

**Metropolitan Domestic Water Improvement District
Board of Directors Meeting**

September 8, 2014

**Intergovernmental Agreement for
Pilot Inter-AMA Firming of Central Arizona Project Water with the City of Phoenix**

Synopsis

The Board of Directors is requested to consider approving an intergovernmental agreement for Pilot Inter-AMA Firming of Central Arizona Project (CAP) water with the City of Phoenix. District staff has developed with the City of Phoenix Water Department an Intergovernmental Agreement to pilot test how to firm their respective CAP allocations prior to Colorado River shortages affecting water providers. This pilot test would not financially impact the District nor impact our water resources portfolio.

Inter-AMA Firming Concept

The Arizona Water Banking Authority (AWBA) has the responsibility to take excess CAP water and store it in recharge projects so that water can be recovered and used by Municipal and Industrial (M&I) CAP users during a Colorado River shortage that impacts M&I users. The Central Arizona Water Conservation District (CAWCD) projects that M&I users will not be impacted by shortages before 2025. The AWBA has targets for how much water it would store respectfully in the Phoenix, Pinal and Tucson AMAs for M&I users prior to a shortage that impacts M&I users. For the Tucson AMA, the goal for M&I CAP water firming is 864,000 acre-feet. The AWBA projects that by the end of 2014 it will have only achieved 69 percent of the Tucson AMA firming goal. The AWBA has two challenges meeting the M&I firming goal for the Tucson AMA - insufficient funds to purchase Excess CAP water and insufficient storage capacity.

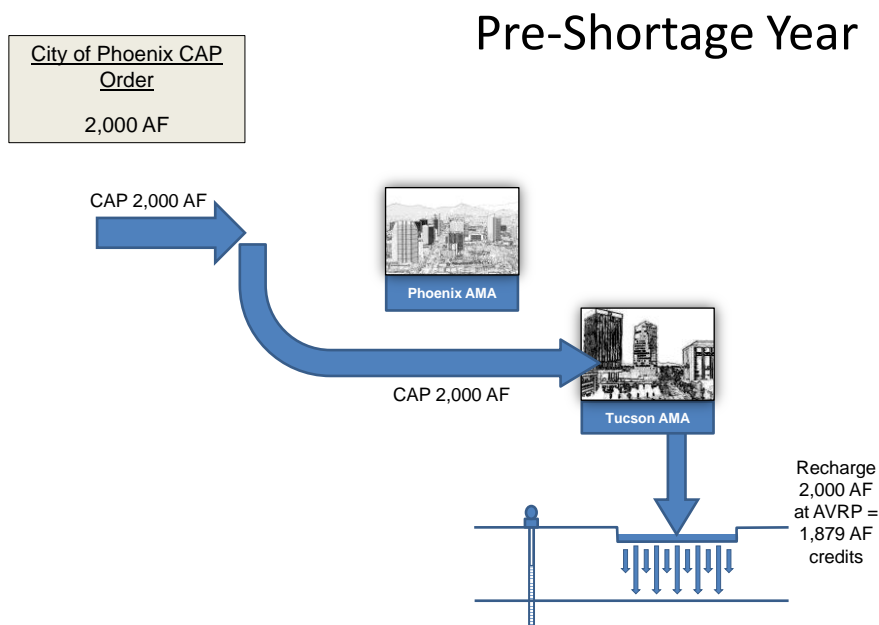
As a way to get closer to the AWBA firming goal for the Tucson AMA, the District and Tucson Water began discussions about an Inter-AMA M&I firming concept. Variations of this concept have been discussed previously in the water community; however, the District and Tucson Water were able to further develop the concept. This generated interest and support from the Southern Arizona Water Users Association (SAWUA) and the Arizona Municipal Water Users Association (AMWUA). With SAWUA's and AMWUA's support, discussions were held with the AWBA, CAWCD, and the Arizona Department of Water Resource, which were supportive of the concept.

The Inter-AMA firming concept envisioned the AWBA using a portion of Maricopa County's ad valorem tax to expand Tucson Water recharge facilities and pay for the Excess CAP water stored by AWBA. The AWBA would then store water for Phoenix AMA in the Tucson AMA, which would

increase M&I firming in the Tucson AMA but also benefit the Phoenix AMA to allow the Phoenix M&I users to directly receive CAP water during a shortage while the Tucson AMA recovers the Phoenix AMA water stored in the Tucson AMA for use by Tucson M&I users.

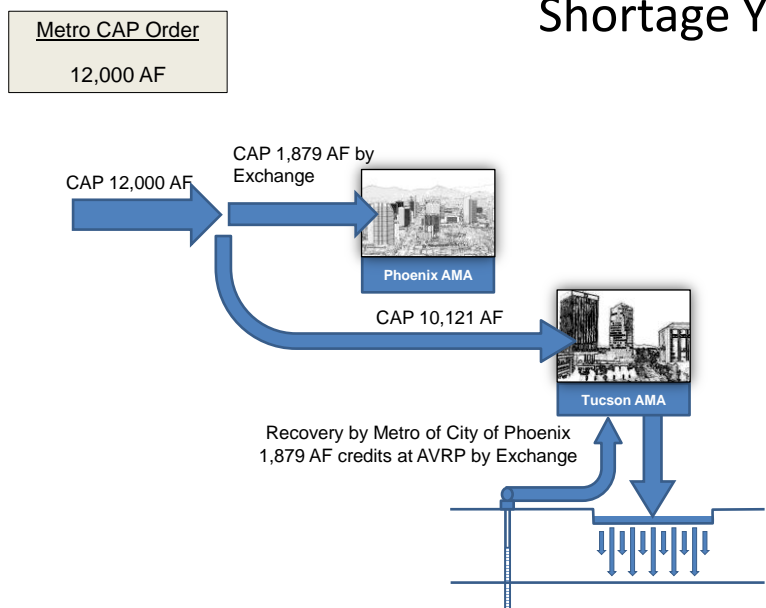
In addition, some Phoenix water providers were interested in working with Tucson water providers to follow the same concept. Instead of the AWBA and using the ad valorem tax, the Phoenix water providers would use their utility funds to expand Tucson AMA recharge facilities and have a portion of their CAP water stored in the Tucson AMA to firm their CAP allocations when Excess CAP water is unavailable to AWBA.

To further explain the concept of Inter-AMA firming, the diagram below illustrates how an Inter-AMA firming agreement between Phoenix and the District would work: For example, the City of Phoenix could order 2,000 acre-feet of their overall CAP subcontract that would be diverted and delivered to the Tucson AMA and recharged in the District's Avra Valley Recharge Project. This adds additional water at the Avra Valley Recharge Project and thus benefits the Tucson AMA. The stored 2,000 acre-feet though would still be impacted by the cut to the aquifer (percentage of water that cannot be recovered to benefit the aquifer) and evaporation losses, meaning that 6% less than the 2,000 acre-feet can be recovered, which amounts to 1,879 acre-feet.



During a shortage year that impacts M&I CAP subcontractors, the City of Phoenix would request recovery of the water stored in the Tucson AMA. Under this scenario, the recovery would be done by having Metro Water order a CAP water delivery of 12,000 acre-feet, as just an example. Of that 12,000 acre-feet, 10,121 acre-feet would be delivered to Metro Water District but the remaining 1,879 acre-feet would be delivered directly to the City of Phoenix as its recovered water. However, the District remains whole because the 1,879 acre-feet of credits previously stored at the District's Avra Valley Recharge Project would then be recovered by the District's recovery wells through this exchange. The diagram on the next page illustrates this.

Shortage Year

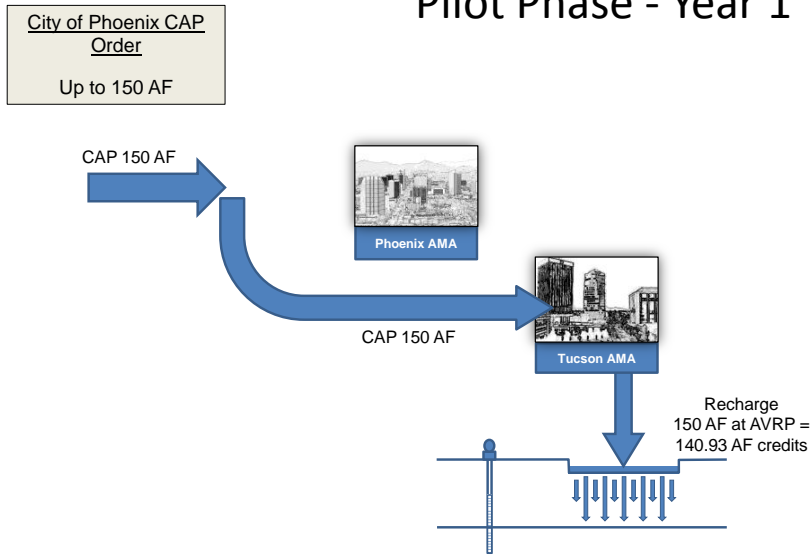


Pilot Phase Agreement

As this concept was discussed among the various interested parties, it was concluded that a pilot phase or proof of concept would be advantageous to ensure that the Inter-AMA firming concept works. The District and Tucson Water have each developed with the City of Phoenix an Intergovernmental Agreement for the pilot phase of Inter-AMA firming. The purpose of the Pilot is to administratively test with the State Agencies the feasibility of Inter-AMA M&I firming by storing and recovering up to 150 acre-feet of CAP water.

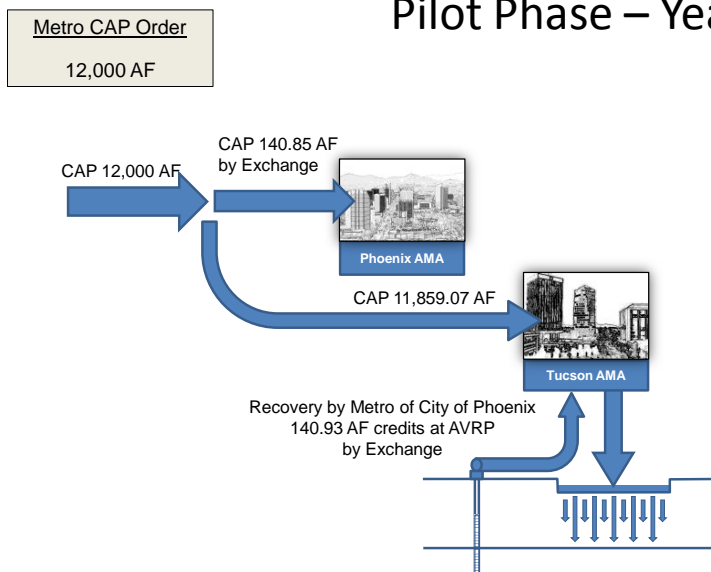
The agreement between the District and Phoenix outlines the pilot test. The pilot phase follows the same concept as previously described but it is done with a smaller amount of water. The City of Phoenix would be allowed to store a small portion (150 acre-feet) of its CAP allocation that it orders in 2015 and have it delivered and recharged at the District's Avra Valley Recharge Project. The 150 acre-feet would be subject to the cut to the aquifer and evaporation losses so that the Arizona Department of Water Resources (ADWR) would record that the City of Phoenix had stored 140.93 acre-feet of CAP water recharge credits. The City of Phoenix would have a similar agreement with the City of Tucson.

Pilot Phase - Year 1



In 2016, the second year of the pilot phase, the District would place an order of CAP water for 12,000 acre-feet, as just an example. Of that order, 140.93 acre-feet of CAP water is delivered to Phoenix as recovered water. The District then would recover the 140.93 acre-feet that had been stored at Avra Valley Recharge Project and the District's 12,000 acre-feet order remains whole. The City of Phoenix and the District would record in Year 2016 with the ADWR an exchange of these CAP water supplies.

Pilot Phase – Year 2



Under Section 7.1 and 7.2 of the agreement, provisions equally protect the District and City of Phoenix from either party defaulting on their respective contract obligations. Also, both the District and the City of Phoenix will not incur a financial expense during the pilot test. The CAP water ordered by the City of Phoenix and District will not be an additional budgetary expense, but is part of their respective CAP budget expenditure. Additionally, the District will not experience an expense on the recovery of the City of Phoenix recharge credits. Likewise, there is no fee associated with the water exchange filing with the Arizona Department of Water Resources.

If the pilot phase is successful, then an Intergovernmental Agreement could be developed for Phase 2 to use Maricopa County monies for a 20 year term on a 43,500 acre-foot per year capital and operational expansion of Tucson AMA recharge facilities possessing recovery capacity. The Arizona Water Banking Authority Commission plans to start discussing AWBA's role in Inter-AMA firming after the pilot phase at its meeting on September 17, 2014.

The District would benefit many ways from Inter-AMA M&I firming following the pilot phase. Maricopa funds could be used to construct the remaining recharge capacity at AVR, which amounts to approximately 3,500 acre-feet. If Tucson's facilities are expanded, it brings more water to the Tucson AMA and could help increase CAP reliability for Metro-Southwest. More importantly, District staff believes this is the only viable option for AWBA to meet its M&I CAP firming goal for the Tucson AMA.

Staff Recommendation

Staff recommends the Board of Directors approve the IGA for Storage, Recovery and Exchange of Central Arizona Project Water between the City of Phoenix and the Metropolitan Domestic Water Improvement District. This agreement allows for a proof of concept regarding the Pilot Inter-AMA firming that could have long-term benefits. The pilot phase has no financial impact to the District's financial plan. More importantly, the pilot phase as well as the further development of Inter-AMA firming ensures no loss of water and has the potential of bringing more physical water to the Tucson AMA.

Suggested Motion

I move to approve the Intergovernmental Agreement for Storage, Recovery and Exchange of Central Arizona Project Water between the City of Phoenix and the Metropolitan Domestic Water Improvement District.

Respectfully submitted,

I concur with staff's recommendation

Respectfully submitted,

Warren Tenney
Assistant General Manager

Joseph Olsen, P.E.
General Manager