

ARIZONA WATER BANKING AUTHORITY
Wednesday, September 21, 2005

No.	NAME (Please print)	Phone No.
1	JAN BUSH	602 828 3694
2	MINH TRANG	602-604-7836
3	MARK MYERS	520 742 0416
4	Brian Hennin	623-867-2567
5	PATRICK DENT	623-829-2581
6	MARVIN COHEN	480-425-7632
7	Tom Buschkatze	602 261 8532
8	PAUL ORME	623-465-0445
9	Virginia O'Connell	602-417-2465
10	Rich Siegel	602 236 2277
11	JEFF EHLERS	602 236-5504
12	Kenneth Seasholtz	NR
13	Laura Grignano	ADWR
14	DAVE CROCKETT	857 4192
15	Gregg Capps	480-782-3585
16	Gary Given	623 869-2158
17	PAUL NELSON	602-216-3878
18	Paul Li	602-254-5908
19	RON WOLSB	520-682-2516
20	Denise Forbes	602-440-4884
21	Dennis Rule	520-791-2666
22	Marcel Benberon	602-542-6192
23	ALAN P. KLEINMAN	702-293-8081
24	Tom Maher	702-862-3702

No.	NAME (Please Print)	Phone No.
25	Megan Gnagy	602-926-3146
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Arizona Water Banking Authority
500 North Third Street, Phoenix, Arizona 85004
Telephone 602-417-2418
Fax 602-417-2401
Web Page: www.awba.state.az.us

PLEASE POST

NOTICE OF PUBLIC MEETING

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 September 21, 2005 at 10:00 a.m. at the Arizona Department of Water Resources, 500 North Third Street, Phoenix, Arizona 85004, third floor conference room. The meeting is open to the general public. A copy of the agenda for the meeting is posted below.

Dated this 16th day of September, 2005

AGENDA

Arizona Water Banking Authority Commission Meeting

1. Welcome/Opening Remarks
2. Approval of Minutes of June 22, 2005 AWBA Meeting
3. Water Banking Staff Activities
 - Deliveries
 - Shortage Workshops
 - Indian Firming Committee
 - Status of Colorado River discussions
 - MCWA/CAWCD Agreement
 - Staff Changes
4. Draft 2006 Annual Plan of Operation
 - Partner meetings
 - Draft Table 2
 - Public meetings
5. Status of Nevada's Payment pursuant to Interstate Agreement
6. Call to Public

Future Meeting Date:

Wednesday, December 14, 2005

Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting Nan Flores at (602) 417-2418. Requests should be made as early as possible to allow time to arrange the accommodation.

ARIZONA WATER BANKING AUTHORITY
Draft Minutes¹

June 22, 2005
Arizona Department of Water Resources



AUTHORITY MEMBERS
Herbert R. Guenther, Chairman
William K. Perry
Charles L. Cahoy, Secretary
John Mawhinney
Maureen R. George

EX OFFICIO MEMBERS
The Honorable Jake Flake
The Honorable James Weiers

Welcome/Opening Remarks

Senator Herb Guenther welcomed the attendees. Chuck Cahoy was not present at the meeting. *Ex officio* member Jake Flake was in attendance.

Approval of Minutes of March 16, 2005 AWBA Meeting

The Authority approved the minutes of the meeting with correction of two typographical errors noted by Chuck Cahoy.

Water Banking Staff Activities

Tim Henley reviewed water deliveries and stated that actual volumes are somewhat less than projected due to rainfall and cooler temperatures. As usual, CAP staff will attempt to make up lost volume as much as possible.

Mr. Henley informed the Authority that the Indian Firming Study Commission (Commission) is moving forward and is at a point that they are identifying specific alternatives and attempting to put numbers with them. He stated that the group has a fairly aggressive schedule to meet with respect to recommendations. He also noted that the process is now a function of the Department of Water Resources and not the AWBA. John Mawhinney asked if there was some clarity with respect to the state's role and the AWBA's role. Mr. Henley noted that there were really no changes to the AWBA's role except for the statutory obligations for the Southside replenishment. Otherwise, the role of the AWBA really hasn't changed. The AWBA can still be utilized to support the state in meeting their obligations. What has changed is the responsibility for preparing the report regarding recommendations for alternative actions. That responsibility is now with the Commission and not with the AWBA.

Mr. Henley provided an update on the status of the Sven Basin State's discussions and noted that the current issue of focus is shortages and development of shortage criteria. He noted that the Secretary of the Interior did not call for a mid-year revision of the Annual Operating Plan and that releases to the Lower Basin remained at 8.23 million acre-feet. These discussions tie into the AWBA's activities because of the obligation to firm during times of shortage. Herb Guenther noted that there currently is no consensus between the states with respect to river operations but that the states are trying to reach a point of mutual respect and understanding of other's positions. Mr. Mawhinney asked if there was an Upper Basin vs. Lower Basin position. Senator Guenther noted that the Upper Basin position is really inequitable division of the Colorado River/Colorado River Compact issues.

¹ Please note that these are not formal minutes but a summary of discussion and action of the meeting. Official minutes are prepared prior to the next Authority meeting and are approved at that meeting.

With respect to legislative type activities, Mr. Henley noted that a major one dealt with the \$100 million that would be received from Nevada upon request. He stated that this issue would be discussed later under agenda item VIII. Mr. Henley also noted that Mr. Cahoy had some issues with the determination reached by ADWR's legal staff regarding the need for the AWBA to have a separate certificate of inclusion for the Multi-Species Conservation Plan. He stated that staff would work with Mr. Cahoy and legal counsel to resolve the issues. Mr. Mawhinney asked about progress being made with respect to recovery planning. Mr. Henley replied that the issue had been given somewhat of a lower priority in late 2004 and early 2005 but it is anticipated that activities associated with the Agreement to Firm Future supplies will begin to force the issue.

2004 Annual Report

Mr. Henley reviewed the statutory requirements with respect to the AWBA's submittal of the Annual Report and reiterated that the report covers the activities for calendar year 2004. He also noted that the annual report has included a ten-year plan pursuant to the 1999 revisions of the AWBA's statutes. The ten year plan included in the 2004 Annual Report is a little different from past plans due to the commitment to Nevada to have a total of 1.25 million acre feet of credits. In this ten-year plan, development of Nevada credits was prioritized. Additionally, this plan did not include a general fund appropriation and expended withdrawal fee revenues before 4¢ *ad valorem* tax revenues. Mr. Mawhinney stated that he did not think the annual report identified the problems that may be encountered with meeting the M&I firming goal for Tucson and Pinal. Mr. Henley stated that the ten-year plan indicated that if groundwater withdrawal fees are utilized, the goal would be met for Pinal. Tucson would still be somewhat short of the goal through 2015. A motion was made that the Authority approve the annual report and ten year plan with any minor changes and transmit it to the required entities. The motion was adopted.

Fiscal Year 2006 Administrative Budget

Mr. Henley reviewed the administrative budget and noted that there was a cover sheet and summary sheets that provide more detailed information. For FY 2005, he noted that actual expenditures were less than budgeted under some categories. He identified two reasons for this: (1) Sandy Fabritz-Whitney's time was charged to a new code due to her assuming a new position; and (2) the \$50,000 included for outside consultant services for Indian firming was not utilized. He noted that the FY 2006 budget is higher than the FY 2005 because of increased staffing costs. He also noted that travel costs have increased due to inclusion of legal staff at meetings. Mr. Henley concluded the discussion by reminding the Authority that administrative costs are paid out of the administrative account. The money in that account comes from the interest earned on the other accounts. He informed the Authority that based on the current balance and

anticipated interest gains; the account will probably be able to pay administrative costs for another year. After that time, the Authority will need to request money for administrative costs from CAP. The 4¢ *ad valorem* tax being retained by the CAP has earned interest that may be used to pay administrative costs.

Discussion and Potential Approval of Amendments to Excess Water Contract

Mr. Henley reviewed the historical levelized billing process and noted that the contract had been amended at the previous meeting to authorize billing based on actual deliveries. However, recently the AWBA recognized the benefit of pre-paying CAP for the interstate water banking portion to insure availability of funds for the Water Protection Fund. Ryan Smith noted that the pre-payment would earn interest and that it could be requested to be returned with 15-day notice. Maureen George questioned how much the pre-payment would be and what deliveries would be being paid for. Mr. Henley replied that the pre-payment would be for deliveries projected in the 2005 Annual Plan of Operation (approximately \$24.5 million) plus money owed for last year (\$1.5 million). The total request from Nevada would be \$26 million from the \$100 million. Senator Jake Flake asked whether that money would be repaid. Mr. Henley stated that it would be paid back from the Operating Account once deposits are made there beginning in 2009. Mr. Mawhinney asked if this was for one year only. Mr. Henley replied that the contract is permissive and allows this to happen but does not require it. The amendments to the contract were approved and were on the CAWCD Board agenda for approval the following day.

Discussion Regarding Status of Agreement to Firm Future Supplies

Ms. George requested that the record show she would not be discussing this issue due to a conflict of interest and stated that she had also filed a letter regarding her conflict with respect to this issue. Senator Guenther noted Ms. George's actions. Mr. Henley reviewed the pertinent components of the Agreement to Firm Future Supplies (Agreement to Firm) between the AWBA and the Mohave County Water Authority (MCWA). The Agreement to Firm had two requirements: (1) the MCWA must enter into subcontracts with entities that require the firming; and (2) the MCWA must enter into an exchange agreement. He stated that the Authority members had been given a draft of the MCWA subcontract with Bullhead City developed pursuant to the first requirement. He noted that the Authority is not taking action with respect to the subcontract but that the Authority is required to approve the subcontract pursuant to the Agreement to Firm. Mr. Mawhinney asked about the status of entities that didn't enter into subcontracts with MCWA. Mr. Henley replied that they take their chances. All entities in Mohave County had been offered the option to participate and some chose not to. Mr. Smith noted that July 15, 2005 is the last day to amend Exhibit A of the Agreement to Firm to include additional participants. Tom Griffin, chairman of the MCWA, addressed the Authority and informed them that MCWA had contacted every entity in Mohave County with a contract for Colorado River water for M&I use. Lake Havasu City, Bullhead City, Mohave Water Conservation District and State Parks were the only entities that chose to participate. Each of the participants have had funding

approved by their city councils. He stated that the exchange agreement is being worked on with CAP but that they may need to request an extension of that particular deadline. He added that the MCWA still has some issues regarding recovery but anticipate those issues being addressed later on. Senator Guenther noted that all of these issues tie into the seven Basin states discussions because these are the entities that will be impacted if a shortage is declared on the river.

Interstate Water Banking

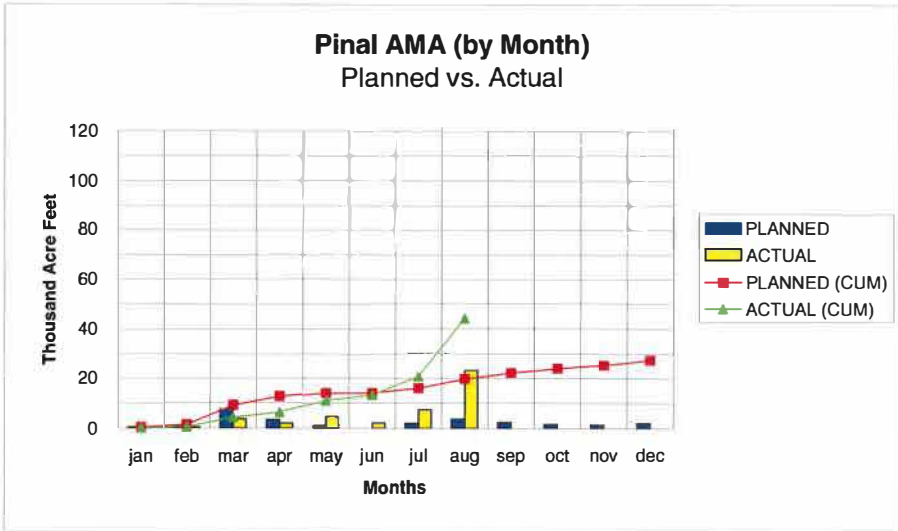
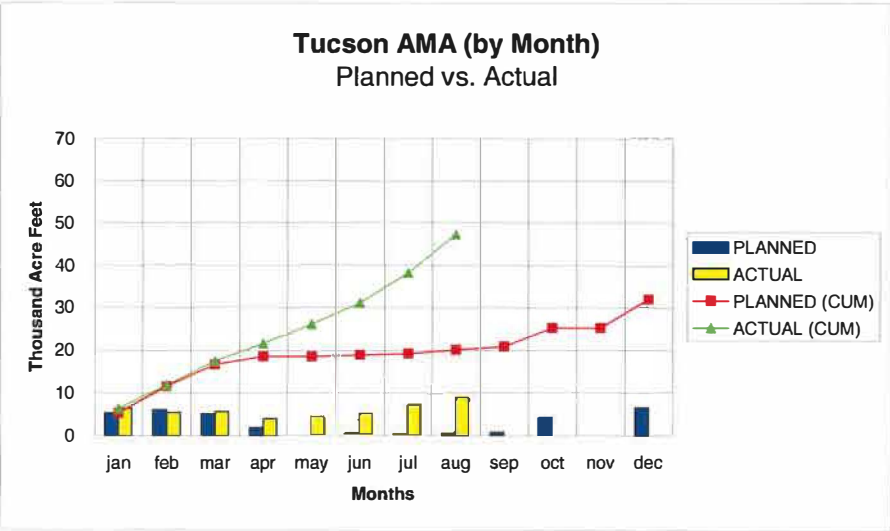
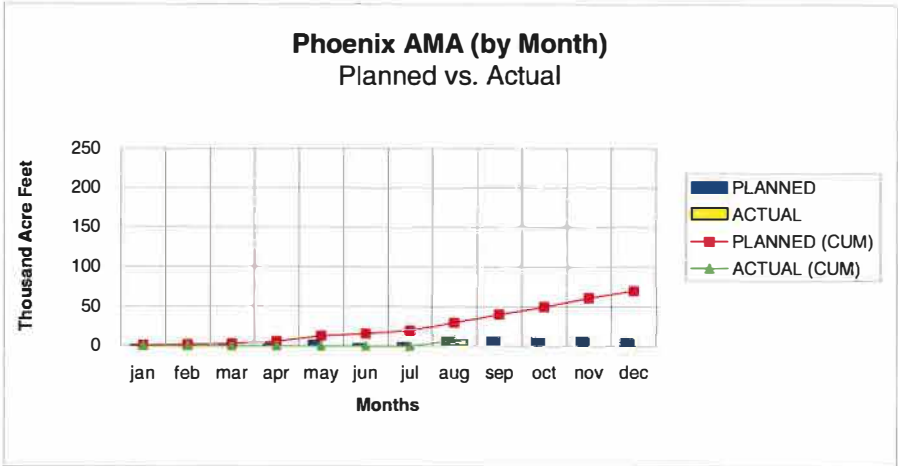
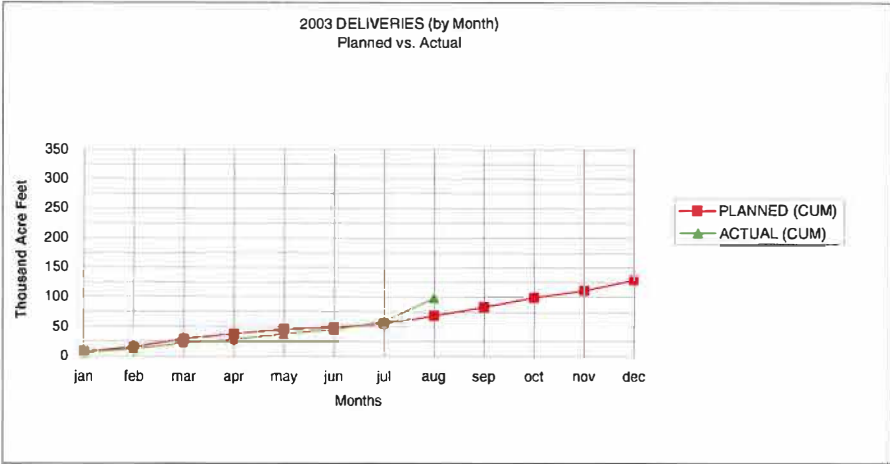
Mr. Henley stated that the final conclusion regarding options associated with the \$100 million to be received from Nevada was that the money must be deposited with the State Treasurer's Office (STO). AWBA staff then met with STO staff and reviewed investment opportunities. One potential option was investment in the Local Government Investment Pool (LGIP) however it was uncertain whether the AWBA had the authority to invest in the LGIP. Senate Bill 1522 amended the AWBA statutes to permit investment in the LGIP and included language requiring the appropriation of any portion of the \$100 million not needed to fulfill the contractual obligation. Mr. Henley stated that it would be his recommendation that the AWBA request the \$100 million from Nevada for investment in the LGIP. This would meet the terms of the agreement and permit loaning of funds for interstate water banking to be completed before 2009. William Perry questioned the time frame for getting the money after request. Mr. Henley noted that Ken Albright from SNWA was in the audience. Mr. Albright stated that the \$100 million could be transferred by the end of the calendar year and the \$26 million would likely only take a couple of weeks. Mr. Mawhinney stated that it appeared to him that there were several issues: (1) the interest to be earned by the invested money; (2) whether or not the AWBA should pre-pay the CAP; and (3) would the AWBA ask for the remaining \$74 million. He further stated that he was not concerned about the interest but was instead concerned about the principal and did not think that the language in S.B. 1522 provided any protection for the \$100 million or remainder thereof. Senator Guenther stated that he believed that the language regarding meeting the contractual obligation did provide protection. Mr. Perry stated that he doesn't think the money is in danger now but will be in danger at the back end. Mr. Mawhinney suggested that development of policy may assist in forestalling appropriation of the money. Senator Flake stated that, at least from his legislative perspective, the intention was always that the money would be used for water issues.

Call to the Public

Questions and comments made by the public are included in the above discussion under the agenda item in which they were made. There was no additional public comment at this time.

The meeting concluded at 11:45 a.m.

2005 Plan of Operation



Actual deliveries updated <i>Plan of Operation</i>	16-Sep-05 <i>1-Jan-05</i>	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	total
Phoenix AMA														
GRUSP		0	0	0	0	0	0	0	0	0	0	0	0	0
		<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
AGUA FRIA		0	0	0	0	0	0	0	0	0	0	0	0	0
		<i>500</i>	<i>0</i>	<i>0</i>	<i>1,000</i>	<i>1,000</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1,000</i>	<i>1,500</i>	<i>5,000</i>
CHCID		0	0	0	0	15	44	42	63	0	0	0	0	164
		<i>0</i>	<i>0</i>	<i>50</i>	<i>50</i>	<i>50</i>	<i>100</i>	<i>75</i>	<i>75</i>	<i>50</i>	<i>83</i>	<i>0</i>	<i>0</i>	<i>533</i>
NMIDD		0	0	0	0	0	0	0	7,079	0	0	0	0	7,079
		<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>4,000</i>	<i>1,500</i>	<i>3,000</i>	<i>6,000</i>	<i>6,500</i>	<i>6,000</i>	<i>5,584</i>	<i>2,500</i>	<i>35,084</i>
QCID		0	0	0	0	0	0	0	0	0	0	0	0	0
		<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>2,285</i>	<i>2,000</i>	<i>800</i>	<i>960</i>	<i>1,600</i>	<i>7,645</i>
TID		0	0	0	0	0	0	0	0	0	0	0	0	0
		<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
SRP		0	0	0	0	0	0	0	0	0	0	0	0	0
		<i>800</i>	<i>800</i>	<i>800</i>	<i>800</i>	<i>800</i>	<i>0</i>	<i>0</i>	<i>800</i>	<i>800</i>	<i>800</i>	<i>800</i>	<i>800</i>	<i>8,000</i>
MWD		0	0	0	0	0	0	0	0	0	0	0	0	0
		<i>0</i>	<i>0</i>	<i>0</i>	<i>1,050</i>	<i>1,050</i>	<i>1,050</i>	<i>1,050</i>	<i>1,050</i>	<i>1,050</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>6,300</i>
HIEROGLYPHIC		0	0	0	0	0	0	0	0	0	0	0	0	0
		<i>0</i>	<i>100</i>	<i>100</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1,767</i>	<i>2,417</i>	<i>2,416</i>	<i>6,800</i>
Subtotal		0	0	0	0	15	44	42	7,142	0	0	0	0	7,243
Total to date		0	0	0	0	15	59	101	7,243	7,243	7,243	7,243	7,243	7,243
<i>Projected total to date</i>		<i>1,300</i>	<i>2,200</i>	<i>3,150</i>	<i>6,050</i>	<i>12,950</i>	<i>15,600</i>	<i>19,725</i>	<i>29,935</i>	<i>40,335</i>	<i>49,785</i>	<i>60,546</i>	<i>69,362</i>	<i>69,362</i>
Pinal AMA														
CAIDD		0	0	0	0	0	0	0	12,135	0	0	0	0	12,135
		<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>2,000</i>	<i>2,000</i>	<i>1,500</i>	<i>1,000</i>	<i>1,000</i>	<i>1,500</i>	<i>9,000</i>
MSIDD		63	0	0	2,000	4,818	2,148	7,463	7,066	0	0	0	0	23,558
		<i>300</i>	<i>0</i>	<i>1,960</i>	<i>880</i>	<i>1,440</i>	<i>0</i>	<i>0</i>	<i>1,750</i>	<i>920</i>	<i>720</i>	<i>450</i>	<i>580</i>	<i>9,000</i>
HIDD		103	482	3,752	0	0	0	0	4,068	0	0	0	0	8,405
		<i>275</i>	<i>1,000</i>	<i>5,600</i>	<i>2,625</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>9,500</i>
Subtotal		166	482	3,752	2,000	4,818	2,148	7,463	23,269	0	0	0	0	44,098
Total to date		166	648	4,400	6,400	11,218	13,366	20,829	44,098	44,098	44,098	44,098	44,098	44,098
<i>Projected total to date</i>		<i>575</i>	<i>1,575</i>	<i>9,135</i>	<i>12,640</i>	<i>14,080</i>	<i>14,080</i>	<i>16,080</i>	<i>19,830</i>	<i>22,250</i>	<i>23,970</i>	<i>25,420</i>	<i>27,500</i>	<i>27,500</i>
Tucson AMA														
Avra Valley		402	308	107	0	0	0	195	320	0	0	0	0	1,332
		<i>338</i>	<i>338</i>	<i>338</i>	<i>0</i>	<i>0</i>	<i>338</i>	<i>338</i>	<i>338</i>	<i>300</i>	<i>247</i>	<i>0</i>	<i>650</i>	<i>3,225</i>
Clearwater		0	0	500	500	500	500	2,000	2,000	0	0	0	0	6,000
		<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>4,000</i>	<i>0</i>	<i>6,000</i>	<i>10,000</i>
Pima Mine		2,185	1,497	1,289	0	1,052	657	2,545	2,940	0	0	0	0	12,165
		<i>2,040</i>	<i>2,040</i>	<i>2,040</i>	<i>819</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>6,939</i>
Lower Santa Cruz		3,847	3,652	3,809	3,569	2,912	3,836	2,393	3,818	0	0	0	0	27,836
		<i>3,000</i>	<i>3,800</i>	<i>2,800</i>	<i>1,100</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>10,700</i>
Kai Red Rock		0	0	0	0	0	0	0	0	0	0	0	0	0
		<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>500</i>	<i>500</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1,000</i>
Subtotal		6,434	5,457	5,705	4,069	4,464	4,993	7,133	9,078	0	0	0	0	47,333
Total to date		6,434	11,891	17,596	21,665	26,129	31,122	38,255	47,333	47,333	47,333	47,333	0	47,333
<i>Projected total to date</i>		<i>5,378</i>	<i>11,556</i>	<i>16,734</i>	<i>18,653</i>	<i>18,653</i>	<i>18,991</i>	<i>19,329</i>	<i>20,167</i>	<i>20,967</i>	<i>25,214</i>	<i>25,214</i>	<i>31,864</i>	<i>31,864</i>
TOTAL														
		6,600	5,939	9,457	6,069	9,297	7,185	14,638	39,489	0	0	0	0	98,674
Total to date		6,600	12,539	21,996	28,065	37,362	44,547	59,185	98,674	98,674	98,674	98,674	98,674	197,348
<i>Projected total to date</i>		<i>7,253</i>	<i>15,331</i>	<i>29,019</i>	<i>37,343</i>	<i>45,683</i>	<i>48,671</i>	<i>55,134</i>	<i>69,932</i>	<i>83,552</i>	<i>98,969</i>	<i>111,180</i>	<i>128,726</i>	<i>128,726</i>

Modeling Assumptions Common to All Scenarios

- Initial reservoir conditions set to January 1, 1980 levels
- Model simulates reservoir operations from 2005 through 2060
- Lake Mead is operated to meet downstream demand, except when additional releases are required to meet the ACOE flood control procedures
- Interim Surplus Guidelines in effect through 2016 then 70R
- Future water use (depletion) schedules:
 - Lower Basin at 7.5 maf per year for normal years; surplus schedules in effect for surplus years
 - Upper Basin at 4.45 maf per year in 2005, ramping up to 5.43 MAF by 2060¹
 - Republic of Mexico at 1.5 maf per year; up to 1.7 maf per year during flood control years
- Future inflow sequences were derived from the historical record using Reclamation's natural flow data base, 1906 – 1995
- 90 possible traces
- Bypasses to the Cienega de Santa Clara in Mexico assumed to be 109,000 acre-feet per year (the historical average from 1990- 2003). Replacement of the bypassed water not assumed to occur in the future.
- Upper Basin reservoir operating rules (excluding Lake Powell) used. Operation of independent of Lake Powell's operation.
- Lake Mohave and Lake Havasu existing rule curves.

- Lake Powell operational release constrained each month to minimum and maximum range. The range is 390 kaf per month to 1500 kaf per month, reflecting the current limits on release rates of 6500 cfs and 25000 cfs.
- Beach/Habitat Building Flows
- Future inflow sequences were derived from the historical record using Reclamation's natural flow data base, 1906 – 1995
- “Worse case” assumes the 1953 – 1973 sequence is repeated in 2005 – 2025
- All historical sequences (90 possibilities) were also studied to project the probabilities of future events

Modeling Assumptions Common to All Scenarios but change from previous for Shortage Analysis

- **Equalization conditions:** 2006-2016, 3630 (about 14.85 MAF)
2017-2025, 14.85 MAF + (2020_602a – 2 008_602a)

Because many of the runs do not have a set minimum objective release from Powell, it is not possible to implement the 602a storage algorithm because future minimum Powell releases cannot be determined. To roughly estimate what 602a storage would be after 2016 (when ISG interim 602a storage runs out) we have computed the 602a storage for year 2020 and we have computed the 602a storage for year 2008 (the year that the 602a storage algorithm will approximately match the ISG interim 602a storage). The 602a storage algorithm computations assumed a minimum objective release of 8.23 MAF. The difference in 602(a) storage between

2020 and 2008 is 2.64 MAF. This differential is added to 14.85 MAF (the ISG interim 602a storage) to give a new Powell 602(a) storage value to use for the period from 2017 to 2025. This computation yielded a Powell storage value of 17.39 MAF which is roughly equivalent to the elevation of 3,651 feet above sea level.

- **LB Shortage Strategy:** Step shortage (400, 500, 600) in place 2006 through 2025
 - Mead 1075 – 1050, 400 KAF shortage
 - Mead 1050 – 1025, 500 KAF shortage
 - Mead below 1025, 600 KAF shortage

Arizona came up with the (400,500,600) strategy at the 9/7/2005 meeting. Basically what it says is that when Mead's elevation at the end of the previous year is in the ranges specified, the Lower Basin would take the shortage specified. There is no absolute protection of 1000 foot elevation so once we are at 600 KAF the shortage would not increase even if Mead was projected to be below 1000 feet at the end of the water year.

Lake Mead

1229

Full Pool
25.9 maf
Live Storage



Active Storage

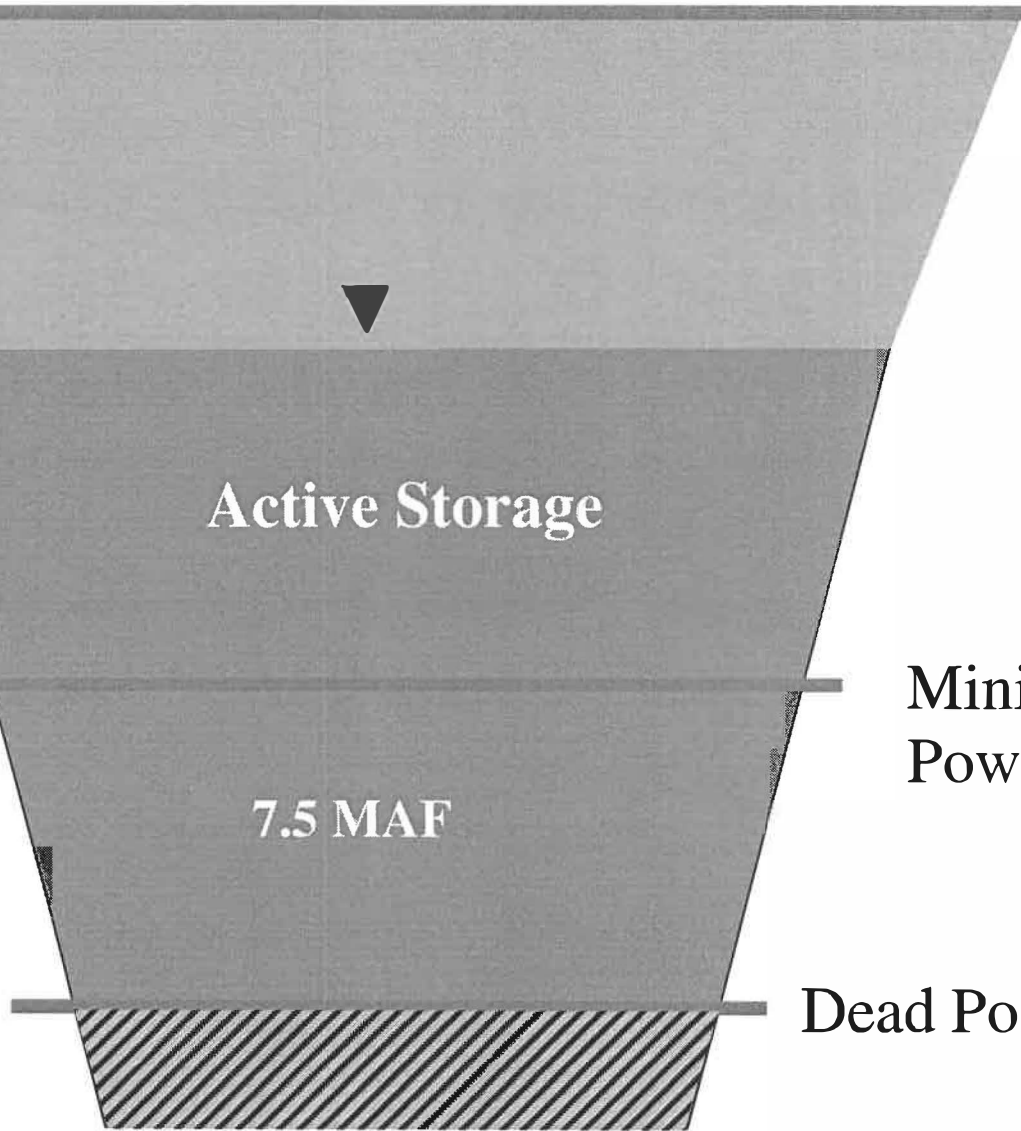
1050

Minimum
Power Pool

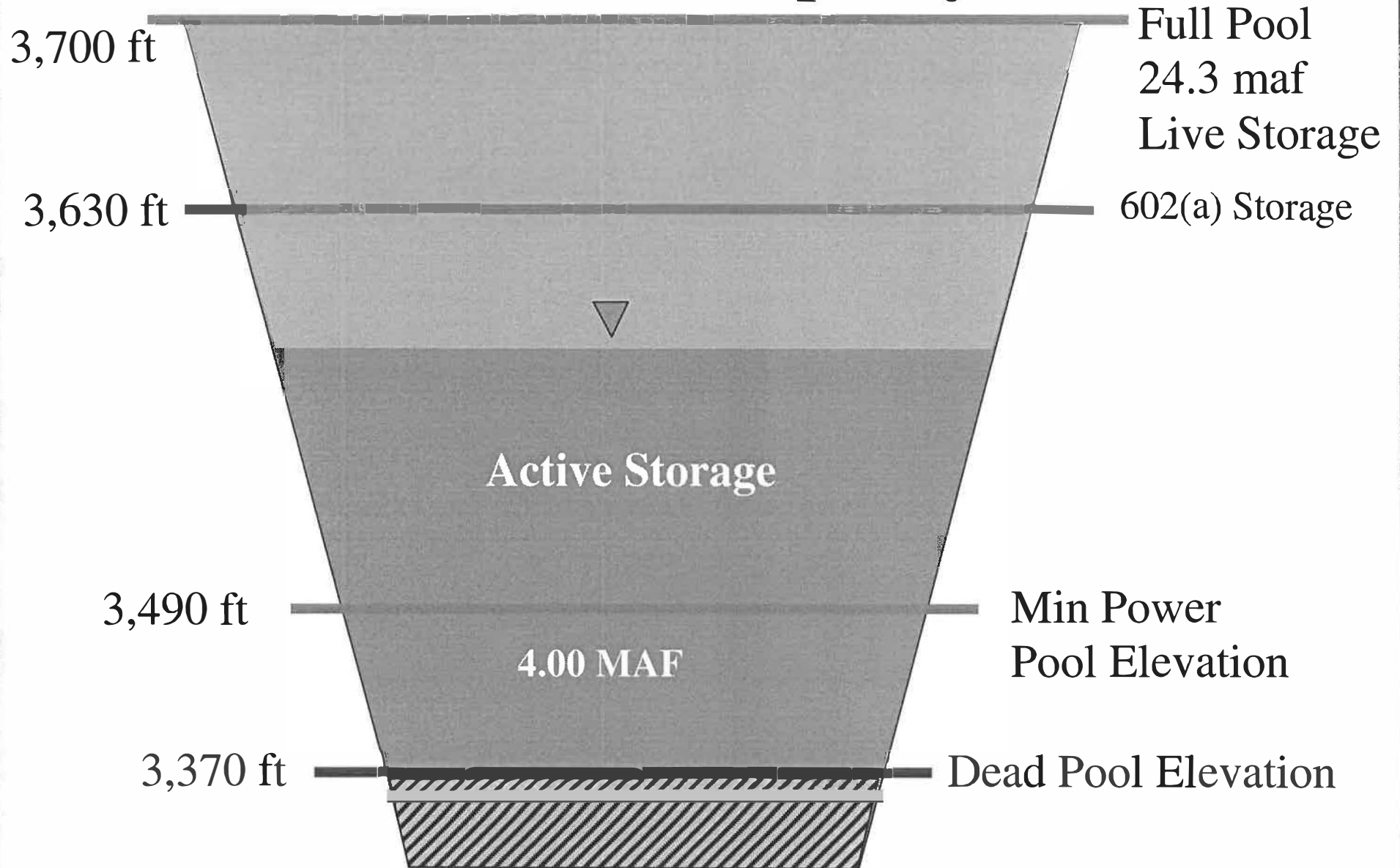
7.5 MAF

895

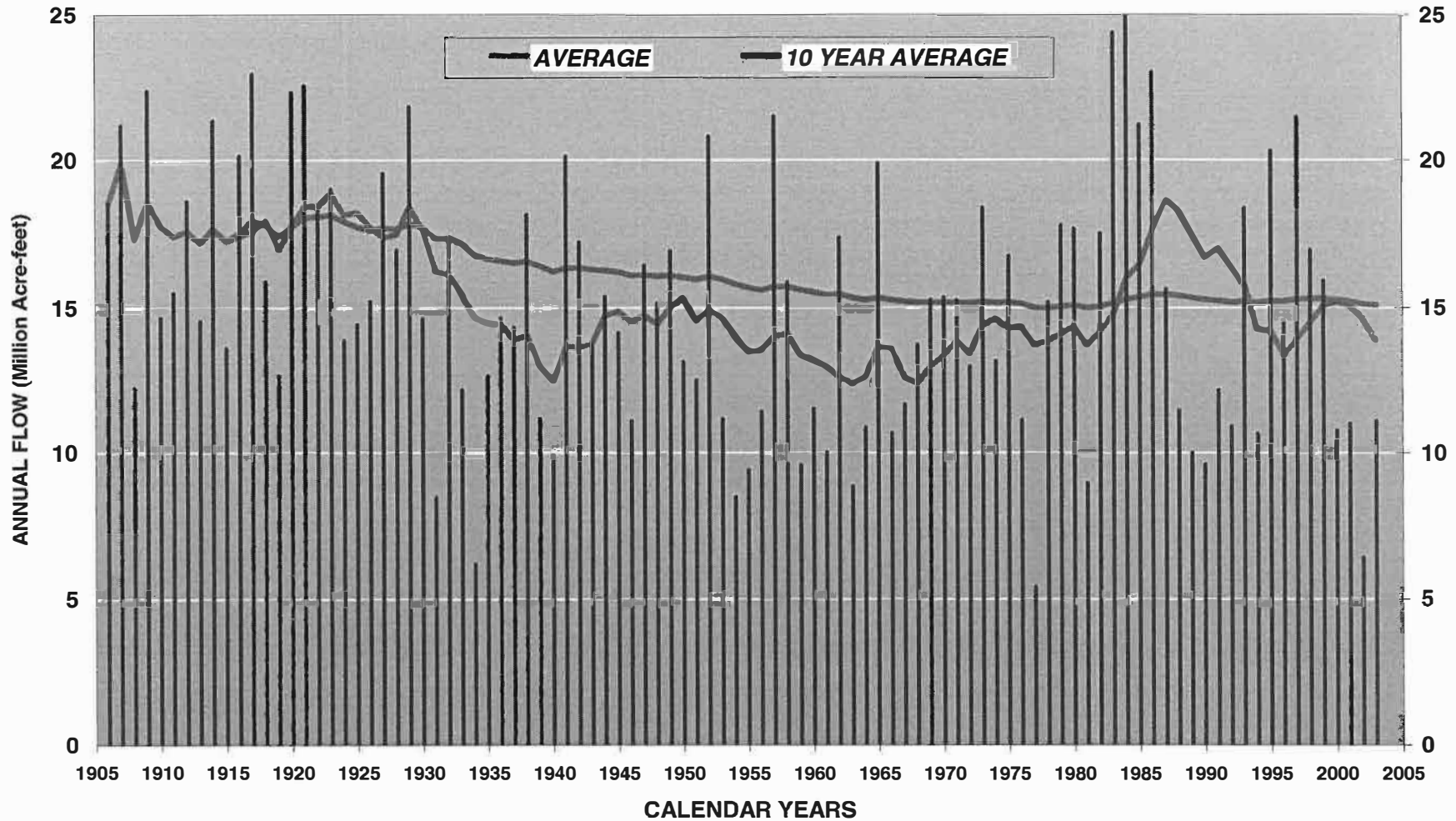
Dead Pool



Lake Powell Capacity

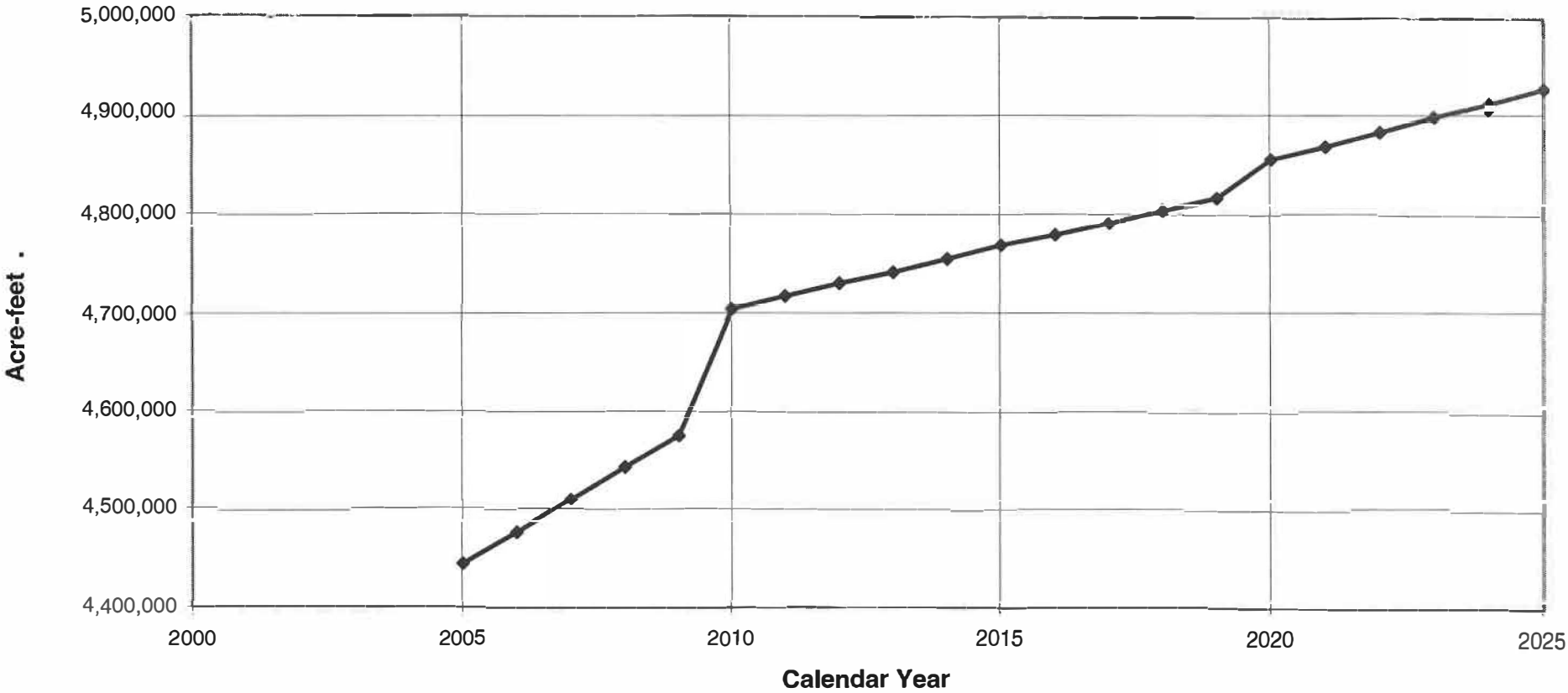


NATURAL FLOW
Colorado River at Lees Ferry, AZ
Calendar Year 1906-2003



1996 to 2003: Provisional data, subject to change.

Upper Basin Scheduled Depletions through 2025



Specific Shortage Runs

TierRel

Powell above 3630: Equalize or 8.5 **(8.2)**

Powell 3550-3630: 8.5 **(8.2)**

Powell 3524 -3550: 8.0 **(7.8)**

Powell below 3524: 7.5 **(7.8)**

The TierRel strategy sets the min release for Powell based on the projected EOWY Powell elevation. A sensitivity analysis of this strategy was made to compare the releases from Lake Powell.

DD2

Powell above 3630: Equalize or 8.5 **(8.2)**

Powell 3550-3630: 8.5 **(8.2)** or if Mead below 1050 balance contents with a Min/Max of 6.5/10 **(7/9)**

Powell below 3550: Balance contents with Min/Max of 6.5/10 **(7/9)**
(3550 ft = 7.6 MAF 1050 ft = 7.5 MAF)

The DD2 strategy focuses on the condition of Mead to determine how much water to release from Powell. When Mead is in poor shape, this strategy tries to balance the contents of Mead with the contents of Powell within a max Powell release constraint of 10 MAF. A sensitivity analysis of this strategy was made to compare the releases from Lake Powell

Hybrid 1 & (1a)

Powell above 3630: Equalize or 8.5 **(8.2)**

Powell 3550-3630: Balance contents if Mead < 1050 (Min/Max 6.5/10.0) **(Min/Max 7.0/9.0)**

If Mead > 1050, 8.5 **(8.2)**

Powell 3524-3550: 8.0 **(7.8)**

Powell below 3524: 7.5 **(7.8)**

Hybrid 1 is a run that combines features from the TierRel_rev1 strategy with the DD2_rev1. The idea behind this run is that when Powell is in fair condition but Mead is in poor condition, Powell will release more water to support Mead through balancing the contents between Powell and Mead with a min/max constraint of 6.5 to 10 MAF. But when Powell is in poor condition, releases from Powell will be lowered to a minimum release without consideration for Mead. Hybrid 1a is identical to Hybrid 1 with different minimum releases levels for Powell to test the sensitivity to Powell releases.

Hybrid 2 & 2a

Powell above 3630: Equalize or 8.5 **(8.2)**

Powell 3550-3630: Balance contents if Mead < 1050 (Min/Max 6.5/10.0) **(Min/Max 7.0/9.0)**

If Mead > 1050, 8.5 **(8.2)**

Powell 3524-3550: 7.5 **(7.8)**

Powell below 3524: Balance contents (Min 6.5) **(Min 7.0)**

Hybrid 2 is like Hybrid 1 with the exception that when the condition of Powell is very poor (below 3524) and loss of power production appears to be eminent, Powell is operated to balance contents between Mead and Powell with a Powell minimum release constraint of 6.5 MAF. Hybrid 2a is identical to Hybrid 2 with different minimum release levels for Powell to test the sensitivity to Powell release.

Powell 602a Storage

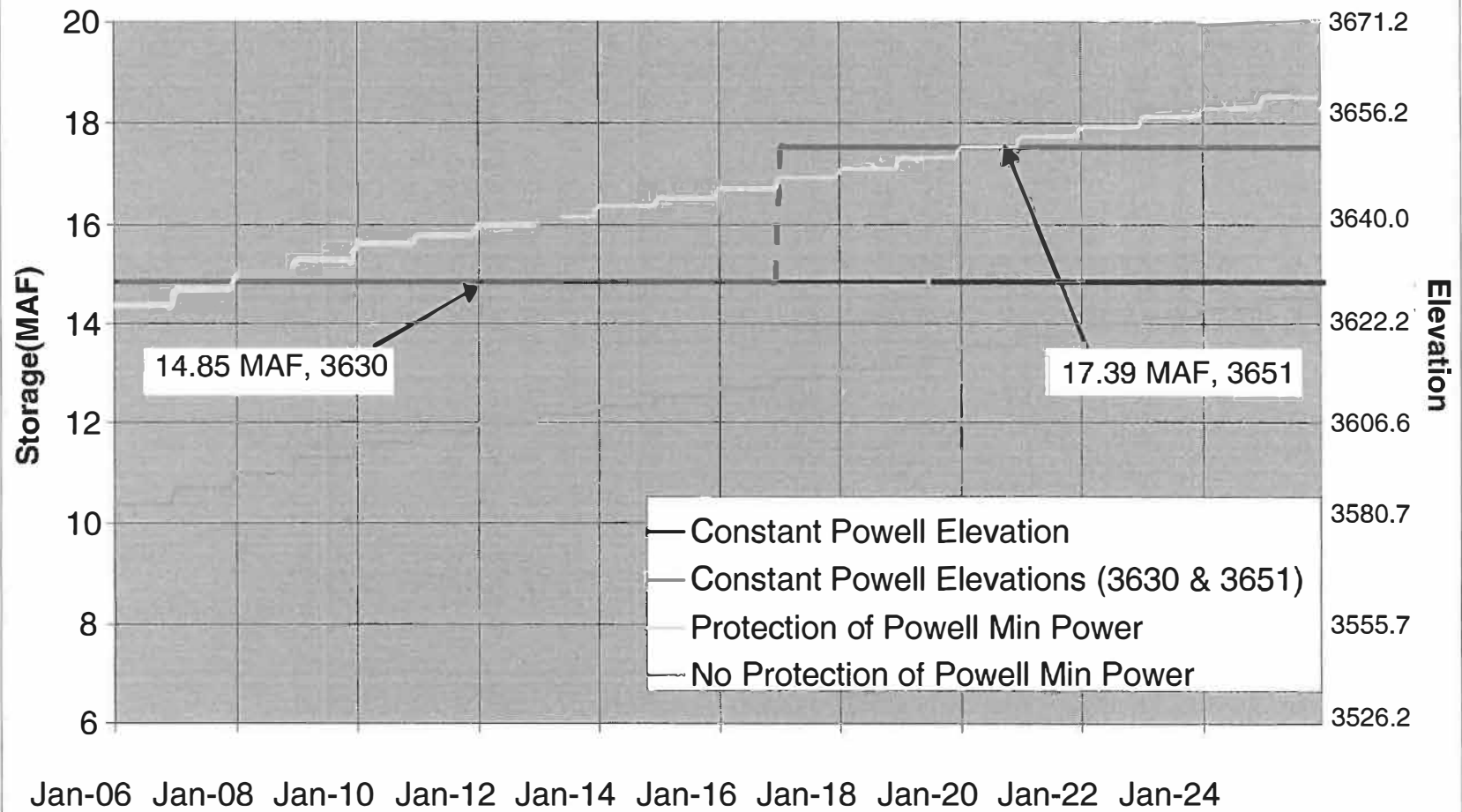


TABLE 2 Draft Plan of Operations 2006 Estimated Deliveries and Costs

		January	February	March	April	May	June	July	August	September	October	November	December	Total
A W B A - Recharge Sites :														
PHOENIX AMA :														
USF	GRUSP	6,700	6,700	6,700	6,700	6,700	0	0	0	6,700	6,700	3,100	0	50,000
	GRUSP Interstate													
	HIEROGLYPHIC	2,500	2,500	2,500	2,500	2,500	2,500	2,500	0	0	0	0	0	17,500
	HIEROGLYPHIC Interstate													
	AGUA FRIA	3,000	3,000	3,000	3,000	3,000	3,000	3,000	0	0	0	0	0	21,000
	Tonopah Desert	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	0	0
Tonopah Interstate														
<i>188,500</i>														
GSF	SRP	0	0	0	0	0	0	0	0	0	0	0	0	0
	CHANDLER HGTS ID	0	0	50	50	50	100	75	75	50	83	0	0	533
	MWD	0	0	0	0	0	0	0	0	0	0	0	0	0
	NEW MAGMA	0	2,000	0	0	5,000	1,000	3,000	6,000	6,500	6,000	3,500	2,500	35,500
	QUEEN CREEK	0	0	0	0	0	0	0	3,100	1,700	600	860	1,400	7,660
	RWCD	0	0	0	0	0	0	0	0	0	0	0	0	0
	TONOPAH ID	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>43,693</i>													
TOTAL INTRASTATE	22,200	24,200	22,250	22,250	27,250	16,600	18,575	19,175	24,950	23,383	7,460	3,900	232,193	
TOTAL INTERSTATE														
AMA TOTAL	22,200	24,200	22,250	22,250	27,250	16,600	18,575	19,175	24,950	23,383	7,460	3,900	232,193	
PINAL AMA :														
GSF	CAIDD	0	0	0	0	0	0	2,000	2,000	1,500	1,000	1,000	1,500	9,000
	CAIDD Interstate													
	HOHOKAM	103	482	5,600	2,625	0	0	0	0	690	0	0	0	9,500
	HOHOKAM Interstate													
	MSIDD	63	0	1,960	5,780	1,197	0	0	0	0	0	0	0	9,000
	MSIDD Interstate													
<i>27,500</i>														
TOTAL INTRASTATE	166	482	7,560	8,405	1,197	0	2,000	2,000	2,190	1,000	1,000	1,500	27,500	
TOTAL INTERSTATE														
AMA TOTAL	166	482	7,560	8,405	1,197	0	2,000	2,000	2,190	1,000	1,000	1,500	27,500	
TUCSON AMA:														
USF	AVRA VALLEY	500	500	500	600	600	0	0	600	600	600	300	300	5,100
	PIMA MINE RD	550	550	550	550	550	0	0	550	550	550	550	550	5,500
	PMR Interstate													
	LOWER SANTA CRUZ	2,000	2,000	2,000	2,000	1,000	0	0	0	0	0	0	0	9,000
	LSC Interstate													
	CLEARWATER	1,000	1,000	1,000	1,000	2,500	0	0	3,000	3,000	3,000	3,000	1,500	20,000
CLEARWATER Interstate														
<i>39,600</i>														
GSF	KIA FARMS (Avra)	0	0	0	0	0	0	0	0	0	0	0	0	0
	BKW	0	0	0	0	0	0	0	0	0	0	0	0	0
	KIA FARMS (Red Rock)	0	0	0	0	0	0	0	500	1,000	500	0	0	2,000
TOTAL INTRASTATE	4,050	4,050	4,050	4,150	4,650	0	0	4,650	5,150	4,650	3,850	2,350	41,600	
TOTAL INTERSTATE														
AMA TOTAL	4,050	4,050	4,050	4,150	4,650	0	0	4,650	5,150	4,650	3,850	2,350	41,600	
TOTAL INTRASTATE	26,416	28,732	33,860	34,805	33,097	16,600	20,575	25,825	32,290	29,033	12,310	7,750	301,293	
TOTAL INTERSTATE														
TOTAL	26,416	28,732	33,860	34,805	33,097	16,600	20,575	25,825	32,290	29,033	12,310	7,750	301,293	
Remaining CAP Capacity :	7,584	13,268	26,140	26,195	21,903	15,400	5,425	12,175	24,710	17,967	28,690	10,250	209,707	

PROJECTED

2006 PLAN OF OPERATION

	FUNDING		CREDITS ¹	
	AVAILABLE	EXPENDED	AMOUNT	LOCATION
Withdrawal Fee				
Phoenix AMA	\$2,500,000	\$2,500,000	27,000	Phoenix AMA
Tucson AMA	\$500,000	\$500,000	5,000	Tucson AMA
Pinal AMA	\$1,020,000	\$1,020,000	18,000	Pinal AMA
Four Cent Tax				
Maricopa County ²	\$34,600,000	\$17,337,035	188,000	Phoenix AMA
Pima County ²	\$5,050,000	\$3,426,200	34,000	Tucson AMA
Pinal County ²	\$420,000	\$410,000	7,000	Pinal AMA
Other				
General Fund	\$0	\$0	0	
(Phoenix AMA)		\$0	0	(Phoenix AMA)
(Tucson AMA)		\$0	0	(Tucson AMA)
(Pinal AMA)		\$0	0	(Pinal AMA)
California	(not applicable)			
Nevada				
TOTAL	\$44,090,000	\$25,193,235	279,000	

¹ Estimate base on 2004 loss calculation

² Funds available at CAWCD



LGIP Core-Mix

AZ State Pool 500

Objective Total return through strategic asset allocation.
 Duration Target 2 years
 Benchmark Merrill Lynch U.S. Domestic Master Index 1-5 Yrs (DVA0)

Current Yield	3.45%	Yield	4.22%
Current Duration	1.52	Merrill Lynch Duration	2.33
Total Asset	~\$25 million	Merrill Lynch Credit	AA1/AA2

Core-Mix

Asset Allocation

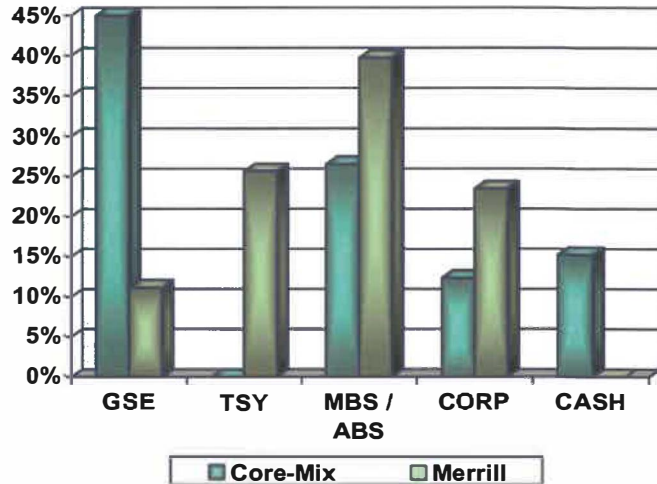
GSE	45.91%
TSY	0.00%
MBS / ABS	26.52%
CORP	12.33%
CASH	15.24%
TOTAL	100.00%

Merrill Lynch Index

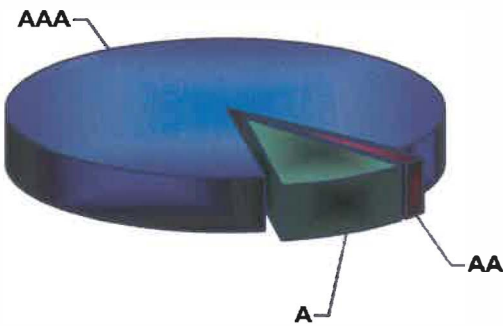
Asset Allocation

GSE	11.16%
TSY	25.62%
MBS / ABS	39.74%
CORP	23.48%
CASH	0.00%
TOTAL	100.00%

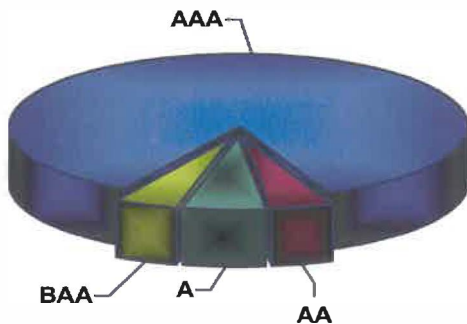
Asset Allocation Comparison



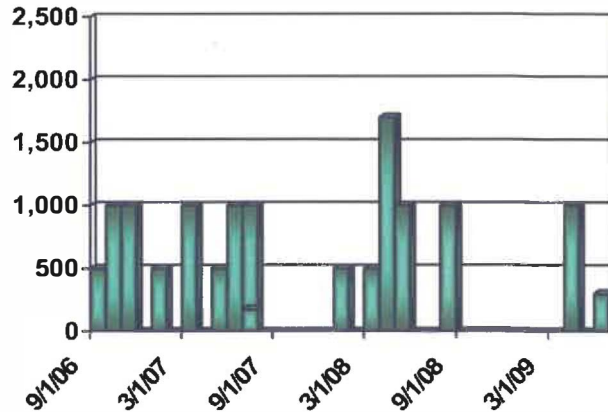
Core-Mix Credit Quality



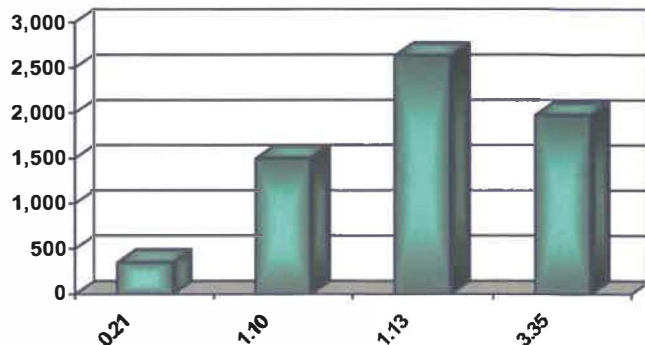
Merrill Credit Quality

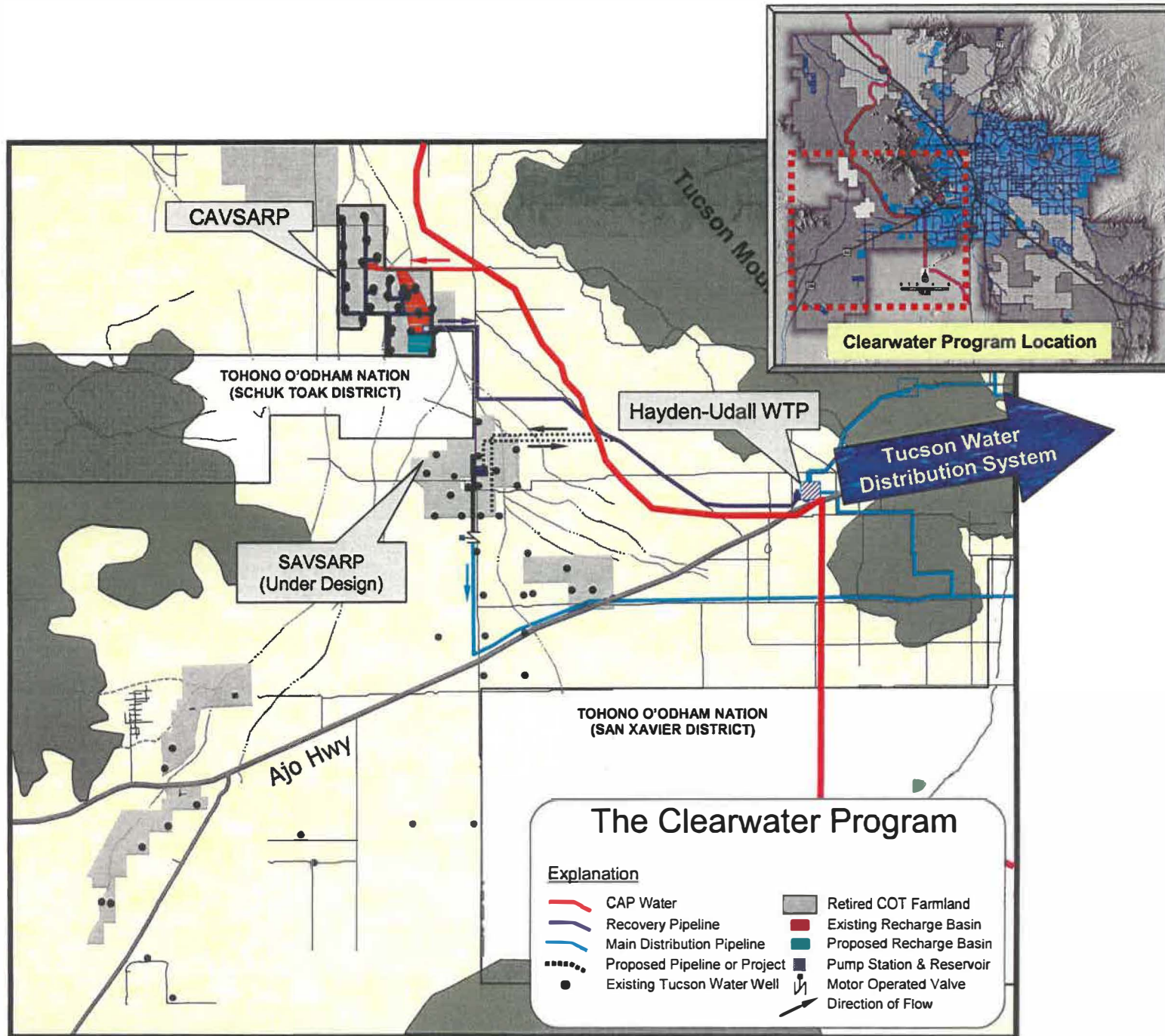


Core-Mix Maturity Range (ex. Mtge)

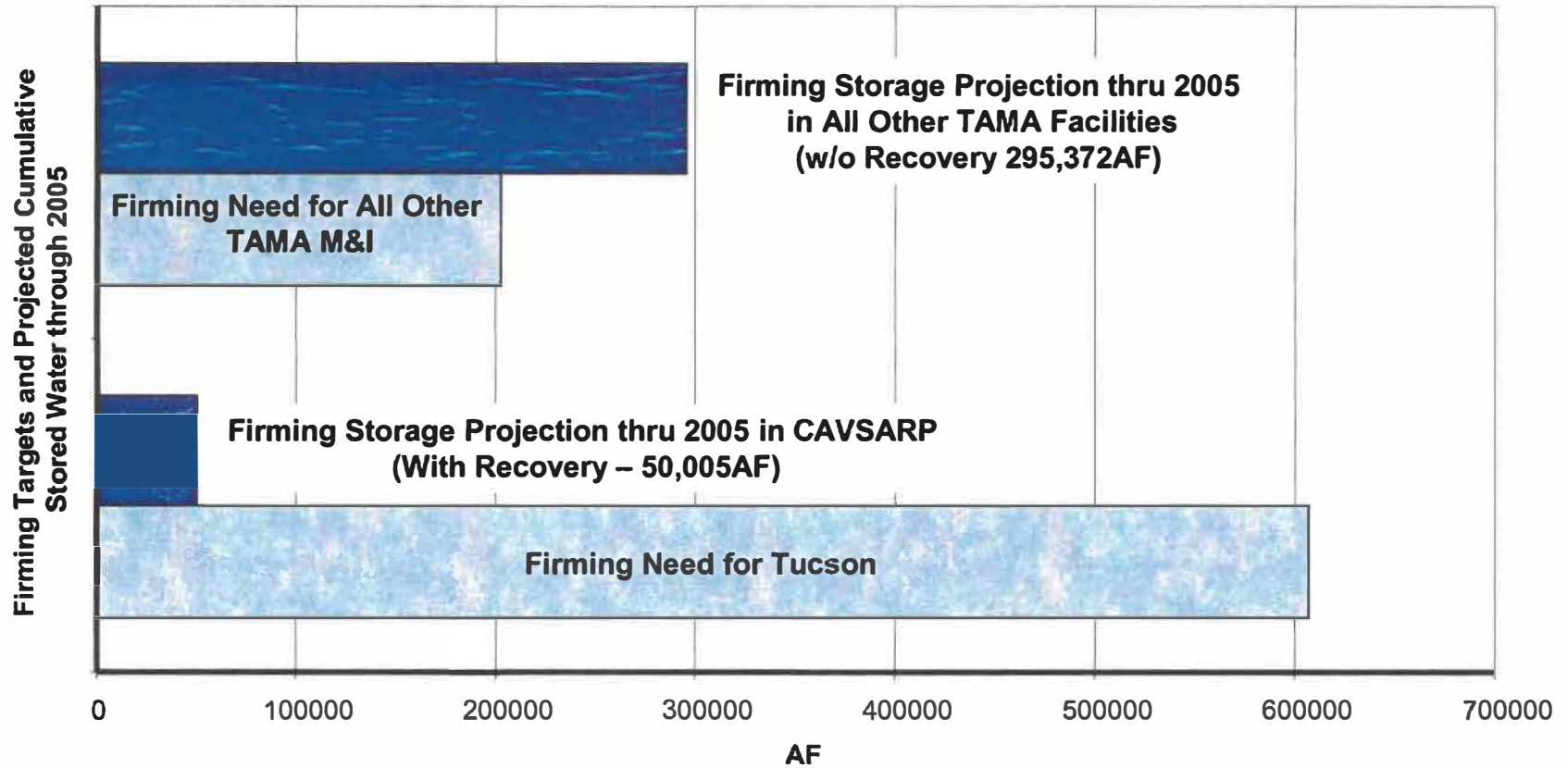


Core-Mix Mtge Avg Life





TAMA M&I Firming Targets and Water Storage by Facility With and W/O Recovery



TAMA M&I Firming Target = 810,000AF
 Proportional Firming Need for Tucson = 607,500 (75%)
 Proportional Firming Need for Other TAMA M&I = 202,500 (25%)