

# **CAPACITY DEVELOPMENT PROGRAM ANNUAL REPORT FY2019**

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**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**CAPACITY DEVELOPMENT ANNUAL REPORT**  
**JULY 1, 2018 – JUNE 30, 2019**

**1. INTRODUCTION**

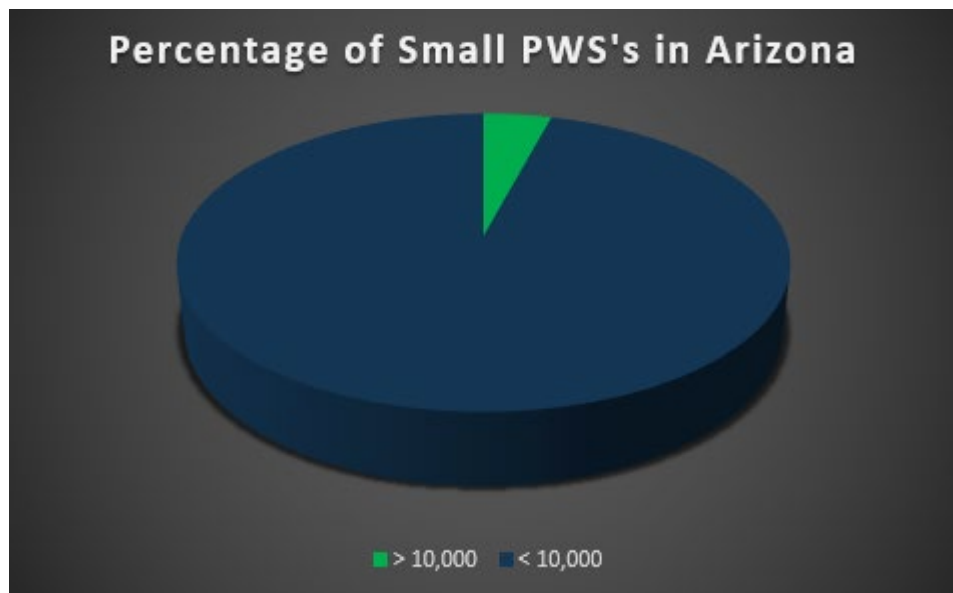
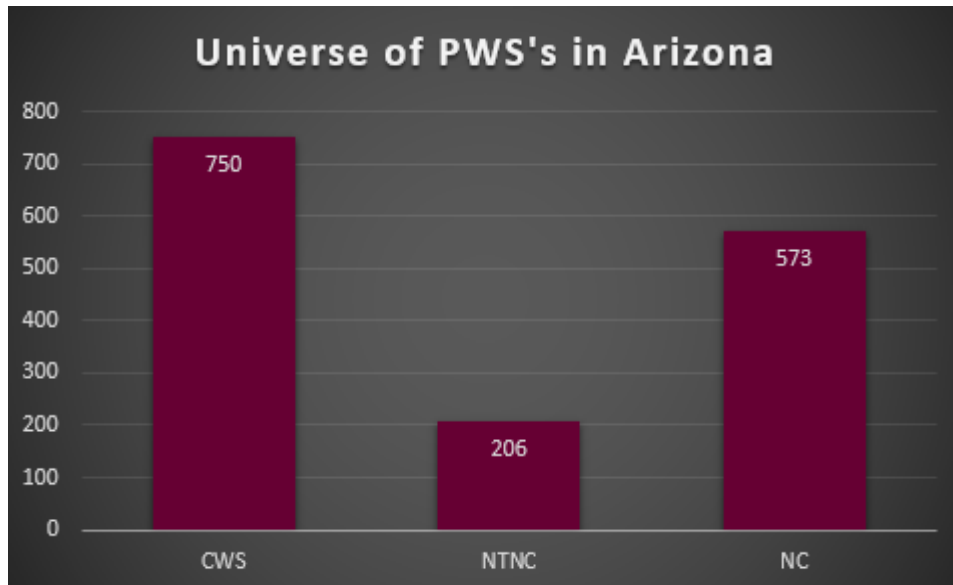
The objective of the 1996 amendments to the Safe Drinking Water Act (SDWA) was to ensure that public water systems (PWSs) provide safe drinking water to the public. Water system capacity is the ability to plan for, achieve, and maintain compliance with all applicable state and federal drinking water standards and regulations. There are three components to capacity: technical, managerial and financial (TMF). States are to develop strategies and programs aimed at helping water systems acquire and maintain these capacities in order to properly operate, manage and finance their systems. Adequate capability in all three areas is necessary for the successful operation of a public water system. States are prohibited from providing Drinking Water State Revolving Fund (DWSRF) assistance to a PWS that lacks adequate capacity, unless that assistance is directly related to improving that system’s technical, managerial or financial capabilities.

The Arizona Department of Environmental Quality’s (ADEQ) Capacity Development Program works to ensure that new small community and non-transient, non-community water systems possess the technical, managerial, and financial capabilities to operate in accordance with all federal and state drinking water rules and regulations. The Program also targets both new and existing community and non-transient, non-community PWSs serving 10,000 or fewer people, for technical assistance funded through set-aside monies from the EPA Capitalization Grant of the DWSRF.

The 1996 amendments also require states to prepare an annual report documenting the ongoing implementation of the Capacity Development Program for addressing capacity determinations for new systems and the application of the approved strategy for existing public water systems. This report reviews the activities conducted by ADEQ from July 1, 2018 through June 30, 2019. In this annual report, ADEQ provides responses to the memorandum from Cynthia C. Dougherty, Director, Office of Groundwater and Drinking Water, USEPA, Washington, D.C., dated June 1, 2005 and the questions highlighted in the “Reporting Criteria for Annual State Capacity Development Program Implementation Reports”.

## 2. ARIZONA'S WATER SYSTEM DEMOGRAPHICS

As of the date of this report, there are 1,529 regulated PWSs currently operating in Arizona: 750 are classified as community PWSs (49%), 206 are non-transient, non-community PWSs (13.5%) and 573 are transient PWSs (37.5%) Over 96% of Arizona's public water systems are classified as small water systems serving less than 10,000 persons, based on EPA's classification of drinking water systems and population served. ADEQ's capacity development program is designed to help address the needs of these small water systems.



### **3. NEW SYSTEMS PROGRAM ANNUAL REPORTING CRITERIA**

**3.1 *Has the state’s legal authority to implement the program changed in previous year?***

The legal authority to implement ADEQ’s Capacity Development Program has not changed since the inception of the capacity development rule in 1999. The Department’s regulations are codified in Arizona Administrative Code (A.A.C.) Title 18, Chapter 4, Article 6 – Capacity Development Requirements for a New Public Drinking Water System.

**3.2 *Have there been any modifications to the state’s control points? If so, describe the modifications and any impacts these modifications have had on implementation of the new systems program. If not, no additional information on control points is necessary.***

There have been no modifications to the state’s control points.

**3.3 *List new systems (PWSID & Name) in the state within the past three years, and indicate whether those systems have been on EPA’s Enforcement Targeting Tool (ETT) list.***

Table 1 lists the PWSs that were approved under the capacity development program from July 1, 2016 through June 30, 2019. No Elementary Business Plans were approved in FY19. None of the PWSs approved during this period are currently on EPA’s Enforcement Targeting Tool (ETT) list with a score of 11 points or higher.

**Table 1. List of PWSs approved for Capacity Development from July 1, 2016 through June 30, 2019**

<b>PWS NAME</b>	<b>PWS NUMBER</b>	<b>CLASSIFICATION</b>	<b>COUNTY</b>	<b>CAPDEV APPROVAL</b>	<b>DATE PWS ACTIVATED</b>
<b>Monsanto Greenhouse – Marana</b>	AZ0410200	NTNC – active	Pima	02/06/17	02/07/19
<b>The Hub</b>	AZ0413342	NTNC – active	Yavapai	01/02/18	02/02/18
<b>Settlin Inn RV Park</b>	AZ0408189	<sup>1</sup> CWS - active	Mohave	03/02/18	10/12/17
<b>Retreat at Oak Creek DWID</b>	AZ0413298	CWS – proposed	Yavapai	03/12/18	Proposed
<b>Bearizona</b>	AZ0403105	NC- active	Coconino	NA	01/11/2017
<b>Hickmans Egg Ranch Tonopah</b>	AZ0407547	NTNC- active	Maricopa	02/25/2015	07/01/2017
<b>Scenic Valley Holding Company</b>	AZ0408188	NTNC- active	Mohave	NA	09/07/2017
<b>Marana Tangerine Business Park</b>	AZ0410010	NTNC- active	Pima	6/25/2015	5/5/2018

#### **4. EXISTING SYSTEM STRATEGY**

**4.1 *In referencing the state’s approved existing systems strategy, which program, tools, and/or activities were used, and how did each assist existing PWS’s in acquiring and maintaining TMF capacity? Discuss the target audience these activities have been directed towards.***

Regulatory requirements vary for the different types of systems and the major focus of the Capacity Development Program is on community and non-transient, non-community systems. Influencing factors include system size, regulatory oversight (e.g., Arizona Corporation Commission, municipal, ADEQ) and ownership type (e.g., county improvement district, domestic water improvement district, and municipal, private, non-profit, for profit). Costs for water system operation and maintenance can be significant and have a major impact on the ability of small system operators, often with volunteer or part-time staff, to maintain the systems in compliance with the ever increasing and more complex EPA and State regulatory requirements. Therefore, ADEQ’s Capacity Development Program is focused primarily on those small water systems most in need of assistance, which tend to be small rural communities and schools that are their own public water system. Primary tools include the Monitoring

<sup>1</sup> PWS approved as CWS, later changed to TNC in 2018.

Assistance Program, the Technical Assistance Program, and training workshops for water system representatives such as owners, managers, or operators.

#### ***4.1.1 Monitoring Assistance Program***

All community and non-transient, non-community public water systems, that are not federally or state-owned, and that serve 10,000 or less people are required to participate in ADEQ's Monitoring Assistance Program (MAP). For a base fee of \$250 per year and an additional \$2.57 charge per meter or service connection, MAP conducts all baseline monitoring for regulated volatile organic, synthetic organic, and inorganic chemicals in addition to nitrate, nitrite, asbestos, and radionuclides. MAP does not currently monitor for copper, lead, disinfection byproducts, microbiological contaminants and any increased monitoring which remains the responsibility of the PWS. The MAP has dramatically reduced the number of PWSs that would otherwise be in noncompliance with monitoring and reporting requirements for the various rules.

#### ***4.1.2 Technical Assistance Program***

Funded by both the 2% and 15% set-asides from the DWSRF Capitalization Grant, thirty task assignments were completed for twenty-five PWSs in FY19, doubling the amount of assistance provided in FY18. FY19 resulted in twelve out of the twenty-five PWSs being provided with design assistance, the highest number since this type of assistance was launched in FY18. The PWSs and types of assistance given are listed in Table 2.

A system evaluation is an assessment report of the water system's technical, managerial and financial capacity with prioritized recommendations for system improvements. The compliance options evaluation consists of an assessment of feasible treatment options for the contaminant(s) of concern, a recommendation based on system specifics, as well as estimated capital costs and initial and long-term operational and maintenance costs associated with each proposed option. Contractors who designed treatment system often also prepared the necessary documentation and drawings for the water system to submit an Approval to Construct application to ADEQ.

FY19 was also the first year that ADEQ's technical assistance program ventured into evaluating non-treatment options by conducting zonal sampling and testing "pump to waste" methods. The third party contractors also analyzed groundwater sources to evaluate feasible solutions such as blending, deepening the well, or rehabilitating the well. Zonal sampling assisted water systems, such as Sun Valley Farms Unit VI, Park Place Apartments, Rancho Del Conejo, Picacho Water Improvement District and Q Mountain Vista MHP, in determining the condition of the well infrastructure, examining options for non-treatment and/or confirming the best solution for the water system was to purchase and install treatment for removal of the contaminants.

**Table 2: PWSs Receiving Technical Assistance in FY19**

	<b>PWS NAME</b>	<b>PWS #</b>	<b>TECHNICAL ASSISTANCE PROVIDED</b>	<b>Comments<sup>2</sup></b>
1	Alma Ranchettes	07-286	Well video for nitrates; condition of well precluded further work till rehabilitated	ETT =30; MPL = 95
2	Arroyos Water Co.	04-083	10% design & engineering opinion of probable costs	PWS requested assistance; MPL = 60
3	Beaver Valley Water Co.	04-004	ATC/AOC applications for surface water treatment plant	PWS requested assistance
4	Beaver Valley Water Co.	04-004	10% design & engineering opinion of probable costs	PWS requested assistance
5	Cibola Mutual Water Company	15-123	TTHM compliance options	Consent order [ETT = 10; MPL = 70]
6	Coldwater Canyon Water 1,2,3	13-020, 192, 202	Asset management plans for all three systems (one owner)	PWS requested assistance
7	Jakes Corner Water Company	04-029	10% design & engineering opinion of probable costs	PWS requested assistance
8	Mayer DWID	13-039	Median household income survey	PWS requested assistance
9	Mayer DWID	13-039	ATC for a blending plan for arsenic – allows two additional wells to be brought online	PWS requested assistance
10	Monte Vista Water Co.	02-043	ATC for installation of arsenic treatment system	Consent order [ETT = 5; MPL = 45]
11	Orange Grove Elementary	14-105	Minor construction management and AOC to install chlorinator	PWS requested assistance
12	Park Place Apartments	20-534	Well video, flow and chemistry profiling for uranium	ETT = 12
13	Picacho DWID	11-042	System evaluation and asset management plan	ETT = 20
14	Picacho DWID	11-042	Well video, flow and chemistry profiling for arsenic	ETT = 20
15	Pinedale Estates DWID	09-040	System evaluation and asset management plan	ETT=10
16	Pinedale Estates DWID	09-040	Selenium mitigation options report	ETT=10
17	Q Mountain Vista MHP	15-509	Zonal sampling for nitrates	PWS requested assistance
18	Rancho Del Conejo	10-142	Well rehabilitation and zonal sampling for arsenic	PWS requested assistance



19	Sun Valley Farm Unit 6	11-111	ATC/AOC & construction management for system improvements to address nitrates	Consent order [ ETT = 100; MPL = 160]
20	Sun Valley Farm Unit 6	11-111	Updated cost estimate for overall system improvements	Consent order [ ETT = 100; MPL = 160]
21	Sun Valley Farm Unit 6	11-111	Zonal sampling for nitrate	Consent order [ ETT = 100; MPL = 160]
22	Shepard Water Co.	14-014	ATC for arsenic treatment – now running pilot test	Consent order [ETT = 5; MPL = 45]
23	Sequoia Village School	09-088	Compliance options for selenium	ETT= 10
24	Sierra Pacific Mobile Manor	14-098	Engineering assessment and opinion of probable costs	Consent order [ETT = 31; MPL = 71]
25	Sierra Pacific Mobile Manor	14-098	ATC for arsenic treatment	Consent order
26	Town of Springerville	01-013	ATC for blending vault for combined radium	ETT=10; MPL = 45
27	Town of Wellton	14-022	ATC to extend water distribution line under I-8 to loop system to address TTHMs	Consent order [ETT = 61; MPL = 101]
28	Town of Mammoth	11-018	ATC for water line replacement damaged in monsoon storm	PWS requested assistance
29	Villa Grande DWID	11-321	System evaluation and asset management plan	Consent order [ETT = 42; MPL = 117]
30	White Hills Unit 1	08-149	Well video for arsenic; small screened interval precluded flow & chemistry profiling	Consent order

<sup>2</sup> ETT = Enforcement Targeting Tool score from January, 2019 (one of MPL ranking criteria)  
MPL = FY19 Master Priority List ranking from June, 2019

### 4.1.3 Training

ADEQ conducts technical workshops statewide, both independently and in partnership with private consulting firms and nonprofit organizations, to improve the technical, managerial, and financial capacity of existing PWSs. The Drinking Water Program conducted a total of five outreach events and two contaminant specific analyte workshops during FY19.

One of the two targeted workshops focused on preventing, treating, and responding to disinfection by product contaminants, specifically TTHMs. The other targeted workshop focused on arsenic. The workshops enabled discussion with owners, operators, and managers in the areas of rule compliance, non-treatment vs. treatment options, how to optimize the current treatment plant, and the financial

impacts to these contaminants. The audience also heard from vendors and manufacturers of treatment systems and media.

Additionally in FY19, ADEQ expanded the capacity of both the Technical Assistance (TA) and Operator Certification Programs by hiring one additional staff person for each program. The department is focusing on in-house training and expanding the knowledge capacity of these programs to better serve the small water systems in Arizona. One goal for this expansion is to begin creating internal technical assistance processes such as in-house, point-of-use evaluations and design; optimal corrosion control recommendations; and design of corrosion control treatment.

ADEQ anticipates holding statewide workshops to train and assist small water systems in order to meet the 2018 American Water Infrastructure Act's Risk and Resilience Assessments and updated Emergency Response Plans in FY20 through FY21.

***4.2 Based on the existing system strategy, how has the state continued to identify systems in need of capacity development assistance?***

Public water systems are initially identified for assistance based on the Master Priority List (MPL). The criteria used to determine need are similar to the criteria used in determining existing PWS capacity. These criteria include EPA's Enforcement Targeting Tool (ETT) score, system classification type, population served, and violation history. The FY19 MPL was updated in the spring and published on May 4, 2018 for a 30-day comment period. As required by rule, an oral proceeding was held on June 4, 2018 to accept comments from the public. There were no comments made on the record so the FY19 MPL was finalized following the close of the proceeding. In addition to identifying systems in need of technical assistance, WIFA uses the MPL to identify possible candidates for additional financial assistance (e.g., low interest loans, principal forgiveness). Once the MPL is final, ADEQ does research on the highest-ranking systems and contacts the owners to offer technical assistance.

**4.3 During the reporting period, if statewide PWS capacity concerns or capacity development needs (TMF) have been identified, what was the state’s approach in offering and/or providing assistance?**

When capacity needs and/or concerns are identified that may affect several water systems, ADEQ offers support and assistance either through training or the technical assistance program. The focus in FY19 was on those small water systems still facing MCL issues (technical capacity). The program helped identify the most cost effective and manageable compliance options (managerial), and often assisted the water system in finding funding (financial capacity) and helping to prepare the necessary drawings and documentation to get the approval to construct application approved by the engineering review program.

An example in FY19 were the engineering evaluations done for both Sun Valley Farms Unit VI and Mayer DWID. Sun Valley Farms was preparing to go to the Arizona Corporation Commission for a rate case and authorization to incur debt to address the ongoing nitrate issues. The engineering evaluation report provides estimated costs on four different proposals to address system deficiencies so that both the Sun Valley Farms shareholders and the Corporation Commission could make an educated decision about the water system and its customers’ ability to manage additional debt.

For Mayer DWID, the water system contacted ADEQ concerning capacity issues during the summer. They proposed bringing two additional wells online, both with arsenic levels above the MCL, and blend with two existing wells, with arsenic levels well below the MCL, prior to entering the distribution system. The water system is well run and they understand their issues. It was a straight-forward assignment for the technical assistance contractor to figure out the right ratios and flows to make the in-line blending plan work and then prepare the ATC applications.

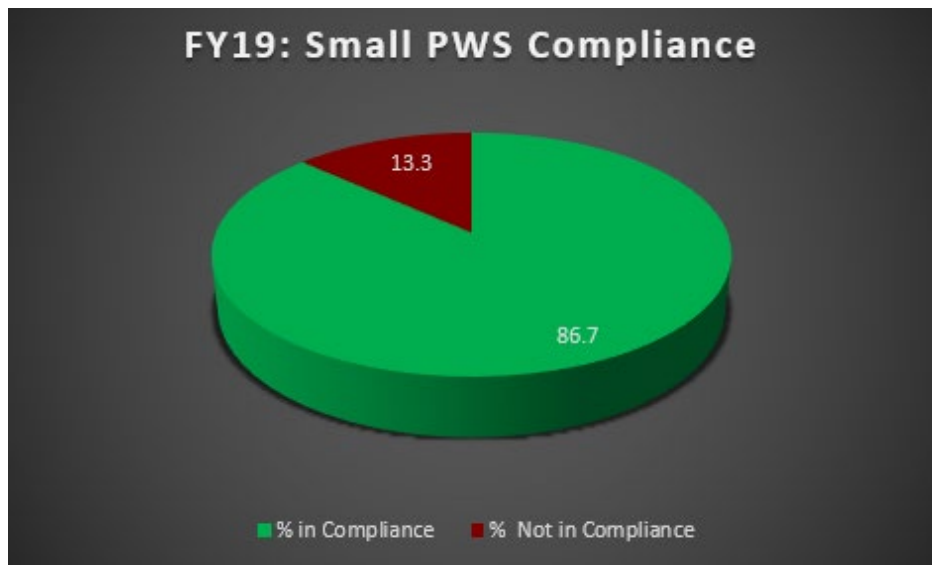
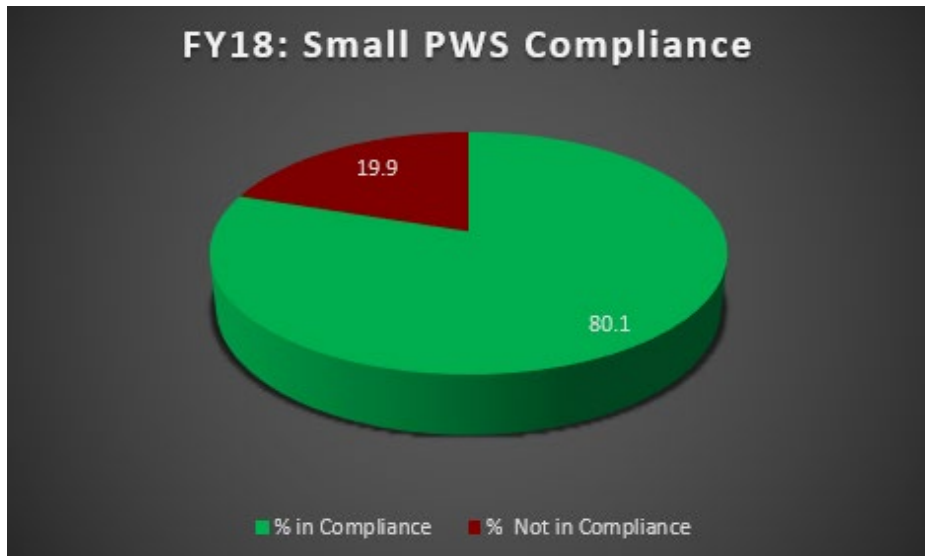
**4.4 If the state performed a review of implementation of the existing systems strategy during the previous year, discuss the review and how findings have been or may be addressed.**

In late FY16, ADEQ drafted a Small Water Systems Compliance Assistance Plan & Resource Toolbox to supplement its Capacity Development Program. As with the overall program, a major goal of this Plan is to assist existing small water systems in achieving and maintaining sustainable compliance with environmental regulations while providing healthy drinking water to its customers. ADEQ began implementing portions of the plan in FY17. ADEQ is tracking several interim measures that target specific areas of the plan and will report on progress in future annual or interim status reports. Interim measures 2017-2022:

- Report the technical assistance provided to small PWSs with high MPL scores each fiscal year  
*NOTE: Because the MPL is a snapshot in time, compliance with this interim measure is the number of small water systems with any of the following: an ETT score greater than 11, under a consent/compliance order, or have an MPL score greater than 50*

FY18:	No. of individual systems helped by the TA program:	14
	No. of systems meeting criteria above:	11 or 79%
FY19	No. of individual systems helped by the TA program:	25
	No. of systems meeting criteria above:	14 or 56%

- Report on progress to increase the number of small PWSs in compliance from 64.4%<sup>2</sup> to 95% by 2022



**4.5 Did the state make any modifications to the existing system strategy? If so, describe.**

No formal changes to the strategy.

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<sup>2</sup> Percent of Arizona small drinking water systems in compliance according to July 2016 ETT List