



April 8, 2015

Via email to: sscantlebury@azwater.gov

Ms. Sharon Scantlebury
Docket Supervisor
Legal Division
Arizona Department of Water Resources
3550 North Central Avenue
Phoenix, AZ 85012

**RE: CENTRAL ARIZONA GROUNDWATER REPLENISHMENT DISTRICT (CAGR)
2015 PLAN OF OPERATION/SUBMITTED DRAFT DECEMBER 29, 2014
(SUBMITTED DRAFT)**

Dear Ms. Scantlebury:

The Arizona Municipal Water Users Association (AMWUA) and its members, the cities of Avondale, Chandler, Glendale, Goodyear, Mesa, Peoria, Phoenix, Scottsdale, and Tempe, and the town of Gilbert, file these comments on the Submitted Draft. In a letter dated October 23, 2014 (see copy attached), we presented comments to CAWCD on the preliminary draft Plan of Operation. However, the Submitted Draft still falls short of addressing our concerns.

In particular, the Submitted Draft does not adequately demonstrate that CAWCD will have sufficient water supplies to meet current and projected replenishment obligations for the twenty years following submission of the plan.

Colorado River Supplies

The Submitted Draft identifies between 109,800 and 219,700 acre-feet per year of other Colorado River water (Priority 4 or higher) that could be available for use by CAGR for the first twenty years of the Plan through transfers, leases, or fallowing agreements. "To estimate the amount of Colorado River water potentially available through fallowing agreements, CAGR assumed that up to 20% of the consumptive use associated with all irrigated acreage within each county (based on data from 2010 to 2013) could be made available." Submitted Draft at 4-12. CAWCD staff arrived at this assumption using technical guidance developed by Reclamation for federal irrigation projects in California.

Aside from the fact that technical guidance for California may not be relevant for Arizona, the Submitted Draft does not discuss the process that must be followed to transfer (by lease or otherwise), Colorado River water. Any proposed transfer must first be evaluated by ADWR and potential impacts to the area of origin must be considered. After the conclusion of ADWR's process, the Secretary of the Interior must determine whether to approve a transfer, triggering environmental evaluations. It seems

Arizona Municipal Water Users Association

optimistic that such a large quantity of Colorado River water could be made available for CAGRDR replenishment purposes in the first twenty years of the Plan.

There is also a profound disconnect between the amount of other Colorado River water identified in the Submitted Draft for replenishment, and the much-discussed issues of projected shortages of Colorado River water and declining water levels in Lake Mead. The Department and CAWCD are presently pursuing options to reduce Colorado River demand in Arizona and leave that water in Lake Mead to address potential water shortages in the Lower Basin, yet the Submitted Draft indicates that this same water, in whole or in part, may be available for transfer for CAGRDR purposes.

Long-Term Storage Credits

The Submitted Draft includes up to 22,000 acre-feet per year of long-term storage credits (storage credits) that CAWCD plans to use to meet CAGRDR's replenishment obligations over the first twenty years of the Plan. Our review of the September 2014 storage credits account summary prepared by ADWR indicates that the total amount of storage credits in the three central Arizona Active Management Areas (AMAs) is 9.21 million acre-feet. After subtracting the storage credits held by the CAWCD, CAWCD-CAGRDR, CAGRDR replenishment reserve, the CAGRDR conservation district, the Arizona Water Banking Authority, Salt River Project, the Gila River Indian Community, the Bureau of Reclamation, and municipal water providers that are cities and towns, a total of 1.62 million acre-feet is left, which is only 16,200 acre-feet per year. Note 2 to Table 4.2 indicates that the figures do not include storage credits currently owned by CAGRDR.

Storage credits held by private water companies would reduce the 16,200 acre-feet figure. While some of the storage credits held by the above-mentioned entities might be available for purchase, like the Preliminary Draft, the Submitted Draft does not include any analysis of who might be willing to sell and on what terms and conditions.

Central Arizona Project (CAP) Water

The Submitted Draft projects that from 279,000 to 559,300 acre-feet of unused CAP water annually may be available for acquisition over the first twenty years of the Plan. "To arrive at this estimate, CAGRDR has assumed that any CAP water not currently utilized as part of a long-term commitment, i.e. dedicated to an Assured Water Supply or otherwise committed to a long-term use by the entitlement holder, may be available during the next 20 years." Submitted Draft at 4-10. Importantly, CAP water that is not scheduled for delivery in any year by an entitlement holder becomes excess CAP water. CAWCD's own analysis regarding excess CAP water contradicts its optimistic projection of the amount of unused CAP water that will be available for replenishment.

On March 6, 2014, the CAWCD Board of Directors approved a CAWCD staff proposal for distributing excess water for the period 2015 through 2019 that included making available up to 35,000 acre-feet annually to meet CAGRDR's annual replenishment obligations. The proposal then allocated the remaining excess water to the Statutory Firming Pool.¹

The staff proposal approved by the CAWCD Board of Directors also stated:

For CAGRDR replenishment obligations, the excess water pool will be a secondary alternative—that is, CAGRDR will first use resources in its water supply portfolio (other than long-term storage credits) to meet annual replenishment obligations; if those resources are insufficient, then CAGRDR may access the excess water pool, up to the 35,000 AF limit.

The March 6, 2014 Action Brief on this issue for the CAWCD Board of Directors notes that, "Since 2009, use of CAP water by long-term entitlement holders has increased significantly, reducing the amount of excess water available for allocation each year . . . That trend is expected to continue over the next several years." The Brief further states that, "we do not anticipate having enough excess water over the next five years even to fill the underground storage and CAGRDR pools at the levels specified in 2009."

It is difficult, if not impossible, to reconcile CAWCD's excess CAP water findings in March 2014 with its assertion that from 279,700 to 559,300 acre-feet of CAP water per year will be available for the first twenty years of the plan.

Effluent

The Submitted Draft identifies between 59,600 and 119,200 acre-feet of effluent per year that CAWCD could use during the first 20 years of the Plan. According to a technical memorandum dated December 3, 2013 prepared for the CAWCD by HDR, "95% of the wastewater generated within the CAP service area serves beneficial uses" either directly or indirectly. According to this memorandum, in 2009, a total of 200,000 acre-feet of wastewater was generated in Maricopa County and 20,500 acre-feet was generated in Pinal County. In 2012, 65,000 acre-feet were generated in Pima County. These amounts total 285,500 acre-feet. However, Table 4.2 shows 407,600 acre-feet of annual effluent production in the Phoenix, Pinal and Tucson AMAs based on a survey conducted by WestWater Research for CAGRDR. This discrepancy should be explained.

Five percent of the 285,500 acre-foot figure is less than 15,000 acre-feet. While the figures for Maricopa and Pinal Counties may be dated, comparing 15,000 acre-feet to the effluent projections in

¹The staff proposal stated that the Statutory Firming Pool would be apportioned among the Arizona Water Banking Authority, CAGRDR (for replenishment reserve use) and Reclamation (for Indian firming).

Ms. Sharon Scantlebury

April 8 2015

Page Four

the Submitted Draft shows a substantial difference on an order of magnitude basis. Wastewater is a significant water supply for the municipalities that treat it, and it is likely that they will continue to use it for their own water supply needs. It seems unrealistic to expect that even 59,600 acre-feet per year of effluent will be available to CAWCD for CAGRDR replenishment.

For these reasons, CAWCD's Submitted Draft fails to clearly demonstrate that sufficient water supplies are available to meet CAWCD's replenishment obligations during the first twenty calendar years of the plan. AMWUA and its members urge the Department to request that CAWCD refine its projections of available water supplies for the period 2015-2034 using more reasonable assumptions that take into account the issues addressed in this letter. Until that time, the Department should refrain from determining that the Plan of Operation is consistent with achieving the management goals of the Phoenix, Pinal and Tucson AMAs.

Sincerely,



Carol Ward-Morris

Interim Executive Director

Attachment

- c: Members, AMWUA Board of Directors
- Lisa Atkins, President, CAWCD Board of Directors
- Dennis Rule, CAGRDR Manager



October 23, 2014

Via E-mail to: drule@cap-az.com

Dennis Rule, CAGR D Manager
Central Arizona Project
P.O. Box 43020
Phoenix, Arizona 85080

**RE: Central Arizona Groundwater Replenishment District (CAGR D)
2015 Preliminary Draft Plan of Operation Dated September 8, 2014**

Dear Mr. Rule:

The Arizona Municipal Water Users Association (AMWUA) and its members, the cities of Avondale, Chandler, Gilbert, Goodyear, Mesa, Peoria, Phoenix, Scottsdale, and Tempe, and the town of Gilbert, submit these comments on the Preliminary Draft Plan of Operation dated September 8, 2014 (Preliminary Draft).

State law¹ identifies the information that the Central Arizona Water Conservation District (CAWCD) must include in every ten-year Plan of Operation. The projections of future CAGR D enrollment and resulting replenishment obligation, and the description of the water resources CAWCD plans to use to meet CAGR D's replenishment obligation are the most important elements. We do not believe that the Preliminary Draft provides enough information for stakeholders and the Arizona Department of Water Resources (ADWR) to evaluate whether the Plan of Operation meets the requirements of state law.

PROJECTED ENROLLMENT AND REPLENISHMENT OBLIGATION

Chapter three of the Preliminary Draft presents the projected enrollment and associated replenishment obligation. It is clear that both of these projections are the result of a complicated set of assumptions and variables, which are processed through an intricate algorithm. Unfortunately, the Preliminary Draft does not always identify the assumptions used. If the assumptions are identified, the Preliminary Draft does not explain how they were determined.

¹ A.R.S. §45-576.02

CAWCD is required to include in the Plan of Operation:

"An estimate of the conservation district's (CAWCD's) current and projected replenishment obligations . . . for the twenty calendar years following the submission of the plan and an estimate of the district's projected groundwater replenishment obligations for the one hundred calendar years following the submission of the plan for current members and potential members based on reasonable projections of real property and service areas that could qualify for membership in the ten years following submission of the plan."²

Without more information explaining how the assumptions were derived and used, it is difficult to independently analyze whether CAWCD's projections are reasonable.

For example, according to the Preliminary Draft, allocation of future housing units is based on information developed by the Maricopa, Central Arizona, and Pima Associations of Governments. CAWCD staff allocated future housing units to municipal providers and then further allocated housing units to vacant lands within each municipal provider's service area based on distribution ratios for providers serving member lands. However, there is no information on how these distribution ratios were determined or how they will change over time.

Similarly, according to the Preliminary Draft, the supply assumptions related to effluent reuse are based on effluent availability and future growth in housing units. However, the Preliminary Draft is silent about how effluent reuse was projected into the future.

Without access to documentation that fully explains the data, data sources, assumptions and methodologies used in developing the Preliminary Plan, we believe it will be impossible for ADWR to evaluate the Plan's projections. Certainly, our review is constrained by the lack of sufficient information.

WATER SUPPLIES

CAWCD is required to include in the Plan of Operation:

"A description of the water resources that the conservation district plans to use for replenishment purposes during the twenty calendar years following submission of the plan and water resources potentially available to the

² Id.

conservation district for groundwater replenishment purposes during the subsequent eighty calendar years."³

In general, the Preliminary Draft appears to greatly over-estimate the types and amounts of the water supplies CAWCD plans to use for replenishment.

Central Arizona Project (CAP) Water

The Preliminary Draft projects that CAWCD plans to rely on from 279,700 to 559,300 acre-feet of unused CAP water annually over the first twenty years of the Plan. CAWCD's own analysis in the context of excess CAP water contradicts this projection.

On March 6, 2014, the CAWCD Board of Directors approved a CAWCD staff proposal for distributing excess water for the period 2015 through 2019 that included making available **up to 35,000** acre-feet annually to meet CAGR's annual replenishment obligations. The proposal then allocated the remaining excess water to the Statutory Firming Pool.⁴

The staff proposal approved by the Board of Directors also stated:

"For CAGR's replenishment obligations, the excess water pool will be a secondary alternative--that is, CAGR will first use resources in its water supply portfolio (other than long-term storage credits) to meet annual replenishment obligations; if those resources are insufficient, then CAGR may access the excess water pool, up to the 35,000 AF limit."

The March 6, 2014, Action Brief on this issue for the CAWCD Board of Directors notes that, "Since 2009, use of CAP water by long-term entitlement holders has increased significantly, reducing the amount of excess water available for allocation each year . . . that trend is expected to continue over the next several years." The Brief further states that, "we do not anticipate having enough excess water over the next five years even to fill the underground storage and CAGR's pools at the levels specified in 2009."

Long-Term Storage Credits

The Preliminary Draft includes up to 22,000 acre-feet per year of long-term storage credits (storage credits) that CAWCD plans to use to meet CAGR's replenishment obligations over the first twenty years of the Plan. Our review of the September 2014 storage credits account

³ Id.

⁴ The staff proposal stated that the Statutory Firming Pool would be apportioned among the Arizona Water Banking Authority, CAGR (for replenishment reserve use) and Reclamation (for Indian firming).

summary prepared by ADWR indicates that the total amount of storage credits in the three central Arizona Active Management Areas (AMAs) is 9.21 million acre-feet. After subtracting the storage credits held by the CAWCD, CAWCD-CAGRD, CAGRD replenishment reserve, the CAGRD conservation district, the Arizona Water Banking Authority, Salt River Project, the Gila River Indian Community, the Bureau of Reclamation, and municipal water providers that are cities and towns, a total of 1.62 million acre-feet is left, which is only 16,200 acre-feet per year. Storage credits held by private water companies would reduce the 16,200 acre-feet figure. While some of the storage credits held by the above-mentioned entities might be available for purchase, the Preliminary Draft does not include a sophisticated analysis of who might be willing to sell and on what terms and conditions.

Other Colorado River Water

The Preliminary Draft identifies between 109,800 to 219,700 acre-feet per year of other Colorado River water (Priority 4 or higher) that could be available for use by CAGRD for the first twenty years of the Plan through transfers, leases, or fallowing agreements. "To estimate the amount of Colorado River water potentially available through fallowing agreements, CAGRD assumed that up to 20% of the consumptive use associated with all irrigated acreage within each county (based on data from 2010 to 2013) could be made available." CAWCD staff arrived at this assumption using technical guidance developed by Reclamation for federal irrigation projects in California.

Aside from the fact that technical guidance for California may not be relevant for Arizona, the Preliminary Draft does not discuss the process that must be followed to transfer (by lease or otherwise) Colorado River water. Any proposed transfer must first be evaluated by ADWR and potential impact to the area of origin must be considered. After the conclusion of ADWR's process, the Secretary of the Interior must determine whether to approve a transfer, triggering environmental evaluations. It seems extraordinarily optimistic that such a large quantity of Colorado River water could be made available for CAGRD replenishment purposes in the first twenty years of the Plan.

There is also a profound disconnect between the amount of other Colorado River water identified in the Preliminary Draft for replenishment, and the much-discussed issue of projected shortages of Colorado River water and declining water levels in Lake Mead. The CAWCD is presently considering options to reduce Colorado River demand in Arizona and leave that water in Lake Mead to address the structural deficit in the Lower Basin, yet the Preliminary Draft indicates that this same water, in whole or in part, may be available for transfer for CAGRD purposes.

Effluent

The Preliminary Draft identifies between 59,600 and 119,200 acre-feet of effluent that CAWCD plans to use during the first twenty years of the Plan. A technical memorandum dated December 3, 2013, prepared for the CAWCD by HDR found that "95% of the wastewater generated within the CAP service area serves beneficial uses" either directly or indirectly. According to this memorandum, in 2009, a total of 200,000 acre-feet of wastewater were generated in Maricopa County and 20,500 acre-feet were generated in Pinal County. In 2012, 65,000 acre-feet were generated in Pima County. These amounts total 285,500 acre-feet. Five percent of this figure is less than 15,000 acre-feet. While the figures for Maricopa and Pinal Counties may be dated, comparing 15,000 acre-feet to the effluent projections in the Preliminary Draft shows a substantial difference on an order of magnitude basis. Wastewater is a significant water supply for the municipalities that treat it, and it is likely that they will continue use it for their own water supply needs. It seems unrealistic to expect that much effluent will be available to CAWCD for CAGRDR replenishment.

ADDITIONAL CONCERNS

One of the results of the 2013 CAGRDR Stakeholder Process was CAWCD staff's recommendation that there be an annual review of the approved Plan of Operation. The Preliminary Draft does not include any mention of this review process.

During the CAGRDR Stakeholder Process on the Plan of Operation, a stakeholder coalition submitted a proposal for "Mitigating Risks that CAGRDR will be Unable to Acquire Sufficient Supplies." A copy of the proposal is attached. In light of our concerns that the Preliminary Draft contains overly optimistic estimates of the amount of water supplies that may be available to meet CAGRDR replenishment obligations, we believe it is critical that the Final Plan address this issue of risk mitigation.

On September 6, 2012, the CAWCD Board of Directors adopted CAGRDR Guiding Principles. Of particular interest is the discussion on Enrollment of New Members. Among other things, the Board found that "there is a general sentiment that by the time the current Plan of Operation expires in 2015, CAGRDR will have taken on as much risk as it should." With this in mind, the Board adopted the following Guiding Principle:

"The risk to CAGRDR associated with enrollment of new members under the next Plan of Operation must be mitigated through appropriate conditions on enrollment. Consideration should be given to establishing alternative paths for meeting the new conditions on enrollment."

The Preliminary Draft falls short of this principle.

Mr. Dennis Rule
Page 6 of 6
October 23, 2014

At its meeting on September 29, 2014, the AMWUA Board of Directors unanimously approved a motion requesting that CAWCD revise the Preliminary Draft to address AMWUA's concerns, and that CAWCD staff provide the necessary data, assumptions and methodologies for stakeholders to evaluate the projections, estimates and costs contained in the Preliminary Draft.

Thank you and the CAWCD Board of Directors for your consideration of these comments.

Sincerely,



Kathleen Ferris
Executive Director

Attachment - *Mitigating Risks That CAGR D Will Be Unable To Acquire Sufficient Supplies – 9/21/13*

By E-mail

cc: Lisa Atkins, Chair, CAGR D & Underground Storage Committee
Members, CAWCD Board of Directors
Members, AMWUA Board of Directors
David Modeer, CAWCD General Manager
Michael J. Lacey, Director, ADWR