



MEMORANDUM

Date: March 16, 2010

To: The Honorable Chairman and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator

A handwritten signature in black ink, appearing to be "CHH", is written over the printed name "C.H. Huckelberry".

Re: **Central Arizona Project (CAP) Unused Allocations in Calendar Year 2009**

Attached please find a memorandum regarding unused 2009 CAP allocations. I find it incredible that a significant percentage of CAP water subcontracted to water providers in Pima County goes unused. In fact, if the information is accurate, 33 percent of our CAP allocation for municipal and industrial purposes goes unused. This ought to be the focus of interest, not conservation effluent pool commitments made more than a decade ago.

Based on the information provided, of the 10 municipal and industrial water providers entitled to CAP water in Pima County, only two fully utilized their CAP entitlement in 2009. Two other entities purchased a portion of the excess CAP water that was returned to the pool, and recharged it in Pima County. However, one was Rosemont Mine, which has their self interest in mind. The other is the Arizona Water Banking Authority, which is tasked with increasing long-term storage credits for the state as a whole.

The attached information includes estimated costs for a locally controlled wholesaler to purchase the entire excess CAP water allocation on an annual bases, and then sell credits to local water providers as needed. Cost estimates range from \$18 to \$21 in additional property taxes per year for the owner of an average valued home in Pima County.

CHH/dr

c: John Bernal, Deputy County Administrator - Public Works
Mike Gritzuk, Director, Regional Wastewater Management
Nicole Fyffe, Executive Assistant to the County Administrator
Kathy Chavez, Water Policy Manager, Regional Wastewater Reclamation
Craig Horn, Financial Projects Coordinator, Budget Division, Finance and Risk Management
Melaney Seacat, County Project Coordinator, City/County Water and Wastewater Study



MEMORANDUM

Date: March 16, 2010

To: C.H. Huckelberry
County Administrator

From: 
Nicole Fyffe,
Executive Assistant to the
County Administrator

Re: **Cost to Average Household to Acquire Excess CAP for Pima County Region**

Background

Per your request, Kathy Chavez, Craig Horn and I developed the following memorandum. One of the 19 goals developed as part of Phase II of the City/County Water and Wastewater Infrastructure, Supply, and Planning Study, is to "Work collaboratively to acquire new water supplies for reliability." This goal is the first of five goals under the Water Supply category. This section of the report calls for local water providers to participate in the ADD water process (Acquire, Develop, and Deliver); a process being coordinated by the Central Arizona Water Conservation District (CAWCD) to expand and diversify the water resources available to Central Arizona Project (CAP) customers. What was not addressed in the report was the fact that most CAP customers in Pima County have not been taking their full CAP allocations, also known as CAP subcontract entitlements.

This memorandum addresses the following questions:

1. What is the total quantity of CAP allocated to water providers in Pima County?
2. How much did these water providers take of their allocations?
3. Who did not take their full allocation and by how much?
4. What is the cost associated with taking full allocation?
5. What would the average household cost be if a local water banking entity acquired the unused allocation and spread the cost across the Pima County property tax base?

CAP Allocations In Pima County

Table 1 lists CAP Allocations in Pima County for water providers, specifically referred to in CAP lingo as "CAP Non-Indian Municipal and Industrial Subcontracts". Subcontract water is one class of CAP water. There are 10 of these subcontracts in Pima County as listed in first column. The second column lists the number of acre-feet of water that each subcontract is entitled to. The third column lists the number of acre-feet of water that each subcontract purchased out of their total entitlement in 2009.

Incentive water was available in 2009, and is listed in the forth column. Its purpose is described below. It is not available for 2010. The fifth column shows how much CAP water

was unused or not purchased and delivered, (including incentive water) for each subcontract/water provider.

Table 1
CAP Allocations in Pima County

CAP Non-Indian Municipal and Industrial Subcontracts	Entitlement (1)	CY2009 Subcontract Water @ \$108/af (2)	CY2009 Incentive Water @ \$82/af (3)	Unused Entitlement
Avra Water Co-Op	808	-	-	808
Community Water of Green Valley	2,858	-	-	2,858
Flowing Wells Irrigation District	4,354	1,400	-	2,954
Green Valley DWID	1,900	525	-	1,375
Town of Marana ^[4]	47	1,528	-	(1,481)
Metro Water	13,460	8,858	1,500	3,102
Town of Oro Valley	10,305	2,500	1,500	6,305
Spanish Trail Water Co.	3,037	-	-	3,037
City of Tucson	144,172	102,638	-	41,534
Vail Water Co.	1,857	-	1,857	-
Total	182,798	117,449	4,857	60,492

^[1] As of October 5, 2009 <http://www.cap-az.com/includes/media/docs/SubcontractStatusReport-10-05-09.pdf>

^[2] M&I Deliveries at \$108/af <http://www.cap-az.com/includes/docs/deliveries/2009%20Monthly%20Delivery%20Rep.pdf>

^[3] Incentive water is unused water returned to the excess pool and re-distributed and recharged by CAWCD.

^[4] Marana is in the process of acquiring 1,481 af/y of Flowing Wells' entitlement

Incentive Water Versus Subcontract Water

Subcontract water that is not taken by water providers is returned to an excess pool that is distributed by Central Arizona Water Conservation District (CAWCD) on an annual basis. An important distinction between subcontract water and excess water is that subcontract water is a long-term source of water that can be applied toward the water providers' demonstration of assure water supply. Excess water is not and the amount of excess water available varies from year to year. In order to encourage use of excess water so Arizona could show it was taking its full CAP entitlement, CAWCD created an incentive category of excess water that

C.H. Huckelberry, County Administrator

Cost to Average Household to Acquire Excess CAP for Pima County Region

March 16, 2010

Page 3

was available to those with a CAP subcontract. The incentive was a lower rate (\$82 per acre-foot versus \$108 per acre-foot). CAWCD redistributed it and it was recharged in either underground storage facilities (recharge basins) or in groundwater savings facilities (farms where CAP water is used in lieu of groundwater). For 2009, an entity with a CAP subcontract could take incentive water and recharge it to accrue long-term storage credits.

Because more entities in Arizona are now taking more of their CAP entitlement, CAWCD is eliminating the subsidy for incentive water starting this year-2010. There will be no more incentive water (lower rate), but there may still be excess subcontract water that is returned to the CAP excess pool. Others order the excess water on a year-by-year basis. This is how Rosemont is acquiring (and storing) CAP water.

Metro Water and Oro Valley took both subcontract water and incentive water in 2009. To meet assured water supply rules, Arizona Department of Water Resources (ADWR) makes them take some of their subcontract water (higher rate-\$108/af). This water is recharged underground and recovered in the same year (short term storage). Metro and Oro Valley also took incentive water (lower rate-\$82/af). This water is also recharged, but on a long term basis, and Metro and Oro Valley accrue long-term storage credits that they plan to recover (pump) at some point in the future.

Vail took all of their CAP entitlement water as incentive water because it's cheaper. They are recharging all of it and accruing long-term storage credits that they will use later.

The approved 2010 rates are \$118/af for subcontract water and \$133/af for excess water (no more incentive water).

A Third of CAP Water for Region was Unpurchased by Water Providers with CAP Subcontracts in 2009

According to the table, over 60,000 acre-feet of water was not purchased by water providers in Pima County in 2009. This amounts to 33 percent of the total 183,000 acre-feet of water available to these water providers. Only the Vail Water Company and the Town of Marana took their full entitlements of CAP water in 2009, both of which were small amounts compared to other water providers. If water is not taken, it is returned to the excess pool and is available for purchase by others that don't have CAP subcontracts.

Only a Portion of Excess CAP Water Purchased and Recharged in Pima County

Just because the subcontractors did not take their full allocations, does not mean the entire amount of unused CAP subcontract water for Pima County did not get delivered or recharged in Pima County. Table 2 shows who purchased excess CAP water in 2009 in the Tucson Active Management Area (TAMA) in 2009, how much, and where recharge or storage of the water occurred. The Arizona Water Banking Authority and Rosemont Copper were the two purchasers of this excess CAP water. But they did not purchase the entire balance of excess

water (42,108 acre-feet compared to total balance of 60,492 acre-feet), leaving 18,384 acre-feet unused.

**Table 2
Purchases of Excess – CAP Water 2009**

Excess CAP Water in Zone	Acre-feet	Location of Recharge/Storage
Arizona Water Banking Authority	27,108	1,893 at Kai Farms Groundwater Saving Facility 3,001 at Avra Valley Recharge Project 6,074 at Lower Santa Cruz Recharge Project 16 at Pima Mine Road Recharge Project 4,525 at Southern Avra Valley Storage and Recovery Project 11,599 at Central Avra Valley Storage and Recovery Project
Rosemont Copper	15,000	at Lower Santa Cruz Recharge Project
Total Excess in TAMA	42,108	

The Arizona Water Banking Authority (AWBA) was established in 1996 to increase utilization of the state's Colorado River entitlement and develop long-term storage credits for the state. The AWBA stores or "banks" unused Colorado River water. It will be used in times of shortage to firm (or secure) water supplies for Arizona. These water supplies help to benefit municipal and industrial users and communities along the Colorado River, fulfill the water management objectives of the state, store water for use as part of water rights settlement agreements among Indian communities, and assist Nevada and California through interstate water banking. For instance, if the Secretary of the Interior were to declare a shortage on the Colorado River and CAP water were not delivered, water providers could purchase the AWBA's long term storage credits. Alternately, if there was an unplanned long-term outage on the CAP canal and CAP water could not be delivered, water providers could purchase the AWBA's long term storage credits. The credits can only be recovered from within the Active Management Area (AMA) in which they were stored. Through these mechanisms, the AWBA aids in ensuring long-term water supplies for Arizona.

Rosemont Copper is purchasing the excess CAP water with the intent of offsetting the depletion of groundwater proposed to be pumped for mining operations in the Green Valley/Sahuarita area. In reality, recharging water in Marana does nothing to offset impacts to groundwater upstream. In addition, Rosemont accrues credits that they could sell in the future to water providers that could recover the water in areas of ground water dependent ecosystems, or in areas that impact other non-mining entities, thus creating the potential for future negative impacts.

C.H. Huckelberry, County Administrator

Cost to Average Household to Acquire Excess CAP for Pima County Region

March 16, 2010

Page 5

Cost to Purchase Full Subcontract Entitlement of CAP Water

It would cost \$21.6 million for calendar year 2010 for each of the 10 subcontractors/water providers to take their full allocations, \$7.1 million more than if they just purchased the same portion of the allocation that they purchased in 2009. This is based on the 2010 rate of \$118 an acre-foot. This does not include the cost of recharge for those that don't own their own recharge facilities, which would add another \$24 an acre-foot. For example, Tucson Water and Metro have their own facilities. Metro recently bought the Avra Valley Recharge Facility.

But what if for 2010 a non-subcontractor purchased all of the excess 60,492 acre-feet of CAP water instead and recharged in Pima County? First, they would have to pay for it as "excess" CAP water at the excess rate of \$133 an acre-foot, instead of the subcontract rate of \$118 an acre-foot. The cost would be \$8 million to purchase the water ($\$133 \times 60,492 \text{ af} = \$8,045,436$).

Second, if the entity is recharging CAP water in one of CAWCD's recharge facilities they have to add the \$24 per acre-foot recharge fee. This would add another \$1.5 million, for a total cost of \$9.5 million ($\$133 + \$24 = \$157 \times 60,492 \text{ af} = \$9,497,244$).

\$18 - \$21 Annual Cost to Owner of Average Valued Home if Spread the Cost Across Tax Base Versus Rate Payers

If there is agreement that it is a benefit to the region as a whole to purchase and recharge the maximum amount of CAP water available annually, what is the best way to pay to keep this unused CAP entitlement water in Pima County? If it was in the best interest of the water providers, they would already be taking their full allocation. But they are not, either because of the cost to purchase the water, or the cost to recharge the water, or both, or capacity issues at recharge facilities. For the purpose of this exercise, let's assume it is the cost to purchase and recharge the water. So in effect, the water providers are unwilling to raise the rates of their ratepayers to purchase and recharge their full share of CAP water.

What if instead a local entity, as opposed to a state-wide entity like the Arizona Water Banking Authority, purchased all of the excess CAP water in the TAMA, recharged it in Pima County, and allocated the cost across property tax payers as opposed to ratepayers? This is the typical method used by the County to fund parks, libraries and other public facilities – through general obligation bonding where the debt is paid off through the levy of a property tax. Prior to County bond elections the County typically provides an estimated cost to the average household if voters authorize the bond program. The same costs can be calculated to allocate 60,492 acre-feet of CAP water across the Pima County tax base.

Without recharge costs, it is estimated that the cost to the owner of an owner-occupied residence with a full cash value of \$187,449 (the average taxable value of a home in Pima County), would be \$17.86 a year.

C.H. Huckelberry, County Administrator

Cost to Average Household to Acquire Excess CAP for Pima County Region

March 16, 2010

Page 6

Including recharge costs, it is estimated that the cost to the owner of an owner-occupied residence with a full cash value of \$187,449 (the average taxable value of a home in Pima County), would be \$21.09 a year.

This does nothing to correct the pump/recharge disconnect. That would require additional capital costs to extend lines and build more recharge facilities.

Summary

We say it is important to work collaboratively to acquire new water supplies for reliability and make sure that we are maximizing our options for the future. But, as a region we are not even purchasing the full amount of CAP water that we are entitled to purchase. If the issue is the cost increases that would be necessary to charge rate payers of local water providers, and if the region sees this as a public benefit, not just a private rate-payer benefit, then one possible solution could be to spread the cost across the tax base instead. Based on 2009 usage, and 2010 rates, the cost to an owner of an average valued home would be between \$18 and \$21 a year. A local wholesaler would be needed to purchase the excess water and then sell credits to local water providers as needed. This could be similar to the model proposed in the early 1990s known as the Santa Cruz Valley Water District, of which the City of Tucson and County had veto authority and that failed due to veto by the City. Additional analysis would of course be needed to assess the costs, benefits, and feasibility of such a proposal.

NF/dr

- c: John Bernal, Deputy County Administrator - Public Works
- Mike Gritzuk, Director, Regional Wastewater Management
- Kathy Chavez, Water Policy Manager, Regional Wastewater Reclamation
- Craig Horn, Financial Projects Coordinator, Budget Division, Finance and Risk Management
- Melaney Seacat, County Project Coordinator, City/County Water and Wastewater Study