

2015

CENTRAL ARIZONA GROUNDWATER
REPLENISHMENT DISTRICT

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
A.R.S.	Arizona Revised Statutes
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
CMID	Cortaro-Marana Irrigation District
DAWS	Designation of Assured Water Supply
GSF	Groundwater Savings Facility
IGA	Intergovernmental Agreement
LPSCO	Litchfield Park Service Company
LTSCs	Long-term Storage Credits
M&I	Municipal and Industrial
MDWID	Metropolitan Domestic Water Improvement District
ML	Member Land
MSA	Member Service Area
NIA	Non-Indian Agricultural
SAWRSA	Southern Arizona Water Rights Settlement Act
SMCFD	Superstition Mountains Community Facilities District
TON	Tohono O’odham Nation
USF	Underground Storage Facility

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 a 100-year Assured Water Supply (“AWS”) under Arizona law. CAGRD recharges Central Arizona Project (“CAP”) water and other water supplies to replenish groundwater use 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 do so, provided it becomes a member of CAGRD. As a member of CAGRD, 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 segregated 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 reports to CAGRD annually identifying the volume of Excess Groundwater pumped within the service area also and must pay CAGRD replenishment taxes on that volume. 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. This projection serves as a basis for estimating CAGRD’s long-term replenishment obligation for the service area. Membership in CAGRD allows 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.

Replenishment Obligation

CAGRD must replenish (or recharge) 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 the operation of underground storage facilities, where water is stored underground in existing aquifers or through groundwater savings facilities, where water is used directly by irrigation districts in lieu of pumping groundwater. 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 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 the MSA service area. Individual property owners in MLs each pay a special assessment to CAGRD, collected through the annual property tax assessment process.

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

¹Excess 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.

of Operation (“2015 Plan”) was approved by the Director of ADWR on August 5, 2015 and covers the ten-year period from 2015-2024.

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.

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 amount, 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, changes in replenishment obligation, water supply and replenishment reserve activities and any new legislation and administrative activities.

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 second CAGRD Annual Operations Report was completed in late 2016 for calendar year 2015, which is the first 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 and posted on the CAGRD website at www.cagrd.com.

1. Enrollment and Activation – 2015

Enrollment

Most of the new Member Land (ML) enrollment in 2015 occurred in the Phoenix AMA and was comprised of 2,709 lots with a projected demand of 1,916 AF/yr (see **Table 1.1**). The West Valley encompassed 79% of new membership (2,194 lots) with a projected demand of 1,547 AF/yr of new enrollment annual obligation. The East Valley encompassed 19% of this new membership (515 lots) with a projected demand of 369 AF/yr of new enrollment annual obligation. The Tucson AMA encompassed 2% of new membership (55 lots) with a projected demand of 37 AF/yr of new enrollment annual obligation. There were no new MLs enrolled in the Pinal AMA in 2015.

TABLE 1.1

NEW MEMBER LAND (ML) ENROLLMENT IN 2015

AMA	ML Lots*	Projected Demand AF/yr
Phoenix	2,709	1,916
<i>West Phoenix</i>	<i>2,194</i>	<i>1,547</i>
<i>East Phoenix</i>	<i>515</i>	<i>369</i>
Pinal	--	--
Tucson	55	37
TOTAL	2,764	1,953

TABLE NOTES:

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

No new MSAs enrolled in 2015.

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 CAGRD MLs and MSAs, an Activation Fee must be paid to CAGRD per residential unit offered for sale. In 2015, the number of lots activated totaled 7,564 (ML lots = 2,700; MSA lots = 4,864). **Table 1.2** provides a breakdown by AMA of previously enrolled lots that were activated in 2015.

TABLE 1.2

NUMBER OF LOTS ACTIVATED IN 2015

AMA	MLs	MSAs
Phoenix	2,378	3,120
<i>West Phoenix</i>	<i>1,545</i>	<i>2,687</i>
<i>East Phoenix</i>	<i>833</i>	<i>433</i>
Pinal	185	69
Tucson	137	1,675
TOTAL	2,700	4,864

2. Replenishment Obligation Incurred and Replenishment Obligation Completed – 2015

The 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 groundwater and the volume of Excess Groundwater delivered to each parcel in the subdivision. MSAs are also required by statute to file an annual report with CAGRD indicating the volume of 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 is actually delivered. CAGRD must complete its Replenishment Obligation within three calendar years after it is incurred. For that reason, at any given point there may be approximately one year’s worth of obligation unfulfilled.

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 2015, CAGRD incurred a replenishment obligation of 30,399 AF. **Table 2.1** shows the distribution of obligation between MLs and MSAs by AMA. Overall, the total obligation was 73% within MLs and 27% within MSAs.

Table 2.1

EXCESS GROUNDWATER DELIVERIES FOR MLs AND MSAs in 2015 (AF)
By AMA

AMA	MLs	MSAs	TOTAL
Phoenix	20,324	7,151	27,475
Pinal	83	314	397
Tucson	1,651	876	2,527
TOTAL	22,058	8,341	30,399

Tables 2.2, 2.3, 2.4, and 2.5 list the volumes of Excess Groundwater delivered/withdrawn from 2012 through 2015. 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, reflecting that CAGRD has met its obligation within the statutory time frame. In 2015, CAGRD completed 42,315 AF of obligation as shown in **Tables 2.2 through 2.5** (refer to 2015 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 2012 column illustrates that a total of 14,620 AF of Excess Groundwater was delivered to MLs and withdrawn by MSAs in 2012 in West Phoenix AMA. Fulfillment of this obligation occurred over a two-year period: 3,679 AF in 2013 and 10,941 AF in 2014. The two rows toward the bottom of the table showing the volume “completed to date” and “unmet to date” reflect ongoing replenishment activities to fulfill or complete the obligation associated with Excess Groundwater deliveries. For example, the 2015 column illustrates a total of 13,001 AF of Excess Groundwater was delivered or withdrawn in 2015; in 2015, 4,069 AF had been replenished leaving 8,932 AF of remaining obligation.

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)			
		2012	2013	2014	2015
		14,620	14,062	13,958	13,001
YEAR OBLIGATION COMPLETED	2012				
	2013	3,679			
	2014	10,941	9,167		
	2015		4,895	13,958	4,069
Amount Completed to Date		14,620	14,062	13,958	4,069
Amount Unmet to Date		0	0	0	8,932

TABLE NOTES:

*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)			
		2012	2013	2014	2015
		15,429	16,909	16,398**	14,474
YEAR OBLIGATION COMPLETED	2012				
	2013	3,254			
	2014	12,175	6,300		
	2015		10,609	5,832	
Amount Completed to Date		15,429	16,909	5,832	0
Amount Unmet to Date		0	0	10,566	14,474

TABLE NOTES:

*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.

**Obligation shown differs from 2014 Annual Operations Report by about 41 AF due to water provider reporting errors following submittal of CDAR; CDAR is not amended, however change in obligation is reported the following year.

Table 2.4

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

PINAL AMA		EXCESS GROUNDWATER OBLIGATION BY REPORT YEAR* (AF)			
		2012	2013	2014	2015
		318	215	551	397
YEAR OBLIGATION COMPLETED	2012				
	2013	1			
	2014	316	61		
	2015		2		
Amount Completed to Date		317	63	0	0
Amount Unmet to Date		0	152	551	397

TABLE NOTES:

*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)			
		2012	2013	2014	2015
		3,021	2,914	2,957	2,527
YEAR OBLIGATION COMPLETED	2012				
	2013	734			
	2014	2,286	867		
	2015		2,047	903	
Amount Completed to Date		3,021	2,914	903	0
Amount Unmet to Date		0	0	2,054	2,527

TABLE NOTES:

*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.

Change in Excess Groundwater Reporting Requirements for MSAs and MLs that joined CAGRD prior to January 1, 2004

The replenishment obligation in 2015 decreased by about 3,500 AF from the previous year (33,905 AF in 2014; 30,399 AF in 2015). This was primarily due to the change in 2015 of the minimum reporting requirement for Excess Groundwater from two-thirds to zero for MSAs and MLs joining CAGRD prior to 2004.

MSAs and municipal providers serving MLs must calculate and report the amount of Excess Groundwater delivered in any year according to a formula that establishes a minimum amount of groundwater that must be reported as Excess Groundwater. For MSAs and MLs that joined CAGRD prior to 2004, there was a minimum reporting requirement that increased over time. Ultimately, the minimum reporting requirement for these members became equal to two-thirds of the total groundwater delivered to the MSA or ML. Beginning in 2015, the minimum reporting requirement for these pre-2004 members became zero.

The formula does not prevent a municipal provider from reporting a greater amount of Groundwater as Excess Groundwater in a given year, if the provider wishes or needs to do so. If Excess Groundwater is reported as zero, and the volume in the groundwater allowance account

for the MSA or ML is depleted, the Excess Groundwater volume to be reported could jump to 100% in future years.

Depletion of the groundwater allowance account can be particularly problematic for MLs because the water provider may not be aware of the resulting increase in the assessments owed by ML property owners. For this reason, CAGRD staff encourages ML water providers to track the balance remaining in the groundwater allowance account and estimate the amount of Excess Groundwater that should be reported in order to avoid a sudden increase in the ML assessments.

MSAs tend to be more attuned to the groundwater allowance account for the service area and manage their annual reporting amounts accordingly.

For MSAs and MLs that joined CAGRD in 2004 and after, the minimum reporting requirement that two-thirds of the total groundwater delivered must be reported as Excess Groundwater remains in effect, until the groundwater allowance for each member has been depleted.

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

Recovery in the housing market has not occurred to the level projected by the Association of Governments used in the 2015 Plan of Operation. This largely explains the discrepancy shown in **Table 2.6** below where actual enrollment was about 75% lower than projected enrollment in 2015.

TABLE 2.6

**COMPARISON OF ACTUAL ML ENROLLMENT IN 2015
TO PROJECTED 2015 ML ENROLLMENT**

AMA	Actual 2015 ML Enrollment ^a	Projected 2015 ML Enrollment ^b
<i>Phoenix</i>	2,709	8,549
<i>Pinal</i>	--	608
<i>Tucson</i>	55	1,136
TOTAL	2,764	10,293

TABLE NOTES:

^a2015 CAGRD Annual Operations Report, Table 1.1.

^b2015 Plan of Operation, Figure 3.11. For the housing unit projection methodology, refer to the New Demand Section 3.2.2 (pg. 3-2) of the 2015 Plan of Operation.

The obligation projections are tied to housing unit growth as well, thus, combined with the change in reporting requirements for some MSAs and MLs, actual obligations in 2015 were lower than the Plan of Operation projections (**Table 2.7**). As enrollment and activation continues to recover along with the housing market, this gap is expected to narrow in future years.

TABLE 2.7

**COMPARISON OF ACTUAL REPLENISHMENT OBLIGATION IN 2015
TO PROJECTED 2015 REPLENISHMENT OBLIGATION**
(Replenishment Obligation Reflected by Excess Groundwater Deliveries)

AMA	MLs		MSAs	
	Actual 2015 Obligation ^a	Projected 2015 Obligation ^b	Actual 2015 Obligation ^a	Projected 2015 Obligation ^c
<i>Phoenix</i>	20,324	24,000	7,151	10,300
<i>Pinal</i>	83	100	314	700
<i>Tucson</i>	1,651	1,900	876	1,400
TOTAL	22,058	26,000	8,341	12,400

TABLE NOTES:

^a2015 CAGRD Annual Operations Report, Table 2.1.

^b2015 CAGRD Plan of Operation, Table 3.4, Projected ML Water Provider Demand & Obligation.

^c2015 CAGRD Plan of Operation, Table 3.3, Projected MSA Demand & Obligation.

Water Supply Program - 2015

A description of CAGRD's water supply program for 2015 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 2015 [four newly executed agreements] and on-going activity carried over into 2015. Discussion of new activity in 2015 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 [CAP Entitlement and Long-Term Storage Credits ("LTSCs")] for 2015, summarizing the volume of water supplies CAGRD had available going into the year, water accrued or acquired during the year, and total volume available at the end of the year.

A. Water Supply Activity

New Agreements Executed in 2015

Agreement between the United States and CAWCD for the Sale and Purchase of LTSCs pursuant to the Southern Arizona Water Rights Settlement Act

CAWCD and the Secretary of the Interior ("Secretary") acting through the Bureau of Reclamation ("BOR") executed an agreement on June 15, 2015 whereby the BOR agreed to sell and CAWCD agreed to purchase, for CAGRD purposes, 60,000 AF of LTSCs accrued in the Tucson AMA.

The Southern Arizona Water Rights Settlement Act ("SAWRSA"), enacted in 1982 and amended by the Arizona Water Settlements Act of 2004, established a framework for settling longtime claims to water for the Tohono O'odham Nation ("TON"). A key provision that developed from this framework authorizes the Secretary to enter into a contract with the City of Tucson to acquire 28,200 AF/yr of treated effluent to be used in carrying out obligations under the SAWRSA.

Subsequently, the BOR has been accruing LTSCs through the storage of effluent at two managed recharge projects in the Tucson AMA, the Santa Cruz River Managed Underground Storage Facility ("USF") and the Lower Santa Cruz River Managed Recharge Project. Provisions of SAWRSA authorizes the sale of these LTSCs to provide revenue to the Cooperative Fund that was established in the settlement to assist with payment of CAP water delivery charges on behalf of the TON.

In October 2014, the BOR sent letters to prospective buyers to solicit bids for the purchase of LTSCs. CAGRD's offer to purchase 60,000 AF of LTSCs in a single purchase was accepted and the agreement was executed in June 2015. The LTSCs were purchased and transferred to CAWCD in July 2015.

Intergovernmental Agreement between the Superstition Mountains Community Facilities District No. 1 and CAWCD for the Purchase and Sale of LTSCs Accrued in the Phoenix AMA

CAWCD and Superstition Mountains Community Facilities District No. 1 ("SMCFD") executed an Intergovernmental Agreement ("IGA") on October 1, 2015 whereby CAGRD will purchase credits that become available from the storage of effluent in the Phoenix AMA in the years 2014 – 2019.

Treated effluent is recharged at the Superstition Mountains USF via infiltration basins and recharge wells. Under the IGA, SMCFD guarantees that CAGRD will be able to purchase a minimum of 1,500 LTSCs over the duration of the agreement, but may purchase up to 2,352 LTSCs per year (permitted capacity of the USF) if available. The term of the agreement begins on the effective date and continues through December 31, 2020.

Agreement between the Metropolitan Domestic Water Improvement District and CAWCD to Purchase LTSCs Accrued in the Tucson AMA

CAWCD and Metropolitan Domestic Water Improvement District ("MDWID") executed an agreement on October 1, 2015 whereby CAGRD will purchase surplus credits available from the delivery of reclaimed water to a Groundwater Savings Facility ("GSF"). Recently, MDWID and the BOR have been developing a project that, when fully implemented, will deliver reclaimed water directly for irrigation purposes at Cortaro-Marana Irrigation District ("CMID"). This project diverts a portion of the reclaimed water currently being discharged to the Lower Santa Cruz River, from the Tres Rios (Ina Rd) water reclamation facility. The diversion is delivered via pipeline to the nearby CMID GSF. Deliveries of effluent associated with this project should commence in 2017.

The term of this agreement is 45 years, a 25-year initial term with two successive 10-year rights of renewal. MDWID will be selling CAGRD a minimum of 250 LTSCs per year, with a maximum of 1,000 LTSCs per year.

Agreement between Del Webb and CAWCD for the Purchase and Sale of LTSCs

CAWCD and Del Webb Corporation and Del Webb Home Construction ("Del Webb") executed an agreement on November 5, 2015 whereby Del Webb agreed to sell and CAGRD agreed to purchase 10,060 AF of LTSCs. These LTSCs were stored at a number of USFs and GSFs in the Phoenix AMA. The purchase occurred in a single transaction and the LTSCs were transferred in 2015.

Purchase of Long-Term Storage Credits

Single Transaction LTSC Purchase Agreements

In 2015, a total of 70,060 AF of LTSCs were purchased through single transaction purchases.

Table 3.1a lists the LTSC purchases by AMA and the volumes associated with each transaction.

TABLE 3.1a

LTSCS PURCHASED IN 2015 THROUGH SINGLE TRANSACTION PURCHASE AGREEMENTS (AF)

AMA	LTSCs
<i>Phoenix</i>	
Del Webb	10,060
<i>Tucson</i>	
BOR	60,000
TOTAL	70,060

Multi-Year LTSC Purchase Agreements

In 2015, a total of 27,065 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 2015 THROUGH MULTI-YEAR PURCHASE AGREEMENTS (AF)

AMA	LTSCs
<i>Phoenix</i>	
LPSCO	2,936*
Mojave Ventures	14,311
SMCFD	774
<i>Phoenix AMA Subtotal</i>	18,021
<i>Tucson</i>	
City of Tucson	5,000
Mojave Ventures	4,044
<i>Tucson AMA Subtotal</i>	9,044
TOTAL	27,065

TABLE NOTES:

*Transfer of LTSCs to CAGRD occurred in CY2015; volumes reflected in ADWR 2016 accounting.

A brief description of the LTSC purchase agreements executed prior to 2015 are provided in the box below.

LPSCO Credit Purchase Agreement: In 2013, CAWCD and Litchfield Park Service Company (LPSCO) entered into an agreement where LPSCO agreed to sell CAGR D 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 CAGR D portfolio when concluded.

Mojave Ventures Credit Purchase Agreement: In 2013, CAWCD and Mojave Ventures entered into an agreement where Mojave Ventures agreed to sell and transfer to CAWCD (for CAGR D purposes) 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.

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 CAGR D. CAGR D 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

CAGR CAP Entitlement

CAGR holds an annual entitlement to 7,996 AF of CAP M&I (“Municipal & Industrial”) Priority water pursuant to the “Supplemental Contract between the U.S. and CAWCD for Delivery of CAP Water, Contract No. 14-06W-245, Amendment No. 1, Supplement No. 1, as amended,” (“Supplemental Contract”). The Supplemental Contract is for permanent water service.

CAGR Long-Term Storage Subaccount

In 2015, CAGR began the year with a balance of 90,599 AF in the Long-Term Storage Subaccount. As discussed previously in the section on **Purchase of Long-Term Storage Credits**, an additional 97,125 AF of LTSCs were purchased bringing the total number of LTSCs in the CAGR Long-Term Subaccount to 187,724 AF by year’s end. **Table 3.2** provides a summary of the LTSC balances by AMA.

TABLE 3.2

CAGR LONG-TERM STORAGE SUBACCOUNT IN 2015 (AF)

AMA	Balance of CAGR LTSCs at end of 2014	LTSCs Transferred to CAGR in 2015	Balance of CAGR LTSCs at end of 2015
<i>Phoenix</i>	65,506	28,081	93,587
<i>Pinal</i>	0	0	0
<i>Tucson</i>	25,093	69,044	94,137
TOTAL	90,599	97,125	187,724

TABLE NOTES:

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

4. Replenishment Reserve – 2015

The Replenishment Reserve consists of LTSCs that CAGRD accrues in a Replenishment Reserve Subaccount established for each AMA within which CAGRD operates. The purpose of the Replenishment Reserve is to help ensure that CAGRD will be able to meet its replenishment obligation and to enhance rate stability. During periods of water supply shortage or infrastructure failure, CAGRD 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 CAGRD Replenishment Reserve

The Board has dedicated LTSCs held by CAWCD for exclusive use by CAGRD to meet its legal requirements to establish and maintain the CAGRD Replenishment Reserve Subaccounts for each AMA. In 2015, CAGRD reimbursed CAWCD for a total of 8,794 AF of LTSCs that were transferred to specific AMA Replenishment Reserve accounts as follows: Phoenix AMA – 8,518 AF and Pinal AMA - 276 AF. An additional 600,000 AF of CAWCD LTSCs remain reserved for CAGRD under Board policy.

CAGRD Replenishment Reserve Subaccount

CAGRD accrues LTSCs through a combination of storage in constructed Underground Storage Facilities “(USFs)”, storage at Groundwater Savings Facilities “(GSFs)”, purchase of pre-existing LTSCs and LTSC transfers from MSAs to off-set the replenishment reserve component of their Replenishment Tax. **Table 4** provides the Replenishment Reserve balance at the end of 2014, the number of credits accrued during 2015 and the resulting balance of LTSCs in the Replenishment Reserve at year’s end. Also shown is the percent of the Reserve Target goal achieved through the end of 2015. 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 CAGRD Plan of Operation for additional explanation and calculation of the Reserve Target; www.cagrd.com).

In 2015, CAGRD began the year with a balance of 177,392 AF in the Replenishment Reserve Subaccount (2014 Conservation District Annual Report - CDAR). During the year, 5,428 AF of Excess CAP water was stored for the purpose of the Replenishment Reserve (Phoenix AMA – 4,166 AF; Tucson AMA – 1,262 AF). As stated above, 8,794 AF of LTSCs were purchased from CAWCD; an additional 9 AF were transferred from one Tucson MSA², bringing the total number

² MSAs can choose to transfer LTSCs to CAGRD for the Replenishment Reserve component of their tax assessment.

of LTSCs in the Replenishment Reserve Subaccount to 191,623 AF by the end of 2015. This total represents 25% of the overall Reserve Target.

TABLE 4

Replenishment Reserve Subaccount Balance and Target Achieved for 2015 (AF)

AMA	Replenishment Reserve Balance 12/31/14	Replenishment Reserve Accruals During 2015	Replenishment Reserve Balance 12/31/15	Reserve Target	% of Reserve Target Achieved 12/31/15
<i>Phoenix</i>	142,573	12,684	155,257	603,866	26%
<i>Pinal</i>	3,547	276	3,823	48,036	8%
<i>Tucson</i>	31,272	1,271	32,543	112,600	29%
TOTAL	177,392	14,231	191,623	764,502	25%

5. Legislation – 2015

Voluntary De-enrollment of Member Lands

House Bill 2325 was signed into law on April 9, 2015. This legislation allows CAGR D MLs to voluntarily de-enroll from CAGR D, subject to all of the following conditions: 1) the land cannot have been sold or leased to a retail purchaser or lessee; 2) no public report for the property has been issued; 3) if the lot or parcel boundaries have been recorded, the planning agency (e.g. county) has vacated them; 4) a declaration with the county has been recorded specifying that the property's CC&Rs have been revoked; 5) the agreement between CAGR D and the municipal provider has been revoked; and 6) if a Certificate of Assured Water Supply has been issued for the property, ADWR has revoked the Certificate.

6. Administrative Activity – 2015

Revision to Enrollment Fee and Activation Fee Policy

In October 2015, the CAWCD Board approved two changes to the enrollment fee provisions of the CAGR D Enrollment Fee and Activation Fee Policy. These changes went into effect when the Final CAGR D 2016/2017 Water Rate Schedule was approved in June 2016.

The first change involved revising the policy to include using a portion of the enrollment fee revenues to cover the administrative costs of enrollment-related activities in addition to acquiring water rights. The second change revised the policy to include a specific provision for collection of an enrollment fee on commercial subdivisions. Although enrollment fees historically had been collected on each parcel within a new commercial subdivision, the policy (prior to the revision) referred only to enrollment fees assessed on the basis of housing units in a new subdivision. This revision aligned the policy language with the historic and current practice of collecting enrollment fees on new commercial subdivisions. The new enrollment fee on commercial subdivisions is established by the Board during the annual CAGR D rate setting process. This enrollment fee is higher than the enrollment fee for other properties to reflect the fact that commercial subdivisions do not pay activation fees.

7. Other Activity - 2015

Third-Party Marketing of LTSCs to HOAs

In 2015, third-party entities began marketing LTSCs to homeowners associations (“HOAs”) within CAGR D MLs 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 the 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 assessment for that year.

CAGRD has expressed concern over uncertainties created by this recovery concept and has identified numerous considerations that need to be further assessed. From a regulatory standpoint, ADWR has determined that the LTSC process outlined above does not conflict with its volumetric accounting policy with regard to deliveries made by the water provider. However, it remains uncertain whether the LTSC process is subject to Arizona Corporation Commission oversight.

There are also a multitude of financial considerations that could affect the long-term goals and financial health of CAGRD. The temporary or intermittent use of LTSCs by individual MLs presents a significant challenge to CAGRD’s ability to cover its ongoing costs under its current rate structure without creating inequities among MLs. Of particular concern is that this practice could severely impact revenues needed to acquire water supplies to meet the long-term replenishment obligation of CAGRD. In 2016, staff met to discuss potential approaches to modifying various rate components/fee structures and continue to evaluate this situation as it develops.