# BOARD POLICY

**Approved by the CAWCD Board**
**December 5, 2002**

## SUPPLEMENTAL POLICY FOR MARKETING OF EXCESS WATER FOR NON-INDIAN AGRICULTURAL USE - 2004 THROUGH 2030

### BACKGROUND

The CAWCD Policy for Marketing of Excess Water for Non-Indian Agricultural Use - 2004 through 2030 was adopted by the CAP Board on May 18, 2000. Item D of the Policy states: "A program for determining the allocation of the NIA Pool among eligible users and for determining the eligibility to participate as a groundwater savings facility will be established." This policy is intended to complete those actions identified in Item D of the existing Policy. The accompanying report entitled Program for Allocation of the Ag Pool and Associated Conditions for Participation as a Groundwater Savings Facility provides additional background concerning the issues and process leading the development of this Policy.

### POLICY

Ag Pool

- One single ag pool of 400,000 acre-feet (declining to 225,000 acre-feet over time and ending in 2030)
  - Ag users that do not wish to participate will not be required to do so
  - In any year, water will be offered to pool participants in accordance with the allocation process discussed in the attached Program
  - Any water not scheduled by a pool participant will be re-offered in the following order:
    - To other pool participants in the same AMA
    - To all other pool participants

Groundwater Savings Facility Eligibility

- ADWR's initial review has determined that the CAP ag pool would be a reasonably available alternative source of water for GSF permit holders, therefore, no credit would be available for water stored at CAP GSFs unless and until the ag pool water offered to the GSF permit holder has been scheduled for delivery to that irrigation district (ag pool scheduled deliveries may consist of Colorado River water or water recovered by or for CAWCD pursuant to banking an exchange arrangement).

Incentive Recharge Water Availability

- The CAP Board will determine each year whether to offer incentive recharge water and, if so, how much water to offer in this category. If incentive recharge is made available and the purchaser intends to deliver such water to a GSF facility, priority for the water will first be offered to those purchasers who are using a GSF partner that is using the ag pool that was allocated to that ag entity.

Attachment: Program for Allocation of the Ag Pool and Associated Conditions for Participation as a Groundwater Savings Facility

**Program for Allocation of the Ag Pool and Associated Conditions for Participation as a Groundwater Savings Facility**

Background/Summary

After conducting several meetings in the summer and fall of 2002 with the interested Ag and M&I entities and conducting a Board work study session on September 19, 2002, the staff of CAWCD and ADWR believe we have developed a program that has consensus support. Several difficult issues were addressed. The primary issues were:

1) CAP and ADWR staff would like to see a reasonable amount of the Ag Pool used in the Phoenix and Tucson AMAs so that CAP water is used to replace groundwater pumping without any recharge credits earned.

2) Some Ag entities, primarily in the Phoenix and Tucson AMAs, would prefer not to use Ag Pool water and rely on Groundwater Savings Facility (GSF) partners as a lower cost supply of CAP water.

3) Some M&I entities, primarily in the Phoenix and Tucson AMAs, were concerned that their GSF partner would ask them to share in the cost of Ag Pool water thereby lowering the storage credits earned and raising the cost of each credit.

4) Some Ag entities, primarily in the Pinal AMA and the Harquahala INA, would like a larger allocation of Ag Pool water. Their current and historic use of CAP Ag Pool water is greater than the proposed allocation.

All of the interested parties support the general goals of 1) using CAP water to replace Ag groundwater pumping; 2) encouraging Ag use to support a significant component of interest free federal debt; 3) keeping Ag as a vital part of the central Arizona economy; and 4) using CAP water to help ensure full use of Arizona's entitlement of Colorado River water.
The financial analysis performed by most of the M&I entities to evaluate the impact of this program was based on the recent history of a plentiful supply of excess CAP water that CAP has made available at an "incentive" rate that is a partially subsidized incremental cost rate. CAP created this program to help ensure that all Colorado River water available to CAP that was not scheduled for direct use would be stored underground and available for future use. The Ag Pool Program, the incentive recharge pricing, the growth of the AWBA and growing needs for direct M&I use have increased CAP water use such that we are using all available water in these years of "normal" water supply. CAP staff believes that the justification for "incentive recharge" pricing for users other than those that are firming existing water allocations (the AWBA or CAGRD replenishment reserve) will only continue for 1-3 years. In other words, we will not need a subsidized rate in order to have sufficient demand for all available Colorado River water. If the low cost "incentive" rate becomes unnecessary and unavailable due to competing demands for water, the anticipated financial conditions for earning recharge credits would not exist for the M&I entities in any case.

The Policy adopted in May 2000 included a proposed allocation of the Ag Pool. That proposal has been updated and modified. A draft table is included with this Program report. The Ag users in the Pinal AMA have a history of significant CAP water use and have a limited opportunity to participate as a GSF. The recommended initial allocation remains at 1.3 af/acre. The Ag users in the Phoenix AMA include those with a consistent history of CAP Ag pool use and some that have been occasional users of CAP Ag water and/or have used CAP water as a GSF partner. The Phoenix AMA Ag users have more opportunities to be a GSF than those in the Pinal AMA. Those users with consistent history Ag pool water use are given an initial allocation of 1.0 af/acre; the others are allocated .5af/acre. The Tucson AMA entities listed in the initial allocation are not currently eligible to receive Ag water due to the acreage limitation/ownership restriction of the Reclamation Reform Act (RRA). The GRIC Settlement Act is expected to exempt the CAP Ag users from RRA but that will not happen for 3 to 5 years. Consequently, the Tucson AMA allocation will be redistributed to others until conditions change.

As part of the formal process for relinquishment of their Ag subcontracts, some of the irrigation districts may allow individual landowners the option of retaining a portion of the subcontract water. We expect this percentage to be fairly small. However, if it does happen, that irrigation district would have the eligible acreage base used to determine their Ag Pool entitlement reduced by the amount of acres retaining an entitlement to the Ag subcontract water.

(over)

Recommendation

After carefully considering the input from interested M&I and Ag entities and from the Board work study session, staff from CAP and ADWR have developed a simplified proposal that 1) provides an initial allocation offer to all Ag users; 2) effectively assures all Ag Pool water will be used; and 3) recognizes ADWR's role in deciding if CAP Ag water is "reasonably available" to determine if GSF long-term storage credits should be granted.

Other documents supplemental to this Program report are the recommended policy and the suggested initial offer of an Ag Pool allocation to all Ag entities in the CAP service area who have used CAP Ag water and/or participated as a GSF (FICO, in the Tucson AMA, has not yet taken any CAP water). As you may note, the pool size shown is slightly over 400,000 af but we believe some of the estimates for eligible acres are too high. Staff would expect to fine-tune the allocation to match a total pool of 400,000 af.

Attachments

2000 Excess Water Marketing for Non-Indian Ag 2004 Through 2030

1993 Proposed Program for Repayment Adjustment & 1996 Update

# Ag Pool Allocation (Initial Offer - 2004)

| | Eligible Acres | Acre-feet per Acre | Initial Volume |
|---|---|---|---|
| **Pinal AMA** | | | |
| Central Arizona | 87,102 | 1.3 | 113,233 |
| Hohokam | 27,588 | 1.3 | 35,864 |
| Maricopa-Stanfield | 86,617 | 1.3 | 112,602 |
| San Carlos | 25,884 | 1.3 | 33,649 |
| Subtotal | | | 295,348 |
| **Phoenix AMA** | | | |
| Chandler Heights | 542 | 1.0 | 542 |
| #Maricopa Water District | 8,000 | 0.5 | 4,000 |
| New Magma | 27,325 | 1.0 | 27,325 |
| Queen Creek | 18,112 | 1.0 | 18,112 |
| #Roosevelt WCD | 15,000 | 0.5 | 7,500 |
| SRP | 7,600 | 0.5 | 3,800 |
| #San Tan | 1,400 | 1.0 | 1,400 |
| Tonopah | 3,437 | 1.0 | 3,437 |
| Subtotal | | | 66,116 |
| **Tucson AMA** | | | |
| *#BKW | 5,000 | 0.5 | 2,500 |
| *#Cortaro-Marana | 11,500 | 0.5 | 5,750 |
| *FICO | 6,194 | 0.5 | 3,097 |
| *#Kai | 2,000 | 0.5 | 1,000 |
| Subtotal | | | 12,347 |
| **Outside AMA** | | | |
| Harquahala | 32,537 | 1.0 | 32,537 |
| Total | 365,838 | | 406,348 |

**Notes:** * RRA ineligible until passage of federal legislation
# Acreage figures need to be updated

Adopted 12/5/2002

# BOARD POLICY

**Approved by the CAWCD Board**
**May 18, 2000**

## CAWCD POLICY FOR MARKETING OF EXCESS WATER FOR NON-INDIAN AGRICULTURE USE - 2004 THROUGH 2030

### BACKGROUND

The Repayment Settlement Stipulation provides that CAWCD may, at its discretion, establish programs for the sale of Excess Water in various categories and with different charges. It specifically provides for a category reserved exclusively for Non-Indian Agriculture (NIA).

As part of the overall water allocation resolution and to allow the GRIC settlement to proceed, the NIA subcontractors are being required to give up claims to long-term NIA water allocations. To convince them to do so, they must have an assurance of a reasonable supply of reasonably priced Excess Water beginning in 2004 when the current program expires and continuing through 2030. Staff analysis of future water supply, expected demands for Excess Water, and monthly delivery demands give assurance that CAWCD can commit to the highest priority of Excess Water and delivery capacity through 2030 for NIA use.

The attached discussion documents describe an exclusive category of NIA Excess Water beginning at 400,000 af with stepped reductions to 225,000 af ending in 2030. The price would be only the energy component of costs. There are certain restrictions that require use of some NIA water to be eligible for participation as a groundwater savings facility with a partner that is purchasing incentive priced recharge water.

### POLICY

It is the policy of CAWCD to promote the continued use of Excess CAP Water by Non-Indian Agriculture (NIA). This policy establishes a program that provides:

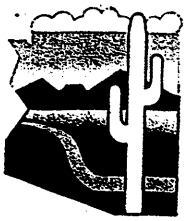
A. As long as Excess Water is available, CAWCD shall reserve and make available for exclusively NIA use at least 400,000 af/year for the period 2004 through 2016, 300,000 af/year for the period 2017 through 2023, and 225,000 af/year for the period 2024 through 2030. This use shall be the highest priority use for Excess Water.

B. The charge for NIA use Excess Water will be equal to the Pumping Energy Charge established for delivery of water to long-term contractors and subcontractors.

C. The right to monthly delivery capacity for scheduled NIA water shall be equal to the rights of long-term contractors and subcontractors.

D. A program for determining the allocation of the NIA pool among eligible users and for determining the eligibility to participate as a groundwater savings facility will be established.

**NOTE:** The definitions for Excess Water, Pumping Energy Charge, and long-term contractors and subcontractors are the definitions provided in the Repayment Settlement Stipulation. O:\board manual\policy marketing excess wtr non indian ag 2004-2030
1993 Proposed Program for Repayment Admustment & 1996 Update



# Central Arizona Water Conservation District

DATE: October 7, 1993

TO: Board of Directors

FROM: Tom Clark

SUBJECT: Proposed Program for Repayment Adjustment

A month ago staff provided a preliminary proposal regarding initiation of altered arrangements for the repayment of CAWCD's CAP debt and establishment of water rates,to assist in payment of operation and maintenance costs. Ten days ago we offered a revised version of the initial proposal, and with this memorandum offer a third version reflecting further evolution of the original proposal. This version reflects our consideration of the comments offered at the public meetings of the Board and is presented with the recommendation that the Board of Directors adopt this proposal as the foundation of the CAWCD repayment program and the basis for establishing O&M charges.

The program contains two major elements: 1) it protects the interest-free designation of a major portion of the CAP costs allocated to water supply by encouraging agricultural use of CAP water by making such water available to agricultural users at prices which are less than cost, and 2) it minimizes rate shock and uncertainty for M&I users by establishing a forward pricing policy predicated on utilizing interest savings and CAWCD reserves toward these ends.

The above elements are the same as those presented to you in the previous two proposals. As in the last proposal, the plan does not utilize additional taxing authority, it avoids direct assumption of irrigation district debt by CAWCD, and it is consistent with Board indications about the levels of reserves deemed desirable. Implicit in this proposal as with the previous proposals is the necessity to maintain the pricing program as it would initially be structured.

Primary differences are in the forward pricing schedules and in the priorities in the agricultural program. The supported prices in the agricultural water are somewhat higher, and the M&I prices have been altered to provide additional short-term control on rate shock. Additionally, priorities have been rearranged so that within the group of agricultural users who are not taking water under the terms of now existing subcontracts, the lower-priced water will have a second priority rather than a first priority.

RECOMMENDATIONS

Staff recommends that the CAWCD Board of Directors formally adopt the following outline as the conceptual basis for restructuring the CAP repayment process.

1. Each agricultural subcontractor would be given the opportunity to terminate or amend its CAP subcontract to reduce its percentage entitlement to CAP agricultural water. The reduced entitlement would apply to both annual agricultural deliveries and conversions to M&I use. No other variances would be offered. A cutoff date of December 15, 1993, would be established for subcontractors to request a change in their contract provisions or status.

2. The Arizona Department of Water Resources would be asked to finalize prior to December 1, 1993, recommendations for reallocation or utilization of all CAP water for which no contract or subcontract has been signed.

3. The Secretary of the Interior would be asked to finalize CAP allocations including identification of the amount of CAP water which the United States wishes to reserve. The Secretary will be expected to commit to participating in all costs of using or reserving that amount of CAP water. If the Secretary elects not to expedite final allocation, CAWCD will assume than any water which is not under contract has been reserved by the Secretary in accordance with his previous declarations. CAWCD will expect the CAP cost allocation to reflect capital cost assignments to appropriate non-reimbursable functions associated with the Secretary's declarations and will establish OM&R charges on the basis of the Secretary retaining effective control of the water. CAWCD will, in effect, proceed under the provisions of the master repayment contract.

4. All entitlement to CAP agricultural water supplies retained by CAP subcontractors or the Secretary of the Interior will be subject to a take-or-pay obligation for fixed OM&R costs.

5. CAWCD will create and maintain a new sales process, or market, for CAP agricultural water. Pricing in this market will be controlled in a manner to produce the water use, revenue streams and cost savings required by the plan. A major assumption is that CAWCD currently has the authority and the contractual right to take control of and manage an agricultural pool as suggested. The validity of that assumption will be proved or disproved early in the process should the proposal be adopted.

Designations and Conditions. The overall agricultural pool

will be divided into two major categories:

Category A. This will be agricultural water delivered pursuant to existing contracts or subcontracts which have been modified only in respect to the percentage entitlement of the subcontractor. Subcontractors will be required to pay fixed OM&R charges on all water available for delivery under their subcontracts based on a deliverable water supply of 1,425,000 acre-feet minus, in each year, any shortages declared by the Secretary of the Interior and the amount of M&I and Indian water scheduled for delivery.

Category B. This will be agricultural water sold and delivered without benefit of a long-term agricultural water service subcontract. This category will consist of three pools.

Pool 1. Pool 1 will consist of 200,000 acre-feet with a lesser priority than Category A water. It will be available through calendar year 1999 at established prices reflected in Table I ($27 to $32 per acre-foot). The schedule of prices shown in Table I for the years 2000 through 2011 are estimates only. The CAWCD Board of Directors will review forward prices annually and set a firm schedule for the succeeding five years. Scheduled prices will not be guaranteed but will reflect the considered goals and the intent of the Board. The information available about the CAP water supply suggests that Pool 1 water will be available for most of the repayment period in the full amount designated for the pool. Any entity which executed a CAP subcontract and returned that executed contract to the United States prior to October 1, 1993, and which is otherwise eligible to receive agricultural water service will be eligible to purchase Pool 1 water. In case of oversubscription, entities will be prorated a portion of the 200,000 acre-feet based on eligible acres associated with original CAP subcontracts.

Pool 2. Pool 2 will consist of 200,000 acre-feet with a lesser priority than Pool 1. It will be available through year 1999 at established prices reflected in Table 1 ($17 to $22 per acre-foot). The CAWCD Board of Directors will review forward pricing annually and set a firm schedule for the succeeding five years. Scheduled prices and water amounts will not be guaranteed but will reflect the considered goals and the intent of the Board. The information available about the CAP water supply suggests that the availability of Pool 2 water will diminish significantly with time. This condition and the intent to curtail the life of this emergency program are reflected in the termination of the pool at the end of

the year 2003. Participation in this pool will be limited to those CAP subcontractors who relinquish all or a part of their validated water service subcontracts between October 7, 1993, and January 1, 1994. In case of oversubscription, entities will be prorated a portion of the 200,000 acre-feet based on eligible acres associated with the original CAP subcontracts. Any portion of the pool which is not sold to those eligible to purchase Pool 2 water in any year shall be made available first to Pool 1 until exhausted and then to Pool 3.

Pool 3. Pool 3 will consist of any agricultural water remaining after sales from Pools 1 and 2. It will be available a the project water supply permits through the year 2010 unless the Board of Directors determines that this agricultural incentive program is no longer beneficial to the District. Pool 3 water will be priced no less than pumping energy costs plus a capital charge to be determined each year. Entities otherwise eligible to receive CAP water service (without reference to a validated CAP water service subcontract) will be eligible to buy pool 3 water.

6. In order to facilitate M&I water supply planning, the combined water rate charged the M&I subcontractors will be established by the CAWCD Board of Directors through the year 1999. The CAWCD Board of Directors will review forward prices annually and set a schedule for the succeeding five years. To the extent that annual charges did not cover annual payments required, the shortfall would be made up from CAWCD reserve funds.

7. All water not covered by contract, subcontract, or reservation by the United States will accrue to CAWCD to sell through a market facilitated by CAWCD, to utilize in meeting its groundwater replenishment district responsibilities, or to otherwise sell or manage in consultation with ADWR.

8. Spot market sales to Arizona users other than non-Indian agricultural users will be on the same cost basis as CAWCD will identify for use in pricing CAP water used for replenishment district purposes. Specific prices for individual users could vary as determined on a case-by-case basis by the Board of Directors.

9. CAWCD will not directly assume or be a principal in the restructuring of the private or public debt of the subcontractors.

# USE OF AG WATER IN POOLS ESTABLISHED UNDER CAWCD'S PROGRAM FOR REPAYMENT ADJUSTMENT

**(Adopted by the Board of Directors at its October 7, 1993 meeting)**

The percent of participation by each agricultural irrigation district in pools 1 and 2 is arrived at by identifying the original CAP eligible acres for each district as declared by the Bureau of Reclamation, minus the amount that would have been delivered to eligible acres in the district's service area that have been converted to M&I use or have otherwise been removed from irrigation as determined by the Bureau. Each district's eligible acres is then divided by the sum of all districts' acres participating in each pool, and it is that percentage when multiplied by the amount of water in each pool (200,000 acre-feet) that gives the maximum amount of water that is available to each district from each pool (see Table 1).

Each district that relinquishes all or a part of its original entitlement between October 7, 1993 and January 1, 1994, may participate in pool 2, and each district that executed a CAP subcontract prior to October 1, 1993, may participate in pool 1 up to its full percentage per each pool as identified in Table 1.

There are 10 districts that qualify for participation in pool 1 and seven districts that qualify for participation in pool 2. It is expected that those districts which may draw from both pool 1 and pool 2 will draw first from pool 2. If a district in pool 2 does not take its full supply, then any remaining amount will be made available to the remaining districts in pool 2 based on the percentage of their eligible acres to the sum of the remaining districts' acres.

If a district in pool 1 does not take all of its percentage allocated to it, then that amount will be made available to the remaining districts in pool 1 based on the percentage of their eligible acres to the sum of the remaining districts' acres. If all water of pool 2 is not allocated to pool 2 participants, it will be made available to pool 1 participants at pool 1 prices.

If, after all requests are met for pool 1 participants, water is still available under pool 1, then that water will be made available to agricultural nonsubcontractors at a price to be set by the Board in that calendar year. If the commitment is to sell 400,000 acre-feet of ag water and if the participants in pools 1 and 2 took only 350,000 acre-feet of water in any year, the Board may want to consider selling the remaining 50,000 acre-feet at pool 1 prices or, if demand would be sufficient, to sell the 50,000 acre-feet at pool 3 prices.

# TABLE I

## Analysis of Alternative Proposed Programs for CAP Repayment Adjustments

### 3-Tier Ag Pricing

Alternative 9 - No Tax Increase • Ag Prices: $27, $17, $41 • M&I Capital Increase by $9/AF/Year to Maximum of $54 • Interest Savings from Ag Participation Reduces M&I and Indian OM&R Charges • Annual Ag Price Increases by $1/year Through 2011 and 2%/year Thereafter.

| | Constant Assumptions | | | | | | Zero Ag Deliveries | | | Assumed Proposal Results | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | M&I Deliveries (KAF) | Indian Deliveries (KAF) | Total Fixed OM&R ($1000) | Take-or-Pay Charge on Subcontracted but Unused Ag Water ($/AF) | M&I Capital Charge ($/Alloc AF) | Ad Valorem Tax Rate (¢/$100) | January Fund Balance ($1000) | M&I Delivery Price (Energy + OMR) ($/af) | Indian Delivery Price (Energy + OMR) ($/af) | Pool 1 Non-Indian Ag Deliveries (KAF) | Pool 1 Non-Indian Ag Price ($/af) | Pool 2 Non-Indian Ag Deliveries (KAF) | Pool 2 Non-Indian Ag Price ($/af) | Pool 3 Non-Indian Ag Deliveries (KAF) | Pool 3 Non-Indian Ag Price ($/af) | Interest Savings from Ag Use Applied to OM&R ($1000) | January Fund Balance ($1000) | M&I Delivery Price (Energy + OMR) ($/af) | Indian Delivery Price (Energy + OMR) ($/af) |
| 1994 | 275 | 75 | 31,100 | $22 | $10.50 | 10 | 163,000 | $60 | $89 | 200 | $27 | 200 | $17 | 50 | $41 | (6,400) | 163,000 | $60 | $66 |
| 1995 | 289 | 75 | 33,696 | $24 | $21.00 | 10 | 191,203 | $61 | $122 | 200 | $28 | 200 | $18 | 0 | -- | 7,961 | 182,820 | $61 | $77 |
| 1996 | 307 | 75 | 36,295 | $26 | $30.00 | 10 | 181,666 | $65 | $124 | 200 | $29 | 200 | $19 | 0 | -- | 4,628 | 177,482 | $63 | $80 |
| 1997 | 315 | 75 | 38,197 | $27 | $39.00 | 10 | 173,251 | $69 | $128 | 200 | $30 | 200 | $20 | 0 | -- | 5,693 | 169,538 | $67 | $82 |
| 1998 | 319 | 75 | 39,402 | $28 | $48.00 | 10 | 160,501 | $74 | $131 | 200 | $31 | 200 | $21 | 0 | -- | 8,735 | 158,215 | $71 | $85 |
| 1999 | 277 | 75 | 40,510 | $29 | $48.00 | 10 | 140,210 | $86 | $145 | 200 | $32 | 200 | $22 | 0 | -- | 8,797 | 142,246 | $82 | $89 |
| 2000 | 296 | 75 | 41,921 | $30 | $54.00 | 10 | 121,412 | $93 | $145 | 200 | $33 | 200 | $23 | 0 | -- | 8,852 | 127,174 | $87 | $91 |
| 2001 | 316 | 75 | 43,336 | $31 | $54.00 | 10 | 107,671 | $106 | $143 | 200 | $34 | 200 | $24 | 0 | -- | 8,901 | 116,921 | $91 | $91 |
| 2002 | 337 | 75 | 44,754 | $32 | $54.00 | 10 | 97,794 | $120 | $142 | 200 | $35 | 200 | $25 | 0 | -- | 8,944 | 107,895 | $93 | $93 |
| 2003 | 357 | 75 | 46,175 | $33 | $54.00 | 10 | 92,653 | $130 | $142 | 200 | $36 | 200 | $26 | 0 | -- | 8,979 | 99,449 | $94 | $94 |
| 2004 | 378 | 75 | 47,801 | $34 | $54.00 | 10 | 91,831 | $130 | $142 | 200 | $37 | 0 | -- | 0 | -- | 12,385 | 91,340 | $104 | $112 |
| 2005 | 346 | 141 | 49,330 | $35 | $54.00 | 10 | 90,220 | $129 | $139 | 200 | $38 | 0 | -- | 0 | -- | 12,383 | 90,026 | $104 | $112 |
| 2006 | 366 | 154 | 50,862 | $36 | $54.00 | 10 | 90,618 | $127 | $137 | 200 | $39 | 0 | -- | 0 | -- | 12,391 | 90,352 | $103 | $112 |
| 2007 | 387 | 167 | 52,399 | $37 | $54.00 | 10 | 92,146 | $125 | $135 | 200 | $40 | 0 | -- | 0 | -- | 12,395 | 91,611 | $103 | $112 |
| 2008 | 398 | 181 | 54,040 | $38 | $54.00 | 10 | 94,660 | $124 | $135 | 200 | $41 | 0 | -- | 0 | -- | 12,395 | 94,136 | $103 | $113 |
| 2009 | 411 | 194 | 55,585 | $39 | $54.00 | 10 | 94,168 | $123 | $134 | 200 | $42 | 0 | -- | 0 | -- | 12,392 | 93,666 | $103 | $113 |
| 2010 | 424 | 207 | 57,335 | $41 | $54.00 | 10 | 94,435 | $122 | $134 | 200 | $43 | 0 | -- | 0 | -- | 12,384 | 94,004 | $103 | $114 |
| 2011 | 438 | 221 | 59,289 | $42 | $54.00 | 10 | 95,356 | $121 | $135 | 200 | $44 | 0 | -- | 0 | -- | 12,373 | 95,096 | $103 | $115 |

Assumptions:

- Capital charge to M&I is $9/AF from Jan-Jun 1994; $12/AF from Jul-Dec 1994.
- 11% of non-Indian ag allocations is reserved but unused (fixed OM&R is paid under take-or-pay provisions for this unused water).
- 21 percent of the total reimbursable project cost is allocated to power.
- CAWCD fund balance must stay above $90 million.
- Increase in total M&I price per acre-foot (OM&R + Capital) not to exceed 20% of previous year's price.

DRAFT

*Approved by CAWCD Board on Oct. 7, 1993*

# TABLE II

## CAWCD Repayment Obligation and Savings With 3-Tier Ag Pricing

| Year | CAWCD Repayment Obligation with No Ag ($1000) | Potential Proposal Results | | | | | |
|---|---|---|---|---|---|---|---|
| | | Ag Deliveries (KAF) | CAWCD Repayment Obligation ($1000) | Repayment Savings Over Zero Ag ($1000) | Cost to Deliver to Ag at Lower Price ($1000) | Cost to Meet Contract Obligations to Indians ($1000) | Remaining Repayment Savings ($1000) |
| 1994 | 0 | 450 | 900 | (900) | 5,500 | 1,725 | (8,125) |
| 1995 | 46,133 | 400 | 32,684 | 13,449 | 5,488 | 3,375 | 4,586 |
| 1996 | 54,288 | 400 | 44,279 | 10,009 | 5,382 | 3,300 | 1,328 |
| 1997 | 63,779 | 400 | 52,805 | 10,974 | 5,281 | 3,450 | 2,243 |
| 1998 | 76,893 | 400 | 62,970 | 13,922 | 5,187 | 3,450 | 5,285 |
| 1999 | 76,291 | 400 | 62,395 | 13,896 | 5,099 | 4,200 | 4,597 |
| 2000 | 75,690 | 400 | 61,821 | 13,869 | 5,017 | 4,050 | 4,802 |
| 2001 | 78,868 | 400 | 65,026 | 13,842 | 4,941 | 3,900 | 5,001 |
| 2002 | 78,266 | 400 | 64,451 | 13,815 | 4,872 | 3,675 | 5,269 |
| 2003 | 77,539 | 400 | 63,750 | 13,789 | 4,809 | 3,600 | 5,379 |
| 2004 | 78,431 | 200 | 64,669 | 13,762 | 1,377 | 2,250 | 10,135 |
| 2005 | 77,703 | 200 | 63,968 | 13,735 | 1,352 | 3,797 | 8,586 |
| 2006 | 76,921 | 200 | 63,199 | 13,722 | 1,331 | 3,849 | 8,542 |
| 2007 | 76,139 | 200 | 62,430 | 13,709 | 1,314 | 3,847 | 8,547 |
| 2008 | 79,137 | 200 | 65,442 | 13,695 | 1,300 | 3,973 | 8,422 |
| 2009 | 78,355 | 200 | 64,673 | 13,682 | 1,290 | 4,072 | 8,319 |
| 2010 | 77,446 | 200 | 63,778 | 13,668 | 1,284 | 4,145 | 8,239 |
| 2011 | 78,158 | 200 | 64,503 | 13,655 | 1,282 | 4,411 | 7,962 |
| 2046 | 15,555 | 200 | 14,980 | 575 | 575 | 7,601 | (7,601) |
| NPV - 1994-2011 | 686,633 | | 560,629 | 126,004 | 42,011 | 36,878 | 47,115 |
| NPV - 1994-2046 | 1,023,560 | | 838,476 | 185,083 | 49,459 | 61,132 | 74,492 |

Assumptions:

- 200 KAF/Yr will be delivered to ag from year 2012 through the end of the repayment period under this alternative.
- Total reimbursable project cost is $1.8 billion.
- 21 percent of the total reimbursable project cost is allocated to power.
- Net present value calculated with an interest rate of 6.35%.
- CAWCD will complete repayment of the project in 2046.
- Pool 1 water priced at $27/AF, Pool 2 at $17/AF, and Pool 3 at $41/AF in 1994, escalated $1/year through 2011 and 2%/year after 2011.

# BOARD AGENDA BRIEF

*Information Only*

**Date:** November 21, 1996

**Subject:** Update and Review of Target Pricing Analysis and CAWCD's Long Term Financial Position

**From:** John Newman, Assistant General Manager

Staff has updated the target pricing analysis which formed the basis for the program for repayment adjustments approved by the Board in October 1993. There are several changes in the overall assumptions that were made as follows:

1. The amount of power revenues anticipated to be derived from the sale of excess Navajo energy and capacity was underestimated. The original analysis included about $19 million annually; whereas, the SRP contract provides for about $22 million annually. In addition, these revenues accrued one year earlier than anticipated in 1993.

2. The levels of fixed OM&R costs are lower than were anticipated in 1993. Hiring levels have not been realized and the District's budgets are lower.

3. The maximum delivery volume for Indian water was increased from 447,000 to 466,000 acre-feet to reflect 19,000 acre-feet of non-Indian agricultural water which was acquired by the United States from the Harquahala Valley Irrigation District and converted to Indian priority for use in future water rights settlements.

4. CAWCD has delivered more water (both M&I and Ag) than was anticipated in 1993, and with the Arizona Water Banking Authority (AWBA) in operation, future projections of M&I deliveries are higher.

5. CAWCD has funded the replacement/repair of the Agua Fria and Centennial siphons.

Attached is a table that shows the 1993 analysis as compared to the 1996 analysis out to the year 2010. The projected reserve fund balance under the original analysis showed the District's reserves reaching the $90 million level in about the year 2005. The current analysis shows the reserves continually growing through the end of the study period. The current analysis uses the same annual repayment obligation as in the original analysis and also assumes the same water delivery prices for M&I, agriculture and Indian water as was approved in the original study. The updated analysis also assumes that the AWBA deliveries will always bring total annual water deliveries to 1.415 MAF. The numbers shown for 1994, 1995, and 1996 under the updated analysis are actuals or projected actuals.

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Attachment

## Original 1993 Analysis

| Year | M&I (kaf) | Ag (kaf) | Fed (kaf) | Fixed OM&R ($1000) | Siphon Costs ($1000) | Reserve Balance ($1000) |
|---|---|---|---|---|---|---|
| 1994 | 275 | 400 | 75 | 31,100 | 0 | 163,000 |
| 1995 | 289 | 400 | 75 | 33,696 | 0 | 182,820 |
| 1996 | 307 | 400 | 75 | 36,295 | 0 | 177,482 |
| 1997 | 315 | 400 | 75 | 38,197 | 0 | 169,538 |
| 1998 | 319 | 400 | 75 | 39,402 | 0 | 158,215 |
| 1999 | 277 | 400 | 75 | 40,510 | 0 | 142,246 |
| 2000 | 296 | 400 | 75 | 41,921 | 0 | 127,174 |
| 2001 | 316 | 400 | 75 | 43,336 | 0 | 116,921 |
| 2002 | 337 | 400 | 75 | 44,754 | 0 | 107,895 |
| 2003 | 357 | 400 | 75 | 46,175 | 0 | 99,449 |
| 2004 | 378 | 200 | 75 | 47,801 | 0 | 91,340 |
| 2005 | 346 | 200 | 141 | 49,330 | 0 | 90,026 |
| 2006 | 366 | 200 | 154 | 50,862 | 0 | 90,352 |
| 2007 | 387 | 200 | 167 | 52,399 | 0 | 91,611 |
| 2008 | 398 | 200 | 181 | 54,040 | 0 | 94,136 |
| 2009 | 411 | 200 | 194 | 55,585 | 0 | 93,666 |
| 2010 | 424 | 200 | 207 | 57,335 | 0 | 94,004 |
| Average | 341 | 300 | 117 | | | |

## Updated 1996 Analysis

| M&I (kaf) | AWBA (kaf) | Ag (kaf) | Fed (kaf) | Fixed OM&R ($1000) | Siphon Costs ($1000) | Reserve Balance ($1000) |
|---|---|---|---|---|---|---|
| **216** | **0** | **513** | **80** | **26,907** | **0** | **160,895** |
| **171** | **174** | **536** | **76** | **30,918** | **80** | **178,162** |
| **175** | **269** | **578** | **75** | **31,846** | **21,800** | **194,774** |
| 181 | 547 | 400 | 75 | 32,801 | 6,700 | 195,479 |
| 248 | 692 | 400 | 75 | 33,785 | 0 | 178,146 |
| 269 | 671 | 400 | 75 | 34,798 | 0 | 192,413 |
| 291 | 649 | 400 | 75 | 35,842 | 0 | 211,079 |
| 298 | 642 | 400 | 75 | 36,918 | 0 | 237,001 |
| 306 | 634 | 400 | 75 | 38,025 | 0 | 266,520 |
| 314 | 626 | 400 | 75 | 39,166 | 0 | 299,039 |
| 322 | 818 | 200 | 75 | 40,341 | 0 | 334,539 |
| 329 | 792 | 200 | 94 | 41,551 | 0 | 387,961 |
| 348 | 755 | 200 | 112 | 42,798 | 0 | |
| 366 | 718 | 200 | 131 | 44,082 | 0 | |
| 384 | 681 | 200 | 150 | 45,404 | 0 | |
| 403 | 644 | 200 | 168 | 46,766 | 0 | |
| 421 | 607 | 200 | 187 | 48,169 | 0 | |
| 297 | 364.1 | 340 | 98 | | | |