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182	Vasquez	Suzanne	Phoenix, City of	<a href="mailto:suzanne.vasquez@phoenix.gov">suzanne.vasquez@phoenix.gov</a>	
183	Walker	Shelly	MSIDD	<a href="mailto:shelly@msidd.com">shelly@msidd.com</a>	
184	Ward	Grant	MSIDD	<a href="mailto:grant@msidd.com">grant@msidd.com</a>	
185	Weber	Magill	Nature Conservancy	<a href="mailto:mweber@tnc.org">mweber@tnc.org</a>	
186	Whitler	Ron	Buckeye, Town of	<a href="mailto:rwhitler@buckeyeaz.gov">rwhitler@buckeyeaz.gov</a>	
187	Widmark	Derrick		<a href="mailto:info@diablotrust.org">info@diablotrust.org</a>	
188	Williams	John	SRP	<a href="mailto:mflowe@srpnet.com">mflowe@srpnet.com</a>	
189	Williams	Roger		<a href="mailto:rwilliams@torrentresources.com">rwilliams@torrentresources.com</a>	
190	Wilson	Richard		<a href="mailto:wilsonwater@aol.com">wilsonwater@aol.com</a>	
191	Wilson	Walley	Tucson Water	<a href="mailto:wally.wilson@tucsonaz.gov">wally.wilson@tucsonaz.gov</a>	
192	Wilson			<a href="mailto:mwilson21@cox.net">mwilson21@cox.net</a>	
193	Woner	Jeff	Tonopah Irrigation District	<a href="mailto:TIDDistrictAdmin@krsalien.com">TIDDistrictAdmin@krsalien.com</a>	
194	Wong	Ron	BKW Famrs	<a href="mailto:ron@bkwfarms.com">ron@bkwfarms.com</a>	
195	Zimmerman	Carol	CAP	<a href="mailto:carol@zimmermancom.com">carol@zimmermancom.com</a>	
196			CAIDD	<a href="mailto:Glinda@caidd.com">Glinda@caidd.com</a>	
197			CMID	<a href="mailto:cmid12253@comcast.net">cmid12253@comcast.net</a>	
198				<a href="mailto:aparizona@ap.org">aparizona@ap.org</a>	
199				<a href="mailto:hlh51@aol.com">hlh51@aol.com</a>	
200				<a href="mailto:no4son@earthlink.net">no4son@earthlink.net</a>	
201				<a href="mailto:plummernw@aol.com">plummernw@aol.com</a>	
202				<a href="mailto:posmon@azleg.gov">posmon@azleg.gov</a>	
203				<a href="mailto:rburnsaz@cox.net">rburnsaz@cox.net</a>	
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**NOTICE AND FINAL AGENDA OF MEETING OF  
THE ARIZONA WATER BANKING AUTHORITY COMMISSION**

Pursuant to A.R.S. § 38-431.02, notice is hereby given that there will be a meeting of the Arizona Water Banking Authority Commission on Wednesday, **October 16, 2013 at 10:00 a.m.** at the Arizona Department of Water Resources, 3550 North Central Avenue, Phoenix, Arizona 85012, Upper Verde Conference Room. The meeting is open to the general public.

The agenda for the meeting is as follows:

- I. Welcome/Opening Remarks
- II. Approval of Minutes
  - September 4, 2013 meeting
- III. Water Banking Staff Activities
  - Update on Draft 2014 Plan of Operation (Table 2)
  - Update on recovery planning
- IV. Action Planning – Top Priority Items
  - Update on long-term storage credits purchase proposal
  - Discussion on options for a General Fund appropriation for Indian firming or other activities
  - Potential action to approve a submittal for a General Fund appropriation for Indian firming or other activities
- V. Call to the Public
- VI. Action Planning Process - Environmental Scan workgroup session

**Note:** The AWBA Commission will recess for lunch at an appropriate time. No business of the AWBA will be discussed during the lunch recess.

**Future Meeting Dates:**

**Wednesday, December 4, 2013**

Dated this 15<sup>th</sup> day of October, 2013

All visitors must use the south elevators; please stop at the 2<sup>nd</sup> floor to sign-in and receive a visitor's badge. Badges are to be displayed at all times. Visitors are also required to sign out and return their badges. Thank you for your assistance.

*Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting Michelle Moreno at 602-771-8530 or 602-771-8501 (TDD). Requests should be made as early as possible to allow time to arrange the accommodation.*

ARIZONA WATER BANKING AUTHORITY  
Draft Minutes

September 4, 2013  
Arizona Department of Water Resources



AUTHORITY MEMBERS  
Sandra Fabritz-Whitney, Chairman  
Maureen R. George, Vice-Chairman  
Clifford A. Neal, Secretary  
Jim Hartdegen  
John Mawhinney

EX OFFICIO MEMBERS  
The Honorable Andy Tobin  
The Honorable Gail Griffin

### Welcome/Opening Remarks

Chairman Sandra Fabritz-Whitney welcomed attendees. All Authority members were present except *ex-officio* members, Senator Gail Griffin and Speaker of the House Andy Tobin. Chairman Fabritz-Whitney asked Don Gross, Colorado River Management for ADWR, to provide an update on the U.S. Bureau of Reclamation's (USBOR) most recent August 24-Month Study.

Mr. Gross explained that because of recent poor hydrology, Lake Powell is projected to drop into the mid-elevation release tier meaning the release volume from Powell will drop from 8.23 million acre-feet (MAF) to 7.48 MAF in 2014 and again in 2015. This will cause Mead to decline faster leading to a much higher probability of shortages in 2016.

If a Tier 1 shortage occurs in 2016, Arizona will take a 320,000 acre-foot shortage, Mexico 50,000 acre-feet and Nevada 13,000 acre-feet.

### Approval of Minutes

Chairman Fabritz-Whitney requested a motion to approve the minutes of the June 19, 2013 regular quarterly meeting of the AWBA. Mr. Mawhinney moved to approve the minutes. Mr. Hartdegen seconded the motion, and the motion passed.

### Water Banking Staff Activities

**Deliveries.** Ms. O'Connell, Manager of the AWBA, directed the members to the monthly delivery charts. Only 1,000 acre-feet had been delivered to the Pinal AMA since the June meeting. Delivery locations, however, are shifting. 6,000 acre-feet originally scheduled for the Tonopah Desert Recharge Project (TDRP) will now be delivered to the Agua Fria Recharge Project (AFRP) and Superstition Mountain Recharge Project (SMRP). In the Tucson AMA, 883 acre-feet planned for the Avra Valley Recharge Project (AVRP) has been shifted to Tucson Water's Southern Avra Valley Storage and Recovery Project (SAVSARP) because of operational issues. The Cortaro-Marana Irrigation District (CMID) requested 2,000 acre-feet of water. To accommodate this request, staff redirected 2,000 acre-feet from the Pima Mine Road Recharge Project. In addition, 6,500 acre-feet of turn back water also became available and it is scheduled for storage in the Tucson AMA at the Lower Santa Cruz Recharge Project (LSCRCP).

Ms. George asked if operational issues at AVRA Valley were significant enough to cause concern. Ms. O'Connell responded that it should not as Metro Water is currently working on resolving the algae issues at the facility. Mr. Neal stated that given an additional 6,500 acre-feet has become available, and since 2,000 acre-feet was redirected to CMID, he hopes the AWBA will store as much as possible in Pima Mine Road before storing any water at LSCRCP. Ms. O'Connell affirmed that strategy and added that Tucson Water may be able to take a little more water at its facilities. The rest can be stored at the LSCRCP. Chairman Fabritz-Whitney asked about operations at SMRP. Patrick Dent, Recharge Program Manager at CAP, indicated that SMRP is

permitted for 25,000 acre-feet. The facility is operating, and CAP intends to store the entire capacity in 2013 including 3,000 acre-feet of AWBA deliveries.

**Recovery Planning Update.** Ms. O'Connell gave a brief overview of the recovery planning process. The Interagency Recovery Planning Group has prepared the first half of the recovery plan including background information and the modeling analyses on the potential need to recover water bank credits. The Group continues to work on the second half of the recovery plan which will address how recovery will be implemented. There will also be a section on future activities and commitments. The Group hopes to have the rest of the draft available at the October meeting. The current draft was provided to the Ad Hoc Recovery Group, and the Interagency Group is waiting for comments. Ms. O'Connell introduced Laura Grignano and Kenneth Seasholes, both from CAP, who presented the first half of the Joint Recovery Plan. The PowerPoint presentation is available on the AWBA's website. Highlights include:

- Maximum near-term shortage, 17,000 acre-feet, affects Indian NIA and On-River users
- Maximum mid-term shortage, 38,000 acre-feet, affects Indian NIA and On-River users
- Maximum long-term shortage, 84,200 acre-feet, affects all categories including CAP Priority 4 M&I users
- Earliest projected intrastate recovery is 2017 with a probability of 1%
- Less than 35% probability of needing any recovery before 2024
- No M&I recovery projected before 2035
- Bulk of intrastate credits remain past 2045
- Timing and magnitude of Nevada's request plays a significant role

Ms. George asked if the bulk of intrastate credits remaining after 2045 included the credits reserved for outside the CAP service area. Mr. Seasholes responded affirmatively. Mr. Mawhinney asked what specific plan CAP has for addressing disruptions and to what degree those plans would affect recovery of credits. Mr. Seasholes indicated that CAP routinely conducts business disaster planning including disruptions of varying magnitudes. Such disruptions are more focused on physically getting water to customers, and the AWBA's credits do not play a prominent part in those plans. Mr. Mawhinney asked if that was because CAP places less interest in that option, or because the probabilities are low and CAP sees little likelihood of needing the credits for disruptions. Mr. Seasholes responded saying the role of AWBA's credits is dwarfed by other issues CAP would face under such conditions.

Mr. Neal expressed concern about the 2045 timeframe potentially not matching up with other work such as the modeling and the AWBA goal re-evaluation process. Ms. Grignano explained that the analysis for recovery planning uses the same model that is based on 100 years. The recovery plan simply ends its study period at 2045. Mr. Neal asked if the existing model shows any shortages greater than a Tier 3 shortage. Mr. Seasholes responded saying the model is constructed in a way that does not protect a particular elevation in Mead so no shortage is shown that would exceed a Tier 3 shortage.



**Review of Arizona baseline modeling assumptions.** Deanna Ikeya, Colorado River Management at ADWR, explained that a separate but related group is working on the Arizona baseline Colorado River Simulation System (CRSS) modeling assumptions. She emphasized that the table of assumptions provided to the Authority is a draft. The baseline assumptions are not identical to the assumptions used in modeling for the recovery plan. Any differences are documented in the recovery plan draft. The Arizona model uses the 2010 version of the CRSS model published by the USBOR. She explained that the current model has been updated to include 105 traces of data and January 1, 2013 elevation data. Ms. Ikeya then described the details in the table. Regarding upper basin demand projections, the table shows a demand build up to 4.8 million acre-feet (MAF). Mr. Neal asked what the upper basin projects its demands to be. Ms. Ikeya responded saying up to 5.6 million acre-feet.

**Re-evaluation of AWBA numeric goals.** Tim Henley, AWBA, provided background information on the original development of the goals. Because of changes in river operation and how the CRSS model operates, he is recommending the AWBA re-evaluate the original goals. The plan is to wait until the USBOR releases the updated model, until that time staff will ensure that the Arizona model has the most recent information. Once staff has the data it needs, the plan is to run the model. The re-evaluation will be based on the most recent version of the model whether it's the USBOR's, hopefully it will be available, or the most current ADWR version of the model that Ms. Ikeya described including the 105 traces and the January 1, 2013 elevation data.

In this study, two scenarios will be evaluated. The first scenario will assume the Interim Guidelines will be extended throughout the firming period (2097). In the second scenario, the analysis will assume the Interim Guidelines through 2016. After 2016, the analysis will assume the 80P operating philosophy. Each of these scenarios would be analyzed using two cases (1) assuming prorating shortages based on entitlement (Director's Recommended Arizona Shortage Sharing Guidelines) and (2) assuming prorating shortages based on annual uses. The two main differences between 1997 evaluation and the re-evaluation are: (1) reservoir starting elevations and (2) the implementation of Interim Guidelines. The re-evaluation will also help to better define the obligation the AWBA has towards Indian firming.

Chairman Fabritz-Whitney asked if it was safe to assume the potential goals could increase for M&I firming and Indian firming. Mr. Henley responded affirmatively indicating that in 1997 when the original goals were developed the average probability of shortage was 30%. As shown in the recovery planning presentation, new data shows a much greater probability of shortage than 30%. He added that in 1997 we used 100 years of data because the firming obligation was for 100 years starting in 1997. In the re-evaluation, we will use 80 years of data because the AWBA only looks to see what will happen out to 2097.

Mr. Neal asked what process was used to adopt the goals originally. Mr. Henley responded saying that the goals were analyzed at the time because the AWBA was required to identify a reasonable amount of credits to reserve for users outside the CAP service area. At the same time, the model produced information relevant to other goals. There was no specific resolution adopting firming goal except for users outside



the CAP service area. In fact, the goal for CAP M&I firming are viewed as benchmarks to see how the AWBA is doing and to decide if other things can be done.

### **Draft 2014 Plan of Operation**

Ms. O'Connell gave members an overview of the draft Preliminary 2014 Plan of Operation that encompasses four tables representing the heart of the Plan: Tables 2, 3, 4 and 6. Once the draft Plan is complete, staff will make it available to the public for comment.

**Table 2**, the delivery schedule, shows 70,900 acre-feet of water available to the bank for 2014 consistent with the estimate from the Ten-Year Plan (2014-2023). A preliminary volume, the actual volume available will not be known until CAP has received all customer orders. Under the proposed plan, a little less than half of the water is scheduled for storage in the Tucson AMA (i.e. 28,000 acre-feet). The remainder is divided almost in half with 19,600 acre-feet going to the Phoenix AMA and 18,000 acre-feet going to the Pinal AMA. The plan does not include storage for the Southern Nevada Water Authority. The AWBA has been delivering, to the SSRB, 1,000 acre-feet annually since 2009, the minimum volume that must be delivered. However, since the 24-Month Study projects a high probability the AWBA will not have water for storage in 2016, staff is recommending that the remaining 10,000 acre-feet for the SSRB be delivered over the next two years: 5,000 acre-feet in 2014 and another 5,000 in 2015. The Gila River Indian Irrigation District (GRIDD) has indicated that they can take delivery of 5,000 acre-feet next February.

Mr. Neal asked about CAP's recent policy giving the AWBA higher priority for storage in CAP projects. Ms. O'Connell responded saying that the policy gives higher priority to the AWBA and CAGR for replenishment. The proposed delivery amounts at CAP's storage facilities in Phoenix AMA were based on past deliveries and that these amounts are still flexible. Authority members further asked if what is planned to be stored at TDRP (Tonopah Desert Recharge Project) could instead be stored at other facilities closer to where recovery would occur. Ms. O'Connell indicated that any water stored at TDRP will eventually be recovered, and the credits will not be stranded. She indicated staff would work with CAP on delivering more water to its other facilities.

Mr. Mawhinney asked about the AWBA's delivery plan if turn back water becomes available again. Ms. O'Connell indicated that the Authority directed staff to deliver any turn back water to Tucson. She is operating under the assumption this direction is still valid. Mr. Mawhinney asked about financial resources. Ms. O'Connell indicated that there is additional money for Tucson at CAP, but that the only capacity is at LSCR. Mr. Mawhinney indicated he was thinking more broadly than Tucson. Ms. O'Connell indicated that if funds in the Tucson AMA are exhausted there is sufficient funding and capacity available for storage in Maricopa.

**Table 3** identifies the water and facility rates for 2014. CAP's delivery rate for AWBA storage will be \$166 per acre-foot an increase of \$22 per acre-foot over the 2013 rate of \$144. The interstate rate also increased going from \$163 to \$189 per acre-foot. For the Groundwater Savings Facility cost share rates, AWBA staff is proposing they remain the same at \$34 per acre-foot for the Phoenix and Pinal AMAs and \$16 per acre-foot for the Tucson AMA. CAWCD's facility rates have remained the same. The

facility rates for the Avra Valley Recharge Project and Clearwater facilities are subject to 3% increases per the agreement between the parties. Metro Water did not increase its rates last year, but will this year. Tucson Water opted to not increase the rate, keeping it the same as the 2013 rate. The cost to deliver water to the SSRB is also \$166/AF.

Authority members asked about the actual cost to store at a CAP facility, whether the AWBA pays the same rate as others and if there is room for negotiation. Ms. O'Connell responded saying that the AWBA pays the same rate as others. CAP rates are established in a public process and are not negotiated. Agreements with private parties such as Metro Water and Tucson Water are negotiated, but those rates are based on real data.

**Table 4** estimates funds available to the AWBA at nearly \$24 million. Over \$5 million is generated from withdrawal fee collections, nearly \$17 million from 4¢ tax monies and \$1.5 million from shortage reparation monies. Implementation of the plan is expected to cost \$11.3 million and is expected to produce just over 60,000 acre-feet of credits. Ms. O'Connell pointed out that in the Pinal AMA, \$830,000 in withdrawal fees will be used to pay for the increased volume of water to be delivered to the SSRB.

**Table 6** projects the percent of goals and obligations achieved through 2014. In the Phoenix and Pinal AMAs, around 85% of the M&I firming goal is expected to be met, using only 4¢ tax monies. In Tucson, including the use of withdrawal fees, 59% of the goal is expected to be met. There is no change for On-River firming. Likewise for Indian firming, except that 67% of the initial volume for the SSRB will be met. Regarding shortage reparation monies, Ms. O'Connell indicated the AWBA will have spent \$6 million out of the \$8 million producing nearly 100,000 acre-feet of credits.

Commission members directed staff to schedule and hold public meetings on the draft 2014 Plan of Operation in conjunction with the Groundwater Users Advisory Council meetings for the Phoenix, Pinal and Tucson AMAs.

### **Action Planning**

Ms. O'Connell explained that at the June meeting, as part of the Ten-Year Plan discussions, staff was directed to develop an action plan to address issues facing the AWBA, specifically the decreasing water supplies and funding resources available to the Bank that affect its ability to make progress on storage goals. Staff was asked to act on two possible solutions immediately:

- Expand the AWBA's authority to purchase long-term storage credits
- Begin process for requesting a general fund appropriation for Indian firming

Ms. O'Connell directed members to two discussion papers, one for each solution. She added that staff is also working on a process for developing the rest of the action plan. She briefed the Board on the credit purchase proposal.

**Long-term storage credit purchase.** Ms. O'Connell indicated the volume of water available to the Bank for the next 10 years is only 58% of what was estimated the previous year, averaging about 69,000 acre-feet per year. This trend is expected to continue. Decreased supply coupled with increasing costs for CAP water will put the

Bank further behind in meeting its goals. The ability to purchase credits could help address this issue. The Bank currently has the authority to purchase credits, but only in limited circumstances. Expanding the AWBA's authority to purchase credits would allow it to accrue credits even in years when CAP supplies are curtailed or unavailable. It would give the bank more flexibility in meeting its firming goals and also expand opportunities for meeting the state's water management objectives. It would also allow the Bank to accrue more credits at today's rates. For these reasons, staff is recommending the AWBA proceed with developing a legislative proposal amending statutes to expand the AWBA's authority to purchase credits using the funds in the Arizona Water Banking Fund.

Commission members discussed potential opposition to the legislation and the need to ascertain such opposition sooner rather than later. Ms. O'Connell added that assuming the Authority approves moving forward, staff would begin the process of determining support and opposition. Ms. George asked if the AWBA can purchase credits for the SSRB now. Ms. O'Connell replied that while the AWBA is filling the initial volume, deliveries have to be made to the SSRB. If the AWBA were meeting an obligation, credits could be purchased. Mr. Neal asked if the proposal is to buy credits only when there is no water to buy and store, or can credits be purchased in addition to buying and storing water. Ms. O'Connell responded saying the proposal is to purchase credits and water at the same time. Mr. Neal suggested a potential criticism might be the AWBA would buy credits instead of water. Ms. O'Connell replied saying the Authority could decide when the time comes if in addition to purchasing water, the authority might also buy credits. She did not envision the Authority buying credits instead of water.

Mr. Mawhinney moved to approve the AWBA proceeding with developing a legislative proposal amending AWBA's authority to use funds in the Arizona Water Banking Fund for the purpose of purchasing long-term storage credits. Mr. Hartdegen seconded the motion and the Authority approved staff moving forward.

**General Fund appropriation for Indian firming.** Staff was also asked to begin the process of requesting a General Fund appropriation, specifically for Indian firming. Ms. O'Connell recited the Indian firming obligations and reviewed the briefing paper. She explained that a request for a General Fund appropriation must be accompanied by a detailed budget and justification for the appropriation. Staff has been meeting with entities to discuss potential alternatives for meeting the Indian firming requirement. Staff continues to evaluate the ways General Fund appropriations can be used. This information will be provided at the October 16<sup>th</sup> Special Meeting if the Authority directs staff to move forward.

Ms. George asked when the model would incorporate the recent USBOR 24-month Study results. She suggested that such an update could change the AWBA's Indian firming obligation. Ms. O'Connell indicated that Ms. Ikeya reported that the 24-month study data has been incorporated into Arizona's version of the CRSS model. The data would also be included in Mr. Henley's analysis. Mr. Hartdegen suggested that there should be a line item in some department's budget every year addressing this obligation until the obligation is met.



Chairman Fabritz-Whitney expressed concern that certain questions need to be answered to be successful in obtaining an appropriation. The Indian firming goal is 550,000 acre-feet. Withdrawal fees have not been dedicated to any water management purpose except for M&I firming in the Tucson AMA. Recovery planning is showing 2.4 million acre-feet of credits remaining after 2045. Shortage is possible in 2016 and 2017. We are currently sitting on funds and will be asking for funds when there may be no water to purchase and store. If the AWBA intends to use withdrawal fee credits for something other than Indian firming, which is a defined water management objective, then these actions need to be identified. If not for Indian firming, then staff needs to describe what water management objectives will be met using the credits. Mr. Henley reminded Chairman Fabritz-Whitney that the AWBA is required to meet the shortfall in water supplies. The amount could be higher than the projected goals. Ms. O'Connell indicated that staff is investigating alternatives that do not require the use of CAP water and intends to present that information at the next meeting. Mr. Neal asked if withdrawal fees can be used for purposes other than buying and storing water. Ms. O'Connell responded that it depends on the circumstances. Mr. Mawhinney asked if every dollar of withdrawal fee money used for Indian firming cannot be used for M&I firming. Chairman Fabritz-Whitney replied saying most likely, but she reminded Mr. Mawhinney that the AWBA is close to meeting its goals in the Phoenix and Pinal AMAs and that Indian firming is also a water management objective.

Commission members directed staff to continue evaluating the use of General Fund appropriation for meeting the AWBA's Indian firming obligation and to provide recommendations on the amount and purpose for a General Fund appropriation at the next AWBA meeting. Mr. Neal expressed concern about the amount of time staff has to come up with the amount and purpose. Mr. Mawhinney stated that since time will be limited by the middle of October, whatever staff brings will need to be formalized. Ms. O'Connell explained that staff has been working on this task and can share its findings with Authority members and be prepared with a formal action in October.

**Future action planning.** Regarding other potential action items the AWBA should address, the AWBA staff per direction from the Authority is putting together a facilitated action planning process. Staff is considering starting the facilitated process at the October meeting during a separate meeting in the afternoon if this is the direction the AWBA wants to take. Staff will be talking with AWBA members further about what kind of process will work.

### **Call to the Public**

Chairman Fabritz-Whitney asked for public comments. Nicole Klobas, AWBA legal counsel, reminded Commission members that side conversations during meetings and passing notes can be perceived as conducting AWBA business and should therefore be avoided.

Chairman Fabritz-Whitney indicated that the next meeting would be Wednesday, October 16, 2013 and the last quarterly meeting of the year would be Wednesday, December 4, 2013. Chairman Fabritz-Whitney asked for a motion to adjourn. Ms. George moved to adjourn the meeting. No second was provided.

The meeting adjourned at 2:57 p.m.



# **Joint Recovery Plan Update**

**ADWR, AWBA & CAP**

AWBA Meeting  
**October 16<sup>th</sup>, 2013**

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# Joint Recovery Plan Update

- Interagency Group working on the second half of the Joint Plan, with input from the Ad Hoc Recovery Group
- Building on the first five chapters of the Joint Plan - Modeling Results
- Credit Requests and Distribution, Opportunities by AMA and Implementation



# Credit Requests & Distribution

- Total projected recovery volumes are applied to the AMA level
- Credit requests are matched against authorized purposes by funding source and location...
- ...while considering AWBA resolutions, statutes and contracts

# Funding Sources & Allowable Use

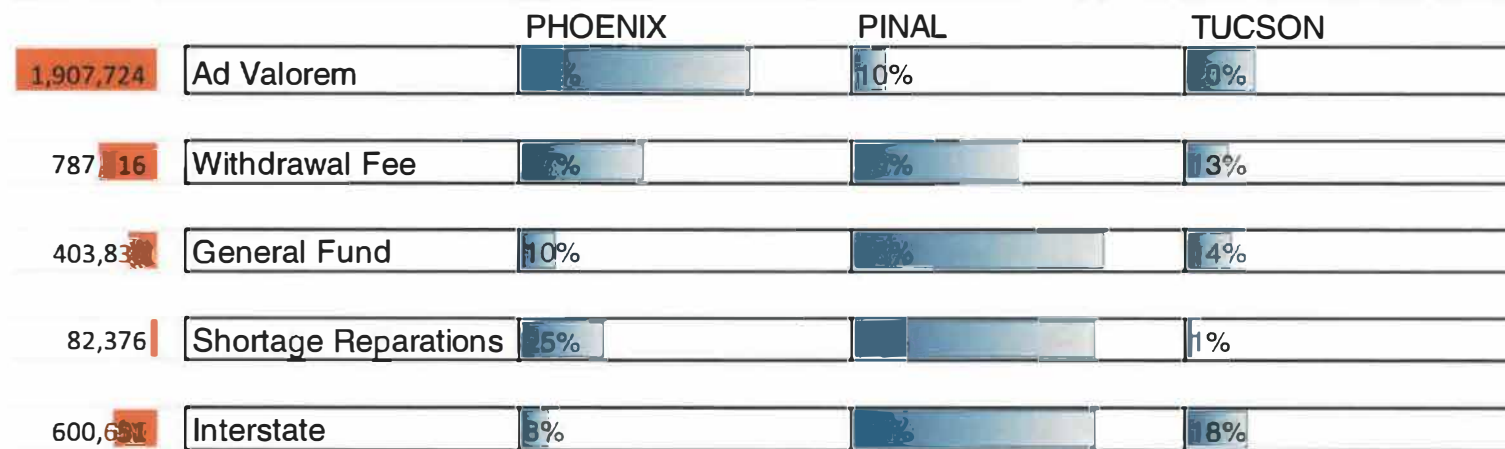
Summary of Intrastate Funding Sources and Allowable Use

FUNDING SOURCE	Firming M&I CAP	Firming On-River M&I (P-4)	Firming Indian Settlements (NIA)	Fulfilling Water Management Objectives
Ad Valorem Taxes	X			
Groundwater Withdrawal Fees	X		X	X
General Fund	X	X	X	X
Shortage Reparations	X	X	X	X

# Location of LTSC by AMA

Percentage and Location of Long-Term Storage Credits Accrued Through Dec 2012

AF





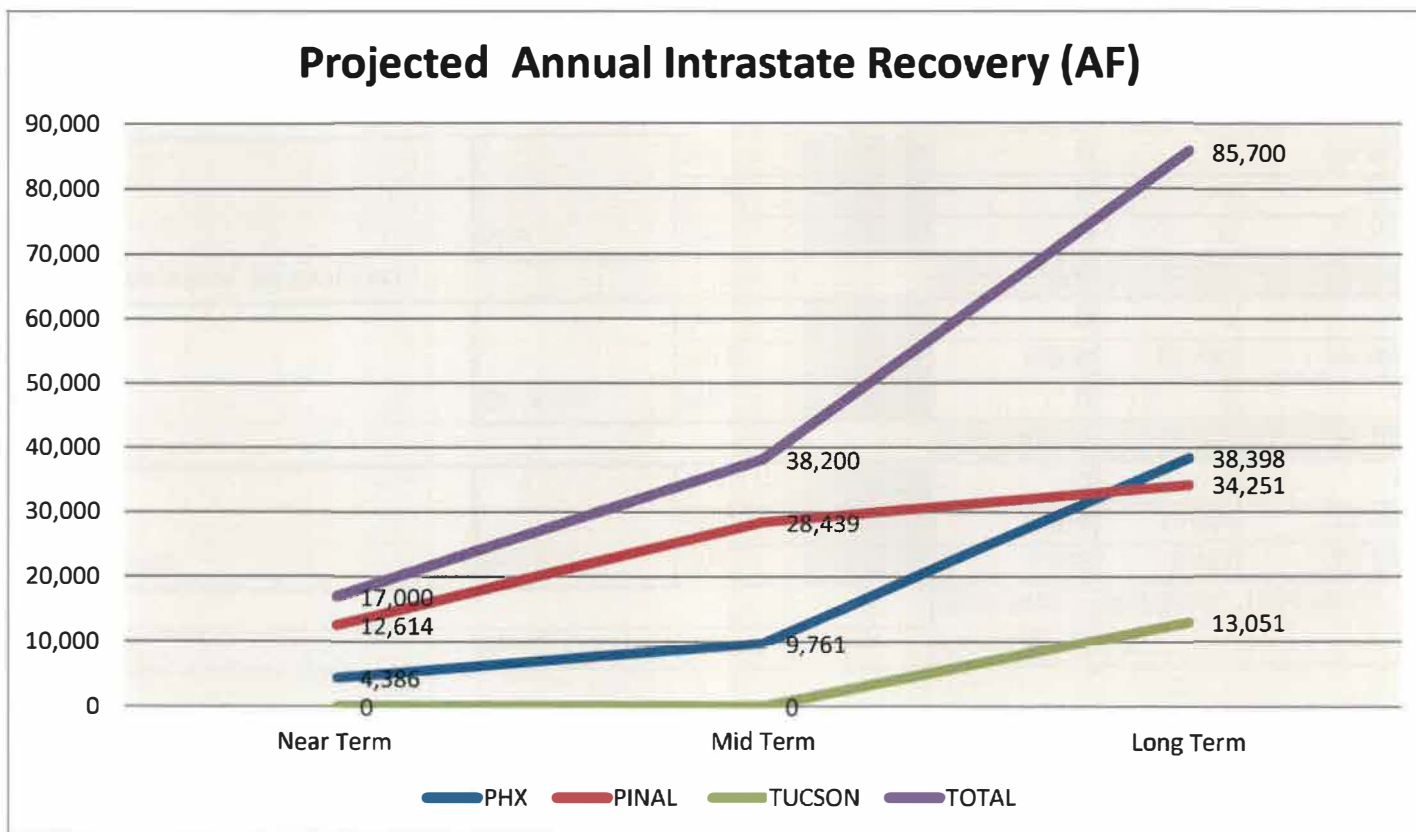
# Other Considerations

- Credits accrued with ad valorem taxes are distributed for the benefit of the county from which monies were collected
- Withdrawal fee credits in the Tucson AMA may be needed for M&I firming
- 100% of the general fund credits reserved for Mohave County Water Authority are in the Pinal AMA

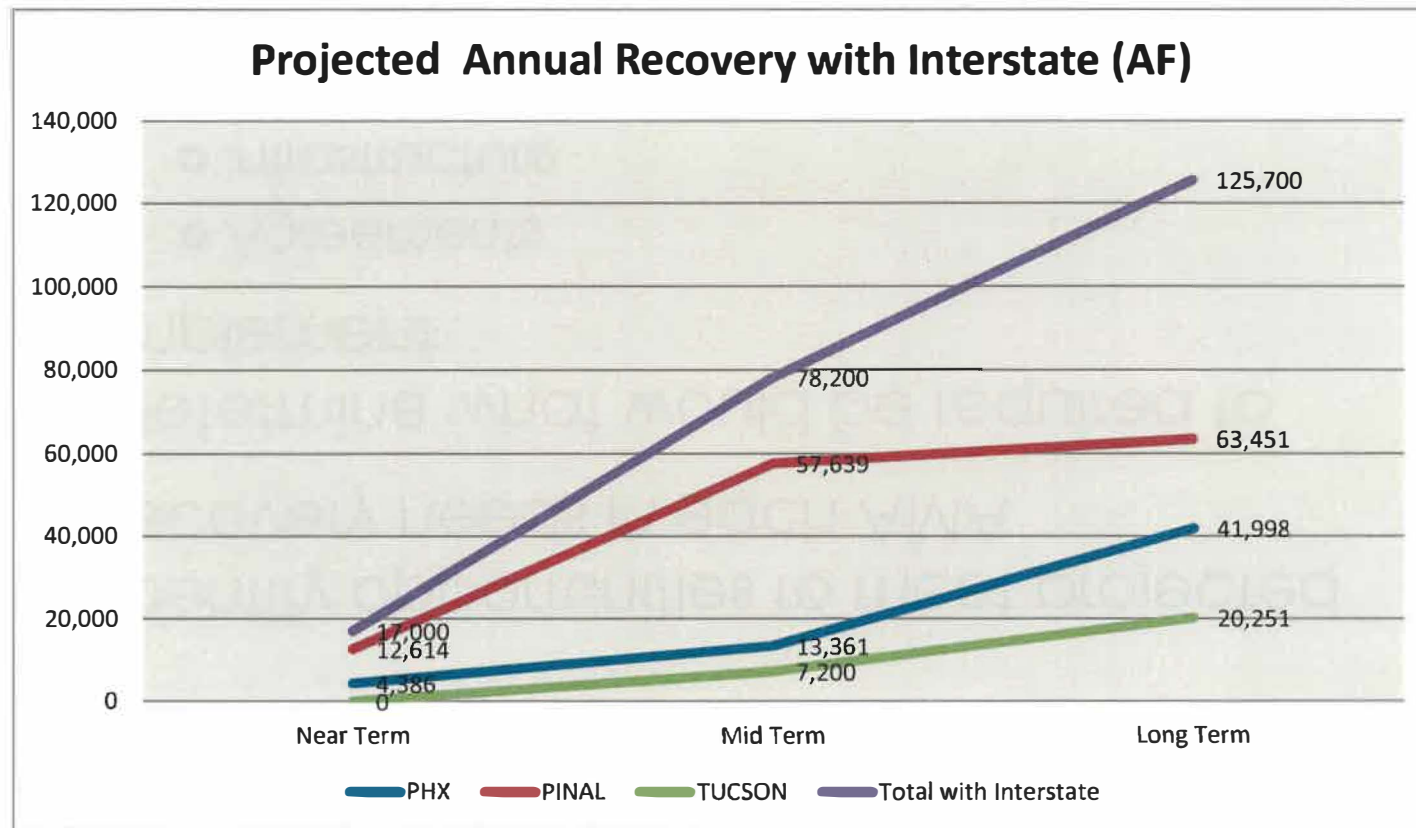
# Interactive Spreadsheet

Funding	Water User	AMA Porportion	Planning Periods			
			Near Term	Mid Term	Long Term	
Withdrawal	Indian NIA	Phx	43%	4,386	9,761	10,191
		Pinal	57%	5,814	12,939	13,509
		Tuc	0%	0	0	0
Gen				10,200	22,700	23,700
	On-River	Phx	0%	0	0	0
		Pinal	100%	6,800	15,500	19,900
		Tuc	0%	0	0	0
4 cent (based on entitlement)				6,800	15,500	19,900
	M&I	Phx	64%	0	0	28,207
		Pinal	3%	0	0	842
		Tuc	33%	0	0	13,051
				0	0	42,100
Intrastate total				17,000	38,200	85,700
Interstate						
	SNWA	Phx	9%	0	3,600	3,600
		Pinal	73%	0	29,200	29,200
		Tuc	18%	0	7,200	7,200
Interstate total				0	40,000	40,000
<b>TOTAL</b>				<b>17,000</b>	<b>78,200</b>	<b>125,700</b>

# Example Distribution



# Example Distribution





# Next Steps

- Identify opportunities to meet projected recovery needs in each AMA
- Determine what would be required to implement
  - Agreements
  - Infrastructure
- Challenges

## Utilizing AWBA Withdrawal Fee Credits to Meet Water Management Objectives

The Arizona Water Banking Authority is authorized to utilize credits accrued with groundwater withdrawal fees for certain purposes, including firming CAP Municipal and Industrial (M&I) subcontract supplies during shortages, implementing the settlement of water right claims by Arizona Indian communities, or, on request from the Director, to meet water management plan objectives of the Arizona Groundwater Code. Because these credits can be used for various purposes and there are limited credits available, there could be competition for how these credits are used in the future. The table below estimates the amount of withdrawal fee credits that will be accrued through calendar year 2014.

### Estimated Amount of Withdrawal Fee Credits Accrued through 2014

Active Management Area	Long-term Storage Credits (Acre-feet)
Phoenix	305,650
Pinal	414,700
Tucson	97,540
Total	817,890

\*estimated credits for 2014 are based on the preliminary 2014 Plan of Operation

The various purposes are summarized below, with estimated amounts that could be used for each purpose.

- M&I firming** – Assuming the 4¢ ad valorem tax is not renewed, withdrawal fee credits could be used to meet M&I firming goals. Based on the Ten-Year Plan (2014-2023):
  - All the withdrawal fee credits in the Tucson AMA would be needed and would only result in achieving 70% of the firming goal.
  - About 18,500 AF of credits would be needed in the Pinal AMA.
  - If the AWBA accrues fewer credits than anticipated because of decreases in water availability, additional credits would be needed.
- Indian firming** – The AWBA could dedicate existing withdrawal fee credits to meet its Indian firming goal estimate of 550,000 acre-feet. At the end of 2014, the AWBA will have an estimated 720,350 acre-feet of credits accrued in the Phoenix and Pinal AMAs. Subtracting 550,000 acre-feet would leave only 170,350 acre-feet remaining for other water management purposes: 17,337 acre-feet in the Phoenix AMA and 153,013 acre-feet in the Pinal AMA.
- Water Management Goals of the AMAs** - There are projected to be nearly 820,000 acre-feet of withdrawal fee credits accrued by the AWBA by the end of 2014. Those withdrawal fee credits could be used to help address numerous water management issues. Some of the following uses may require a change in legislation.
  - Agree not to recover withdrawal fee credits in “hot spots”. “Hot spots” are areas short in physical availability, areas of known or projected groundwater decline and subsidence prone areas.
  - Identify areas with water quality issues and agree not to recover AWBA withdrawal fee credits in a way that would further aggravate the water quality issue.

- c. Extinguish withdrawal fee credits during shortages to offset the incidental recharge factor in the Safe Yield formula associated with agricultural surface water use that would have occurred had CAP water been available.
- d. Extinguish withdrawal fee credits to offset pumping by M&I users who would have received excess CAP water (e.g. nurseries, golf courses, etc.).
- e. Use withdrawal fees to purchase long-term storage credits held by others in areas where the AWBA is not able to store water.
- f. Use withdrawal fees to incentivize storage by others at GSFs located in proximity to “hot spots”.
- g. Exchange withdrawal fee credits with the CAGR D to better target the obligations of both the CAGR D and the AWBA.

Because each of the three opportunities identified are competing for the same withdrawal fee credits, any additional funding to assist in meeting the first two opportunities, M&I and Indian firming, would increase the credits available to meet the water management objectives of the AMAs.

## **Options for Utilizing a General Fund Appropriation to meet Indian Settlement Obligations**

The AWBA is considering requesting a general fund appropriation for 2014 to assist in meeting its firming requirements for the GRIC, WMAT and other future Indian settlements. The following are potential ways the AWBA could utilize a general fund appropriation for this purpose. The ability to utilize these options will be dependent on water availability and could in turn also affect the balance of the AWBA's other funding resources.

Many of these options, if conducted in advance, and if carried out within the GRIC reservation boundaries or within the planning areas of lessees in the case of the WMAT, could create an opportunity for the State to cap its obligations.

### **Excess CAP Supplies Needed:**

1. **Traditional Storage Off-Reservation** – AWBA stores Excess CAP water at permitted recharge facilities off-Reservation. Credits would be recovered or exchanged to provide water to the GRIC, or to lessees in the case of the WMAT, during shortages.
2. **Traditional Storage On-Reservation** – AWBA stores water at state permitted recharge facilities located within the GRIC. Credits would be recovered or extinguished to provide water to the GRIC during shortages. AWBA has already accrued 105,000 acre-feet of credits from storage at the Gila River Indian Irrigation and Drainage District (GRIIDD) GSF.
3. **Fulfill the Southside Replenishment Bank** –AWBA delivers 10,000 acre-feet of Excess CAP water to the SSRB to fulfill the initial obligation. AWBA must schedule at least 1,000 acre-feet per year for delivery to the SSRB until 15,000 acre-feet has been delivered. Through 2013, AWBA will have only delivered 5,000 acre-feet. Due to increased shortage risk, AWBA would seek to mitigate the State's risk by delivering the remaining 10,000 acre-feet as soon as possible instead of over ten years as originally planned.
4. **Traditional Storage during Surplus Event.** AWBA would maximize storage during surplus events. General funds would be held in the Indian Firming Reserve Subaccount or another escrow type of account where the monies would accrue interest and be available during a surplus event. During such events, large volumes of water would become available, allowing a significant volume of Indian firming to be accomplished in a single year. Storage could occur on or off-reservation and would need to be delivered to a state permitted facility.

### **Excess CAP Supplies Not Used:**

1. **Non-Traditional Storage on-Reservation (Direct Delivery)** – AWBA would pay the energy portion of the GRIC's Indian priority water delivery costs for water that is delivered on-Reservation during normal supply years accruing the equivalent of a firming credit. GRIC would pump the firming equivalent credits during shortages.
2. **Infrastructure Improvements towards Use of Reclaimed Water on-Reservation** – GRIC currently has an exchange agreement with the cities of Chandler and Mesa. To the extent these cities or others have reclaimed water and would consider delivering it to the GRIC, the AWBA



could share in the costs associated with any expanded infrastructure. This option would likely require a change in AWBA statutes.

3. **Pay Future Energy Pumping Costs** – If Indian firming credits are not available when shortages occur, the GRIC could pump groundwater on-reservation and AWBA could pay the pumping costs. To pay these future pumping costs, general funds could be held in the Indian Firming Reserve Subaccount or another escrow type of account where the monies could accrue interest and be available during shortages.
4. **Purchase of Long-term Storage Credits** –AWBA would purchase credits accrued by others. This option would require a change in AWBA statutes. Credits could be credits accrued in proximity to the GRIC or in the case of WMAT in proximity to entities benefitting from the leases.

The table presented on the following page summarizes the estimated volume of credits that could be produced using the various options assuming three funding levels: \$1, \$2 and \$3 million. Options vary from producing between 5,700 and 90,000 acre-feet based on the method and the funding level. The most cost effective options are those that can reduce costs to only paying energy costs. The least cost effective options are those using USFs or managed facilities.

Option	Excess Water Needed	Type of Facility	State Permitting Required	Firming Accomplished in 2014 Dollars			Assumptions
				Acre-feet Assuming \$1,000,000 spent	Acre-feet Assuming \$2,000,000 spent	Acre-feet Assuming \$3,000,000 spent	
Traditional Storage Off-Reservation	Yes	USF	Yes	5,747	11,494	17,241	Assumes 2014 water delivery rates and that water is stored at a CAWCD facility in Phoenix AMA.
	Yes	GSF	Yes	7,576	15,152	22,727	Assumes 2014 water delivery rates and that water is stored at a Phoenix or Pinal AMA GSF.
Traditional Storage On-Reservation	Yes	USF	Yes	5,747	11,494	17,241	Assumes \$8 per acre-foot to store at a GRIC owned and operated managed facility.
	Yes	GSF	Yes	7,576	15,152	22,727	Assumes 2014 water delivery rates and that water is stored at GRIDD and AWBA receives a firming equivalent credit.
Fulfill Southside Replenishment Bank	Yes	None	No	5,955	10,000	10,000	Assumes full CAWCD delivery charge. Assumes 5,000 acre-feet delivered in 2014 and the rest delivered in 2015 up to the amount of money assumed. Limits costs to the full 10,000 acre-feet of obligation. In no case would the cost exceed \$1.72 million in 2014/15 dollars.
Traditional Storage of Surplus CAP water	Yes	USF	Yes	13,333	26,667	40,000	Assumes CAWCD establishes special rate for energy only to ensure full use of surplus water and that water is stored at CAWCD facility in the Phoenix AMA.
	Yes	GSF	Yes	30,303	60,606	90,909	Assumes CAWCD establishes special rate for energy only to ensure full use of surplus water and that water is stored at a Phoenix or Pinal AMA GSF.
Non-Traditional Storage On-Reservation (direct delivery)	No	None	No	14,925	29,851	44,776	Assumes AWBA would pay the GRIC's cost for delivery of its Indian water; assume 2014 energy rate only.
Infrastructure Improvements towards use of Reclaimed Water On-Reservation	No			-	-	-	Not quantifiable at this time.
Pumping Energy Costs	No	None	No	14,925	29,851	44,776	Assumes 2014 energy rate only.
Purchase Long-term Storage Credits	No	None	No	6,803	13,605	20,408	Assumes credits are purchased at the cost established in the Purchase and Sale Agreements recently executed by CAGR for actual credit purchase.