



CITY OF  
TUCSON

TUCSON WATER  
DEPARTMENT

July 3, 2013

Jeff Tannler, Statewide AMA Director  
Arizona Department of Water Resources  
3550 N. Central Avenue  
Phoenix, Arizona 85012

Re: Enhanced Aquifer Management Strategy

Dear Mr. Tannler:

I have discussed with Jeff Biggs and Wally Wilson the conversation they had with you at the last Safe Yield Task Force meeting on June 17, 2013. I would like to relay to you Tucson Water's specific comments regarding the proposed "Enhanced Aquifer Management" strategy for the coming 4<sup>th</sup> Management Plan.

Tucson Water (TW) agrees that there are areas within the Tucson AMA (TAMA) that are experiencing water level declines without the support of recharge. Through wheeling agreements currently in action and those in the planning stages, TW is working regionally with our water provider partners to alleviate the groundwater pumping in many of these problem areas. Understandably, the current and future wheeling of renewable supplies will depend on improved infrastructure to deliver more water. These costs for infrastructure improvements needed to wheel CAP supplies are now the responsibility of our wheeling partners. This is difficult for smaller utilities that have far smaller customer bases to fund the needed projects; however, progress is being made on several fronts. Some of these are:

1. The Pascua Yaqui Tribe is storing their CAP allocation in Tucson Water's Clearwater facilities and then delivering to the reservation through existing delivery pipelines,
2. Vail Water Company is building needed infrastructure within their service area to receive wheeled CAP water and deliver to its customers,
3. Metro Water is planning necessary improvements to their southwest service area and Avra Valley Recharge Project to enable delivery of CAP supplies to their customers,
4. Oro Valley has planned capital projects to expand transmission capacity for wheeled CAP water further north into their service area.



To: Jeff Tannler  
Subject: Enhanced Aquifer Management Strategy  
Page: 2

Together, these projects will off-set over 15,000 AF/y of groundwater pumping. However, the proposed cuts to the aquifer could limit future investments in infrastructure by other water provider's to wheel stored water.

TW recognizes impacts to these and other CAP subcontractors including the Tohono O'odham tribe (TO). The Bureau of Reclamation (BOR) will be affected in their duty to manage the Tribes water resources. Adding these proposed cuts to the aquifer will place additional constraints on the BOR's ability to effectively manage these resources through recharge in the TAMA.

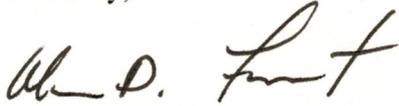
Effluent generated at Metropolitan Water Reclamation Facilities has and will continue to be used in the TAMA to off-set groundwater pumping. There has been a strong effort by all regional partners who have effluent entitlements (Effluent IGA's within Pima County) to maximize the use of this resource. TW is currently constructing an expansion of our Sweetwater recharge facility and a new recharge facility is being constructed to capture and recharge more of our effluent entitlement within the next two to three years. This will account for up to 7,000 AF/y of additional recharge into the regional aquifer that otherwise was susceptible to flowing out of the TAMA. At this time, Oro Valley is fully utilizing its entire effluent entitlement for turf irrigation that would otherwise require groundwater pumping. In addition, TW will soon be wheeling a portion of Metro Water District's effluent entitlement for turf irrigation.

With the efforts to fully utilize CAP allocations and effluent entitlements in the TAMA, additional loses due to enhanced cuts to the aquifer for recharged CAP water could be a disincentive for importing CAP supplies to the region. TW has invested in excess of \$250 million in infrastructure at recharge facilities to expedite the full utilization of its 144,172 AF/y of Colorado River allocation. The additional costs as a result of proposed cuts to the aquifer will result in higher rates for our customers. It will be difficult to explain these necessary rate increases to our customers that are also facing increasing costs for CAP water and costs of delivering water within TW's service area. This is especially evident in the added cuts to the aquifer for annual storage and recovery of CAP allocations. In the case of the relationship between TW's Santa Cruz Well field and the Pima Mine Road Recharge Project (PMRRP), this could result in as much as \$1.8 million of losses in 2013 dollars that will require increased customer rates. For TW's Clearwater Facilities, any planned or emergency outage of transmission facilities from Avra Valley will require either a 20% cut to the aquifer or debiting the City's mined groundwater account while meeting demand with the Central Well field. When coupled with approved and expected increases in CAP delivery rates, these additional cuts to the aquifer will become an annual decision as to how much of TW's allocation can be purchased.

To: Jeff Tannler  
Subject: Enhanced Aquifer Management Strategy  
Page: 3

TW has supported the cuts to the aquifer for long term storage credits. At this point in time, and for the foreseeable future, the Municipal Sector of water users in the TAMA are in Safe Yield. Any additional deterrent to utilizing full subcontractor's allocations means less renewable water entering the TAMA. For all of the reasons discussed in this letter, TW cannot support the additional burden of cuts to annual storage and recovery volumes as proposed for the 4<sup>th</sup> Management Plan.

Sincerely,

A handwritten signature in black ink, appearing to read "Alan D. Forrest". The signature is fluid and cursive, with the first name "Alan" and last name "Forrest" clearly distinguishable.

Alan D. Forrest, P.E.

Director

Tucson Water Department

AF/lr

c: Joe Olsen, Administrator, Tucson Water  
Jeff Biggs, Administrator, Tucson Water  
Wally Wilson, Chief Hydrologist, Tucson Water  
Christopher Avery, Principal Assistant City Attorney