CAGRD
CENTRAL ARIZONA GROUNDWATER REPLENISHMENT DISTRICT
A Division of Central Arizona Project

May 14, 2015

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

RE: Responses to Public Comments on CAGRD 2015 Plan of Operation

Dear Ms. Scantlebury:

Pursuant to A.R.S. § 45-576.03(L) and as requested in the April 21, 2015 letter from Mr. Jeff Tannler, attached are responses to the written comments on the CAGRD 2015 Plan of Operation received by the Arizona Department of Water Resources during the Department's public hearing period.

Sincerely,

Dennis A. Rule, Manager
Central Arizona Groundwater Replenishment District

Attachment

DRAFT CAGRD 2015 PLAN OF OPERATION
SUMMARY OF COMMENTS RECEIVED AND RESPONSES TO COMMENTS

Comments Submitted on Behalf of Mohave County Water Authority

Comment: Expressing appreciation for the work which went into the Draft Plan and the public process to have input on same.
Response: Comment noted.

Comment: Support for a proposed midterm adjustment to allow better reaction to actual CAGRD demand versus that forecasted and the idea of performance benchmarks.
Response: CAGRD has committed to prepare an enhanced annual report that will present specific information on new enrollment, the amount of obligation and replenishment that has occurred during the preceding year, acquisition of new supplies, and the location of pumping and replenishment. In addition, CAGRD will conduct a mid-Plan review that will summarize the past five years of operation as described in the preceding annual reports and will provide the opportunity to evaluate consistency between the Plan's projections and actual experience over the five year period. Enhanced annual reporting and a mid-Plan review are not statutory requirements and thus are not included in the Plan itself. However, the CAWCD Board of Directors has clearly expressed its intent to memorialize the enhanced annual review and mid-Plan review commitment in its formal transmittal of the Draft Plan to ADWR. These measures will allow CAGRD to react in an appropriate and timely manner to changes in demand from what is currently forecast.

In addition, pursuant to the provisions of ARS §45-576.03(R) ADWR may require CAGRD to submit a revised plan if the Director finds that there has been an unexpected increase in replenishment obligation or an unexpected reduction in water supplies to meet current obligations.

However, specific performance benchmarks are not required by statute and are not included in the Draft Plan.

Comment: Any transfers, by whatever name, off the mainstem should only be done pursuant to a full and open public process on a statewide basis.
Response: Future CAGRD acquisitions of Colorado River water supplies will comply with all federal and state regulatory requirements, including public notice provisions and environmental compliance.

Comment: The Draft Plan's reference to 200,000 acre-feet of Multi-Species Conservation Plan ("MSCP") coverage available to CAGRD for transfers is also

troubling since several transfers have already been made and/or are pending by other parties pursuant to that MSCP provision.
Response: The total volume of Colorado River water that has been recommended for transfer since implementation of the MSCP in 2005 is approximately 60,000 acre-feet, so the remaining volume for which there is programmatic Endangered Species Act coverage is approximately 140,000 acre-feet. This number was changed in the final Draft Plan.

Comment: Reliance, even in part, on Colorado River supplies should include more discussion and analysis of shortage and structural deficit impacts.
Response: The Plan of Operation statutes require the development of a single obligation forecast and, for the forecast, staff has assumed a normal Colorado River supply. Speculation about the impacts of shortage necessarily presuppose a great many things about the depth, timing and impact of a shortage deep enough to eliminate Non-Indian Agriculture ("NIA") priority CAP supplies, the vast majority of which are held by those other than CAGRD or its members. Nevertheless, staff has evaluated a "no NIA" scenario and has concluded that it would result in a very modest increase in obligation.

Loss of the NIA supply to CAGRD itself can be addressed with existing tools, such as the Replenishment Reserve, other long-term storage credits and additional supply development if the loss of the NIA supply were to persist for an extended period. Furthermore, shortage on the Colorado River is only one of a number of factors that could affect the CAGRD's future obligation. In recognition of the actual range of uncertainty facing the CAGRD, staff is committed to ongoing planning and analysis that considers a range of scenarios to support CAGRD's operations.

Comment: Beyond the "Plan" there should be analysis and discussion of whether this replenishment approach is sustainable over the long term.
Response: Comment noted.

Comments Submitted on Behalf of Pima County Regional Wastewater Reclamation Department

Comment: Legislation that permits de-enrollment, such as HB 2325, is one mechanism that permits voluntary termination of member land status, and that would decrease CAGRD's replenishment obligation for these lands.
Response: HB 2325, the voluntary de-enrollment legislation initiated by CAGRD itself, was passed by the 2015 Legislature and signed into law by the Governor. In addition to the pre-existing provisions for member service area de-enrollment, member lands now may voluntarily de-enroll from CAGRD.

Comment: CAGRD has acquired approximately 36,530 acre-feet, sufficient to fulfill its current replenishment obligation for all three AMAs. The Draft Plan projects an additional replenishment obligation of 50,370 acre-feet in 2034 and an additional 26,100 acre-feet in obligation by 2114; this is "unmet" obligation. Further, the Replenishment Reserve target for the Tucson AMA is 112,600 acre-feet; CAGRD has only 34,818 acre-feet in the Tucson Replenishment Reserve account, leaving a deficit of 77,782 acre-feet.

Response: CAGRD is not required to acquire water supplies in advance of incurring replenishment obligation. CAGRD is required to fulfill incurred obligation within three years and, to date, it has met this requirement for each AMA. For future obligations, statutes require that the Plan describe the water resources CAGRD plans to use for replenishment purposes for the next 20 years and to describe water resources potentially available for replenishment purposes for the subsequent 80 years. The Draft Plan meets these requirements.

The Replenishment Reserve target calculation is based on the projected total replenishment obligation over the next 100 years and is re-calculated for each 10-year Plan of Operation based upon that Plan's projections. Per statute, the Draft Plan must describe CAGRD's replenishment reserve activities in the preceding ten years and the planned replenishment reserve activities for the ensuing ten years. ADWR's review of the Draft Plan is to determine whether or not the replenishment reserve target for each AMA was calculated in accordance with statutory provisions and whether or not CAGRD is developing a replenishment reserve in each AMA pursuant to those statutory provisions. CAGRD is not required to have accrued the total Replenishment Reserve target amount up front but to make reasonable progress in accruing the target amount.

Comment: Acquiring long term storage credits already accrued in the AMA does not bring new renewable water into the area, and it does not ensure that the credits will be recovered near the areas where the groundwater is pumped.

Response: CAGRD's primary mission is to replenish the aquifer to offset pumping by its members; the sources of water that may be used for replenishment are defined in ARS §48-3771(C). There is no requirement that the source of replenishment water be "new" renewable water brought into the AMA.

Regardless of the source of renewable water supplies used to accomplish the replenishment, the stored water is administratively converted to long term storage credits by ADWR prior to being recorded against CAGRD's replenishment obligation and extinguished. The process is effectively the same whether CAGRD is the originator of the storage credits or has purchased storage credits generated by

another party. There is no requirement for CAGRD to be the original generator of the long term storage credits used to offset replenishment obligation.

Under the replenishment process, storage credits are not recovered; they are extinguished. Extinguishment ensures that the water will not be recovered, which is a benefit to the aquifer.

Comment: The Draft Plan proposes leases with effluent owners to generate long term storage credits. However, the location of the stored effluent is unlikely to be in close proximity to where groundwater is pumped. Using locally produced effluent to meet replenishment obligations also brings no new water resources to the AMA.
Response: CAGRD must replenish within the same AMA where replenishment obligation is generated. Within the constraints of available source water, delivery infrastructure and permitted recharge projects, CAGRD manages its replenishment activities to ensure that replenishment occurs as close as feasible to where obligation originates.

As noted previously, the statutory provisions for water that may be used for replenishment includes effluent, and the source of replenishment water is not required to be "new" water. As noted above, the extinguishment of storage credits as an offset to replenishment obligation ensures that the stored water remains in the aquifer rather than being recovered.

Comment: CAGRD can use excess CAP water for replenishment, but less excess CAP water will be available as subcontractors and contractors use more of their entitlement and excess CAP water can be reduced or eliminated under shortage declaration. The availability of excess CAP water to meet future replenishment obligation is uncertain.
Response: CAGRD recognizes that excess CAP water is not a water supply which is guaranteed to be available to meet replenishment obligation. The Draft Plan anticipates that CAGRD will use excess CAP water only "to the extent that it is available".

Comment: ADWR should require that CAGRD replenish within the hydrologic area impacted by members' groundwater pumping or deliver renewable water directly using water delivery infrastructure or wheeling agreements.
Response: As noted above, although CAGRD is only required to replenish within the AMA, efforts are made to replenish as close as feasible to where pumping occurs.

CAGRD is statutorily authorized to replenish the aquifer; direct delivery by CAGRD is not authorized.

Comments Submitted on Behalf of Douglas Ranch El Dorado, LLC, AMB Associates, Inc., Sunbelt Holdings and Robson Communities

Comment: The Draft Plan clearly and concisely demonstrates all of the elements described in A.R.S. § 45-576.03(N) (1) – (4) for each of the Phoenix, Pinal and Tucson AMAs, and therefore we urge the Director to determine that the Plan is consistent with achieving the management goals of each of the Phoenix, Pinal and Tucson AMAs.

Response: Comment noted.

Comments Submitted on Behalf of Home Builders Association of Central Arizona and Southern Arizona Home Builders Association

Comment: The Plan is consistent with achieving the management goals for the Phoenix, Tucson and Pinal Active Management Areas, as required by statute.

Response: Comment noted.

Comments Submitted on Behalf of Pulte Home Corporation

Comment: CAGRD's proposed 2015-2025 Plan of Operation is consistent with achieving the CAP service area Active Management Area goals in accordance with A.R.S. § 45-576.03.

Response: Comment noted.

Comments Submitted on Behalf of Arizona Municipal Water Users Association

Comment: The Draft Plan does not adequately demonstrate that CAGRD will have sufficient water supplies to meet current and projected replenishment obligations for the twenty years following submission of the plan.

Response: As required by statute (§ 45-576.03(N)(1)) the Draft Plan details the water portfolio acquired by CAGRD for replenishment purposes and identifies additional water supplies that far exceed CAGRD's projected replenishment obligation for the next 20 years.

Comment: The Draft Plan does not discuss the process that must be followed to transfer (by lease or otherwise) Colorado River water.

Response: Any future acquisition of Colorado River water supplies by CAGRD will comply with all federal and state regulatory requirements, including public notice provisions and environmental compliance.

Comment: It seems 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.

Response: Table 4.2 of the Draft Plan identifies a volume of up to 219,700 acre-feet of available Colorado River water. The total projected CAGRD replenishment obligation in 2114 is only 113,000 acre-feet, and only a portion of that total would

potentially be Colorado River water. As required by statute, the Draft Plan describes CAGRD's existing water supply portfolio and identifies additional water supplies that are potentially available that far exceed CAGRD's projected replenishment obligation.

Comment: There is a profound disconnect between the amount of other Colorado River water identified in the Draft Plan for replenishment, and the much-discussed issues of projected shortages of Colorado River water and declining water levels in Lake Mead.

Response: Including Colorado River supplies in the list of available supplies for CAGRD acquisition is not inconsistent with, nor does it undermine, CAWCD's commitment to both protect reservoir levels in Lake Mead and address the structural deficit in the Lower Basin. Any use of mainstem Colorado River supplies by the CAGRD, whether through a lease, transfer or fallowing agreement, would not increase diversions from the mainstem. Under state law, only *consumptive use* volumes are available for transfer, meaning that an existing consumptive use would be replaced by a new consumptive use. There would be no increase in consumptive use of Colorado River water resulting from a lease, transfer or fallowing program by CAGRD.

Further, water transfers are specifically identified as a strategy to meet emerging water demands in the December 2012, Colorado River Basin Water Supply and Demand Study ("Study"). The Study identifies water transfers as an important tool for resolving imbalances in both the near- and long-term and notes that voluntary water transfers can have many potential benefits and, in particular, promote flexibility in adapting to uncertain future conditions. The Study also notes that many of the Basin States have been utilizing voluntary water transfers to meet emerging water management challenges and will continue to look to transfers as an important solution.

Comment: 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 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.

Response: The Draft Plan includes up to 22,000 acre-feet/yr of LTSCs that CAGRD plans to use to meet replenishment obligations over the first 20 years. This number is based on the total number of existing credits in the Phoenix, Pinal, Tucson AMAs and the Harquahala INA as reported by ADWR. These credits total 8.8 million acre-feet, minus the credits owned by CAWCD, CAGRD, AWBA and any credits pledged to a provider's assured water supply. CAGRD is required by statute to identify water supplies that are potentially available to meet CAGRD's replenishment obligations for the next 20 years. This number represents a portion of the potentially available supply of LTSCs.

Comment: The Draft Plan does not include any analysis of who might be willing to sell and on what terms and conditions.
Response: CAGRD is required by statute to identify water supplies that are potentially available. CAGRD's existing water supply portfolio includes a number of LTSC acquisitions from a variety of willing sellers, demonstrating that LTSCs are potentially available. CAGRD is not required to conduct any further analysis of willing sellers or general deal terms and conditions as part of the Plan of Operation. However, CAGRD has conducted this type of analysis as part of its confidential water supply acquisition strategy.

Comment: 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 the Draft Plan's optimistic projection of the amount of unused CAP water that will be available for replenishment.
Response: CAGRD's projections for available CAP water are not limited to the availability of excess CAP water. CAGRD's analysis has been intentionally structured to avoid double counting potentially available water supplies for the CAP and LTSC water supply categories as more fully described in the footnotes to Table 4.2. The Plan notes that CAGRD will utilize excess CAP water when it is available and needed to meet replenishment obligations.

Comment: It is difficult, if not impossible, to reconcile CAWCD's excess CAP water findings in March 2014 with its assertion that from 279,000 to 559,300 acre-feet of CAP water per year will be available for the first twenty years of the plan.
Response: Potentially available CAP water supplies were estimated based on all supplies that were not dedicated to an Assured Water Supply or otherwise committed to a long-term direct use from 2010 through 2013, the most current period for which information was available. This estimate includes M&I entitlements that were not delivered in any year during that period, unallocated NIA priority CAP supplies, all tribal supplies delivered under short-term lease agreements, and all tribal supplies delivered to permitted recharge facilities. Supplies currently owned or leased by CAGRD are not included. The low end of the estimate of potentially available supplies assumes a 50% acquisition success rate. The purpose of developing a wide range of potentially available supplies is to recognize that multiple factors may influence future availability. Even the low end of the estimate far exceeds CAGRD projected demand through 2114.

Comment: According to a technical memorandum dated December 3, 2013 prepared for CAWCD by HDR, "95% of the wastewater generated within the CAP service area serves beneficial uses" either directly or indirectly.

Response: The HDR study assumed that effluent discharged to a surface drainage without accrual of storage credits constitutes "beneficial use". CAGRD does not make this assumption; therefore, CAGRD's evaluation of available effluent includes these quantities of unused effluent as available.

Comment: The total amount of effluent production in Maricopa, Pinal, and Pima Counties, according to the HDR memo, was 285,500 acre-feet in 2012. 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 CAGRD. This discrepancy should be explained.

Response: CAGRD commissioned a comprehensive effluent study, completed in 2013, that identified all currently discharged/unused effluent. The numbers derived from this study are the most comprehensive and reliable estimates of available effluent. The study included data on effluent production from all permitted facilities in Maricopa, Pima, and Pinal Counties.

The HDR study screened those facilities and only included those producing more than 1.5 million gallons per day (MGD) in Maricopa and more than 0.5 MGD in Pima and Pinal. Using the Arizona Department of Environmental Quality's list of all existing Wastewater Treatment Plants (WWTPs) the owner/operators were identified and interviewed to obtain information on the quality, quantity and volume of effluent that is reused, recharged and discharged. Where possible, this information was verified by reviewing annual reports filed with ADWR.

Comment: The Draft Plan 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. The commenter urges 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 the Plan of Operation is consistent with achieving the management goals for the Phoenix, Pinal and Tucson AMAs.

Response: The commenter uses different assumptions about potentially available water supplies and, as a result of these different assumptions, has developed different, lower estimated volumes of water that are potentially available to meet CAGRD's current and future replenishment obligations. As noted above, CAGRD has utilized the best currently available information to develop a wide range of potentially available water supplies to meet current and potential new members' replenishment obligation for the next 100 years, as required by statute. Even at the low end of the range the potentially available water supplies identified in the Draft Plan far exceed the

amount of water that CAGRD must acquire to meet its current and potential new members' replenishment obligation for the next 100 years as required by statute.