



2019 Progress Report

AMA Municipal Conservation Program Report

<https://new.azwater.gov/ama/ama-conservation>

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Within Arizona's five Active Management Areas (AMAs), large municipal providers are regulated under one of four conservation programs pursuant to management plans. These conservation programs include the Gallons Per Capita per Day Program (GPCD), the Non-Per Capita Conservation Program (NPCCP), the Alternative Conservation Program (ACP), and the Institutional Provider Program (IPP). Pursuant to Arizona Revised Statutes (A.R.S.) § 45-563.01, ADWR is required to periodically issue a report on per-capita water use and efforts to promote water conservation by providers in each AMA. This report describes the regulatory conservation programs and lists the providers within each, includes background information about the NPCCP, and lists the best management practices selected by the 61 providers that are regulated under the NPCCP. Conservation statistics for each large municipal provider are presented.

1. Regulatory Programs

In Arizona's Active Management Areas, all large municipal water providers (cities, towns, private water companies, and irrigation districts that serve more than 250 acre-feet of water annually for non-irrigation purposes) are regulated under one of four municipal conservation programs as shown in the table below.

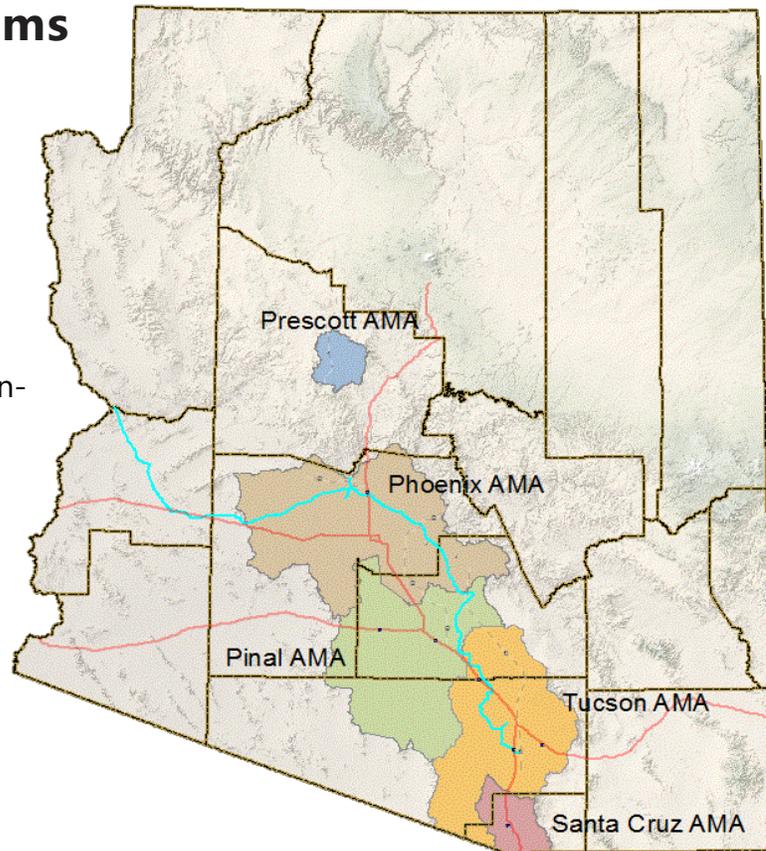


Table 1: Number of providers regulated under each conservation program

	GPCD Gallons per Capita per Day	NPCCP Non-Per Capita Conservation Program	ACP Alternative Conservation Program	IPP Institutional Provider Program	Total
Phoenix AMA	9 (9 )	32 (6 )	0		41 (15 )
Pinal AMA	0	6 (3 )	1 (1 )	2	9 (4 )
Prescott AMA	1 (1 )	1	0		2 (1 )
Santa Cruz AMA	1 (1 )	3	0		4 (1 )
Tucson AMA	5 (5 )	19 (3 )	0	1	25 (8 )
Total	16 (16 )	61 (12 )	1 (1 )	3	81 (29 )

 - has a Designation of Assured Water Supply

Large Municipal Water Providers in the Pinal AMA

<i>Non-Per Capita Conservation Program (NPCCP)</i>		<i>Tier</i>
1. Arizona Water Company Pinal Valley		2
2. Florence, Town of 		1
3. Picacho Water Company		1
4. Santa Cruz Water Company (Global) 		2
5. Thunderbird Farms Improvement District		1
6. Johnson Utilities – Pinal 		1
<i>Alternative Conservation Program</i>		
1. Eloy, City of 		1
<i>Institutional Providers</i>		
1. AZ Dept of Corrections -- Florence		
2. AZ Dept of Corrections -- Eyman		

Large Municipal Water Providers in the Santa Cruz AMA

<i>Non-Per Capita Conservation Program (NPCCP)</i>		<i>Tier</i>
1. EPCOR – Tubac		1
2. Rio Rico Utilities		2
3. Valle Verde Water Company		1
<i>Gallons Per Capita per Day</i>		
1. City of Nogales 		2

Large Municipal Water Providers in the Prescott AMA

<i>Non-Per Capita Conservation Program (NPCCP)</i>		<i>Tier</i>
1. Prescott Valley, Town of		2
<i>Gallons Per Capita per Day</i>		
1. Prescott, City of 		2

Large Municipal Water Providers in the Tucson AMA

Non-Per Capita Conservation Program (NPCCP)		Gallons Per Capita per Day	
			Tier
1. Arizona Water Company Oracle	1	1. Flowing Wells Water Company 	1
2. Avra Water Co-op	1	2. Metro DWID Main System 	2
3. Community W.C. of Green Valley	2	3. Oro Valley, Town of 	2
4. Davis Monthan AFB	1	4. Tucson, City of 	3
5. Farmers Water Company	1	5. Vail Water Company 	1
6. Green Valley DWID	2		
7. Lago Del Oro Water Company	2		
8. Los Cerros Water Company	1		
9. Las Quintas Serenas Water Company	1		
10. Marana DWID	1		
11. Marana, Town of 	2		
12. Metro DWID - Hub System	1		
13. Metro Diablo WID	1		
14. Quail Creek Water Company	1		
15. Ray Water Company	1		
16. Ridgeview Water Company	1		
17. Saguaro Water Company	1		
18. University of Arizona	1		
19. Sahuarita Water Company 	2		

 - has a Designation of Assured Water

2. Description of Conservation Programs

Gallons Per-Capita Per Day Conservation Program (GPCD)

The GPCD program was established in the Groundwater Code and first implemented in 1987 as part of the First Management Plan. Providers regulated under the GPCD program are assigned an annual total gallons per-capita per day target. The actual amount of water withdrawn, diverted or received by the provider for non-irrigation use is compared to the amount allowed by its total GPCD target to determine compliance. A flexibility account allows providers to use more water than their total GPCD requirement in some years, subject to a maximum negative account balance limit.

Currently, 16 large providers across all AMAs are enrolled in the GPCD program, all of which are designated as having an assured and adequate water supply. Of these, 13 had a GPCD calculation lower than their regulatory target during the 2017 calendar year (Appendix 3).

Non-Per Capita Conservation Program (NPCCP)

Requirements

Originally established in 1992, and modified during the Third Management Plan, the Non-Per Capita Conservation Program (NPCCP) is mandatory for all large municipal water providers in AMAs that do not have a Designation of Assured Water Supply; it is optional for those that do. The NPCCP requires participating providers to implement a basic public education program and choose one or more additional water conservation Best Management Practices (BMPs) from a list of 52. The number of BMPs that a provider must implement is based on the size of the provider as defined by its combined total of residential and non-residential water service connections:

Tier 1 – up to 5,000 service area connections: one additional BMP

Tier 2 – 5,001 - 30,000 service area connections: five additional BMPs

Tier 3 – more than 30,000 service area connections: ten additional BMPs

Table 2: Number of NPCCP Providers in Each Tier and by AMA

	Tier 1	Tier 2	Tier 3	Total
Phoenix AMA	17	10	5	32
Pinal AMA	4	2	0	6
Prescott AMA	0	1	0	1
Santa Cruz AMA	2	1	0	3
Tucson AMA	14	5	0	19
Total	37	19	5	61

The 52 BMPs (see Appendix 2) are divided into the following seven categories:

1. Public Awareness (4 BMPs)
2. Education and Training (4 BMPs)
3. Outreach Services (8 BMPs)
4. Physical System Evaluation and Improvements (3 BMPs)
5. Ordinances, Conditions of Service, Tariffs (12 BMPs)
6. Rebates/Incentives (13 BMPs)
7. Research/Innovation (8 BMPs)

Providers regulated under the NPCCP are also required to submit a Conservation Efforts Report along with their Annual Water Withdrawal and Use Report, submit a current rate structure following any changes, and submit a new Provider Profile if their tier changes, or within six months of implementation of a new Management Plan.

History and Background

The NPCCP was originally developed as an alternative to the Total GPCD program and was modified during the Third Management Period to better meet the needs and capabilities of both the regulated municipal water providers and ADWR. Between 2006 and 2008, ADWR conducted an evaluation and stakeholder engagement process to examine the regulatory programs for large municipal water providers contained in the Third Management Plan. Modifications to the original Non-Per Capita Conservation Program became effective in May 2008 and have been carried forward into the Fourth Management Plans as they have been promulgated.

With the implementation of the Fourth Management Plan for the Prescott and Tucson AMAs in 2018 and 2019, respectively, the MNCCP was continued as the NPCCP and the list of available BMPs was updated.

Municipal BMP Advisory Committee

A Municipal BMP Advisory Committee was established in 2009 to assist ADWR in the evaluation of the effectiveness of the program. The Advisory Committee was selected based on stakeholder recommendations to include a mix of policy staff and conservation practitioners and:

- at least one representative from each AMA and each tier
- several representatives from private water companies
- at least one representative each from a municipality that has a Designation of Assured Water Supply and one that does not
- a representative in the existing MNPCCP
- a representative from the agricultural use sector
- A representative from the Arizona Corporation Commission.

Committee members provided input on the guidance document, forms, educational workshops, materials and other program components. The Advisory Committee met several times between 2008 and 2013 in preparation of the Fourth Management Plan.

Due to committee members' changing responsibilities and availability, a new Advisory Committee will be formed prior to the implementation of the Fifth Management Plan.

Resources

<https://new.azwater.gov/conservation/water-planners-providers>

Evaluation

The NPCCP is to be reviewed periodically to evaluate its effectiveness, during which water conservation measures chosen by large providers will be compiled and assessed. ADWR staff and/or an independent researcher may assist in the evaluation. As required, an annual water-use measurement (GPCD) is being tracked for each large provider and for each AMA (Figure #1). GPCD values are not used to determine compliance for providers in the NPCCP; however, water-use trends may be used to evaluate the effectiveness of certain BMPs and the overall effectiveness of the program.

GPCD is calculated by dividing municipal demand by the population served and 365 (Municipal Demand/Population served/365 days in a year = GPCD). The top panel of Figure 1 shows GPCD calculated for each AMA from 1985 through 2017. While GPCD calculations were largely stable throughout the First (1 MP) and Second (2 MP) Management Periods, GPCD has fallen at a faster rate since the year 2000. As expected, this trend is also present when GPCD is calculated as a sum of all AMAs, shown in the bottom panel of Figure 1. Slope was calculated for the period of 1985 through 2017, during which time the sum of all AMAs experienced an average decrease of 2.39 GPCD per year. By calculating slope only since the year 2000, we find an average decrease of 3.12 GPCD per year. Since the implementation of the NPCCP in 1991, GPCD has decreased at a rate of 2.51 GPCD per year. Despite this decrease in GPCD for the sum of all AMAs, the Prescott AMA has maintained nearly flat and relatively low GPCD use, over the period for which we have data.

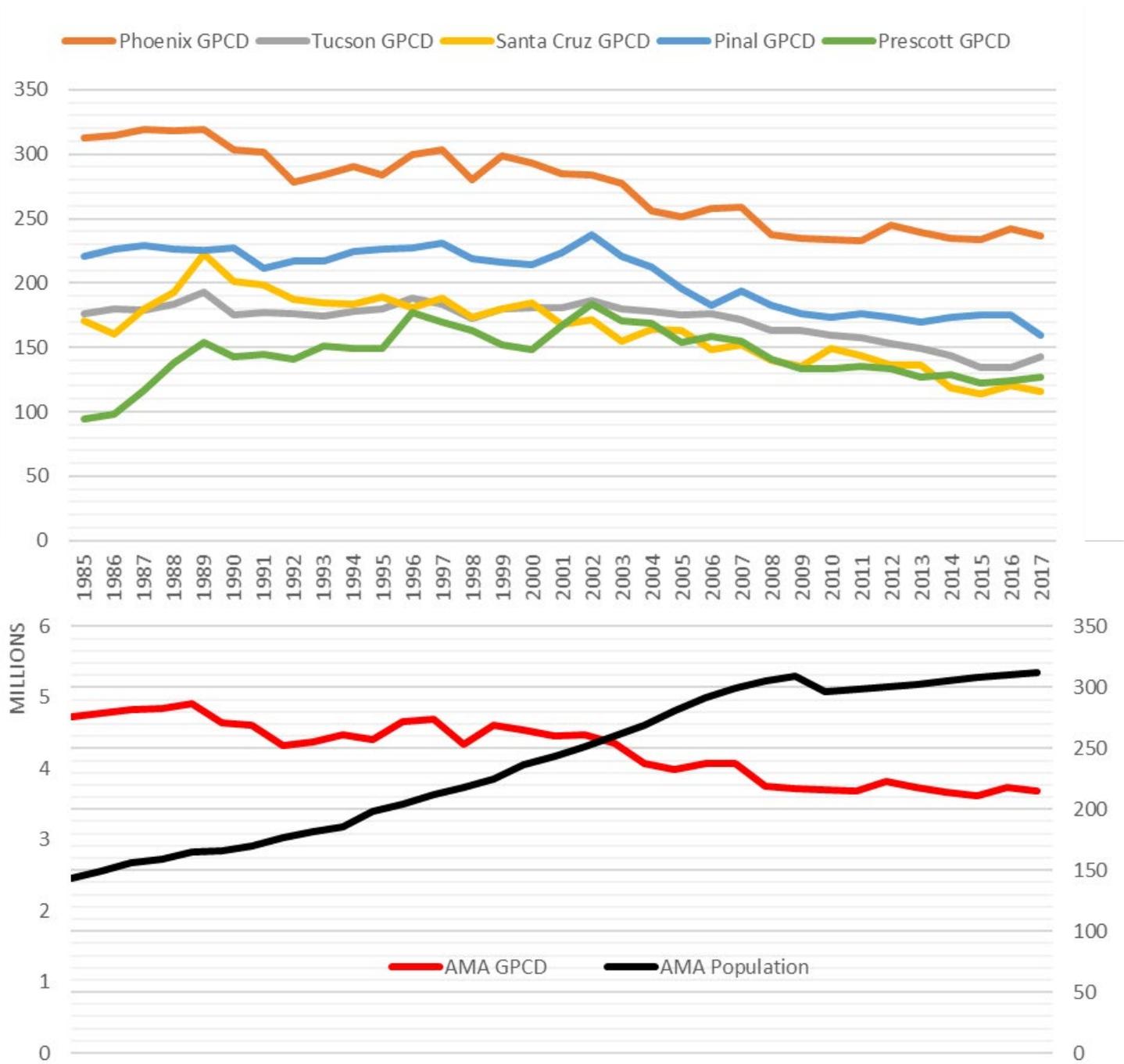


Figure 1. Top Panel: GPCD has decreased in each AMA since the early 2000s. Bottom Panel: Population has increased in Active Management Areas, while GPCD has decreased.

Table 3: GPCD in 2010 (First Year of Modified NPCCP) vs. 2017 (most recent year)

	PHX	Pinal	SC	Prescott	Tucson	All AMAs
2010	234.19	173.19	148.91	133.36	159.82	216.16
2017	236.95	159.30	115.76	127.11	143.15	214.62

Comparing the overall GPCD of each AMA in 2010, the first year of the Modified NPCCP, with the GPCD in the most recent reporting year (2017) further emphasizes the decrease in GPCD. In fact, each AMA except Phoenix has experienced a decrease in overall GPCD, with Pinal and Santa Cruz experiencing GPCD drops of more than 20 gallons/person/day. The period from 2010-2017 also shows a decrease in GPCD for the Prescott AMA in contrast with the relatively stable Prescott AMA GPCD from 1985-2010. This may indicate MNPCCP success, though further investigation is needed.

This decrease in GPCD contrasts with increases in both the population living in the AMAs and municipal demand within the AMAs. While population and municipal demand have risen steadily since the passage of the Groundwater Act of 1980, municipal use has met the demand with increased efficiency.

Further investigation of the effectiveness of the NPCCP is ongoing and necessary and is dependent on the availability of future resources to dedicate the appropriate time and staff needed to complete the analysis. Some questions for further analysis may include:

- *What is the effect of the NPCCP on water-use trends?* Compare the GPCD of individual water providers with the average GPCD of each AMA before and after participation in the NPCCP. Note: at least three years of GPCD data is needed.

- *What is the effect of individual BMPs on water-use trends?* Using a provider's annual report and Conservation Efforts Report, compare the provider's water-use trends before and after implementation of an individual BMP (such as leak detection or meter repair).
- *Is the list of BMPs relevant, up-to-date, useful?* Collect and evaluate recommendations for additions, deletions, or modifications to the list. Changes may be made as necessary and potentially incorporated into the Fourth Management Plan and/or its subsequent modifications.

Alternative Conservation Program (ACP)

First established in the Second Management Plan and continued into the Third Management Plan, the ACP was developed to give large providers with disproportionately increasing non-residential water use an alternative to the Total GPCD Program. The ACP requirements include a limitation on groundwater use, and residential GPCD and non-residential requirements.

Institutional Provider Program (IPP)

The IPP allows those providers with primarily non-residential uses and who are unable to economically utilize non-groundwater sources to be regulated under a program that focuses on the specific institutional water-use characteristics of their service area. Large providers regulated as Institutional Providers (i.e., large institutional facilities such as prisons, military installations, schools and airports that use greater than 90% of their water deliveries for non-residential purposes) are assigned a maximum residential GPCD requirement and specific conservation measures for non-residential uses and will also be required to comply with individual user, distribution system, and monitoring and reporting requirements.

3. General Conservation Requirements

Each large provider is required to limit its Lost and Unaccounted for water to no more than 10% of its total supply, calculated as an average of the most recent three years. 15 large providers currently have a lost and unaccounted volume greater than 10% over the last three years and 18 large providers experienced greater than 10% Lost and Unaccounted for water in the 2017 calendar year (Appendix 3). An additional four large providers did not submit the required information to calculate Lost and Unaccounted for water.

The GPCD program currently has two large providers out of compliance with the Lost and Unaccounted for requirements, or 12.5% of total enrolled providers. Of the 61 large providers enrolled in the NPCCP, 13 are currently out of compliance, a rate of 21.31%. One potential reason for this difference is that providers in the GPCD program tend to be larger cities with more resources to update and maintain infrastructure.

Each year large providers are provided with their calculated GPCD usage and Lost and Unaccounted for water percentage. This information is available to the interested public.

4. Future Actions

Effectiveness of Municipal Conservation Programs will continue to be evaluated and modifications or additional programs will continue to be explored, particularly as the Fifth Management Plan is developed.

The following appendices provide summary information of the NPCCP for the 2017 calendar year, including BMP selection status and a summary of the available BMPs. Conservation statistics for each large provider, including those in the GPCD program are provided in Appendix 3.

Appendix 1: BMP Selection by Provider

The following appendix provides summary information of the NPCCP for the 2017 calendar year, including BMP selection status

	Provider ( = assured water supply designation)	Right Number	AMA	Tier	BMPs Identified in Provider Profile	Notes on BMPs Reported in Conservation Efforts Reports 2015-2018	BMPs being Implemented in 2018
1	Adaman Mutual Water Company	56-002150.0000	Phoenix	1	4.2	Updated for 2018 Schedule CER Incomplete	No Data
2	Avra Water Co-op	56-000019.0000	Tucson	1	3.7	No change	3.7 - Plus (1.1, 2.3, 3.4, 3.6, 5.2)
3	AZ Water Company Apache Junction	56-002000.0000	Phoenix	2	3.1, 3.6, 3.8, 4.1, 4.2	Updated for 2018	3.1, 3.6, 3.8, 4.1, 4.2 - Plus (1.2, 2.3, 3.2, 3.7)
4	AZ Water Company Oracle	56-000016.0000	Tucson	1	4.2	No Change	4.2 - Plus (3.6, 3.8, 4.1)
5	AZ Water Company Pinal Valley	56-001307.0001	Pinal	2	3.1, 3.6, 3.8, 4.1, 4.2	Updated for 2018	3.1, 3.6, 3.8, 4.1, 4.2
6	AZ Water Company Superior	56-002002.0000	Phoenix	1	4.2	No Change	4.2 - Plus (1.2, 2.3, 3.1, 3.2, 3.6, 3.7, 3.8, 4.1)
7	AZ Water Company White Tanks	56-002001.0000	Phoenix	1	4.2	Updated for 2018	4.2 - Plus (3.6, 3.8, 4.1)
8	Berneil Water	56-002004.0000	Phoenix	1	3.7	Update for 2018 Schedule CER missing	No Data
9	Buckeye, City of	56-002006.0000	Phoenix	2	5.2, 5.8, 6.1, 6.6, 7.5	Updated for 2018	1.1, 1.2, 3.1, 3.6, 3.7, 4.2, 5.2, 5.8
10	Buckeye—Valencia, City of	56-002046.0000	Phoenix	2	1.1, 2.2, 3.6, 4.3, 7.1	Updated for 2018	1.1, 1.2, 3.1, 3.6, 3.7, 4.2, 5.2, 5.8
11	Carefree Water Company	56-002007.0000	Phoenix	1	3.6	Updated for 2018	3.7 – Plus (4.1, 4.2, 4.3)
12	Cave Creek, Town of	56-002008.0000	Phoenix	1	2.3	Updated for 2018	No Data
13	Chandler Heights Citrus Irrigation District	56-002504.0000	Phoenix	1	1.1, 4.2, 3.7	Updated for 2018	1.1, 3.7, 4.2
14	Chandler, City of 	56-002009.0000	Phoenix	3	1.1, 2.1, 2.2, 3.1, 3.2, 4.1, 6.9, 6.10, 7.5, 7.7		1.1, 2.1, 2.2, 3.1, 3.2, 3.7, 4.1, 6.9, 6.10, 7.5 -Plus (2.1, 3.3, 3.4, 3.6, 3.8, 5.3, 5.5, 6.12)
15	Clearwater Utilities Company	56-002165.0000	Phoenix	1	3.7	No change	3.7
16	Comm. Water Co. of Green Valley	56-000046.0000	Tucson	2	1.2, 3.4, 3.6, 3.7, 4.2	No change	1.2, 3.4, 3.6, 3.7, 4.2

	Provider (♠ = assured water supply designation)	Right Number	AMA	Tier	BMPs Identified in Provider Profile	Notes on BMPs Reported in Conservation Efforts Reports 2015-2018	BMPs being Implemented in 2018
17	Davis Monthan AFB	56-000058.0000	Tucson	1	4.1	No Change	4.1
18	Desert Hills Water Company (Cave Creek Town of)	56-002169.0000	Phoenix	1	2.4	Updated for 2018 Schedule CER incomplete	No Data
19	Diversified Water Utility	56-002258.0000	Phoenix	1	3.8	No change	3.8
20	EPCOR Agua Fria	56-002012.0000	Phoenix	3	1.1, 1.2, 2.1, 2.2, 3.1, 3.4, 3.6, 3.7, 4.2, 7.6	No Change	1.1, 2.1, 2.2, 2.4, 3.1, 3.4, 3.6, 3.7, 4.2, 5.2
21	EPCOR Paradise Valley	56-002027.0000	Phoenix	1	1.1	Updated for 2018	1.1, 2.2, 2.3, 2.4, 3.1, 3.4, 3.6, 3.7, 4.2, 5.2
22	EPCOR Sun City	56-002038.0000	Phoenix	2	1.1, 2.1, 3.1, 3.4, 4.2	Updated for 2018	1.1, 2.1, 2.3, 2.4, 3.1, 3.4, 3.6, 3.7, 4.1, 4.2, 5.2
23	EPCOR Sun City West	56-002039.0000	Phoenix	2	1.1, 2.1, 3.1, 3.4, 4.2	Updated for 2018	1.1, 2.1, 2.3, 2.4, 3.1, 3.4, 3.6, 3.7, 4.1, 4.2, 5.2
24	EPCOR Tubac	56-000042.0000	Santa Cruz	1	1.1	Updated for 2018	1.1, 2.1, 2.2, 2.3, 3.1, 3.4, 3.6, 3.7, 4.2, 5.2
25	Farmers Water Company	56-000080.0000	Tucson	1	4.2	No change	4.2
26	Florence, Town of ♠	56-001204.0001	Pinal	1	1.1	No Change	3.6
27	Gilbert, Town of ♠	56-002017.0000	Phoenix	3	1.1, 1.2, 2.1, 2.2, 2.3, 2.5	Updated for 2018	1.1, 1.2, 2.1, 2.2, 2.3, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 5.1, 5.3, 5.4, 5.5, 5.13, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8
28	Green Valley DWID	56-000302.0000	Tucson	2	4.2	Updated for 2018 Last report 2015 Schedule CER incomplete	No Data
29	Johnson Utilities-Phoenix ♠	56-002346.0000	Phoenix	2	No Data	No Change	No Data
30	Johnson Utilities-Pinal ♠	56-001538.0000	Pinal	1	No Data	No Change	No Data
31	Lago Del Oro Water Company	56-000245.0000	Tucson	2	3.6, 3.7, 4.1, 4.2,	Updated for 2018	3.6, 3.7, 3.8, 4.1, 4.2
32	Las Quintas Serenas	56-000128.0000	Tucson	1	4.2	Updated for 2018	4.2, 1.4, 3.7 - Plus (1.1, 2.4, 3.6, 3.8)
33	Liberty Utilities (Litchfield PSCO)	56-002021.0000	Phoenix	2	1.2, 2.3, 3.7, 3.8, 6.1	Updated for 2018	1.2, 2.2, 3.2, 3.6, 3.7 - Plus (3.8, 4.1, 4.2, 5.2, 5.8)

	Provider (♠ = assured water supply designation)	Right Number	AMA	Tier	BMPs Identified in Provider Profile	Notes on BMPs Reported in Conservation Efforts Reports 2015-2018	BMPs being Implemented in 2018
34	Los Cerros Water Company	56-000138.0000	Tucson	1	4.2	Updated for 2018	3.7, 4.1, 4.2
35	Luke AFB	56-002022.0000	Phoenix	1	No Data	No Change	No Data
36	Marana Domestic Water Improvement District	56-000246.0000	Tucson	1	4.2	Updated for 2018	4.2
37	Marana, Town of ♠	56-000107.0000	Tucson	2	2.3, 3.4, 3.6, 3.7, 7.6	Updated for 2018	1.1, 2.2, 2.3, 2.4, 3.1, 3.4, 3.6, 3.7, 3.8, 4.2, 5.2, 5.3, 7.6
38	Metro DWID - Hub System	56-000244.0000	Tucson	1	6.7, 6.8	Updated for 2018	1.1, 2.4, 4.2, 6.2, 6.7, 6.8
39	Metropolitan Diablo WID ♠	56-000068.0001	Tucson	1	4.2	Updated for 2018	No Data
40	Picacho Water Company	56-001353.0000	Pinal	1	3.7	Updated for 2018	3.6
41	Pima Utilities	56-002031.0000	Phoenix	2	3.6, 3.7, 3.8, 4.1, 4.2	Updated for 2018	2.1, 3.6, 3.7, 3.8, 4.1, 4.2, 4.3
42	Prescott Valley, Town of	56-003023.0000	Prescott	2	1.1, 2.4, 3.6, 4.2, 7.5	Updated for 2018	1.1, 2.4, 3.6, 3.7, 4.2, 7.5
43	Quail Creek Water Company	56-000367.0000	Tucson	1	4.2	Updated for 2018	3.6, 3.7, 3.8, 4.1, 4.2
44	Queen Creek, Town of	56-002032.0001	Phoenix	2	1.2, 3.6, 3.7, 4.2, 7.5	Updated for 2018	1.1, 1.2, 2.1, 2.2, 2.3, 3.6, 3.7, 4.2
45	Ray Water Company	56-000247.0000	Tucson	1	2.3	No changes	2.3
46	Ridgeview Water Company	56-000375.0000	Tucson	1	4.2	Updated for 2018	3.6, 3.7, 3.8, 4.1, 4.2
47	Rio Rico Utilities	56-000041.0000	Santa Cruz	2	1.2, 2.3, 2.5, 3.6, 4.2	No Change	1.2, 2.2, 2.3, 3.6, 4.2
48	Rio Verde Utilities	56-002035.0000	Phoenix	1	2.3	Updated for 2018	2.3 – Plus (3.7)
49	Rose Valley Water Company	56-002263.0000	Phoenix	1	3.7	Updated for 2018	1.1, 2.3, 3.1, 3.2, 3.6 - Plus (3.8)
50	Saguaro Water Company	56-000135.0000	Tucson	1	3.7	Failure to File (2015 last reported on 3.6, 3.7 and 4.2)	No data

	Provider (♠ = assured water supply designation)	Right Number	AMA	Tier	BMPs Identified in Provider Profile	Notes on BMPs Reported in Conservation Efforts Reports 2015-2018	BMPs being Implemented in 2018
51	Sahuarita Water Company♠	56-000373.0000	Tucson	2	1.1, 1.2, 2.4, 4.1, 4.2,	Updated for 2018	1.1, 2.4, 3.1, 3.6, 3.7, 4.1, 4.2
52	Santa Cruz Water Company (Global) ♠	56-001355.0000	Pinal	2	1.1, 2.2, 3.6, 4.3, 5.4		1.1, 2.2, 3.6, 4.2, 7.6
53	Scottsdale, City of♠	56-002037.0000	Phoenix	3	1.1, 2.1, 2.2, 2.4, 3.1, 3.2, 3.6, 3.7, 4.2, 6.9	Updated for 2018	1.1, 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3, 3.6, 3.7, 3.8, 4.2, 4.3, 5.1, 5.2, 5.3, 5.4, 5.5, 6.2, 6.4, 6.6, 6.9, 6.12, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8
54	Sunrise Water Company	56-002041.0000	Phoenix	1	3.6	Updated for 2018	1.1, 2.3, 3.1, 3.2, 3.6, 3.7, 3.8, 5.2
55	Surprise, City of♠	56-002344.0000	Phoenix	2	1.1, 1.2, 2.1, 2.2, 3.8	Updated for 2018	1.1, 1.2, 2.1, 2.2, 5.1, 5.2, 5.4, 5.5
56	Tempe, City of♠	56-002043.0000	Phoenix	3	1.1, 2.1, 2.2, 2.4, 3.1, 4.1, 5.4, 6.2, 6.9, 6.11	Updated for 2018	1.1, 1.2, 2.1, 2.2, 2.4, 3.1, 3.2, 3.3, 3.7, 3.8, 4.1, 4.2, 5.1, 5.2, 5.3, 5.4, 6.2, 6.7, 6.9, 6.11, 6.12, 7.5
57	Thunderbird Farms Improvement District	56-001342.0000	Pinal	1	4.2	Updated for 2018	3.7
58	Tolleson, City of	56-002044.0000	Phoenix	1	3.6, 4.2, 5.2, 5.3	No Change	3.6, 4.2, 5.2, 5.3
59	University of Arizona	56-000268.0000	Tucson	1	7.3	Updated for 2018	3.6, 3.7, 3.8, 4.1, 4.2, 5.1, 5.2, 5.3, 5.4, 5.8, 7.2, 7.3, 7.4, 7.5, 7.8
60	Valle Verde Water Company	56-000228.0000	Santa Cruz	1	4.2	Updated for 2018	1.1, 3.7, 5.2
61	Valley Utilities Water Company	56-002047.0000	Phoenix	1	4.2	Updated for 2018	4.2

Appendix 2: List of BMPs

For more information, see May 2008 Modifications to the Third Management Plan, Chapter 5 or Chapter 5 of the Tucson and Pinal 4th Management Plans.

In addition to the BMPs below, all providers in the MNPCCP must implement a basic public education program.

Category 1: Public Awareness/Public Relations	
1.1	Local and/or regional messaging program
1.2	Special events/programs and community presentations
1.3	Market surveys to identify information needs/assess success of messages
1.4	Distribution Plan for Water Conservation Materials
Category 2: Conservation Education and Training	
2.1	Adult education and training programs
2.2	Youth conservation education program
2.3	New homeowner landscape information
2.4	Xeriscape demonstration garden
2.5	Distribution plan for water conservation materials**
Category 3: Outreach Services	
3.1	Residential audit program
3.2	Landscape consultations (residential and/or non-residential)
3.3	Water budgeting program (non-residential)
3.4	Residential interior retrofit programs
3.5	Non-residential interior retrofit programs
3.6	Customer high water use inquiry resolution
3.7	Customer high water use notification
3.8	Water waste investigations and information
Category 4: Physical System Evaluation and Improvement	
4.1	Leak detection program
4.2	Meter repair and/or replacement program
4.3	Comprehensive water system audit program

Category 5: Ordinances / Conditions of Service / Tariffs	
5.1	Low water use landscaping requirements for residential, multi-family, non-residential and/or common areas
5.2	Water tampering/water waste ordinances
5.3	Plumbing code requirements if more restrictive than the 1990 Uniform Plumbing Code
5.4	Limitations on water features and/or water intensive landscaping and turf
5.5	Ordinance for model home landscapes in new residential developments
5.6	Required on-site gray water/water harvesting features at residences and/or businesses
5.7	Requirements for car wash water recycling
5.8	Landscape watering restrictions (time of day, etc.)
5.9	Requirements for hot water recirculation devices for residential, multi-family and or non- residential sectors
5.10	Retrofit on resale
5.11	Landscape water-use efficiency standards for non-residential users
5.12	Conservation tariff (private water companies)**
5.13	Water use plan for new large non-residential users
Category 6: Rebates/Incentives	
6.1	Toilet rebate (residential and/or multifamily homes)
6.2	High efficiency flush toilet rebate (residential and/or multifamily homes)
6.3	Toilet replacement (residential and/or multifamily homes)
6.4	Indoor water fixture replacement/rebate/incentive (residential and/or multifamily homes)
6.5	Hot water recirculating system or instant hot water system rebate (residential, multifamily, or non-residential)
6.6	Water efficient appliances rebate/incentive
6.7	Gray water retrofit/rebate/incentive
6.8	Water harvesting retrofit/rebate/incentive
6.9	Landscape conversion rebate/incentive
6.10	Xeriscape installation rebate in new landscapes
6.11	Commercial and industrial program, e.g. audits, incentives, rebates, etc.
6.12	Large landscape conservation program (non-residential)
6.13	No/low interest loans for implementing water conservation measures (non-residential)

Category 7: Research/Innovation Program	
7.1	Implement an emerging technology
7.2	Initiate or support applied research to enhance decision making
7.3	Evaluate new or emerging technologies and practices
7.4	Conduct quantitative analysis of a conservation measure (for water savings results)
7.5	Implement smart irrigation technology
7.6	Develop industry partnerships to save water
7.7	Support the development of new technologies and products
7.8	Pilot a new initiative, project or program

** *BMP only available through 3rd Management Plan*

Appendix 3: Large Provider Conservation Statistics 2017 Calendar Year

The following appendix provides summary conservation statistics for each large provider. Numbers in red are higher than the regulatory limit of 10% Lost and Unaccounted for Water.

Large Municipal Provider	Right Number	2017 L&U	GPCD Actual	GPCD Target
Adaman Mutual Water Company	56-002150.0000	46.91%	665	187
Apache Junction Water District**	56-002025.0000	4.02%	100	145
Arizona Dept. Of Corrections - Eyman	56-001352.0000	N/A	170	N/A
Arizona Dept. Of Corrections - Florence	56-001304.0000	N/A	225	N/A
Arizona Dept. Of Corrections - Tucson	56-000362.0000	F2F		
Arizona Water Co - Pinal Valley System	56-001307.0001	12.10%	175	242
Arizona Water Co - Superior	56-002002.0000	10.20%	161	147
Arizona Water Co. - Apache Junction	56-002000.0000	6.88%	129	140
Arizona Water Co.-White Tanks	56-002001.0000	0.13%	162	105
Arizona Water Company - Oracle	56-000016.0000	8.92%	105	130
Avondale, City of**	56-002003.0000	7.42%	159	129
Avra Water Co-Op	56-000019.0000	4.41%	130	135

Large Municipal Provider	Right Number	2017 L&U	GPCD Actual	GPCD Target
Berneil Water Company	56-002004.0000	10.54%	955	507
Buckeye, City of	56-002006.0000	7.94%	104	133
Carefree Water Company	56-002007.0000	9.21%	349	563
Cave Creek Water Company	56-002008.0000	13.76%	288	180
Chandler Heights Citrus Irr Dist	56-002504.0000	4.58%	183	91
Chandler, City of	56-002009.0000	3.17%	192	179
City of Buckeye-Valencia	56-002046.0000	15.63%	131	105
Clearwater Utilities Co. Inc.	56-002165.0000	5.74%	152	111
Community Water Co Of Green Valley	56-000046.0000	6.64%	109	143
Desert Hills Water Company	56-002169.0000	4.81%	140	122
Diversified Water Utilities, Inc.	56-002258.0000	2.87%	270	93
DM AFB Water System	56-000058.0000	13.10%	228	319
El Mirage, City of**	56-002016.0000	5.73%	127	116
Eloy, City of	56-001203.0000	12.32%	145	218
EPCOR - Paradise Valley	56-002027.0000	7.70%	1136	770
EPCOR - Sun City	56-002038.0000	6.21%	234	228
EPCOR - Sun City West	56-002039.0000	4.11%	230	207
EPCOR - Tubac	56-000042.0000	9.93%	252	302
EPCOR - Agua Fria	56-002012.0000	10.51%	190	119

Large Municipal Provider	Right Number	2017 L&U	GPCD Actual	GPCD Target
EPCOR - Chaparral City Water Co**	56-002011.0000	3.71%	225	249
Farmers Water Company	56-000080.0000	7.23%	119	248
Flowing Wells Irrigation District**	56-000084.0000	15.33%	124	144
Glendale, City of**	56-002018.0000	8.10%	168	185
Goodyear, City of**	56-002019.0000	6.41%	173	209
Green Valley DWID	56-000302.0000	F2F		
Johnson Utilities - Phoenix	56-002346.0000	9.67%	123	99
Johnson Utilities - Pinal	56-001538.0000	5.35%	218	167
Lago Del Oro Water Co.	56-000245.0000	5.44%	199	176
Las Quintas Serenas Water Co.	56-000128.0000	12.25%	233	148
Liberty Utilities (Litchfield Park Water & Sewer) Corp	56-002021.0000	3.63%	222	220
Los Cerros Water Co	56-000138.0000	6.10%	112	129
Luke Air Force Base	56-002022.0000	33.32%	337	349
Marana Domestic Wtr Imp District	56-000246.0000	Incomplete		
MDWID Hub System	56-000244.0000	1.44%	205	188
Mesa, City of**	56-002023.0000	5.17%	145	161
Metro Domestic WID**	56-000349.0000	5.93%	150	174
Metropolitan Diablo Water Impr Dist	56-000068.0001	8.77%	93	84
Nogales, City of**	56-000002.0000	14.77%	137	162

Large Municipal Provider	Right Number	2017 L&U	GPCD Actual	GPCD Target
Peoria, City of**	56-002029.0000	7.60%	194	143
Phoenix, City of**	56-002030.0000	9.95%	169	204
Picacho Water Company	56-001353.0000	4.81%	735	150
Pima Utilities Company	56-002031.0000	9.05%	395	449
Prescott, City of**	56-003017.0000	7.92%	118	156
Quail Creek Water Company	56-000367.0000	7.13%	176	143
Queen Creek Water Department	56-002032.0001	6.65%	202	117
Ray Water Company	56-000247.0000	13.71%	96	120
Ridgeview Utility Company	56-000375.0000	7.61%	1123	214
Rio Rico Utilities Inc.	56-000041.0000	1.90%	90	146
Rio Verde Utilities, Inc.	56-002035.0000	9.82%	1468	1156
Rose Valley Water Company	56-002263.0000	22.26%	266	163
Saguaro Water Company	56-000135.0000	F2F		
Sahuarita Water Company	56-000373.0000	5.85%	94	104
Santa Cruz Water Company	56-001355.0000	10.45%	125	149
Scottsdale, City of	56-002037.0000	7.98%	325	255
Sunrise Water Company	56-002041.0000	10.09%	309	155
Surprise, City of	56-002344.0000	6.98%	166	95

Large Municipal Provider	Right Number	2017 L&U	GPCD Actual	GPCD Target
Tempe, City of	56-002043.0000	6.38%	237	250
Thunderbird Farms Improvement District	56-001342.0000	5.74%	292	138
Tolleson, City of	56-002044.0000	1.83%	532	147
Town of Florence	56-001204.0001	0.57%	131	191
Town of Gilbert	56-002017.0000	5.74%	180	158
Town of Marana	56-000107.0000	2.06%	114	110
Town of Oro Valley Water Utility**	56-000368.0000	0.01%	147	168
Town of Prescott Valley	56-003023.0000	8.78%	99	132
Tucson, City of**	56-000001.0000	8.50%	120	155
University of Arizona	56-000268.0000	0.00%	292	199
Vail Water Company**	56-000060.0000	8.94%	98	110
Valle Verde Water Company	56-000228.0000	14.11%	115	82
Valley Utilities Water Company	56-002047.0000	7.30%	195	117

**Provider is regulated under the Gallons Per Capita per Day conservation program.