ARIZONA DEPARTMENT OF WATER RESOURCES
BEFORE THE DIRECTOR

IN THE MATTER OF THE CENTRAL ARIZONA GROUNDWATER REPLENISHMENT DISTRICT'S PLAN OF OPERATION FOR THE TUCSON ACTIVE MANAGEMENT AREA SUBMITTED ON DECEMBER 29, 2014	)	**DECISION AND ORDER DETERMINING THAT PLAN OF OPERATION IS CONSISTENT WITH ACHIEVING THE MANAGEMENT GOAL OF THE TUCSON ACTIVE MANAGEMENT AREA**

I. INTRODUCTION

On December 29, 2014, the Central Arizona Groundwater Replenishment District ("CAGRD"), a division of the Central Arizona Water Conservation District ("CAWCD"), submitted to the Arizona Department of Water Resources ("Department") its 2015 Plan of Operation ("Plan") pursuant to A.R.S. § 45-576.02(C)(2). The Plan describes the activities that CAGRD proposes to undertake for the Phoenix, Pinal, and Tucson Active Management Areas ("AMAs") during the 100 years following submission of the Plan. By letter dated February 26, 2015, the Department notified CAGRD that the Department had determined the Plan to be complete. In accordance with A.R.S. § 45-576.03(K), the Department held public hearings on the Plan in Phoenix on March 30, 2015, and in Coolidge and Tucson on April 1, 2015. The hearing record remained open until April 8, 2015, at 5:00 p.m. for the submission of written comments.

The Director of the Department ("Director") is required by A.R.S. § 45-576.03(M) to issue a decision for each of the three AMAs determining whether or not the Plan is consistent with achieving the management goal of each respective AMA. The Director must include findings with the decision and a summary of all public comments received in writing and made at the public hearings held with respect to this matter.

As provided in A.R.S. § 45-576.03(N), the Director must determine that the Plan is consistent with achieving the management goal for each AMA if all of the following have been demonstrated:

1. CAGRD has identified sufficient water supplies to meet its replenishment obligations for current members during the 20 calendar years following submission of the Plan and has identified additional water supplies potentially available for its projected groundwater replenishment obligations for the 100 calendar years following 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 10 years following submission of the Plan.

2. The replenishment reserve target for each AMA was calculated as prescribed in A.R.S. § 48-3772(E), and CAGRD is developing a replenishment reserve in each AMA pursuant to A.R.S. § 48-3772(E).

3. CAGRD has identified sufficient capacity at storage facilities and projects to be used for replenishment purposes during the 20 calendar years following submission of the Plan.

4. CAGRD has made a reasonable estimate of its projected replenishment obligations for the 100 calendar years following submission of the Plan as required by A.R.S. § 45-576.02(C)(2)(b).

II. SUMMARY OF PUBLIC COMMENTS

No oral comments were made at the public hearings conducted in connection with the Plan. The Department received written comments which are summarized in this Section II. Where specific comments are relevant to particular Findings made by the Director in Section III below, those comments are discussed more fully in Section III.

Mohave County Water Authority ("MCWA") (by letter dated March 24, 2015)

MWCA states that it supports a "midterm adjustment" to the Plan "to allow better reaction to actual CAGRD demand versus that forecasted" and that it supports "the idea of performance benchmarks." MCWA states that any transfers of Colorado River water from the river's mainstem for replenishment purposes represents an effective reallocation of Colorado River water in Arizona and should "only be done pursuant to a full and open public process on a statewide basis." MCWA

states that reliance on Colorado River supplies should include more discussion and analysis of "shortage and structural deficit impacts." MCWA objects to "reference to 200,000 a/f of [Multi-Species Conservation Program ("MSCP")] coverage available to CAGRD for transfers." MCWA states that "[b]eyond the plan," it "supports analysis and discussion of whether the 'replenishment' approach is sustainable over the long term."

Pima County Regional Wastewater Reclamation Department ("Pima County") (by letter dated April 3, 2015)

Pima County expresses support for legislation which permits voluntary termination of member land status in order to decrease CAGRD's replenishment obligations. Pima County states that the Plan reveals an "unmet" obligation of 50,370 acre-feet in 2034 and an additional 26,100 acre-feet in obligation in 2114, as well as a target reserve deficit for the Tucson AMA. Pima County objects to CAGRD's proposed reliance on long-term storage credits ("LTSCs") and stored effluent for replenishment purposes to the extent those supplies bring no "new" water into the Tucson AMA and to the extent the replenishment is not made in close proximity to where groundwater is pumped. Pima County urges the Department to require CAGRD to replenish within the hydrologic area of impact of member lands' withdrawals or to require that the CAGRD deliver renewable water using water delivery infrastructure or wheeling agreements. Additionally, Pima County notes that the future availability of excess Central Arizona Project ("CAP") water and non-Indian agricultural pool water is uncertain in light of potential shortage declaration and increased use of entitlement holders to use their entitlements.

Douglas Ranch El Dorado, LLC; DMB Associates, Inc.; Sunbelt Holdings; and Robson Communities ("Douglas Ranch, et al.") (by letter dated April 6, 2015)

Douglas Ranch, et al., state that the Plan complies with all of the elements of A.R.S. § 45-576.03(N)(1)-(4) for each of the AMAs. They state that the applicable statute does not require that CAGRD demonstrate that it has already acquired all water supplies needed to fulfill its obligations

for the next 20 years or the next 100 years. Douglas Ranch, et al., state that the extensive and detailed modelling structure developed by CAGRD along with other materials submitted to the Department demonstrate that CAGRD's membership projections and replenishment obligations are reasonable. Douglas Ranch, et al., state that the Plan contains the reserve target for each of the three AMAs calculated as prescribed by A.R.S. § 45-576.03(N)(2), and that the storage credits already acquired by CAGRD satisfy the replenishment reserve development requirement of A.R.S. § 45-576.03(N)(2). They state that the underground storage capacity described in the Plan far exceeds CAGRD's projected replenishment obligations in the three AMAs.

Pulte Home Corporation ("Pulte") (by letter dated April 7, 2015)

Pulte states that the Plan is consistent with the management goals for each of the AMAs in which CAGRD operates.

Home Builders Association of Central Arizona ("HBCA") and Southern Arizona Home Builders Association ("SAHBA") (by letter dated April 7, 2015)

HBCA and SAHBA state that the Plan is consistent with the management goals for each of the AMAs in which CAGRD operates.

Arizona Municipal Water Users Association ("AMWUA") (by letter dated April 8, 2015)

AMWUA states that the Plan does not adequately demonstrate sufficient water supplies to meet CAGRD's current and projected replenishment obligations during the 20 years following submission of the Plan. AMWUA objects to CAGRD's identification of available Colorado River water without discussion of governmental review processes required to transfer Colorado River water. AMWUA also objects to CAGRD's calculation of available Colorado River water in light of projected Colorado River water shortage and declining water levels in Lake Mead. AMWUA states that proposed reliance on Colorado River water is contrary to the Department's and CAWCD's efforts to reduce Colorado River water demand. AMWUA disagrees with CAGRD's calculation of available LTSCs and objects to the Plan because it does not include an analysis of

who might be willing to sell LTSCs and on what terms and conditions.

AMWUA states that it is difficult to reconcile previous statements by the CAWCD in March of 2014 regarding likely future reductions of available excess CAP water with CAGRD's estimate in the Plan of CAP water which will be available for replenishment purposes. AMWUA objects to CAGRD's calculation of effluent available during the 20 years following submission of the Plan in light of a December 3, 2013 report created by a consulting firm, HDR, Inc., indicating that "95% of the wastewater generated within the CAP service area 'serves beneficial uses'." AMWUA notes a discrepancy between the HDR, Inc. report's identification of a total of 285,500 acre-feet of effluent generated in Maricopa, Pinal, and Pima Counties (200,000 acre-feet generated in Maricopa County and 20,500 acre-feet generated in Pinal County in 2009 and 65,000 acre-feet generated in Pima County in 2012) and the Plan's identification of 407,600 of current effluent production in the Phoenix, Pinal, and Tucson AMAs. AMWUA also notes that municipalities that treat wastewater are likely to continue to use effluent for their own water supply needs.

III. FINDINGS

After reviewing the Plan and public comments received during the public comment period, the Director makes the following findings:

1. CAGRD has identified sufficient water supplies to meet its replenishment obligations for current members in the Tucson AMA during the 20 calendar years following the submission of the Plan.

a. CAGRD has estimated its replenishment obligations for current members during the 20 years following submission of the Plan, culminating in a total obligation of 62,700 acre-feet for the year 2034 for all three AMAs. For the Tucson AMA only, CAGRD has estimated that its replenishment obligation for current members will be 8,000 acre-feet for the year 2034.

b. CAGRD has identified 36,534 acre-feet per year of "acquired supplies," identified in Table 4.1 of the Plan, which it plans to use to meet its replenishment obligations in all three AMAs. This annual amount represents CAGRD's presently "acquired supplies" annualized over the span of 100 years. This amount includes 1,444 acre-feet per year of LTSCs located in the Tucson AMA and 20,685 acre-feet per year of non-Indian agricultural priority CAP water that will be available to the CAP service area generally beginning in calendar year 2017.

c. In addition to these "acquired supplies," CAGRD has identified between 460,100 and 920,200 acre-feet per year of additional supplies which CAGRD states are currently available and likely to be used to meet its 20-year replenishment obligation for current members within all three AMAs.

d. With respect to CAGRD's obligation to identify supplies to meet its replenishment obligations for current members during the 20 years following submission of the Plan, CAGRD is not required to demonstrate that it has already acquired all of the supplies needed to meet its projected replenishment obligations. Instead, CAGRD may identify supplies which are likely to be available for acquisition by CAGRD for purposes of satisfying its replenishment obligation for current members during the 20 years following submission of the Plan. These must be supplies which are not presently subject to legal or administrative barriers preventing their acquisition and use for replenishment purposes during that 20-year period.

e. Long-Term Storage Credits

i. Beyond the amounts of "acquired" supplies listed in Table 4.1 of the Plan, CAGRD has identified between 11,000 and 22,000 acre-feet per year of LTSCs within the AMAs and the Harquahala INA as being available for replenishment purposes during the 20 years following the submission of the Plan.

CAGRD defines LTSCs for this purpose as any existing LTSC not currently owned (or subject to an existing purchase agreement) by CAWCD, CAGRD, or the Arizona Water Banking Authority, and not currently pledged to a Designation of Assured Water Supply. CAGRD has calculated an annual available supply of existing LTSCs by dividing the total number of LTSCs by 100 years.

ii. AMWUA objects to the Plan because it does not include an analysis of who might be willing to sell LTSCs and on what terms and conditions.

iii. CAGRD is not required to provide an analysis in the Plan of who might be willing to sell LTSCs and on what terms and conditions. The market for LTSC is sufficiently well-established, predictable, and relatively free from legal and administrative impediments such that CAGRD may rely upon these supplies in connection with identifying sufficient supplies to meet its 20-year obligation for current members without identifying entities that might be willing to sell LTSCs and on what terms and conditions.

iv. AMWUA suggests, without explanation, that LTSCs held by Salt River Project, the Gila River Indian Community, the Bureau of Reclamation, and municipal water providers that are cities and towns should not be included in CAGRD's calculation of available LTSCs.

v. The Department is not aware of any legal or administrative barriers preventing the transfer of LTSCs held by Salt River Project, the Gila River Indian Community, the Bureau of Reclamation, or municipal water providers that are cities or towns (exclusive of LTSCs pledged to a Designation of an Assured Water Supply) and which would render the LTSCs unavailable to CAGRD for replenishment purposes during the 20 years following submission of the Plan.

vi. Pima County objects to the use of LTSCs for replenishment purposes to the extent reliance on those supplies does not bring "new" supplies into the AMA and urges the Department to require CAGRD to deliver renewable water to the AMA using water delivery infrastructure or wheeling agreements.

vii. CAGRD is not required to bring "new" supplies into an AMA to fulfill its replenishment obligations. CAGRD is authorized to replenish with "water from any ... lawfully available source except groundwater withdrawn from within an [AMA]," except as prohibited by title 45, chapter 3.1, Arizona Revised Statutes. A.R.S. § 48-3771(C). Title 45, chapter 3.1 expressly allows water that has been stored pursuant to a water storage permit to be used for replenishment purposes, but only in the AMA in which the water was stored unless the water is recovered and transported to another AMA. A.R.S. § 45-832.01(C).

viii. Based upon the Department's accounting of LTSCs within the AMAs and the Harquahala Irrigation Non-Expansion Area,[1] the Director finds that the CAGRD's calculation that a minimum of 11,000 acre-feet per year of LTSCs will be available to CAGRD to meet its replenishment obligations in all three AMAs during the 20 years following submission of the Plan is reasonable. The Director finds that these LTSCs are likely to be available for acquisition by the CAGRD for purposes of meeting its replenishment obligation for current members in all three AMAs during the 20 years after submission of the Plan.

ix. While LTCSs will be available in all three AMAs, only those LTSCs which are located within the Tucson AMA should be included for purposes CAGRD's identification of supplies available to meet its 20-year replenishment for

[1] The Department's review of CAGRD's estimate of LTSCs is based upon LTSC account balances for 2013. The Department has not yet completed its process for verifying and calculating credits and debits to those accounts based on storage and recovery activity in 2014; however, based on a preliminary review, the Department does not anticipate its 2014 accounting will reveal a significant reduction (if any reduction at all) in available LTSCs.

current members in the Tucson AMA. In order for LTSCs in one AMA to be available for replenishment purposes within another AMA, water would need to be recovered and physically transferred to the other AMA. This most likely means that the water would need to be transported through the CAP canal, or "wheeled." Wheeling of such water would require an agreement between the U.S. Bureau of Reclamation and CAWCD. At present date, no standard form of wheeling agreement has been approved by the Bureau of Reclamation. Because LTSCs located in the Phoenix and Pinal AMAs are presently subject to a legal and/or administrative barrier which would prevent their physical transfer to the Tucson AMA, they may not be included in CAGRD's calculation of supplies available to meet its 20-year replenishment obligation for current members in the Tucson AMA.

x. Roughly 10% of all currently available LTSCs are located in the Tucson AMA.[2] Therefore, it is reasonable to estimate that CAGRD can acquire at least 1,100 acre-feet per year of LTSCs (10% of 11,000) within the Tucson AMA in order to meet its replenishment obligation for current members during the 20 years after submission of the Plan.

f. CAP Water

i. CAGRD has identified between 279,700 and 559,300 acre-feet per year of CAP water as being available for replenishment purposes during the 20 years after submission of the Plan in all three AMAs. In arriving at this estimate, CAGRD assumed that any CAP water not currently used as "part of a long-term commitment, i.e. dedicated to an Assured Water Supply or otherwise committed to a long-term direct use by the entitlement holder," may be available during the next 20 years. This includes: (1) all supplies that CAP subcontractors have not ordered for the past four

[2] This estimate is based upon 2013 LTSC account balances, in accordance with Department's review of LTSCs discussed at footnote 1, *supra*.

years, "with some adjustments in cases where CAGRD has specific knowledge of a subcontractor's future plans for full utilization of a supply"; (2) CAP water that is currently being delivered under a lease for five or fewer years ("short-term lease"); and (3) CAP water that is being delivered to an underground storage facility or groundwater savings facility for the purpose of earning LTSCs.

ii. AMWUA notes that a March 6, 2014 Action Brief prepared for the CAWCD Board of Directors states, "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" and "we do not anticipate having enough excess water over the next five years even to fill the underground storage and CAGRD pools at the levels specified in 2009." AMWUA states that these statements contradict CAGRD's projections of "unused CAP water" available for replenishment. Pima County states that the future availability of excess CAP water supplies and non-Indian agricultural pool water is uncertain, particularly in light of predicted Colorado River shortage and increasing tendency of CAP entitlement holders to use their entitlements.

iii. "Excess CAP water" is defined in the Plan to mean CAP water in excess of quantities scheduled for delivery under long-term contracts and subcontracts.

iv. With respect to "excess CAP water" supplies, CAGRD notes that "the availability of excess water for CAGRD use will continue to depend on other demands for that water...." CAGRD's indicates in its Plan that it will rely on "excess CAP water" as long as it is available, but does not assume its availability for replenishment purposes after 2017. *See* Figure 4.1 of the Plan.

vii. Evaluation of shortage impacts on the Plan is outside of the scope of the Director's review of the Plan for purposes of A.R.S. § 45-576.03(N), as the probability of shortage, and the calculation of its degree, duration, and impacts are too speculative at this time. CAGRD is not required to analyze all scenarios that might occur in the next 20 or 100 years. The applicable statutes recognize that there may be some uncertainty in the future availability of the water supplies identified in the Plan as evidenced, in part, by the requirement that CAGRD develop and maintain a replenishment reserve. Additionally, A.R.S. § 45-576.03(R) permits the Director to require CAGRD to submit a revised plan of operation if at any time between the second and eight anniversary of the Director's determination of consistency with the management goal, the Director finds that there has been an unexpected increase in CAGRD's projected obligation or an unexpected decrease in available supplies such that the Plan no longer demonstrates consistency with the management goal for one or more of the AMAs.

viii. The Director finds that in addition to "excess CAP water," certain "non-excess" CAP supplies, such as supplies which are subject to short-term leases or are being delivered for purposes of accruing LTSCs, are likely to be available to CAGRD for acquisition for replenishment purposes during the 20 years following submission of the Plan.

ix. Based upon the availability of both excess and certain non-excess CAP water supplies, including amounts delivered under short-term leases and supplies delivered to permitted recharge facilities solely for purposes of accruing LTSCs, the Director finds that CAGRD's calculation that a minimum of 279,700 acre-feet per year of CAP water will be available during the 20 years following submission of the Plan is reasonable. The Director finds that 279,700 acre-feet per

year of CAP water is likely to be available to CAGRD for purposes of meeting its replenishment obligation for current members in all three AMAs during the 20 years after submission of the Plan.

g. Colorado River Water (Other Than CAP Water)

i. CAGRD has identified between 109,800 and 219,700 acre-feet per year of Colorado River water as being available for replenishment purposes for all three AMAs during the 20 years following submission of the Plan. "Colorado River water" for this purpose is defined by CAGRD as the total of Arizona's consumptive uses of Colorado River water less CAP diversions.

ii. MCWA objects to a "reference to 200,000 a/f of MSCP coverage available to CAGRD for transfers."

iii. The Department does not find reference to MSCP coverage in the Plan.

iv. AMWUA objects to CAGRD's identification of available Colorado River water without including a discussion of governmental review processes required to transfer Colorado River water. MCWA states that any transfers of Colorado River water from the river's mainstem for replenishment purposes represents an effective reallocation of Colorado River water in Arizona and should "only be done pursuant to a full and open public process on a statewide basis."

v. The Department has issued a Substantive Policy Statement entitled "Policy and Procedure for Transferring an Entitlement of Colorado River Water" which sets forth the policies and procedures for obtaining the Director's review of and advice on proposed transfers of Colorado River water entitlements from a non-Indian contractor or subcontractor for a term of more than one year pursuant to A.R.S. § 45-107(D). This Substantive Policy Statement sets forth requirements for

public notice and for opportunity for public comment in the context of proposed conveyances and leases. CAGRD is bound by, and has indicated in its response to comments received on its Plan that it will comply with, all applicable federal and state regulatory requirements in connection with proposed transfers of Colorado River water.

vi. MCWA states that reliance on Colorado River supplies should include more discussion and analysis of shortage and structural deficit impacts. AMWUA also objects to CAGRD's calculation of available Colorado River water in light of projected Colorado River water shortage and declining water levels in Lake Mead. AMWUA states that proposed reliance on Colorado River water is contrary to the Department's and CAWCD's efforts to reduce Colorado River water demand.

vii. As described in Finding No. 1(f)(vii) above, concerns regarding potential shortage declarations are outside of the scope of the Director's review of the Plan pursuant to A.R.S. § 45-576.03(N).

viii. However, the Director finds that Colorado River water should not be included in the water supplies likely to be available for acquisition by CAGRD to meet its 20-year replenishment obligation for current members. In order for Colorado River water to be physically available for replenishment purposes within the three AMAs, such water must necessarily be wheeled through the CAP canal. For the reasons set forth above at Finding No. 1(e)(ix), these supplies are presently subject to a legal and/or administrative barrier which prevents their physical transfer to the three AMAs. Therefore, they may not be included in CAGRD's calculation of supplies available to meet its 20-year replenishment obligation for current members.

h. Effluent

i. CAGRD has identified between 59,600 and 119,200 acre-feet per year of effluent as being available for replenishment purposes during the 20 years following submission of the Plan for all three AMAs.

ii. AMWUA states that municipalities who treat wastewater will continue to use effluent for their own needs. While this is likely true, the Plan anticipates that population will continue to grow within the three AMAs in connection with estimating CAGRD's future replenishment obligations. As population grows in the AMAs and elsewhere throughout the state, amounts of available effluent will increase as well.

iii. Furthermore, to the extent that member service areas and member lands enrolled with CAGRD increase reliance upon their own effluent sources, CAGRD's replenishment obligation is likely to be reduced accordingly.

iv. Pima County objects to the use of effluent for replenishment purposes to the extent reliance on those supplies does not bring "new" supplies into the AMA and urges the Department to require CAGRD to deliver renewable water to the AMA using water delivery infrastructure or wheeling agreements.

v. As stated above in Finding No. 1(e)(vii), CAGRD is not required to bring "new" supplies into an AMA to fulfill its replenishment obligations. CAGRD is statutorily authorized by A.R.S. § 48-3771(C) to replenish with any lawfully available source except groundwater withdrawn from within an AMA.

vi. AMWUA objects to CAGRD's calculation of available effluent in light of a December 3, 2013 Technical Memorandum created by HDR, Inc. indicating that "95% of the wastewater generated within the CAP service area serves beneficial uses." AMWUA also notes a discrepancy between the HDR, Inc. study's

identification of a total of 285,500 acre-feet of effluent generated in Maricopa, Pinal, and Pima Counties and the Plan's identification of 407,600 of current effluent production in the Phoenix, Pinal, and Tucson AMAs.

vii. CAGRD responds that the report created by HDR, Inc. understates the amount of available effluent because it did not include effluent production from facilities producing less than 1.5 million gallons per day in Maricopa County or from facilities producing less than 500,000 gallons per day in Pima and Pinal Counties. CAGRD states that the calculation of available effluent in the Plan is based upon a 2013 survey conducted by WestWater Research for CAGRD. CAGRD states that the HDR's study "assumed that effluent discharged to a surface drainage without accrual of storage credits constitutes 'beneficial use'" and that "CAGRD does not make this assumption."

viii. Based upon review of amounts of effluent which were discharged to a stream channel or evaporation pond by municipal providers as reported in 2014 Annual Water Use Reports, the Director finds that CAGRD's identification that a minimum of 59,600 acre-feet per year of effluent will be available to CAGRD during the 20 years following submission of the Plan is reasonable. While some of these amounts may currently serve beneficial uses, for instance wildlife, including fish, discharging entities are not necessarily bound to continue discharging effluent to a stream channel or pond simply because the effluent currently serves such uses.

ix. While some volumes of effluent may be available for acquisition by CAGRD in the Tucson AMA for purposes of meeting CAGRD's replenishment obligation during the 20 years after submission of the Plan, the Director lacks information to confirm the presence of available effluent in the Tucson AMA for purposes of meeting CAGRD's 20-year replenishment obligation to current

members. As with LTSCs, transfer of effluent supplies from one AMA to another will likely require wheeling of water through the CAP canal. Presently no form of wheeling agreement between CAWCD and the Bureau of Reclamation has been approved. Therefore, for purposes of analyzing whether CAGRD has identified sufficient supplies to meet its replenishment obligation for current members during the 20 years following submission of the Plan, the Director has assumed that no effluent will be available within the Tucson AMA during that period.

i. Based on the foregoing, the Director finds it reasonable to assume a minimum total of 386,834 acre-feet per year of supplies will be available for purposes of meeting CAGRD's 20-year replenishment obligation for current members in all three AMAs. This amount includes CAGRD's presently "acquired" supplies in the amount of 36,534 acre-feet per year and supplies likely to be available for acquisition by CAGRD in the amount of 350,300 acre-feet per year. The amount does not include any non-CAP Colorado River water.

j. The supplies identified by CAGRD to meet its replenishment obligations for current members during the 20 calendar years following submission of the Plan include supplies which are located in specific AMAs ("AMA-specific supplies"), as well as supplies which will be available to the entire CAP service area generally. To the extent that CAGRD's replenishment obligation in the Tucson AMA are not met by Tucson AMA-specific supplies, CAGRD has identified more than sufficient additional supplies of CAP water which will be available to the CAP service area generally, including the Tucson AMA, and which can be directed toward the Tucson AMA as needed, as reflected in the table below:

	Phoenix AMA	Tucson AMA	Pinal AMA
Replenishment Obligation (in acre-feet) for Year 2034 for Current Members	52,200	8,000	2,500
"Acquired" LTSCs Available for Year 2034 (in acre-feet) per Table 4.1 of Plan	(4,009)	(1,444)	0
Additional LTSCs Available for Year 2034 (low estimate in acre-feet) [3]	(6,600)	(1,100)	(3,300)
"Acquired" Effluent for Year 2034 (in acre-feet) per Table 4.1 of Plan	(2,400)	0	0
Additional Effluent Available for Year 2034 (low estimate in acre-feet)	(59,600)	0	0
"Acquired" AMA-specific CAP water for Year 2034 (in acre-feet) per Table 4.1 of Plan	(7,996)	0	0
Replenishment Obligation (in acre-feet) for Year 2034 for Current Members Not Met by AMA-specific supplies	none	5,456	none
Total available CAP water attributable to the CAP service area generally (low estimate in acre-feet)	(300,585)[4]		
Unmet Replenishment Obligation (in acre-feet) for Year 2034 for Current Members	**none**	**none**	**none**

2. CAGRD has identified additional water supplies potentially available for its projected groundwater replenishment obligations in the Tucson AMA for the 100 calendar years following 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 10 years following submission of the Plan.

a. CAGRD has estimated its replenishment obligations for current and potential members in all three AMAs in the 100 years following submission of the Plan, culminating in 113,000 acre-feet of obligation for the year 2114. For the Tucson AMA only, CAGRD has estimated that its replenishment obligation for current and potential members will be 13,300 acre-feet for the year 2114.

[3] Divides 11,000 acre-feet of available LTSCs (low estimate) among the three AMAs by the rough proportion of total LTSCs currently in each respective AMA.

[4] Represents 20,685 acre-feet of "acquired supplies" plus a low estimate of 279,700 acre-feet of additionally-available CAP water.

b. With respect to the requirement that CAGRD identify supplies sufficient to meet its obligations for both current and potential members in the 100 years following submission the Plan, CAGRD is entitled to rely upon not only supplies which are currently likely to be available for acquisition, but also supplies which *potentially* will be available for acquisition in the future. As noted at Finding No. 1(g)(viii) above, Colorado River water should not be viewed as currently available for purposes of meeting CAGRD's 20-year replenishment obligation for current members because no standard form of wheeling agreement necessary to transport Colorado River water has been approved. However, the Bureau of Reclamation may approve a standard form of wheeling agreement in the near future. Therefore some supplies of Colorado River water may be included for purposes of demonstrating sufficient potentially available supplies for purposes of meeting CAGRD's total replenishment obligation for current and potential members in the 100 years following submission of the Plan.

c. CAGRD's calculates that a minimum of 372,500 acre-feet per year of combined LTSCs, effluent, CAP water, and Colorado River water is potentially available for purposes of meeting its projected replenishment obligations for current and potential members in all three AMAs in the 100 calendar years following submission of the Plan. The Director finds that this calculation is reasonable.

d. Beyond the categories of supplies identified for purposes of meeting CAGRD's 20-year replenishment, CAGRD has identified estimates of potentially available imported groundwater and potentially available desalinated water. However, it appears that not all of the volumes that CAGRD estimates for these additional categories of supplies will be potentially available for replenishment purposes. For instance, CAGRD identifies Buckeye waterlogged groundwater as a potential source of desalinated water, *see* note 14 to Table 4.2 of the Plan. However, A.R.S. § 48-3771(C) prohibits the use of groundwater

withdrawn from within an AMA for use for replenishment purposes. Nevertheless, the Director need not reach a determination with respect to whether these additional category of supplies are potentially available for purposes of satisfying CAGRD's 100-year replenishment obligation, as CAGRD has identified sufficient other supplies in satisfaction of the requirements of A.R.S. § 45-576.03(N)(1).

e. CAGRD's low estimate of 372,500 acre-feet per year of potentially available supplies of combined LTSCs, effluent, CAP water, and Colorado River water is more than sufficient to meet CAGRD's total 100-year replenishment obligation in all three AMAs, as shown in the table below:

Replenishment Obligation (in acre-feet) for Year 2114 for Current and Potential Members	84,200 Phoenix AMA 13,300 Tucson AMA 15,500 Pinal AMA 113,000 Total
Available Supplies for Year 2114 (low estimate)	(372,500)
Unmet Replenishment Obligation (in acre-feet) for Year 2114	**none**

f. CAGRD's demonstration that total available supplies exceed its total replenishment obligations for all three AMAs is adequate for purposes of identifying sufficient supplies for CAGRD's 100-year replenishment obligation in the Tucson AMA. As discussed above, a standard form of wheeling agreement permitting the movement of non-CAP water through the CAP may be approved in the near future. Therefore, currently "unavailable" mechanisms to transfer supplies for replenishment purposes, such as through recovery and movement of water through the CAP canal, potentially will be available in the future, making AMA-specific supplies available to the CAP service area generally.

3. The replenishment reserve target for the Tucson AMA was calculated as prescribed in section 48-3772(E), and the CAGRD is developing a replenishment reserve in the Tucson AMA pursuant to A.R.S. § 48-3772(E).

pursuant to A.R.S. § 48-3772(E).

a. CAGRD has accrued 32,491 acre-feet of LTSCs in the Tucson AMA Replenishment Reserve Sub-account and has identified an additional 2,327 acre-feet of LTSCs dedicated by CAWCD for CAGRD replenishment reserve purposes. In Appendix B to the Plan, the CAGRD has included copies of annual reports filed with the Department pursuant to A.R.S. § 48-3775(E), demonstrating CAGRD's historic acquisition and crediting of LTSC's to each AMA's respective replenishment reserve sub-account. CAGRD has been steadily accruing LTSCs in its Tucson AMA Replenishment Reserve Sub-account over the past 10 years. CAGRD has also demonstrated that sufficient LTSCs are currently available to meet CAGRD's combined reserve target amounts for all three AMAs, relying on a combination of existing CAGRD reserve credits and LTSCs held by CAWCD which have been dedicated to CAGRD for replenishment reserve purposes. A large number of "excess" credits are located in the Pinal AMA Replenishment Reserve Sub-account. CAGRD states that it will evaluate mechanisms by which to "transfer" or "exchange" LTSCs as necessary to meet the reserve target amounts for the Phoenix and Tucson AMA. CAGRD states in the Plan that it will also seek to obtain identified supplies over and above amounts necessary to fulfill its replenishment obligations for purposes of meeting and maintaining the replenishment reserve target amount for each AMA. In view of this information, CAGRD has demonstrated that it is taking reasonable steps to develop the replenishment reserve in accordance with A.R.S. § 48-3772(E).

b. With respect to the Tucson AMA, Pima County notes that CAGRD has a reserve target of 112,600 acre-feet but that the CAGRD currently only holds 34,818 acre-feet "in reserve" (representing amounts held in CAGRD's Tucson AMA Replenishment Reserve Sub-account and amounts dedicated by CAWCD), and states that, therefore, 70% of the reserve target for the Tucson AMA remains "unfulfilled."

c. CAGRD is not required to have acquired supplies to meet the entire replenishment reserve target at the time of the submission of the Plan, but must show that it "is developing" a replenishment reserve pursuant to A.R.S. § 48-3772(E). A.R.S. § 45-576.03(N)(2). As explained in sub-paragraph (b) above, CAGRD has met this requirement.

4. The CAGRD has identified sufficient capacity at storage facilities and projects to be used for replenishment purposes in the Tucson AMA during the 20 calendar years following the submission of the Plan.

a. CAGRD has identified 49,700 acre-feet of available annual storage capacity in underground storage facilities in the Tucson AMA to which CAWCD has exclusive access and to which CAGRD has been granted highest priority after entities with contractual rights to use CAWCD storage facilities. CAGRD has further identified approximately 500 acre-feet of available annual storage in groundwater savings facilities ("GSF") in the Tucson AMA, which CAGRD calculated with reference to historical usage of the Kai Farms (Red Rock) GSF by non-CAGRD GSF partners. These facilities provide more than sufficient capacity to be used by CAGRD for replenishment purposes in the Tucson AMA for the next 20 years.

b. Pima County states that CAGRD's underground storage facilities have no physical or hydrological connection to certain Member Land subdivisions within the Tucson AMA and urges the Department to require the CAGRD to replenish within the hydrologic area impacted by Member Lands' groundwater pumping or deliver renewable water directly using water delivery infrastructure or wheeling agreements.

c. Pursuant to A.R.S. § 48-3771(B), CAGRD is required to replenish within the AMA where the respective obligation is incurred. However, there is no requirement that the CAGRD replenish within the area of impact of each member's withdrawals. Although the Department supports efforts to replenish as close as feasible to the area where each

respective obligation is incurred, the Department lacks authority to impose such a requirement.

5. CAGRD has made a reasonable estimate of its projected replenishment obligations in the Tucson AMA for the 100 calendar years following the submission of the Plan as required by A.R.S. § 45-576.02(C)(2)(b).

a. Section 45-576.02(C)(2)(b) provides that the CAGRD shall make an estimate of the CAGRD's projected groundwater replenishment obligations for the 100 calendar years following 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 the submission of the Plan.

b. The Department reviewed CAGRD's projections of real property and service areas that could qualify for membership in the ten years following submission of the Plan. The Department considered projected population for the three AMAs, projected supply and demand for each water use sector, and projected water storage activities, to verify that the CAGRD's projections of its future replenishment obligations are reasonable. The Department determined from its review that CAGRD's projections are reasonable.

6. The following comments by MWCA are not within the scope of what the Director may consider in connection with his review of the Plan pursuant to A.R.S. § 45-576.03(N): (1) MCWA supports a "midterm adjustment" to the Plan "to allow better reaction to actual CAGRD demand versus that forecasted and supports "the idea of performance benchmarks," and (2) MCWA "supports analysis and discussion of whether the 'replenishment' approach is sustainable over the long term."

7. Pima County's statement in support of legislation which permits voluntary termination of member land status in order to decrease CAGRD's replenishment obligations is not within the scope of what the Director may consider in connection with his review of the Plan

pursuant to A.R.S. § 45-576.03(N).

IV. DECISION

Based on the above findings, the Director hereby determines that the Plan is consistent with achieving the management goal for the Tucson AMA.

ORDER

IT IS HEREBY ORDERED:

1. CAGRD's Plan of Operation is determined to be consistent with achieving the management goal of the Tucson AMA.

2. Except as provided in A.R.S. § 45-576.03(R), this determination shall expire on the date provided in A.R.S. § 45-576.03(M).

3. This Order shall become effective upon the date signed by the Director below.

GIVEN under my hand this 5th day of August, 2015.

Thomas Buschatzke
Director

COPY of the foregoing Decision and Order was sent by certified mail this 6th day of August, 2015 to:

Dennis Rule *CMRRR#7006081000046024217 2*
Manager, CAGRD
Central Arizona Project
P.O. Box 43020
Phoenix, Arizona 85080

COPY of the foregoing Decision and Order was sent via electronic mail this 6th day of August, 2015 to the following persons who submitted written comments regarding the Plan:

Maureen R. George (mrglaw1@frontier.net)
Attorney for Mohave County Water Authority

Jackson Jenkins, Director (Jackson.Jenkins@pima.gov)
Pima County Regional Wastewater Reclamation Department

Margaret R. Gallogly (mgallogly@fclaw.com)
Fennemore Craig, P.C.
Attorney for Douglas Ranch El Dorado, LLC; DMB Associates, Inc.; Sunbelt Holdings and Robson Communities

Michele Van Quathem (MVQ@rcalaw.com)
Ryley Carlock & Applewhite
Attorney for Pulte Home Corporation

Connie Wilhelm, President & Executive Director (wilhelm@hbaca.org)
Home Builders Association of Central Arizona

David Godlewski, President (david@sahba.org)
Southern Arizona Homebuilders Association

Carol Ward-Morris, Assistant Director (cwardmorris@amwua.org)
Arizona Municipal Water Users Association

COPY of the foregoing Decision and Order was sent via electronic mail this 6th day of August, 2015 to the following persons who attended a public hearing in this matter but did not submit comments regarding the Plan:

Eric Braun (Eric.Braun@GilbertAZ.gov)
Norm DeWeaver (norm_deweaver@rocketmail.com)
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