



CENTRAL ARIZONA GROUNDWATER
REPLENISHMENT DISTRICT

2017

ANNUAL
OPERATIONS
REPORT



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LIST OF ABBREVIATIONS

<i>ABBREVIATION</i>	<i>DESCRIPTION</i>
ADWR	Arizona Department of Water Resources
AF	acre-feet
AF/Yr	acre-feet per year
AMA	Active Management Area
ARM	Active Resource Management
A.R.S.	Arizona Revised Statutes
AWBA	Arizona Water Banking Authority
AWS	Assured Water Supply
BOR	U.S. Bureau of Reclamation
CAP	Central Arizona Project
CAGRD	Central Arizona Groundwater Replenishment District
CAWCD	Central Arizona Water Conservation District
CAWS	Certificate of Assured Water Supply
CDAR	Conservation District Annual Report
DAWS	Designation of Assured Water Supply
GSF	Groundwater Savings Facility
HOA	Homeowners Association
LPSCO	Litchfield Park Service Company
LSCR	Lower Santa Cruz River
LTSCs	Long-term Storage Credits
M&I	Municipal and Industrial
MDWID	Metropolitan Domestic Water Improvement District
ML	Member Land
MSA	Member Service Area
MVIDD	Mohave Valley Irrigation & Drainage District
PSA	Purchase and Sale Agreement
SMCFD	Superstition Mountains Community Facilities District
SUA	System Use Agreement
USF	Underground Storage Facility
WAM	Water Asset Management, LLC
WPI	Water Property Investor, LP

BRIEF INTRODUCTION TO CAGRD

The Central Arizona Groundwater Replenishment District (“CAGRD”) was established in 1993 to provide a method for landowners and water providers to demonstrate one of the requirements necessary to secure a 100-year Assured Water Supply (“AWS”) under Arizona law. CAGRD recharges Central Arizona Project (“CAP”) water and other water supplies to replenish groundwater used by its members in excess of the limits established by the Arizona Department of Water Resources (“ADWR”) AWS Rules.

The AWS Rules limit the quantity of mined groundwater that an applicant may use to demonstrate an AWS. This groundwater use limitation prevents new development from relying solely on mined groundwater to satisfy its water demands. If a landowner or water provider has no direct access to CAP water or other renewable supplies, but has access to sufficient groundwater to demonstrate an AWS, it may use groundwater, provided it becomes a member of CAGRD. As a member, the landowner or water provider must pay CAGRD to replenish any groundwater pumped by the member which exceeds the pumping limitations (referred to as “Excess Groundwater”) imposed by the AWS Rules.

CAGRD is operated by the Central Arizona Water Conservation District (“CAWCD”) throughout the portion of CAWCD’s three-county service area that is within an Active Management Area (“AMA”). It is governed by the CAWCD Board of Directors (“Board”) yet CAGRD’s finances are completely separate from the rest of CAWCD’s finances and all costs incurred by CAGRD must be paid by CAGRD members.

Membership

Membership in CAGRD is voluntary. Any city, town, private water company, subdivision or homeowner’s association located in the Phoenix, Pinal or Tucson AMA may join CAGRD so long as it meets the State’s requirements. CAGRD is comprised of two types of members: Member Service Areas (“MSAs”) and Member Lands (“MLs”).

- MSA - The service area of a city, town, district or private water company, including any extensions of the service area. The municipal water provider is required to submit a report to CAGRD annually identifying the volume of total water delivered and the volume of groundwater pumped within the service area and must pay CAGRD replenishment taxes on groundwater volumes pumped in excess of the pumping limitations imposed by the AWS rules. When applying to enroll a service area in CAGRD, the applicant provides a projection of future population, water demands and renewable supplies available to meet those demands. These projections serve as a basis for estimating CAGRD’s long-term replenishment obligation for the service area.

Membership in CAGRD enables the water provider to receive a Designation of Assured Water Supply (“DAWS”), issued by ADWR, for its service area.

- ML – An individual subdivision with a defined legal description. The water provider agrees to submit annually to CAGRD the water delivery information necessary to calculate the replenishment assessment for each parcel of land enrolled within the subdivision. A ML water provider does not have a DAWS. Instead, each individual subdivision must receive its own, separate Certificate of Assured Water Supply (“CAWS”) from ADWR, and enrollment in CAGRD enables it to do so.

Replenishment Obligation

CAGRD must replenish in each AMA the amount of Excess Groundwater¹ that has been pumped by or delivered to its members in that AMA. The replenishment may be accomplished through: 1) the operation of underground storage facilities, where water is recharged underground into existing aquifers; 2) through groundwater savings facilities, where water is used directly by irrigation districts in lieu of pumping groundwater; or 3) through the extinguishment of long term storage credits (“LTSCs”) held by CAGRD. Water used for replenishment may be CAP water or water from any other lawfully available source, except groundwater withdrawn from within an AMA.

Revenue Sources

All operations of CAGRD must be funded completely by its members. These costs are covered by a combination of up-front fees, annual membership dues, and replenishment taxes and assessments. Each type of revenue source is dedicated to specific purposes and helps cover costs associated with replenishment activities, such as development of infrastructure, recharge facility construction, water acquisition, operation and maintenance, replenishment reserve accruals and administration. CAGRD also has the authority to issue revenue bonds to develop infrastructure and acquire water rights necessary to perform its replenishment obligation.

MSAs pay CAGRD for replenishment services performed on behalf of their service area, as well as annual membership dues. Individual property owners in MLs each pay a special assessment to CAGRD, as well as annual membership dues, both collected through the annual property tax assessment process.

¹ Excess Groundwater is defined in A.R.S. § 48-3701.7 as the amount of groundwater delivered to a member in a calendar year in excess of the amount of groundwater that may be used by the member in that calendar year consistent with the applicable Assured Water Supply rules adopted by ADWR for the AMA where the member is located.

Planning

Plan of Operation - Every ten years, CAGRD is required to submit a Plan of Operation to the Director of ADWR. The primary purpose of the Plan is to document the actions of CAGRD over the past ten years and to describe the activities that CAGRD proposes to undertake in each AMA during the ten-year and 100-year periods following Plan submission. CAGRD's 2015 Plan of Operation ("2015 Plan") was approved by the Director of ADWR on August 5, 2015 and covers the ten-year period from 2015-2024. CAGRD continues to operate under this Plan until the next plan is submitted by 2025.

Board Strategic Plan - One objective of the CAWCD 2016 Board of Directors Strategic Plan, specific to the management and oversight of CAGRD, involves review of CAGRD status as compared to projections in the Plan of Operation often enough to provide comfort to the Board, staff, stakeholders and legislators. Two action items were identified as part of this review:

1. Perform and document a formal review of CAGRD at least every five years.
2. Prepare an annual report showing membership and corresponding projections of obligations and include it as part of the annual report filed with ADWR.

Mid-Plan Review - The Mid-Plan Review (Item #1 above) is a comprehensive assessment of the mid-term trends in CAGRD operations under the Plan of Operation. The Mid-Plan Review provides indications of where these trends may lead CAGRD over the remaining five years of the Plan and any adjustments to the Plan that may need to be considered. A Mid-Plan Review was completed in 2011 during the 2005 Plan of Operation period and the next Mid-Plan Review is scheduled for completion in 2020 during the 2015 Plan of Operation period.

Annual Reporting - The Conservation District Annual Report ("CDAR") is submitted to ADWR by August 31 of each year for the previous calendar year (A.R.S. § 48-3775.E). The CDAR details numerical information in a series of tables showing water storage amounts, credit transfers, account balances, groundwater replenishment obligations, contract replenishment obligations and contract replenishment credit accounting.

The Board has directed staff to develop an enhanced annual report (Item #2 above), hereafter referred to as the CAGRD Annual Operations Report, that serves to supplement the CDAR with additional information on the status of CAGRD operations. More specifically, the Annual Operations Report provides further details in a narrative format on new enrollment, up-to-date replenishment obligations, water supply and replenishment reserve activities and any new legislation and administrative activities that occurred in the report year.

The first CAGRD Annual Operations Report was completed in late 2015 for calendar year 2014, which was the final year covered under the previous 2005 Plan of Operation. This fourth CAGRD Annual Operations Report was completed in fall 2018 for calendar year 2017, which is

the third year covered under the 2015 Plan of Operation. Completion of the Annual Operations Report will always follow submittal of the CDAR to ADWR. This report was submitted to ADWR in October 2018 and posted on the CAGRD website at www.cagrd.com.

1. Enrollment and Activation – 2017

Enrollment

All new Member Land (ML) enrollment in 2017 occurred in the Phoenix AMA and was comprised of 18 subdivisions with 3,972 lots with a projected demand of 2,014 AF/yr (see **Table 1.1**). The West Valley encompassed 22% of new membership (889 lots) with a projected demand of 417 AF/yr of new enrollment annual obligation. The East Valley encompassed the remaining 78% of new membership (3,083 lots) with a projected demand of 1,597 AF/yr of new enrollment annual obligation. There were no new MLs enrolled in either the Pinal AMA or the Tucson AMA in 2017.

TABLE 1.1

NEW MEMBER LAND (ML) ENROLLMENT IN 2017

AMA	ML Lots*	Projected Demand AF/yr
Phoenix	3,972	2,014
West Phoenix	889	417
East Phoenix	3,083	1,597
Pinal	0	0
Tucson	0	0
TOTAL	3,972	2,014

TABLE NOTE: *The term Member Land (ML) refers to a subdivision enrolled in CAGR; numbers reflect the number of lots or homes within the subdivisions.

Member land enrollment in 2017 was approximately 80% higher than enrollment in 2016, when 2,211 lots enrolled. Enrollment in the Tucson AMA dropped off completely (no new enrollment in 2017 compared to 10 lots in 2016). There has been no enrollment in the Pinal AMA since 2011. Enrollment in the Phoenix AMA increased about 80% overall in 2017 compared to 2016. There was also a shift in West versus East Phoenix AMA enrollment, with about 33% *less* enrollment in the West Valley and an enrollment *increase* of over 350% in the East Valley compared to 2016.

No new Member Service Areas enrolled in 2017.

CAGR also experienced more de-enrollment activity in 2017. Twenty Phoenix AMA subdivisions representing 646 lots de-enrolled from CAGR membership. Portions of these areas were subsequently re-platted and re-enrolled.

Comparison of Actual ML Enrollment in 2017 to Projected ML Enrollment in 2017 (as projected in 2015 Plan of Operation)

Recovery in the CAGRD service area housing market has not yet occurred to the level projected by the Association of Governments, which was used in the 2015 Plan of Operation. This largely explains the discrepancy shown in **Table 1.2** below, which shows that actual enrollment in 2017 was less than one-third of the projected enrollment in the Plan.

TABLE 1.2

**COMPARISON OF ACTUAL ML ENROLLMENT IN 2017
TO PROJECTED 2017 ML ENROLLMENT**

AMA	Actual 2017 ML Enrollment^a	Projected 2017 ML Enrollment^b
<i>Phoenix</i>	3,972	10,813
<i>Pinal</i>	0	913
<i>Tucson</i>	0	1,137
TOTAL	3,972	12,863

TABLE NOTES:

^a2017 CAGRD Annual Operations Report, Table 1.1.

^b2015 Plan of Operation. For the housing unit projection methodology, refer to the New Demand Section 3.2.2 (pg. 3-2) of the 2015 Plan of Operation.

Activation

The Arizona Department of Real Estate issues a public report allowing the sale of lots within subdivisions. Prior to this report being issued for subdivisions within CAGRDL MLs and MSAs, an Activation Fee must be paid to CAGRDL per residential unit offered for sale. In 2017, the number of lots activated totaled 9,530 (ML lots = 5,162; MSA lots = 4,368). **Table 1.3** provides a breakdown by AMA of previously enrolled lots that were activated in 2017.

TABLE 1.3
NUMBER OF LOTS ACTIVATED IN 2017

AMA	MLs	MSAs
Phoenix	4,863	2,032
<i>West Phoenix</i>	3,517	455
<i>East Phoenix</i>	1,346	1,577
Pinal	70	75
Tucson	229	2,261
TOTAL	5,162	4,368

Compared to 2016, more member land lots were activated in 2017 (an increase of approximately 17%) while MSA activations were slightly lower (a decrease of about 5%). On the ML side, 2017 saw a decrease of about 55% in Tucson activations, and a decrease of about 22% in East Phoenix activations. The biggest difference was in West Phoenix, where 3,517 ML lots were activated, a 77% increase over the previous year's 1,980 activated ML lots.

On the MSA side, there were also some shifts compared to 2016, despite such a small difference in total MSA activations (4,368 lots in 2017 versus 4,595 lots in 2016). Specifically, there was a decrease in the number of West Phoenix MSA activations (455 lots in 2017 versus 929 in 2016) and a decrease in East Phoenix MSA activations (1,577 lots in 2017 versus only 1,743 lots in 2016). The East Phoenix MSA with the most activated lots in 2017 was the Town of Gilbert. Pinal MSAs saw a 75% decrease in activated units, with only 75 in 2017 compared to 299 units in 2016. And the Tucson AMA MSA activations saw an increase of approximately 40% (2,261 units in 2017 from 1,624 units in 2016) with the greatest share originating in the City of Tucson.

2. Replenishment Obligation Incurred and Replenishment Obligation Completed – 2017

A municipal water provider serving MLs is required by statute to file an annual report with CAGRD for each ML subdivision that it serves; this report must indicate the volume of total groundwater and the volume of Excess Groundwater delivered to each parcel in the subdivision. MSAs also are required by statute to file an annual report with CAGRD indicating the volume of total groundwater and the volume of Excess Groundwater pumped within their service areas. These reports must be submitted to CAGRD by March 31st of each year, and the volumes reported represent pumping or deliveries from the previous year (“the Report Year”). Thus, CAGRD incurs Replenishment Obligation in the calendar year following that in which the Excess Groundwater was actually delivered. CAGRD must complete its Replenishment Obligation within three calendar years after it is incurred. For that reason, at any given point in time there may be approximately one year’s worth of obligation unfulfilled, or more.

The replenishment obligation reflects the volume of Excess Groundwater delivered by municipal water providers serving CAGRD ML subdivisions and withdrawn by MSA providers within their service areas. In 2017, CAGRD incurred a replenishment obligation of 30,187 AF. **Table 2.1** shows the distribution of obligation between MLs and MSAs by AMA. Overall, the total obligation was 71% within MLs and 29% within MSAs. The 2017 obligation amounted to a small decrease over the 2016 obligation (30,922 AF) with nearly the same contribution by AMA and from MLs versus MSAs.

Table 2.1

EXCESS GROUNDWATER DELIVERIES FOR MLs AND MSAs in 2017 (AF) By AMA

AMA	MLs	MSAs	TOTAL
Phoenix	19,725	6,936	26,661
Pinal	22	652	674
Tucson	1,674	1,178	2,852
TOTAL	21,421	8,766	30,187

Tables 2.2, 2.3, 2.4, and 2.5 list the volumes of Excess Groundwater delivered/withdrawn from 2014 through 2017 along the top row. The tables also identify the extent to which the replenishment obligation resulting from those deliveries has been completed. Recent activity is shown, specifically for the past four years, showing that CAGRD has met its obligation within

the statutory time frame. In 2017, CAGRD completed 36,834 AF of replenishment obligation as shown in **Tables 2.2 through 2.5** (refer to 2017 rows).

The following explanation is offered to assist in interpreting these tables. Please refer to **Table 2.2** showing a comparison of the Excess Groundwater deliveries to completion of replenishment obligation for the West Phoenix AMA.

The top row shows the year in which deliveries or withdrawals of Excess Groundwater occurred. For example, the 2014 column illustrates that a total of 13,958 AF of Excess Groundwater was delivered to MLs and/or withdrawn by MSAs in 2014 in the West Phoenix AMA. Fulfillment of this obligation occurred over a one-year period: all 13,958 AF was fulfilled in 2015. The two rows along the bottom of the table showing the “Amount Completed to Date” and “Amount Unmet to Date” reflect ongoing replenishment activities to fulfill or complete the obligation associated with Excess Groundwater deliveries. For example, the 2017 column illustrates a total of 11,955 AF of Excess Groundwater was delivered or withdrawn in 2017; in 2017, 9,008 AF was replenished, leaving 2,947 AF remaining obligation in the West Phoenix AMA.

Table 2.2

**EXCESS GROUNDWATER DELIVERIES AND
COMPLETION OF REPLENISHMENT OBLIGATION**
For West Phoenix AMA

WEST PHOENIX AMA		EXCESS GROUNDWATER OBLIGATION BY REPORT YEAR* (AF)			
		2014	2015	2016	2017
		13,958	13,001	11,904	11,955
YEAR OBLIGATION COMPLETED	2014				
	2015	13,958			
	2016		13,001	4,884	
	2017			7,020	9,008
Amount Completed to Date		13,958	13,001	11,904	9,008
Amount Unmet to Date		0	0	0	2,947

TABLE NOTE: *Report Year refers to year in which Excess Groundwater was delivered to each ML or withdrawn from each MSA; volumes reported in hundredths have been rounded to whole numbers for this report, resulting in minor discrepancies of 1 AF in some totals.

Table 2.3

**EXCESS GROUNDWATER DELIVERIES AND
COMPLETION OF REPLENISHMENT OBLIGATION**
For East Phoenix AMA

EAST PHOENIX AMA		EXCESS GROUNDWATER OBLIGATION BY REPORT YEAR* (AF)			
		2014	2015	2016	2017
		16,398	14,435	15,990	14,706
YEAR OBLIGATION COMPLETED	2014				
	2015	9,953			
	2016	6,445	14,435		
	2017			15,990	
Amount Completed to Date		16,398	14,435	15,990	0
Amount Unmet to Date		0	0	0	14,706

TABLE NOTE: *Report Year refers to year in which Excess Groundwater was delivered to each ML or withdrawn from each MSA; volumes reported in hundredths have been rounded to whole numbers for this report, resulting in minor discrepancies of 1 AF in some totals.

Table 2.4

**EXCESS GROUNDWATER DELIVERIES AND
COMPLETION OF REPLENISHMENT OBLIGATION**
For Pinal AMA

PINAL AMA		EXCESS GROUNDWATER OBLIGATION BY REPORT YEAR* (AF)			
		2014	2015	2016	2017
		551	397	488	674
YEAR OBLIGATION COMPLETED	2014				
	2015				
	2016	3			
	2017	548	397	488	2
Amount Completed to Date		551	397	488	2
Amount Unmet to Date		0	0	0	672

TABLE NOTE: *Report Year refers to year in which Excess Groundwater was delivered to each ML or withdrawn from each MSA; volumes reported in hundredths have been rounded to whole numbers for this report, resulting in minor discrepancies of 1 AF in some totals.

Table 2.5

**EXCESS GROUNDWATER DELIVERIES AND
COMPLETION OF REPLENISHMENT OBLIGATION**
For Tucson AMA

TUCSON AMA		EXCESS GROUNDWATER OBLIGATION BY REPORT YEAR* (AF)			
		2014	2015	2016	2017
		2,957	2,469	2,540	2,852
YEAR OBLIGATION COMPLETED	2014				
	2015	902			
	2016	2,055	1,153		
	2017		1,316	2,065	
Amount Completed to Date		2,957	2,469	2,065	0
Amount Unmet to Date		0	0	475	2,852

TABLE NOTE: *Report Year refers to year in which Excess Groundwater was delivered to each ML or withdrawn from each MSA; volumes reported in hundredths have been rounded to whole numbers for this report, resulting in minor discrepancies of 1 AF in some totals.

Comparison of Actual Obligations in 2017 to Projected Obligations in 2017 (as projected in 2015 Plan of Operation)

The obligation projections are tied to housing unit growth as well; thus, actual obligations in 2017 (30,187 AF) were lower than the Plan of Operation projection of 33,160 AF (**Table 2.6**). However, on the MSA side, actual obligation was greater than projected. As enrollment activity, and activation activity especially, continue to rebound along with the housing market, the gap in actual versus Plan projected obligation is expected to narrow, though it is difficult to gauge whether the market will ever fully catch up to the Plan projections.

TABLE 2.6

**COMPARISON OF ACTUAL REPLENISHMENT OBLIGATION IN 2017
TO PROJECTED 2017 REPLENISHMENT OBLIGATION
(Replenishment Obligation Reflected by Excess Groundwater Deliveries)**

AMA	MLs		MSAs	
	Actual 2017 Obligation ^a	Projected 2017 Obligation ^b	Actual 2017 Obligation ^a	Projected 2017 Obligation ^b
<i>Phoenix</i>	19,725	23,900	6,936	5,000
<i>Pinal</i>	22	60	652	600
<i>Tucson</i>	1,674	2,400	1,178	1,200
TOTAL	21,421	26,360	8,766	6,800

TABLE NOTES:

^a2017 CAGRD Annual Operations Report, Table 2.1.^b2015 CAGRD Plan of Operation.

3. Water Supply Program - 2017

A description of CAGRD's Water Supply Program for 2017 is provided under two headings: Section A - **Water Supply Activity** and Section B - **Summary of Water Supplies**. Section A describes both new activity in the program for 2017 and on-going activity carried over into 2017. Discussion of new activity in 2017 will identify whether new physical supplies became available during the reporting year or will become available at some future date as specified in the associated contract or agreement. Section B serves to show an overall picture of CAGRD's water supplies for 2017, summarizing the volume of water supplies CAGRD had available going into the year, water accrued or acquired during the year, and the total volume available at the end of the year.

A. Water Supply Activity

New or Amended Agreements

Agreement between Active Resource Management, LLC and CAWCD for the Purchase and Sale of LTSCs

CAWCD and Active Resource Management, LLC ("ARM") executed an agreement on January 5, 2017 whereby ARM agreed to sell and CAGRD agreed to purchase 50,000 AF of Long-Term Storage Credits. These LTSCs were accrued from the storage of CAP water at the Roosevelt Water Conservation District Groundwater Savings Facility ("GSF") located in the Phoenix AMA in the years 2004, 2005 and 2008. The LTSC purchase occurred in a single transaction and the LTSCs were transferred into CAGRD's account in January 2017. This agreement was negotiated and approved by ARM in 2016, but final ratification of the agreement by the CAWCD Board did not occur until the January 2017 meeting of the CAWCD Board of Directors.

Agreement between City of Surprise, Arizona and CAWCD for the Purchase and Sale of LTSCs

CAWCD and the City of Surprise, Arizona ("Surprise") executed an agreement on October 5, 2017 whereby Surprise agreed to sell and CAGRD agreed to purchase 9,082.24 AF of LTSCs. These LTSCs were accrued from the storage of effluent at the Surprise SPA-1 Water Reclamation Facility located in the Phoenix AMA. The LTSC purchase occurred in a single transaction and the LTSCs were transferred into CAGRD's account in October 2017.

Amended Agreement between the Metropolitan Domestic Water Improvement District and CAWCD for the Purchase and Sale of LTSCs

CAWCD and Metropolitan Domestic Water Improvement District (“MDWID”) executed an amended agreement on May 4, 2017 whereby CAGRD will purchase LTSCs available from the delivery of reclaimed water to the Lower Santa Cruz River (“LSCR”) Managed Recharge Facility rather than the Cortaro-Marana Irrigation District GSF. The original agreement between MDWID and CAWCD was executed on October 1, 2015.

The term of the amended agreement remains 45 years, consisting of a 25-year initial term with two successive 10-year rights of renewal. MDWID will sell CAGRD a minimum of 250 LTSCs per year up to a maximum of 1,000 LTSCs per year. MDWID is not obligated to sell, transfer and assign LTSCs to CAWCD in any year in which MDWID is unable, for reasons beyond its control, to store effluent and accrue LTSCs at LSCR Managed Storage Facility.

Agreement between the Town of Quartzsite and CAWCD for the Lease of 1,070 Acre-Feet of Fourth Priority Colorado River Water

CAWCD and the Town of Quartzsite (“Quartzsite”) executed an agreement for a 25-year lease of Quartzsite’s 1,070 AF/yr fourth priority Colorado River water entitlement (Contract No. 7-07-30-W0353) on June 8, 2017. During the summer of 2017 CAGRD staff held pre-application meetings with ADWR and the United States Bureau of Reclamation (“BOR”). On August 2, 2017, Quartzsite and CAWCD submitted a request for consultation to ADWR. CAWCD requested that ADWR recommend to BOR approval of the lease in accordance with ADWR’s adopted “Substantive Policy Statement – Policy and Procedure for Transferring an Entitlement of Colorado River Water.” On May 24, 2018, ADWR recommended against the transfer because Quartzsite had not put the water to beneficial use.

Agreement and Amended Agreements between Water Property Investor, LP, and Water Asset Management, LLC, (WPI Manager) and CAWCD for the Purchase and Sale of Real Property in Mohave County, Arizona

CAWCD and Water Property Investor, LP (“WPI”), and Water Asset Management, LLC, (“WAM”) the manager of WPI, entered into a Purchase and Sale (“PSA”) Agreement of Real Property located in the Mohave Valley Irrigation & Drainage District (“MVIDD”) on October 5, 2017. The PSA consisted of approximately 2,200 acres and 14,000 AF/yr of Colorado River diversion rights.

Two amended PSA agreements were executed by the parties on December 4, 2017 and April 5, 2018 in order to extend the due diligence period; the first extension was requested by the MVIDD Board to allow additional time to address public concerns about the agreement and the second extension was to allow time to develop rotational fallowing program terms and

conditions. At the June 7, 2018, CAWCD Board of Directors meeting, and prior to the agreement closing date, CAGR staff recommended termination of the PSA due to issues identified during the due diligence period.

Purchase of Long-Term Storage Credits

Single Transaction LTSC Purchase Agreements

In 2017, a total of 59,082 AF of LTSCs were purchased through single transaction purchases.

Table 3.1a lists the Phoenix AMA LTSC purchase and the volume associated with that transaction.

TABLE 3.1a

LTSCS PURCHASED IN 2017 THROUGH SINGLE TRANSACTION PURCHASE AGREEMENTS (AF)

AMA	LTSCs
<i>Phoenix</i>	
Active Resource Management, LLC	50,000
City of Surprise	9,082
TOTAL	59,082

Multi-Year LTSC Purchase Agreements

In 2017, a total of 24,193 AF of LTSCs were purchased through multi-year purchase agreements. **Table 3.1b** lists the LTSC purchases by AMA and the volumes associated with each transaction.

TABLE 3.1b

LTSCS PURCHASED IN 2017 THROUGH MULTI-YEAR
PURCHASE AGREEMENTS (AF)

AMA	LTSCs
<i>Phoenix</i>	
Mojave Ventures	14,311
SMCFD	588
<i>Phoenix AMA Subtotal</i>	14,899
<i>Tucson</i>	
City of Tucson	5,000
Mojave Ventures	4,044
MDWID	250
<i>Tucson AMA Subtotal</i>	9,294
TOTAL	24,193

A description of LTSC purchase and sale agreements executed prior to 2017 are provided below.

Town of Florence Credit Purchase Agreement: In 2016, CAWCD and the Town of Florence (Florence) entered into an agreement where Florence agreed to sell CAGRD all storage credits accrued by delivering its 2,048 AF/yr CAP M&I subcontract entitlement water to Tonopah Groundwater Savings Facility, located in the Phoenix AMA, from 2018 through 2022. The agreement consists of a 5-year initial term with three successive 5-year rights of renewal for a total term of 20 years. This agreement is expected to add approximately 9,730 AF of LTSCs during the initial term and 38,920 AF of LTSCs over the full 20-year term.

Litchfield Park Service Company Credit Purchase Agreement: In 2013, CAWCD and Litchfield Park Service Company ("LPSCO") entered into an agreement where LPSCO agreed to sell CAGRD all storage credits accrued by delivering effluent to Roosevelt Irrigation District from 2013 to 2017. This agreement is expected to add approximately 11,500 AF of LTSCs to the CAGRD portfolio when concluded. Note: LPSCO's year 2016 LTSC transfer to CAGRD was executed in late 2015 and was included in the "CAGRD 2015 Annual Operations Report." Future purchases of LTSCs from LPSCO will be completed under the separate, "Agreement for Development of Effluent Recharge Facility, Effluent Disposal and Purchase and Sale of Effluent", completed in 2014. This agreement provides a separate framework for purchase of LTSCs that LPSCO generates after completion of their effluent recharge facility. This facility, the Liberty Aquifer Replenishment Facility, was completed in early 2017.

Mojave Ventures/Greenstone Credit Purchase Agreement: In 2013, CAWCD and Mojave Ventures entered into an agreement where Mojave Ventures agreed to sell and transfer to CAGRD a total of approximately 18,355 AF of LTSCs (14,311 AF from Phoenix AMA and 4,044 AF from Tucson AMA) each year from 2014 through 2020. The total volume of LTSCs to be acquired under this contract is 128,485 AF. In 2017, Greenstone purchased all Mojave Ventures' assets in Arizona, including the credit purchase agreement. Credit purchases under this agreement will be completed with Greenstone from 2018 through 2020.

Superstition Mountains Community Facilities District No. 1 Purchase Agreement

In 2015, CAWCD and Superstition Mountains Community Facilities District No. 1 ("SMCFD") entered into an agreement where SMCFD agreed to sell and transfer a minimum of 1,500 LTSCs and up to a maximum of 2,352 LTSCs over the duration of the agreement. The LTSCs eligible for purchase include LTSCs generated in 2014 through 2019.

Treated effluent is recharged at the Superstition Mountains USF via infiltration basins and recharge wells. The term of the agreement begins on the effective date and continues through December 31, 2020.

City of Tucson Credit Purchase Agreement: In 2013, CAWCD and the City of Tucson ("Tucson") entered into an agreement where Tucson agreed to sell and transfer 100,000 AF of Tucson AMA LTSCs to CAGRD. CAGRD has committed to purchasing 4,000 AF of credits each year for 25 years and retains an option to purchase up to an additional 1,000 AF of LTSCs in any given year.

B. Summary of Water Supplies

CAGRD CAP Entitlement

As of March 14, 2016, CAGRD holds an annual entitlement to 8,311 AF of CAP M&I Priority water pursuant to the “Supplemental Contract between the U.S. and CAWCD for Delivery of CAP Water, Contract No. 14-06W-245, Exhibit A, Amendment No. 2, Supplement No. 1 as amended,” (“Supplemental Contract”). The Supplemental Contract is for permanent water service.

CAGRD Long-Term Storage Subaccount

In 2017, CAGRD began the year with a balance of 215,384 AF in the Long-Term Storage Subaccount. As discussed previously in the section on **Purchase of Long-Term Storage Credits**, an additional 83,275 AF of LTSCs were purchased bringing the total number of LTSCs in the CAGRD Long-Term Subaccount to 298,659 AF by calendar year’s end. **Table 3.2** provides a summary of the LTSC balances by AMA.

TABLE 3.2

CAGRD LONG-TERM STORAGE SUBACCOUNT IN 2017 (AF)

AMA	Balance of CAGRD LTSCs at end of 2016	LTSCs Transferred to CAGRD in 2017	Balance of CAGRD LTSCs at end of 2017
<i>Phoenix</i>	112,203	73,981	186,184
<i>Pinal</i>	0	0	0
<i>Tucson</i>	103,181	9,294	112,475
TOTAL	215,384	83,275	298,659

TABLE NOTE: The LTSC balances in this table do not include LTSC reserves associated with the City of Scottsdale's Water Availability Status membership in CAGRD.

4. Replenishment Reserve – 2017

The Replenishment Reserve consists of LTSCs that CAGR D accrues in a Replenishment Reserve Subaccount established for each AMA where CAGR D operates. The purpose of the Replenishment Reserve is to help ensure that CAGR D will be able to meet its replenishment obligation and to enhance rate stability. During periods of water supply shortage or infrastructure failure, CAGR D may use LTSCs from the Replenishment Reserve to offset its replenishment obligation, rather than purchasing spot-market water which may be more costly during shortage or outage conditions.

CAWCD LTSCs Dedicated for CAGR D Replenishment Reserve

The Board has dedicated LTSCs held by CAWCD for exclusive use by CAGR D to meet its legal requirements to establish and maintain the CAGR D Replenishment Reserve Subaccounts for each AMA or to meet its annual replenishment obligations. In 2017, CAGR D reimbursed CAWCD for a total of 13,459 AF of LTSCs that were transferred to specific AMA Replenishment Reserve accounts as follows: Phoenix AMA – 12,408 AF, Pinal AMA - 268 AF, and Tucson AMA – 783 AF. Approximately 585,000 AF of CAWCD LTSCs remain reserved for CAGR D purchase and use under Board policy.

CAGR D Replenishment Reserve Subaccount

CAGR D accrues LTSCs through a combination of storage in constructed Underground Storage Facilities (“USFs”), storage at Groundwater Savings Facilities (“GSFs”), purchases of pre-existing LTSCs, and LTSC transfers from MSAs who wish to off-set the replenishment reserve component of their Replenishment Tax. **Table 4** provides the Replenishment Reserve balance at the end of 2016, the number of credits accrued during 2017 and the resulting balance of LTSCs in the Replenishment Reserve at year end, by AMA. Also shown is the percent of the Reserve Target goal achieved through the end of 2017. The volume of LTSCs to be accrued in the Replenishment Reserve is known as the “Reserve Target”. A Reserve Target must be identified for each AMA based on that AMA’s projected obligation and the water supplies planned to be used to meet that obligation as described in the Plan of Operation (refer to the 2015 CAGR D Plan of Operation for additional explanation and calculation of the Reserve Target; www.cagrd.com).

In 2017, CAGR D began the year with a balance of 205,184 AF in the Replenishment Reserve Subaccounts (2016 Conservation District Annual Report - CDAR). During the year, 13,459 AF of LTSCs were purchased from CAWCD and stored for the purpose of the Replenishment Reserve, bringing the total number of LTSCs in the Replenishment Reserve Subaccounts to 218,643 AF by the end of 2017. No excess CAP water was stored for Replenishment Reserve purposes, nor were any credits transferred from MSAs. The 2017 year-end balance represents 29% of the overall Reserve Target.

TABLE 4

Replenishment Reserve Subaccount Balance and Target
Achieved for 2017 (AF)

AMA	Replenishment Reserve Balance 12/31/16	Replenishment Reserve Accruals During 2017	Replenishment Reserve Balance 12/31/17	Reserve Target	% of Reserve Target Achieved 12/31/17
<i>Phoenix</i>	167,330	12,408	179,738	603,866	30%
<i>Pinal</i>	4,021	268	4,289	48,036	9%
<i>Tucson</i>	33,833	783	34,616	112,600	31%
TOTAL	205,184	13,459	218,643	764,502	29%

5. Legislation – 2017

There was no CAGR-related legislative activity in 2017.

6. Administrative Activity – 2017

Approval of the CAP System Use Agreement Between the United States and the Central Arizona Water Conservation District

On February 2, 2017, the CAWCD Board of Directors approved the CAP System Use Agreement (“SUA”) with the Bureau of Reclamation. The SUA establishes a contractual framework for “wheeling” non-Project Water, firming of CAP contracts and subcontracts, and exchanges of CAP water for other supplies. The exchange and firming provisions of the SUA were integral to the policy adopted in June 2017 by the CAWCD Board to allow the CAGR’s M&I subcontract to be exchanged for credits transferred to the Conservation District Account. The SUA’s wheeling provisions (including the standard form of CAWCD Wheeling Agreement, attached as an exhibit) are also expected to figure prominently in the CAGR Water Supply program as potential future non-Project Water supplies (including additional Colorado River water) are transported through the CAP system.

Approval of CAWCD Policy Allowing the Use of the CAGR Long-term CAP Contract to Satisfy the Arizona Water Banking Authority’s Firming or Interstate Obligations

On June 8, 2017, the CAWCD Board of Directors approved a new policy allowing CAWCD to exchange CAGR’s long-term CAP contract water for long-term storage credits previously stored by the Arizona Water Banking Authority (“AWBA”). In effect, an exchange of this type would free up CAP water that would have otherwise been stored for replenishment purposes, and redirect the water to other CAP users needing firmed water during a shortage on the CAP system. CAGR would still accomplish its obligation to replenish by extinguishing long-term storage credits transferred to CAGR by the AWBA. Per the policy, and also pursuant to the CAP System Use Agreement, CAWCD must obtain approval by the United States Bureau of Reclamation before executing the exchange. CAGR shall pay all applicable CAP charges that would otherwise have been associated with the delivery of CAGR’s long-term contract water, as if the exchange did not happen. For each acre-foot of water exchanged for AWBA credits, the CAGR shall receive a \$15 incentive payment from CAWCD in the year following the exchange. There are also limitations outlined in the policy on the locations from which CAGR may accept AWBA long-term storage credits.

7. Other Activity - 2017

Third-Party Marketing of LTSCs to HOAs

As initially described in the 2015 Annual Operations Report, third-party entities began marketing LTSCs to homeowners associations (“HOAs”) within CAGR D MLs in 2015 as an alternative to paying CAGR D assessments. The concept involves individual ML property owners, such as an HOA, obtaining a recovery permit for one of their ML water provider’s wells, purchasing LTSCs from a third-party, and entering into an agreement whereby the water provider would recover the LTSCs on behalf of the property owner and “wheel” the recovered water in lieu of groundwater that would otherwise be delivered to the property. The premise is that the LTSCs may be used to reduce or eliminate the property’s replenishment obligation and thereby reduce the CAGR D assessment for that year.

In 2017, the total amount of credits wheeled and recovered within Member Land subdivisions, in order to reduce or eliminate a property’s replenishment obligation, was 582 AF within the Phoenix AMA. No wheeled and recovered LTSCs were reported in the Pinal or Tucson AMAs.