



CAPACITY DEVELOPMENT PROGRAM

ANNUAL REPORT FY2018

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ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
CAPACITY DEVELOPMENT ANNUAL REPORT
JULY 1, 2017 – JUNE 30, 2018

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, 2017 through June 30, 2018. 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 1,517 regulated PWSs currently operating in Arizona: 748 are classified as community PWSs (49%), 197 are non-transient, non-community PWSs (13%) and 570 are transient PWSs (38%) Based on EPA’s classification of drinking water systems based on population served, over 95% of Arizona’s public water systems are classified as small

water systems serving less than 10,000 persons. 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 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.

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, 2015 through June 30, 2018. 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, 2015 through June 30, 2018

PWS NAME	PWS NUMBER	CLASSIFICATION	COUNTY	DATE
Desert Springs DWID	Not assigned	CWS – proposed	Pinal	10/26/15
Crisantes Greenhouse	AZ0412045	NTNC – active	Santa Cruz	02/03/16
Monsanto Greenhouse – Marana	AZ0410200	NTNC – proposed	Pima	02/06/17
The Hub	AZ0413298	NTNC – active	Yavapai	01/02/18
Settlin Inn RV Park	AZ0408189	CWS - active	Mohave	03/02/18
Retreat at Oak Creek DWID	AZ0413298	CWS – proposed	Yavapai	03/12/18

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, 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 most in need of assistance, which tend to be small rural community and rural school public 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, 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 remain 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, a total of sixteen task assignments were completed for fourteen PWSs in FY18. The assignments included: two system evaluations with asset management plans; treatment evaluations for lead/copper (1), uranium + system evaluation (1), nitrates + system evaluation, (1) turbidity (1) including investigating the possibility of relocating the surface water intake; and an engineering evaluation of options and opinion of probable costs (2). FY18 was the first year that ADEQ's technical assistance program ventured into the design arena – the third party contractors worked with vendors to design treatment systems for arsenic (2), radionuclides (2), liquid

chlorination system (1) and a chloramine disinfection system to address TTHMs (1). The PWSs and type of assistance provided are listed 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 evaluation 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 option. Contractors doing treatment system designs also prepared the necessary documentation and drawings for the water system to apply for an Approval to Construct from ADEQ.

FY18 was also the first year that ADEQ was able to recommend water systems to the Water Infrastructure Finance Authority of Arizona (WIFA) for a grant award from the Small Drinking Water Systems Fund. Two systems were awarded grants to install treatment: Jones Coop and Sun Leisure Estates. Two systems were awarded an emergency grant to rehabilitate and retrofit an existing well to augment their supply and install equipment to be able to “pump to waste” to address nitrates in groundwater: Villa Grande DWID & Sun Valley Farms Unit VI.

Table 2: PWSs Receiving Technical Assistance in FY18

	PWS Name	PWS #	Technical Assistance Provided	Comments²
1	Alma Ranchettes	07-286	System evaluation & nitrate compliance options report	ETT =20
2	Antelope Union High School #1	14-044	Optimal corrosion control treatment plan for copper	ETT = 17; MPL = 45
3	Antelope Union High School #2	14-044	Compliance options report for disinfection by-product exceedances	ETT = 17; MPL = 45
4	Bouse Domestic Water Improvement District	15-038	Design arsenic treatment system	Consent order
5	Cameron Trading Post Phase 2	03-006	Design chloramine system to address TTHM issues + ATC/AOC	ETT = 20; MPL = 45; consent order
6	Eden Water Company	05-003	Develop plan to address significant water loss	PWS requested assistance
7	Jones Coop – awarded grant from SDWSF	14-070	System evaluation & arsenic compliance options report; ATC for installation of POU	ETT = 40; MPL = 62
8	Kelvin Simmons Coop	11-035	System evaluation & uranium compliance options report	ETT = 28; MPL = 67
9	Michael’s Ranch Water Users Association	13-109	System evaluation & asset management plan	PWS requested assistance

	PWS Name	PWS #	Technical Assistance Provided	Comments²
10	Orange Grove Elementary School	14-105	Design liquid chlorination system to replace tablet system + ATC/AOC	Follow on to FY17 OCCT study
11	Ranch Water	08-082	Blending plan for combined radium, uranium & arsenic + ATC/AOC	Consent order
12	Rim Trail DWID #1	04-035	Compliance options to address iron & turbidity issues with CC Cragin water source	PWS requested assistance
13	Rim Trail DWID #2	04-035	Engineering assessment & opinion of probable costs to move intake upstream before CC Cragin input	PWS requested assistance
14	Roosevelt Resorts LLC	04-200	System evaluation & asset management plan	PWS requested assistance
15	Sun Leisure Estates (Yuma County Imp District #2017-01) awarded grant from SDWSF	14-075	Design uranium treatment system + ATC/AOC	ETT = 23; consent order
16	Sun Valley Farms Unit VI awarded grant from SDWSF	11-111	Engineering evaluation of options & probable costs for WIFA/ACC	ETT = 60; consent order

² ETT = Enforcement Targeting Tool score from January, 2018 (one of MPL ranking criteria)
MPL = FY18 Master Priority List ranking from June, 2017

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 17 outreach events statewide during FY18. Eleven of those events were monthly trainings at ADEQ's Main Office.

Six of the 17 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. FY18 was the third year for the management track which included modules on budgeting and finance, rate setting, and asset management; water audits/water loss, leak detection, energy management, emerging treatment techniques; emergency preparedness and emergency response planning.

ADEQ also partnered with the Environmental Finance Center Network (EFCN) to bring a "Water Auditing and Controlling Non-Revenue Water Workshop for Small Drinking Water Systems" to Phoenix on June 19, 2018. This training included an introduction to conducting a water balance

using the American Water Works Association (AWWA) M36 Water Audit software, validating the data and then examining the potential sources and solutions for addressing non-revenue water in the water system.

ADEQ assigned one of the third party contractors to provide two different board trainings for the Bouse DWID. The water system just became a domestic water improvement district in November, 2017 and the board of directors seeking information and training on how to work together better as a board and improve their water system. Several of the directors have also been attending some of the management classes around the state.

FY18 attendance at management track events was 157 persons, down from a high of 320 in FY17. With the focus of the program on technical assistance involving design and securing construction funding, ADEQ wasn't able to offer as many courses nor hold them in outlying rural areas as in FY17. ADEQ continues to refine the management track program to address the needs of small systems and finds 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 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, loan forgiveness). Once the list 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 affect several to many water systems, ADEQ would offer support and assistance either through training or the technical assistance program. The focus in FY18 was on those small water systems still facing MCL issues (technical capacity) with identifying the most cost effective and manageable compliance options (managerial), assist them in finding funding (financial capacity) and helping to prepare the necessary drawings and documentation to get the approval to construct for construction.

An example in FY18 were the engineering evaluations done for both Sun Valley Farms Unit VI and Rim Trails DWID. Sun Valley Farms was preparing to go to the Arizona Corporation Commission for authorization to incur debt to address the nitrate issues. The engineering evaluation report provides estimated costs on four different proposals to address the issue so the shareholders could make an educated decision. For Rim Trails, ADEQ had a contractor prepare engineering options to address the ongoing turbidity issues when the East Verde River was receiving CC Cragin water. When the DWID board reviewed the options, the discussion turned to whether moving the intake to a place upstream from where CC Cragin water mixes with the East Verde might be a simpler and a cheaper solution. The second task assignment showed that moving the intake wasn't cheaper initially, but it would be long-term avoiding additional O&M and chemical costs.

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%

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

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

FY17:	% of small PWS in compliance	82.2%
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FY18:	% of small PWS in compliance	80.1%
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¹ Percent of Arizona small drinking water systems in compliance according to July 2016 ETT List

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

No formal changes to the strategy.