



# **CAPACITY DEVELOPMENT PROGRAM ANNUAL REPORT FY2017**

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# **ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**

## **CAPACITY DEVELOPMENT ANNUAL REPORT**

### **JULY 1, 2016 – JUNE 30, 2017**

#### **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, 2016 through June 30, 2017. 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 1,515 regulated PWSs currently in operation in Arizona: 749 are classified as community PWSs (49%), 197 are non-transient, non-community PWSs (13%) and 569 are transient PWSs (38%). Based on EPA's classification of drinking water systems based on population served, over 90% of Arizona's public water systems are classified as small or very small systems serving less than 3,300 persons. ADEQ's capacity development program is designed to help address the needs of these small 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 at: 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.*

Under its capacity development rules, ADEQ requires new community and non-transient, non-community water systems, beginning operations after October 1, 1999, to submit an elementary business plan for review to ensure the new water system possesses adequate technical, managerial, and financial capacity before it can receive approval to operate as a public water system. There have been no changes to this rule in the past year.

*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, 2014 through June 30, 2017. 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, 2014 through June 30, 2017**

<b>PWS NAME</b>	<b>PWS NUMBER</b>	<b>CLASSIFICATION</b>	<b>COUNTY</b>	<b>DATE</b>
Canyon Water Improvement	AZ0404112	CWS - active	Gila	12/22/14
Hickman Egg Ranch	AZ0407547	NTNC - active	Maricopa	02/09/15
Desert Living Estates	Not assigned	NTNC - proposed	Pinal	06/10/15
Tangerine Business Park	AZ0410328	CWS - proposed	Pima	06/25/15
Desert Springs DWID	Not assigned	CWS – proposed	Pinal	10/26/15
Crisantes Greenhouse	AZ0412045	NTNC - active	Pima	02/03/16
Monsanto Greenhouse - Marana	AZ0410200	NTNC - proposed	Pima	02/06/17

## 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, municipal, private, non-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 most in need of assistance, which tend to be small rural community and rural school water systems. Primary tools include the Monitoring Assistance Program, the Technical Assistance Program and training workshops for operators and owners/managers.

### 4.1.1 *Monitoring Assistance Program*

All community and non-transient, non-community public water systems, which are not federally or state-owned, and that serve 10,000 or less people are enrolled in ADEQ's Monitoring Assistance Program (MAP). For a modest 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 remain the responsibility of the PWS. 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 the 2% set-aside from the DWSRF Capitalization Grant, a total of nineteen task assignments were completed for nineteen PWSs in FY17. The assignments included four system evaluations – requested by the water systems; three corrosion control studies for schools; treatment evaluations for arsenic (3), uranium (2), combined radium (2), nitrate (3) and total trihalomethanes (1); modifications to an operation & maintenance manual to address process changes for arsenic treatment; zonal sampling (2), a blending plan for nitrates (1); water resources assessment (1) and engineering drawings needed to apply for an approval to construct/approval of construction for a required storage tank. The PWSs and type of assistance provided are identified in Table 2.

The system evaluation is an assessment report of the water system's technical, managerial and financial capacity with prioritized recommendations for system improvements. The treatment

evaluations consist of an assessment of feasible treatment options for the contaminant(s) of concern, a recommendation based on system specifics, as well as estimated initial and long-term operational and maintenance costs associated with each treatment strategy. Zonal sampling was conducted at two PWSs to try to locate where in the aquifer the contaminant of concern is highest. When a discrete layer can be identified, the typical solution is to modify the well to no longer receive flows from that part of the aquifer.

**Table 2: PWSs receiving Capacity Development Technical Assistance in FY17**

	<b>PWS Name</b>	<b>PWS #</b>	<b>Technical Assistance Provided</b>	<b>Comments<sup>2</sup></b>
<b>1</b>	Cochise College Park Water Association	02-040	System evaluation - PWS requested	ETT = 0; MPL = 45
<b>2</b>	Rancho Sierrita Well Association	10-286	System evaluation - PWS requested; sole well failing	ETT = 0; MPL = 45
<b>3</b>	Breezeway Trailer Park	11-315	Treatment Options for Uranium & Nitrate	ETT = 52; MPL = 53
<b>4</b>	Ash Fork Water Service	13-008	System evaluation & Arsenic Treatment Options	ETT = 10; MPL = 60
<b>5</b>	Orange Grove Elementary School (NTNC)	14-105	OCCT Recommendation for Lead ALE	ETT = 0; MPL = 40
<b>6</b>	Holbrook SDA Indian School (NTNC)	09-046	OCCT Recommendation for Lead ALE	ETT = 4; MPL = 49
<b>7</b>	Oak Creek Elementary School (NTNC)	13-095	OCCT Recommendation for Lead ALE	ETT = 0; MPL = 60
<b>8</b>	La Costa Estates Water Users Association	02-041	System evaluation - PWS requested	ETT = 0; MPL = 45
<b>9</b>	White Horse Ranch Owners Association	13-221	Treatment Options for Nitrates & Water Resources Assessment	ETT = 0; MPL = 50
<b>10</b>	White Hills Water Co Unit 1	08-149	Treatment Options for Arsenic	ETT = 0; MPL = 45
<b>11</b>	Vorelco Test Facility (NTNC)	11-106	Treatment Options for Nitrate	ETT = 2; MPL = 47
<b>12</b>	Rio Verde RV Park	13-425	Zonal sampling in deeper wells – Treatment Options for Arsenic	ETT = 0; MPL = 76; before consent order ETT = 21
<b>13</b>	Rancho Del Conejo Community Water Co-op	10-142	O&M Manual modifications to address process changes for Arsenic treatment	ETT = 2; MPL = 47
<b>14</b>	Bouse Worley Water Co-op	15-037	Zonal sampling to address Arsenic	ETT = 0; MPL = 73; before consent order, ETT = 33
<b>15</b>	Sun Valley Farms Unit 6	11-111	Blending Plan for Nitrate Exceedances	ETT = 62; MPL = 132

16	Town of Springerville	01-013	Treatment Options for Combined Radium	ETT = 12; MPL = 52
17	Ranch Water Service	08-082	Treatment Options for Uranium & Combined Radium	ETT = 0; MPL = 40; under consent order
18	Cameron Trading Post	03-006	Phase I Treatment Options for TTHMs	ETT = 0; MPL = 45
19	Mohawk Utility Corp	14-030	ATC-AOC applications for storage tank	ETT = 0; MPL = 141; before consent order, ETT = 81

<sup>2</sup> ETT = Enforcement Targeting Tool score from January, 2016 (one of MPL ranking criteria)  
MPL = FY17 Master Priority List ranking from June, 2016

### 4.1.3 Training

ADEQ conducts technical workshops statewide, both independently and in partnership with private consulting/training and nonprofit organizations, to improve the technical, managerial, and financial capacity of existing PWSs. The Drinking Water Program conducted a total of 22 outreach events statewide during FY17. Eleven of those events were monthly trainings at ADEQ's Main Office.

Six of the 22 events were two-day capacity development events that were held in Flagstaff, Lake Havasu, Pinetop-Lakeside, Yuma, Tucson and Prescott. These two day events feature training modules for operators as well as owners and managers. FY17 was the second year for the management track which included modules on budgeting and finance, rate setting, and asset management as well as new modules on water audits/water loss, leak detection, energy management, emerging treatment techniques, funding options and working with regulatory agencies. These new management modules were also presented at several of the monthly events at ADEQ's Main Office.

At the request of several communities, four one-day management track trainings were conducted in Safford and Benson (two in each community). ADEQ also partnered with the Environmental Finance Center Network (EFCN) to bring a Funding Forum to Phoenix on June 1 where all the major funding agencies spoke and EFCN made presentations on how to strengthen funding applications.

Lastly, ADEQ hosted two workshops aimed at surface water system operators to address operational issues that typically appear as summer approaches and temperatures rise. The workshop covered the various rules affecting surface water systems, operational and treatment techniques and a tour of a surface water treatment plant. The first one was also scheduled before the Long Term 2 Enhanced Surface Water Treatment Plan (LT2 Plan) deadline of July 1 in order to assist small systems in completing their plans. The first training was held in Quartzsite in early June. The second training was in Flagstaff in early July (FY18). Both were well attended and well received.

FY17 attendance at management track events was 320 persons, more than doubling the attendance in FY16. ADEQ continues to refine the management track program to address the

needs of small systems. Many of the suggested topics come from the course evaluations as well as discussions with owners, managers and the technical assistance providers.

*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 on the basis of 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 MPL was updated in the spring and published on May 26, 2017 for a 30-day comment period. As required by rule, an oral proceeding was held on June 26, 2017 to accept comments from the public. There were no comments made on the record so the FY18 MPL was finalized following the close of the proceeding. In addition to identifying systems in need of technical assistance, the Water Infrastructure Financing Authority (WIFA) uses the MPL to identify possible candidates for additional financial assistance (e.g., low interest loans, grants, loan forgiveness, etc.). Once the list is final, ADEQ does research on the highest ranking systems and contacts the owners to offer contractor support.

*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?*

Depending on the issue, ADEQ would provide support and assistance either through training or the technical assistance program. An example in FY17 were the surface water trainings conducted in Quartzsite and Flagstaff. Staff was aware that as the weather warms, surface water systems typically start having issues with TTHM formation. Solutions can be process-related or sometimes treatment is necessary. In addition, with the LT2 Plan deadline approaching, the workshop provided an opportunity for small systems to work one-on-one with the compliance assistance coordinators to properly complete their plans. Another example is offering technical assistance to public schools, with their own water system, when there is a lead and/or copper alert level exceedance(s).

*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, the goal of this Plan is to assist existing small water systems in achieving and maintaining sustainable compliance with environmental regulations. 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*

FY17:	No. of individual systems helped by the TA program:	19
	No. of systems meeting criteria above:	10 or 53%

- Report on progress to increase the number of small PWSs in compliance from 64.4%<sup>1</sup> to 95% by 2022

FY17:	% of small PWS in compliance	82.2%
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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>1</sup> Percent of Arizona small drinking water systems in compliance according to July 2016 ETT List

