate 2 is the power component for water delivered to the AWBA and other municipal and industrial (M&I) recharge users. The basis for this rate is that water for AWBA and M&I recharge deliveries is typically pumped with higher cost surcharge power. On an annual basis the total cost for AWBA and M&I recharge deliveries will be determined as follows:

pumping energy rate 2; 10% of the fixed OM&R component; plus a component to compensate for loss of revenue from federal deliveries due to delivering to the AWBA or M&I incentive recharge users.

The AWBA members and staff coordinate annually with current and potential recharge entities in the process of development of the Annual Plan of Operation for the following year. Interested entities provide information regarding their desired level of participation with the AWBA. The recharge capacities of the facilities are then matched with the delivery capacities of the CAP aqueduct. Through coordination between AWBA and CAWCD staff, adjustments are made between facility capacities and CAP availability and a final proposed delivery schedule is determined. For the 2000 Plan of Operations, the entities scheduled for delivery were Salt River Project, CAWCD, Metropolitan Water District, New Magma Irrigation District, Queen Creek Irrigation District, Tonopah Irrigation District, Central Arizona Irrigation and Drainage District, Hohokam Irrigation District, Maricopa Stanfield Irrigation District, Tucson Water, and Herb Kai.

The AWBA recharged approximately 251,000 acre feet of CAP water in 1999. Of this, 162,000 acre feet were stored in the Phoenix AMA, 68,000 acre feet were stored in the Pinal AMA and 21,000 acre feet were stored in the Tucson AMA. Total consumptive use of Colorado River water by Arizona for 1999 was approximately 2.56 million acre feet. Distribution of that quantity was: approximately 1.17 million acre feet for direct uses along the Colorado River; CAP subcontractor uses of approximately 1.14 million acre feet; and AWBA water uses of approximately 251,000 acre feet.

For more information about the Arizona Water Banking Authority, consult the AWBA web page at <http://www.awba.state.az.us> or contact Tim Henley ([tihenley@adwr.state.az.us](mailto:tihenley@adwr.state.az.us)) or Gerry Wildeman ([glwildeman@adwr.state.az.us](mailto:glwildeman@adwr.state.az.us)) at 602-417-2418.

## Activities and Projects - 1999

### House Bill 2463

On April 1, 1999, Governor Jane Dee Hull signed House Bill 2463 into law; the effective date of the legislation was August 6, 1999. This legislative package was one of the products of the AWBA Study Commission. Changes to the AWBA enabling legislation were as follows:

1. Arizona Revised Statutes (A.R.S.) § 45-2401 was amended to recognize the future need to provide for the efficient use of all water sources in the state and the need for a centralized source of water banking services. A.R.S. § 45-2423 was amended to allow the AWBA to perform banking services for specific entities in Arizona and to create a mechanism for distribution of long-term storage credits earned on their behalf. The new legislation also created a mechanism for long-term storage credit lending which will allow the AWBA to loan credits to any entity within Arizona for reasonable compensation.
2. A.R.S. § 45-2423(B) was amended to allow the AWBA to store effluent water for the same purposes allowed for CAP water, but only when all available excess CAP water had been stored or was unavailable.
3. A.R.S. § 45-2401 was amended to include a statement of the need to protect non-CAP surface water supplies. This will give the AWBA the ability to utilize any "excess" four-cent tax dollars to obtain long-term storage credits for firming of non-CAP M&I surface water uses within the CAP service area.
4. A.R.S. § 45-2426 was amended to require that the AWBA include in each annual report a section that discusses the banking activities to be undertaken in the next ten years and the AWBA's ability to achieve those goals.

The AWBA's primary function of maximizing the use of Arizona's Colorado River apportionment will not be changed by these legislative amendments. The new AWBA roles described above will be entirely discretionary and will only be undertaken if they do not jeopardize the AWBA's ability to recharge excess CAP water to protect Arizona from future water shortages, assist in achievement of state groundwater management goals and participate in Indian water rights settlements. On the basis of House Bill 2463, this annual report includes a ten year plan; this is the first report to include an evaluation of the long-term activities of the AWBA.

### Interstate Banking

#### History

The Colorado River was used for the first time by humans more than 1,000 years ago. Since then, the water has been used, re-used, divided and subdivided numerous times due to the enormous demand placed upon the system. Historically, there was extensive controversy over how the limited resource would be shared. This controversy resulted in an assortment of agreements, compacts and contracts, an international treaty, state and federal legislation, federal actions and a Supreme Court decision that allocated the water and regulated the use and management of the river. This Law of the River has remained essentially unchanged since its institution. However, demand for the water of the Colorado River has continued to increase over the last decade and members of the water community have recognized that the existing management practices may not allow that demand to be met.

As early as 1988, the Department of the Interior (Interior) examined the concept of water transfers when it issued a statement of general principles that recognized voluntary water transfers as playing a significant role in meeting western water demands. In 1991, Interior prepared a preliminary draft of regulations that described the criteria to be used in managing the Colorado River. This draft titled "Proposed Regulations for Administering Entitlements to Colorado River Water in the Lower Colorado River Basin" included criteria for intrastate water transactions in the form of assignments, transfers of entitlement, exchanges and temporary sales. This version of the regulations received extensive public comment. As a result of the issues raised in the public comment period and a presidential moratorium on new regulations, there was no further consultation regarding the regulations in 1991, however, Interior continued to consult with the Bureau of Indian Affairs regarding tribal federal entitlements.

In late 1992, Colorado River water users received another draft of the regulations that was distributed for informational purposes only. The cover letter accompanying that draft stated "We are developing a section in the regulations regarding water banking and the voluntary water transactions that may be possible with such banking. The development of this language is evolving to reflect the results of ongoing meetings on water banking among the representatives of the Lower Division States that are authorized to represent said states in Colorado River matters...". This draft of the regulations was also not published as a proposed rule.

The next version of the regulations was distributed to Colorado River water users in May of 1994. At the time of the distribution, the regulations were under review by Interior and pending review of the Office of Management and Budget (OM&B). They could not be officially published as a proposed rule prior to OM&B's review and the water community was informed that the Bureau of Reclamation (Reclamation) was not inviting comment. The summary section of this version of the regulations stated that one of the functions of the proposed rule would be "provide maximum flexibility for entitlement holders to negotiate voluntary water transfers for the resolution of local water resource problems and demands". This proposed function of the regulations was not well received by the water communities in the Lower Basin States as it was perceived that the regulations had moved beyond their original intent of addressing the issue of illegal diversions of Colorado River water. In particular, Arizona water interests expressed major concerns with some of the provisions in the 1994 draft of the regulations. Their concerns with regard to water banking and interstate marketing are summarized as follows:

1. The regulations created an interstate banking system that would be controlled by Reclamation. This was not consistent with proposals currently being discussed by the seven basin states. Concurrent with development of the federal regulations were intensive state discussions regarding water banking and interstate marketing. In April 1994, Nevada had proposed a tri-state commission for administration of a Lower Colorado River water bank and in June 1994, Arizona had proposed individual state water banks as a mechanism.
2. The provisions put Arizona's long-term supply of Colorado River water at risk.
3. The regulations granted the Secretary of the Interior the authority to reduce entitlements on the basis of non-use and to reallocate water within the states.
4. The provisions proposed a process that was in violation of Arizona v. California.

Although Reclamation had intended to publish the May 1994 draft as a proposed rule in June 1994, the substance and nature of the comments received altered their proposed timetable and the

publication was suspended. This was done to provide the Lower Basin States, Reclamation and the tribal entities time to continue discussions regarding water banking and interstate marketing. In a letter to Governor Symington, Elizabeth Rieke, the Assistant Secretary for Water and Science, stated that "If it proves impossible to develop a consensus on water banking and interstate marketing by the Spring of 1995, Reclamation will evaluate the alternatives and determine whether to proceed with water banking and interstate marketing provisions in the regulations". While the May 1994 draft of the regulations marked the end of the process driven by federal rulemaking and the beginning of a consensus approach, the idea that the federal government would make rules if agreement could not be reached permeated and guided future state discussions and actions.

### Arizona's Response

Arizona has consistently been at the forefront of developing sound water management policies and planning for the use of the valuable water resource. For over 70 years Arizona leaders have worked to insure that Arizona would have dependable, long-term water supplies to sustain quality of life and to allow for future growth. Therefore, it was not unexpected that Arizona would be a leader in instituting legislation that would provide an innovative process for exchanging Colorado River water within the parameters of the Law of the River.

In the Fall of 1995, the President of the Arizona State Senate and the Speaker of the Arizona House of Representatives created the Joint Legislative Committee on Colorado River Water Issues (Committee) to examine ways to increase diversions and use of Arizona's allocation. One of the primary recommendations of the Committee was an endorsement of a program to provide the necessary resources and organization to take currently unused Colorado River water and store it for future use in Arizona. This recommendation was ultimately translated into House Bill 2494 that was sponsored by Speaker Mark Killian. House Bill 2494, which created the AWBA and the Arizona Water Banking Authority Study Commission, passed the Legislature almost unanimously and was signed by Governor Fife Symington on April 30, 1996.

While increasing Arizona's diversion of water was recognized as a principle goal of the AWBA, the importance of instituting a mechanism to allow interstate water banking was not ignored. The persisting federal position that federal regulations would be developed if the states could not reach a consensual arrangement regarding water banking and interstate marketing coupled with Arizona's desire to be responsive to other states' needs resulted in the inclusion of provisions for interstate banking in the AWBA's enabling legislation. The Legislature also included examination of intra- and interstate water marketing opportunities as a purpose of the Arizona Water Banking Authority Study Commission, however, the final conclusions of the Interstate and Intrastate Banking and Marketing Issues subcommittee focused primarily on intrastate processes.

The state requirements for interstate banking are fully described in Article 4 of the AWBA chapter. In general, the statutes allow the AWBA to enter into interstate banking agreements with California and Nevada. In those agreements, the storing entity agrees to bear all costs associated with water acquisition, water conveyance and storage, recovery of stored water pursuant to the agreement and delivery of recovered water to water users. These costs can include capital repayment costs, operation and maintenance costs, facility use costs, energy pumping costs, and legal and administrative fees. The statutes also limit the total decrease of Arizona's diversions to 100,000 acre feet per year. The statutes authorize the AWBA to decrease Arizona's diversions from the Colorado River to create unused apportionment that is then distributed by Interior to the storing state when

requested. The AWBA can only enter into the statutorily prescribed agreements when three criteria have been met. First, Interior must have promulgated rules regarding the contractual allotment of unused entitlement. Then, the Director of ADWR must determine that the federal rules promulgated adequately protect Arizona's rights to Colorado River water. Finally, the AWBA must agree to enter into the agreements; this requires assenting votes by the Director of ADWR and two other voting members of the AWBA.

### The First Step: Promulgation of Federal Rules

On December 31, 1997, Interior published the proposed rule titled "Offstream Storage of Colorado River Water and Interstate Redemption of Storage Credits in the Lower Division States" for comment. Both the AWBA and the ADWR submitted detailed comments on the proposed rule. From the AWBA's perspective, the goal of the comments was to insure that the rule embodied the AWBA's statutorily mandated mechanism. The focus of ADWR's comments was adherence of the rule to the existing Law of the River and the protection the rule provided to Arizona and its entitlement.

On the basis of the comments received, Interior published the proposed rule again to solicit comment on the definition of the term "authorized entity". The comment submitted by the AWBA reaffirmed the position that an authorized entity in a storing state should not be required to hold an entitlement to Colorado River water.

The final rule titled "Offstream Storage of Colorado River Water and Development and Release of Intentionally Created Unused Apportionment in the Lower Division States" was published on October 29, 1999. This rule incorporated almost all of the changes requested by the AWBA and ADWR. The final rule became effective 60 days following publication in the Federal Register.

### The Second Step: Meeting State Statutory Requirements

As previously discussed, promulgation of a federal rule did not complete the process within Arizona. By statute, the Director of ADWR was required to make a determination regarding whether or not the federal rule met certain criteria and adequately protected Arizona's interests. On January 13, 2000, the chief counsel for ADWR held a public meeting to solicit input to be used in completing his recommendation to the Director regarding the adequacy of the federal rule. On January 26, 2000, the Director presented her determination that the federal rule met the statutory criteria and that initial discussions regarding principles to be negotiated in developing interstate agreements could commence.

Over the next year, the AWBA will have discussions with California and Nevada concerning interstate water banking. If the outcome of those discussions is favorable to the AWBA, they may choose to enter into interstate banking agreements with either California or Nevada.

### 1999 Amended Plan of Operation

The AWBA amended the 1999 Plan of Operation on April 21, 1999. This amendment was necessary to allow the addition of the Salt River Project Groundwater Savings Facility (SRP GSF) in the proposed amount of 66,500 acre feet for the year. Arizona Revised Statutes allow the AWBA to modify an adopted plan of operation and modification was deemed necessary in this instance due to the significant increase in water being recharged and the additional costs associated with it.

The SRP GSF was permitted for 200,000 acre feet per annum for indirect recharge within the SRP service area in May 1996. Initial discussions regarding AWBA recharge at this facility focused on the long-term storage credits being used as part of a water rights settlement with the Gila River Indian Community (GRIC). However, it was recognized by AWBA members that there was no risk in proceeding with an agreement to store at this facility even if it did not ultimately become a part of any GRIC settlement. The AWBA was issued a water storage permit for 200,000 acre feet per annum on May 4, 1999. The first AWBA deliveries to the facility occurred in May and the total annual deliveries for 1999 were 22,084 acre feet.

### 2000 Plan of Operation

The AWBA plans to recharge approximately 288,000 acre feet of water in calendar year 2000. Of this quantity, approximately 120,000 will be recharged at underground storage facilities and approximately 168,000 will be recharged at groundwater savings facilities. The AWBA's Plan of Operation anticipates recharge of approximately 24,000 acre feet at two new facilities: the Agua Fria facility (includes both the constructed and managed portions) and the Lower Santa Cruz facility. Delays in these facilities becoming operational could negatively impact the quantity of water stored under the 2000 Plan of Operations. For more detailed information, the plan is available on the AWBA web page.

### Media Coverage

The AWBA received fairly limited press coverage during 1999 with the majority of articles being published immediately following publication of the final rule regarding interstate water banking.

"Nevada water pact nearly final", Las Vegas Review-Journal, October 28, 1999

"A nest egg for the future: water", The Arizona Republic, October 29, 1999

"Water talks will begin this year", Las Vegas Review-Journal, October 29, 1999

"Water through 2007? 'Bank' on it", Las Vegas Sun, October 29, 1999

"Three states bank on water pact to quench future needs", The Denver Post, October 31, 1999

"Southern Nevada Water Authority applauds water banking regulations" U.S. Water News Online , November 1999

### Salt River Project and AWBA Water Exchange Permit

The AWBA entered into a water exchange agreement with the Salt River Project (SRP) with the intent to "enhance the availability of water to each Party for its purposes" and "to maximize the storage of Colorado River water in the GRUSP ... during operational problems with the Central Arizona Project Canal or the CAP/SRP Interconnection Facility". A general use water exchange permit which granted SRP and the AWBA the ability to exchange water was issued on June 21, 1999 and reissued (in amended form) on June 28, 1999. A general use water exchange permit is one that is only available for exchanges between political subdivisions of the state or between a political subdivision and a

private water company or Indian community. It allows more flexibility for governmental entities that may engage in numerous, routine exchanges with little advance notice within a particular geographic area. Prior to completing an exchange under a general use permit, the parties must file a General Use Permit Exchange Notification form with ADWR. This allows ADWR to monitor the exchange and insure that it adheres to the terms of the permit.

To summarize the terms of the SRP/AWBA permit, the SRP may give up to 50,000 acre feet of Salt/Verde River water per 12 month period to the AWBA to be recharged at the Granite Reef Underground Storage Project (GRUSP). The AWBA may give up to 50,000 acre feet of Colorado River water per 12 month period to be used for deliveries within the SRP service area or to the Salt River Pima-Maricopa Indian Community, the Lakin Cattle Company, the Roosevelt Water Conservation District, or the Buckeye Irrigation and Drainage District. Each party that gives water pursuant to the permit must receive the same quantity of water in exchange within 12 months. The permit may be subject to revocation if the parties fail to exchange water pursuant to this permit for five or more consecutive years.

#### Facility Permit Activity

The AWBA submitted five applications for water storage permits in 1999: Agua Fria (managed); Agua Fria (constructed); Kai Farms – Picacho; Lower Santa Cruz; and Pima Mine Road. The Pima Mine Road facility application was for an additional 10,000 acre feet over two additional years and was permitted on May 26, 1999. The other four applications were not permitted in 1999.

#### Web Page

The AWBA has maintained a web page since 1997 as a means to provide timely and accurate information regarding the AWBA's activities to the water community. The web page contains information about the AWBA, AWBA members and staff, the AWBA's recharge partners, monthly water deliveries, AWBA announcements and scheduled meetings and meeting minutes. It also contains numerous publications and documents that may be downloaded and provides links to other water related web sites.

The web page was developed and maintained by the Water Resources Center at the University of Arizona until October 1999. At that time, a transfer of the web site was initiated. Once the transfer is completed, the web page will be supported and maintained by the ADWR Information Technology Division.

## Monies Expended from the Banking Fund

Arizona Revised Statutes § 45-2425 mandates the various sources of monies for the Water Banking Fund (Fund) that is administered by the AWBA per the statute. In 1999 the AWBA obtained its funding from the following sources:

1. Fees for groundwater pumping are collected within the Phoenix, Pinal and Tucson AMAs. Fees are calculated two different ways because there exists a gradual increase in fees for entities not associated with irrigation districts within the Pinal AMA. In the Phoenix AMA, Tucson AMA and most areas of the Pinal AMA, fees for water banking purposes are charged at \$2.50 per acre foot. Fees for entities in Pinal County who are not associated with an irrigation district were charged at \$0.75 per acre foot in 1997 with planned increases of \$0.25 per acre foot annually until the \$2.50 per acre foot amount was reached. Therefore, the fee charged for these entities was \$1.25 per acre foot in 1999.
2. The CAWCD levies a four cent *ad valorem* property tax and has dedicated it to the AWBA through the year 2016. The tax is collected within the three county CAP service area and deposited into the Fund. The Fund receives this money in two payments that are roughly concurrent with the due dates for property taxes; funds are typically received in December and May. Money from this source must be used to benefit the county in which it was collected.
3. A general fund appropriation is made to the Fund in an annual amount determined to be appropriate by the Arizona Legislature and the Governor. In 1999 the general fund appropriation was \$2 million. General fund money is made available to the Fund in equal payments on a quarterly basis. Water stored with these funds may be used to assist communities along the Colorado River, to assist in meeting state water management objectives or as a component of Indian water rights settlements.

Table 1 shows the money the AWBA received and expended in 1999 by source of funds. Table 2 shows the total money received, expended and remaining in the Fund through December 1999 by source of funds. The money listed as Available is money that is either remaining in the Fund or money that has been prepaid to CAWCD. Any money that remains in the Fund is available to be expended in subsequent years; any interest that accrues on this money is credited to the Fund and is available for use.

**Table 1. Monies Collected and Expended in 1999 by Source of Funds**

Source of Funds	Money Collected	Money Expended
<b>General Fund</b>	<b>\$2,000,000</b>	<b>\$2,043,000</b>
<b>4¢ Ad valorem Tax</b>		
Maricopa County	\$7,259,000	\$4,797,000
Pinal County	\$259,000	\$363,000
Pima County	\$1,938,000	\$1,166,000
Subtotal for Ad Valorem	<b>\$9,456,000</b>	<b>\$6,326,000</b>
<b>Groundwater Withdrawal Fee</b>		
Phoenix AMA	\$1,953,000	\$0
Pinal AMA	\$955,000	\$0
Tucson AMA	\$650,000	\$0
Subtotal for Withdrawal Fees	<b>\$3,558,000</b>	<b>\$0</b>
<b>Interest \$ Collected on Fund Dedicated to Administration</b>	<b>\$817,000</b>	<b>\$364,000</b>
<b>TOTAL</b>	<b>\$15,831,000</b>	<b>\$8,733,000</b>

**Table 2. Monies Collected and Expended through December 1999 and Monies Remaining Available to the Authority**

Source of Funds	Money Collected	Money Expended	Money Available
<b>General Fund</b>	<b>\$6,695,000</b>	<b>\$6,480,000</b>	<b>\$215,000</b>
<b>4¢ Ad Valorem Tax</b>			
Maricopa County	\$22,208,000	\$12,277,000	\$9,931,000
Pinal County	\$839,000	\$831,000	\$8,000
Pima County	\$4,703,000	\$1,983,000	\$2,720,000
Subtotal for Ad Valorem	<b>\$27,750,000</b>	<b>\$15,091,000</b>	<b>\$12,659,000</b>
<b>Groundwater Withdrawal Fee</b>			
Phoenix AMA	\$4,644,000	\$0	\$4,644,000
Pinal AMA	\$2,152,000	\$0	\$2,152,000
Tucson AMA	\$1,367,000	\$0	\$1,367,000
Subtotal for Withdrawal Fees	<b>\$8,163,000</b>	<b>\$0</b>	<b>\$8,163,000</b>
<b>Administration</b>	<b>\$1,820,000</b>	<b>\$748,000</b>	<b>\$1,072,000</b>
<b>TOTAL</b>	<b>\$44,428,000</b>	<b>\$22,319,000</b>	<b>\$22,109,000</b>

## Long-term Storage Credits

The AWBA has established a Long-term Storage Account (Number 70-441150) with ADWR. After receiving the AWBA's annual reports for its water storage and water transfer permits and the annual reports for the recharge facilities, ADWR calculates and issues long-term storage credits to the AWBA's account. The AWBA receives credit for 95% of the recoverable quantity of stored water. The 5% that is not credited is termed the "cut to the aquifer" and provides additional groundwater replenishment benefits. This cut to the aquifer is mandated by statute and applies to almost all storage of water for long-term credit, with some exceptions. The recoverable amount of stored water is determined by subtracting facility losses from the quantity of water delivered to the facility. After credits are issued to the account, AWBA staff allocate the credits to the appropriate sub-accounts based on source of funding.

The number and distribution of long-term storage credits for 1999 are listed in Table 3. Cumulative totals of long-term storage credits through December 1999 are listed in Table 4.

**Table 3. Number and Location of Long-term Storage Credits Accrued in 1999**

Location and Funding Source	Long-term Storage Credits Accrued (AF)
<b>Phoenix AMA</b>	
4¢ <i>Ad valorem</i> Tax	126,746
Groundwater Withdrawal Fee	0
General Fund	24,164
<b>AMA Total</b>	<b>150,910</b>
<b>Pinal AMA</b>	
4¢ <i>Ad valorem</i> Tax	15,277
Groundwater Withdrawal Fee	0
General Fund	47,487
<b>AMA Total</b>	<b>62,764</b>
<b>Tucson AMA</b>	
4¢ <i>Ad valorem</i> Tax	20,148
Groundwater Withdrawal Fee	0
General Fund	0
<b>AMA Total</b>	<b>20,148</b>
<b>Totals by Funding Source</b>	
4¢ <i>Ad valorem</i> Tax	162,188
Groundwater Withdrawal Fee	0
General Fund	71,651
<b>TOTAL</b>	<b>233,822</b>

**Table 4. Cumulative Total and Location of Long-term Storage Credits Accrued through December 1999**

<b>Location and Funding Source</b>		<b>Long-term Storage Credits Accrued (AF)</b>
<b>Phoenix AMA</b>		
	4¢ <i>Ad valorem</i> Tax	357,828
	Groundwater Withdrawal Fee	0
	General Fund	52,087
	<b>AMA Total</b>	<b>409,915</b>
<b>Pinal AMA</b>		
	4¢ <i>Ad valorem</i> Tax	41,170
	Groundwater Withdrawal Fee	0
	General Fund	240,825
	<b>AMA Total</b>	<b>281,995</b>
<b>Tucson AMA</b>		
	4¢ <i>Ad valorem</i> Tax	34,413
	Groundwater Withdrawal Fee	0
	General Fund	0
	<b>AMA Total</b>	<b>34,413</b>
<b>Totals by Funding Source</b>		
	4¢ <i>Ad valorem</i> Tax	433,411
	Groundwater Withdrawal Fee	0
	General Fund	292,323
	<b>TOTAL</b>	<b>726,323</b>

### **Long-term Storage Credits Distributed or Extinguished by the Authority**

The long-term storage credits developed by the AWBA to date have been identified as reserved for three purposes: firming the post-1968 Colorado River municipal and industrial (M&I) entitlements; firming the post-1968 M&I entitlements for entities outside the CAP service area; and fulfilling the water management objectives set forth in Chapter 2 of Title 45 (Arizona Revised Statutes). Credits for firming purposes may be distributed or extinguished when the Colorado River system is deemed to be in a shortage or if there is an operational disruption of the CAP. As current model runs predict 2028 as the first shortage declaration and there were no CAP operational problems, no credits were distributed or extinguished for these purposes in 1999. Credits may be distributed or exchanged for water management purposes upon request of the director of ADWR. There were no requests made for distribution or extinguishment of credits for water management purposes in 1999. Under the 1999 amendments to the AWBA legislation, the AWBA is authorized to develop credits with monies collected pursuant to water banking services agreements. In 1999, no credits were developed or distributed under such agreements.

# Ten Year Plan

## Introduction

Arizona Revised Statutes § 45-2426, which mandates the content of the AWBA Annual Report, was amended by House Bill 2463 in 1999 to include the requirement of a ten year plan. By statute the plan must include a description of any water banking activities the AWBA intends to undertake in addition to the three primary AWBA functions of firming for M&I supplies, assisting in Indian water rights settlements, and fulfilling state water management objectives. The plan must also provide an analysis of the AWBA's ability to complete those activities. The statute was amended to include this long-term planning process as it was apparent that an in-depth analysis of activities over time would become increasingly important as the AWBA matured and expanded the scope of its activities.

The 1999 Annual Report is the first report to include a ten year plan that analyzes activity for the period 2001-2010 (Table 5). AWBA accounting for previous years can be found earlier in this annual report (see Tables 2 and 4). It should be noted that to date the AWBA has only obtained long-term storage credits for the statutorily described uses allowed through expenditure of 4¢ *ad valorem* tax dollars and general fund monies. AWBA staff developed the ten year plan based on the following guiding principles:

1. The intent of the plan is to evaluate if the AWBA can engage in water banking activities beyond the scope of the currently established AWBA role and to what extent.
2. The plan covers a ten year time period beginning with the next calendar year. For example, this ten year plan covers the time period 2001-2010.
3. The plan will be updated annually based on current priorities of the AWBA.
4. The plan is an important tool to be utilized in development of the next year's annual plan of operation.

This first ten year plan was developed in an atmosphere of uncertainty regarding the nature, extent and timing of opportunities for new water banking activities. Consequently, the goal of this ten year plan was maximization of monetary expenditures for the primary purposes of the AWBA and elimination of fund carryover. Exploratory discussions between AWBA staff and California and Nevada have continued and it is perceived that interstate banking activities will be a component of future ten year plans. On the basis of staff level discussions with various parties, it is also possible that loaning credits to other entities will become a component in future plans. However, because of the current uncertainty no attempt was made to predict when, or if, these activities will be undertaken by the AWBA.

## Storage Partners

The AWBA has 11 water storage permits for groundwater savings facilities (GSF) with a total storage capacity of 715,500 acre feet per annum (see Appendix C). The AWBA is not currently utilizing the Roosevelt Water Conservation District GSF and does not anticipate doing so within this plan period. The AWBA is considering utilizing the Kai facilities beginning in calendar year 2001.

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All of the permits associated with GSFs expire within this ten year plan, however, six do not expire until December 31, 2010, the last day of the planning period. All of the AWBA's storage permits expire simultaneously with the partner's facility permits. Consequently, any difficulty on the part of the partners or the AWBA to obtain new permits could effect the ability of the AWBA to maintain adequate storage capacity to fulfill water banking activities. Discussions with ADWR recharge staff have indicated that there is typically no difficulty in obtaining new permits for GSF facilities. Nonetheless, impacts of this nature cannot be predicted and are not included in this ten year plan.

The AWBA has two water storage permits for full-scale underground storage facilities (USF) with a total storage capacity of 211,000 acre feet per annum. These permits are for the Granite Reef Underground Storage Project (GRUSP) and the Avra Valley Recharge Project. The GRUSP permit expires on December 31, 2010.

There are two USFs with a total storage capacity of 90,000 acre feet per annum that have full-scale applications pending. It is anticipated that the permits will be issued sometime in calendar year 2000 and that the term of the permits will be 20 years from the date of issuance. These projects are Pima Mine Road (PMR) and the Central Avra Valley Storage and Recharge Project (CAVSARP). The full-scale capacity of PMR was used in development of the ten year plan, however, due to operational constraints, only a portion of the full-scale capacity of CAVSARP was used. There is currently no available storage capacity at PMR under the pilot permit, however, storage can continue under the CAVSARP pilot permit in the amount of 15,000 acre feet per year until September 30, 2003. Appendix C lists only the pilot permit capacities.

The AWBA also has water storage permits for two pilot USFs with a total storage capacity of 130,000 acre feet per annum. It is believed that these projects, the Agua Fria and the Lower Santa Cruz, will become full-scale within the planning period.

As previously described in the GSF discussion, any difficulty in obtaining new permits could effect the capacity available to the AWBA. As the process of obtaining a new USF permit can be more complex and extensive than obtaining a new GSF permit, the possibility of impact is greater. Again, impacts of this nature cannot be predicted and are not included in the analysis of this ten year plan.

### Recovery

This ten year plan does not include an analysis of the impacts of recovery. Based on current discussions regarding interstate needs, recovery for Nevada and California is not anticipated in this ten year plan. Further, recovery for other AWBA purposes has not been identified and recovery is not anticipated for M&I firming until approximately 2028.

### Issues of Consideration

The decision to participate in specific water bank activities is guided by the goals of the AWBA and influenced by a variety of factors including pricing and availability of CAP water, recharge facility availability and capacity and quantity and source of funding. The following is a description of factors that may influence AWBA actions over the planning period.

## 1. Water management objectives

The early activities of the AWBA were focused on achieving the goal of full utilization of Arizona's Colorado River allocation. However, as the AWBA matures and evolves, there may be increasing emphasis on other AWBA goals.

## 2. Modifications within CAP with regard to pricing and pool allocation

The current method of allocation of water within the agricultural pools has a planned termination of 2004. The CAWCD is presently examining new ways to distribute and price agricultural water. While the extent of the effect of changes in allocation on the AWBA is not known, it is recognized that this is a factor that could impact the AWBA's ability to participate in indirect recharge at groundwater savings facilities.

## 3. Participation in Indian settlements

There are on-going discussions regarding Indian water rights settlements within Arizona. As a result of those discussions, the AWBA may be requested to provide services to insure that the terms of settlements are met. There have been no requests made to date and this factor was not included in the current plan.

## 4. Urbanization of agricultural lands

AWBA staff have discussed this issue with ADWR staff in an attempt to determine the extent of the effect of urbanization on the AWBA's activities. The ADWR does not currently have a process for evaluating the impact of urbanization on issued GSF permits. However, at least two entities that have partnered with the AWBA have indicated to ADWR staff that they believe modifications of their permits is needed to more accurately reflect changes in the status of permitted lands. There have been no modifications made to reflect this factor in the current ten year plan, however, it is believed that future plans will require more in-depth analysis of this issue. AWBA staff plan to work closely with ADWR staff in developing a process for evaluating impacts of this nature.

## 5. Interstate banking

As previously discussed in this annual report, the AWBA's requirements with regard to interstate banking are currently unknown. It is believed that future ten year plans will include this component in their development.

## Conclusion

The ten year plan is intended to serve as a guide to assist the AWBA in the development of the Annual Plan of Operation (Plan). The AWBA is required to develop a Plan for activities to be undertaken the following calendar year. As part of the Annual Report, the ten year plan is reviewed and updated annually. Therefore, it is perceived that the ten year plan may change significantly depending on the goals set by the AWBA.

# Appendices

Appendix A. Colorado River Water Deliveries for Calendar Year 1999 by Partner and Active Management Area

**Phoenix Active Management Area**

<b>Partner</b>	<b>Quantity of Water (acre feet)</b>
Granite Reef Underground Storage Project	61,160
New Magma Irrigation and Drainage District	46,625
Queen Creek Irrigation District	12,434
Maricopa Water District	20,000
Salt River Project	22,084

**Pinal Active Management Area**

<b>Partner</b>	<b>Quantity of Water (acre feet)</b>
Central Arizona Irrigation and Drainage District	6,003
Maricopa-Stanfield Irrigation and Drainage District	21,064
Hohokam Irrigation and Drainage District	40,728

**Tucson Active Management Area**

<b>Partner</b>	<b>Quantity of Water (acre feet)</b>
Avra Valley	3,561
Central Avra Valley Storage and Recharge Project	7,365
Pima Mine Road	10,468

**APPENDIX B**  
**CAP Delivery Schedule**  
(Acre-feet)

Year	Cap Demands				Normal Year Supply <sup>4</sup>	Available for Others
	M&I <sup>1</sup>	Indian <sup>2</sup>	Ag <sup>3</sup>	Total		
2001	271,000	89,000	584,000	944,000	1,474,000	530,000
2002	293,000	102,000	539,000	934,000	1,415,000	481,000
2003	315,000	107,000	498,000	920,000	1,415,000	495,000
2004	337,000	117,000	400,000	854,000	1,415,000	561,000
2005	359,000	126,000	400,000	885,000	1,415,000	530,000
2006	382,000	138,000	400,000	920,000	1,415,000	495,000
2007	403,000	150,000	400,000	953,000	1,415,000	462,000
2008	425,000	162,000	400,000	987,000	1,415,000	428,000
2009	447,000	174,000	400,000	1,021,000	1,415,000	394,000
2010	470,000	186,000	400,000	1,056,000	1,415,000	359,000
2011	482,000	198,000	400,000	1,080,000	1,415,000	335,000

**Footnotes:**

- 1 From DWR studies
- 2 From settlement discussions
- 3 From Agricultural pool discussions
- 4 Based on normal year delivery of 1,485,000 AF

<b>APPENDIX D</b>							
<b>4 Cent Tax</b>							
<b>(Acre-feet)</b>							
<b>Phoenix AMA</b>	<b>Year</b>	<b>Groundwater Savings</b>			<b>Underground Storage</b>		
		<b>Capacity Available</b>	<b>Capacity Used</b>	<b>Credits Earned</b>	<b>Capacity Available</b>	<b>Capacity Used</b>	<b>Credits Earned</b>
	2001	76,000	76,000	68,000	180,000	150,000	135,000
	2002	77,000	77,000	69,000	180,000	150,000	135,000
	2003	79,000	79,000	71,000	180,000	131,000	117,000
	2004	81,000	81,000	73,000	180,000	83,000	74,000
	2005	82,000	82,000	74,000	180,000	79,000	71,000
	2006	84,000	84,000	75,000	180,000	76,000	68,000
	2007	85,000	85,000	76,000	180,000	72,000	65,000
	2008	100,000	100,000	90,000	180,000	62,000	56,000
	2009	100,000	100,000	90,000	180,000	59,000	53,000
	2010	100,000	100,000	90,000	180,000	56,000	50,000
<b>Pinal AMA</b>	<b>Year</b>	<b>Groundwater Savings</b>			<b>Underground Storage</b>		
		<b>Capacity Available</b>	<b>Capacity Used</b>	<b>Credits Earned</b>	<b>Capacity Available</b>	<b>Capacity Used</b>	<b>Credits Earned</b>
	2001	81,000	10,000	9,000	-	-	-
	2002	81,000	10,000	9,000	-	-	-
	2003	81,000	9,000	8,000	-	-	-
	2004	81,000	9,000	8,000	-	-	-
	2005	60,000	8,000	7,000	-	-	-
	2006	45,000	8,000	7,000	-	-	-
	2007	42,000	7,000	6,000	-	-	-
	2008	39,000	7,000	6,000	-	-	-
	2009	37,000	7,000	6,000	-	-	-
	2010	35,000	6,000	5,000	-	-	-
<b>Tucson AMA</b>	<b>Year</b>	<b>Groundwater Savings</b>			<b>Underground Storage</b>		
		<b>Capacity Available</b>	<b>Capacity Used</b>	<b>Credits Earned</b>	<b>Capacity Available</b>	<b>Capacity Used</b>	<b>Credits Earned</b>
	2001	7,000	2,000	1,500	30,000	29,000	26,000
	2002	7,000	2,000	1,500	31,000	30,000	27,000
	2003	7,000	2,000	1,500	32,000	31,000	27,000
	2004	7,000	2,000	1,500	32,000	32,000	29,000
	2005	7,000	2,000	1,500	44,000	32,000	29,000
	2006	-	-	-	52,000	21,000	19,000
	2007	-	-	-	54,000	21,000	19,000
	2008	-	-	-	50,000	20,000	18,000
	2009	-	-	-	53,000	20,000	18,000

2010	-	-	-	55,000	19,000	17,000
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<b>APPENDIX E</b>							
<b>Withdrawal Fee</b>							
<b>(Acre-feet)</b>							
	Year	<b>Groundwater Savings</b>			<b>Underground Storage</b>		
		Capacity Available	Capacity Used	Credits Earned	Capacity Available	Capacity Used	Credits Earned
<b><u>Phoenix AMA</u></b>	2001	-	-	-	30,000	30,000	27,000
	2002	-	-	-	30,000	30,000	27,000
	2003	-	-	-	49,000	49,000	44,000
	2004	-	-	-	97,000	97,000	87,000
	2005	-	-	-	101,000	101,000	91,000
	2006	-	-	-	104,000	104,000	94,000
	2007	-	-	-	108,000	108,000	97,000
	2008	-	-	-	118,000	118,000	106,000
	2009	-	-	-	121,000	105,000	94,000
	2010	-	-	-	124,000	56,000	51,000
	<b><u>Pinal AMA</u></b>	2001	71,000	71,000	63,000	-	-
2002		71,000	71,000	63,000	-	-	-
2003		72,000	72,000	64,000	-	-	-
2004		72,000	72,000	64,000	-	-	-
2005		52,000	52,000	46,000	-	-	-
2006		37,000	37,000	32,000	-	-	-
2007		35,000	35,000	30,000	-	-	-
2008		32,000	32,000	28,000	-	-	-
2009		30,000	30,000	26,000	-	-	-
2010		29,000	29,000	25,000	-	-	-
<b><u>Tucson AMA</u></b>		2001	5,000	-	-	1,000	-
	2002	5,000	-	-	-	-	-
	2003	5,000	-	-	-	-	-
	2004	5,000	-	-	-	-	-
	2005	5,000	-	-	12,000	12,000	1,000
	2006	-	-	-	31,000	31,000	29,000
	2007	-	-	-	33,000	33,000	30,000
	2008	-	-	-	30,000	30,000	27,000
	2009	-	-	-	33,000	12,000	1,000
	2010	-	-	-	36,000	8,000	7,000

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**Table 5. Ten Year Plan**

ARIZONA WATER BANKING AUTHORITY 10 YEAR PLAN 2001 – 2010 (Acre Feet)																
YEA R	(a)	(b)		(c)		(d)		(e)		(f)	(g)		(h) (i) (j) (k)			
	<b>CAP Water Available for Banking</b>	<b>CAP M&amp;I Firming (Four cent tax)</b>		<b>Water Management (Withdrawal fees)</b>		<b>General Fund</b>		<b>Indian Settlement</b>		<b>Loaned Credits</b>	<b>Storage for Others</b>		<b>Interstate Banking</b>			
		Stored	Credits	Stored	Credits	Stored	Credits	Stored	Credits	Credits	Stored	Credits	Water Available	Capacity Available	Nevada Credits	California Credits
2001	530,000	267,000	239,500	101,000	90,000	49,000	44,000						113,000	6,000		
2002	481,000	269,000	241,500	101,000	90,000	47,000	42,000						64,000	6,000		
2003	495,000	252,000	224,500	121,000	108,000	44,000	40,000						78,000	6,000		
2004	561,000	207,000	185,500	169,000	151,000	42,000	38,000						143,000	5,000		
2005	530,000	203,000	182,500	165,000	138,000	50,000	45,000						112,000	5,000		
2006	495,000	189,000	169,000	172,000	155,000	55,000	51,000						79,000	-		
2007	462,000	185,000	166,000	176,000	157,000	55,000	50,000						46,000	-		
2008	428,000	189,000	170,000	180,000	161,000	47,000	42,000						12,000	-		
2009	394,000	186,000	167,000	147,000	121,000	46,000	42,000						15,000	37,000		
2010	359,000	181,000	162,000	93,000	83,000	46,000	41,000						39,000	96,000		

Column Notes:

- (a) See Appendix B
- (b) See Appendix D
- (c) See Appendix E
- (d) See Appendix F
- (e) Currently no Indian settlement requirements identified for the AWBA
- (f) Currently no request for loaned credits
- (g) Currently the AWBA is not providing banking services for others
- (h) Available CAP supplies for banking minus AWBA storage requirements
- (i) Available AWBA capacity minus AWBA storage requirements
- (j) Currently no Interstate Storage and Release Agreement in place
- (k) Currently no Interstate Storage and Release Agreement in place

**APPENDIX F**

**General Fund**

(Acre-feet)

	Year	Groundwater Savings			Underground Storage		
		Capacity Available	Capacity Used	Credits Earned	Capacity Available	Capacity Used	Credits Earned
<b><u>Phoenix AMA</u></b>	2001	100,000	24,000	21,000	180,000	-	-
	2002	100,000	23,000	20,000	180,000	-	-
	2003	100,000	21,000	19,000	180,000	-	-
	2004	100,000	19,000	17,000	180,000	-	-
	2005	100,000	18,000	16,000	180,000	-	-
	2006	100,000	16,000	15,000	180,000	-	-
	2007	100,000	15,000	14,000	180,000	-	-
	2008	100,000	-	-	180,000	-	-
	2009	100,000	-	-	180,000	-	-
	2010	100,000	-	-	180,000	-	-
	<b><u>Pinal AMA</u></b>	2001	81,000	-	-	-	-
2002		81,000	-	-	-	-	-
2003		81,000	-	-	-	-	-
2004		81,000	-	-	-	-	-
2005		81,000	21,000	19,000	-	-	-
2006		81,000	36,000	33,000	-	-	-
2007		81,000	39,000	35,000	-	-	-
2008		81,000	42,000	38,000	-	-	-
2009		81,000	44,000	40,000	-	-	-
2010		81,000	46,000	41,000	-	-	-
<b><u>Tucson AMA</u></b>		2001	7,000	-	-	55,000	25,000
	2002	7,000	-	-	55,000	24,000	22,000
	2003	7,000	-	-	55,000	23,000	21,000
	2004	7,000	-	-	55,000	23,000	21,000
	2005	7,000	-	-	55,000	11,000	10,000
	2006	-	-	-	55,000	3,000	3,000
	2007	-	-	-	55,000	1,000	1,000
	2008	-	-	-	55,000	5,000	4,000
	2009	-	-	-	55,000	2,000	2,000
	2010	-	-	-	55,000	-	-
	<b><u>Outside the AMAs</u></b>	2001				-	
2002					-		
2003					-		
2004					-		
2005					-		
2006					-		
2007					-		
2008					-		
2009					-		
2010					-		