

CAPACITY DEVELOPMENT PROGRAM ANNUAL REPORT FY2020

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ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

CAPACITY DEVELOPMENT ANNUAL REPORT

JULY 1, 2019 – JUNE 30, 2020

1. INTRODUCTION

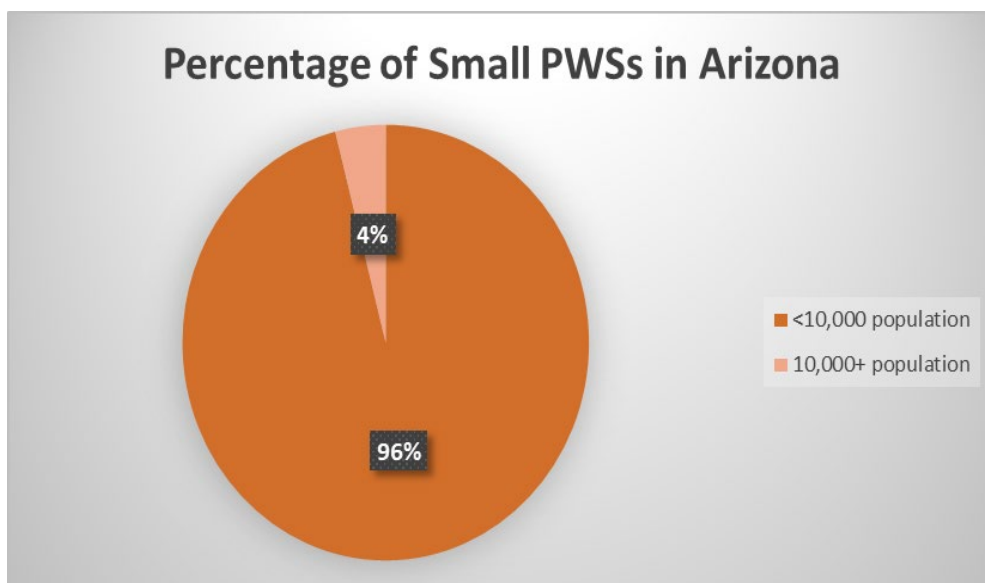
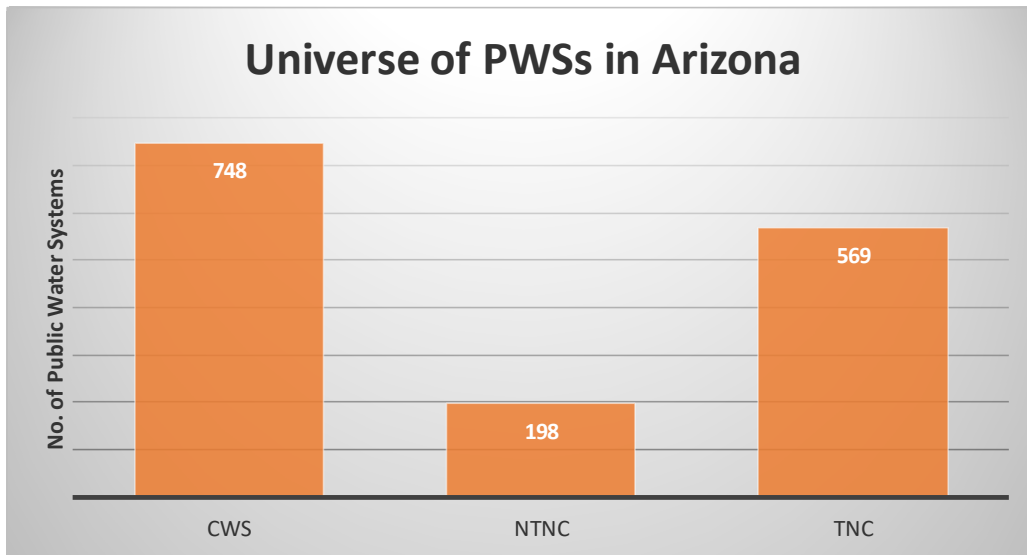
The objective of the 1996 amendments to the Safe Drinking Water Act (SDWA) was to ensure that public water systems (PWSs) provide safe drinking water to the public. Water system capacity is the ability to plan for, achieve, and maintain compliance with all applicable state and federal drinking water 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 Capacity Development 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 U.S. Environmental Protection Agency (USEPA) 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, 2019 through June 30, 2020. 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 operating in Arizona: 748 are classified as community water systems (CWS) (49%), 198 are non-transient, non-community water systems (NTNC) (13%) and 569 are transient non-community water systems (TNC) (38%). Over 96% of Arizona's public water systems are classified as small water systems serving less than 10,000 persons, based on USEPA'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 the 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 USEPA’s Enforcement Targeting Tool (ETT) list.*

Table 1 lists the PWSs that were activated as a new public water system between July 1, 2017 and June 30, 2020. None of the PWSs approved during this period have been on USEPA’s Enforcement Targeting Tool (ETT) list with a score of 11 points or higher.

Table 1. List of PWSs Activated from July 1, 2017 through June 30, 2020

PWS NAME	PWS No.	PWS TYPE	COUNTY	PWS ACTIVATED
HICKMAN'S EGG RANCH - TONOPAH	AZ0407547	NTNC	Maricopa	7/1/2017
DANNY B'S FISH AND CHIPS REST	AZ0413379	NC	Yavapai	7/26/2017
SCENIC VALLEY HOLDING COMPANY	AZ0408188	NTNC	Mohave	9/7/2017
SETTLIN INN RV PARK	AZ0408189	NC [1]	Mohave	10/12/2017
NEW RIVER SHELL STATION	AZ0407548	NC	Maricopa	1/16/2018
THE HUB WATER SYSTEM	AZ0413342	NTNC	Yavapai	2/2/2018
DESERT GARDENS SHOWGROUNDS	AZ0415129	NC	La Paz	4/1/2018
MARANA TANGERINE BUSINESS PARK	AZ0410010	NTNC	Pima	5/5/2018
BEAVER CREEK GAS MART	AZ0413482	NC	Yavapai	6/10/2018
SEDONA VIEW RV RESORT	AZ0413471	NC	Yavapai	6/21/2018
KAIBAB WATER LLC	AZ0413481	NC	Yavapai	10/1/2018
3C GUEST RANCH WATER SYSTEM	AZ0411411	NC	Pinal	12/17/2018
WEST RIM GAS & MINI MART	AZ0408190	NC	Mohave	12/28/2018
CASTLE HOT SPRINGS RESORT	AZ0413325	NC	Yavapai	2/5/2019
MONSANTO GREENHOUSE - MARANA	AZ0410200	NTNC	Pima	2/7/2019
AMADO MANAGEMENT LLC	AZ0412101	NTNC	Santa Cruz	2/15/2019
JACKSON ENERGY STORE #6791	AZ0413484	NC	Yavapai	3/8/2019
UNDER CANVAS GRAND CANYON	AZ0403107	NC	Coconino	4/25/2019
CREEKSIDE RESTAURANT	AZ0404113	NC	Gila	5/1/2019

LAZY J.R. RANCH TOO	AZ0404114	NC	Gila	5/8/2019
WHITE HILLS TRAVEL CENTER	AZ0408192	NC	Mohave	6/4/2019
TACNA TRAVEL CENTER	AZ0414108	NC	Yuma	7/23/2019
SHOW LOW PINES WELL #3	AZ0401076	C	Apache	8/1/2019
SANDERS DOLLAR GENERAL	AZ0401801	NC	Apache [2]	9/13/2019
RIO VIEJO WATER CO	AZ0410011	C	Pima	12/9/2019
RIVERBOUND CUSTOM STORAGE & RVP	AZ0408191	NTNC	Mohave	2/27/2020

[1] PWS was originally approved as a CWS but was re-classified to TNC in 2019

[2] PWS was erroneously activated as AZ0409098 in Navajo County; the PWS is in Apache County

4. EXISTING SYSTEM STRATEGY

4.1 *In referencing the state’s approved existing systems strategy, which programs, 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 small 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 federal 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 public water systems. Primary tools used to help them acquire and maintain capacity include the Monitoring Assistance Program, the Technical Assistance Program, training workshops for water system representatives such as owners, managers, or operators and coordinating with other technical & financial assistance partners.

New tools and activities for FY20 included leveraging construction dollars for small PWSs under the Water Infrastructure Improvements Act (WIIN), assisting PWSs in complying with the new requirements of the America’s Water Infrastructure Act (AWIA) of 2018, and development of a predictive analytics tool to help identify water systems likely to exceed the arsenic MCL.

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. These 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 which increases their technical and managerial capacity. The program currently assists over 830 small drinking water systems.

4.1.2 Technical Assistance Program

Funded by set-asides from the DWSRF Capitalization Grant, the technical assistance (TA) program was able to complete fifty-five task assignments for forty-five PWSs in FY20, nearly doubling the amount of assistance provide in FY19.

	FY18	FY19	FY20
# of projects completed	17	30	55
# of individual PWSs assisted	14	23	45

In FY20 the TA program continued assisting PWSs with design and preparation of permitting applications in order to make necessary system improvements or to install treatment. Staff continues to do both wellhead and zonal sampling early to help determine whether non-treatment options may be successful or, if treatment is required, what other analytes might need to be addressed. In FY20, engineering review staff ran a pilot study for a small water system to address arsenic which helped them determine that retaining their current treatment system was the best, low-cost, and effective option for them. The TA program also provided the water system with an operations and maintenance manual and detailed instructions for using the new system, something they did not have before which was why the original system was not working properly. This helped with all three (TMF) capacities.

In support of American’s Water Infrastructure Act (AWIA) of 2018, an ADEQ contractor conducted two training sessions and assisted ten water systems, with populations between 3,300 and 10,000 persons, complete a risk and resilience assessment of their operations and update or prepare an emergency response plan. The water system then provided a certification to USEPA. ADEQ plans to assist another 29 water systems in FY21. AWIA also requires states to update their capacity development strategy to include how they will encourage and promote asset management in small water systems. Over the last three years, ADEQ has assisted ten small systems in developing asset management plans. In support of this, there have been six workshops that included the basic steps to creating an asset management plan. In FY21, ADEQ will hold additional trainings on asset management and offer contractor assistance in setting up a plan.

These AWIA requirements are important in helping small water systems improve their technical, managerial and financial capacity. The Emergency Response Plan helps them identified risks to their system and establish procedures to respond to such threats. With an asset management plan, the water system can improve service and reliability, and reduce risk and unexpected costs.

Table 2: PWSs Receiving Technical Assistance in FY20

PWS Name	PWS #	Technical Assistance Provided
1 Alma Ranchettes	07-286	Design 2000' 8-in waterline to connect community to City of Chandler potable system; current well high in nitrate
2 Appaloosa Water Co.	13-208	Update system evaluation & prepare asset

			management plan
3	Cibola Mutual Water	15-123	Prepare ATC/AOC for installation of chloramine treatment system
4	Citrus Park Water Co Phase 1	14-107	Preliminary design considerations and EEOPC for new well, arsenic treatment, storage tank & disposal options
5	Desert Gardens RVP	11-129	Video well, perform pump test, take zonal samples for arsenic, recommend new pump size
6	Mayer DWID	13-039	Prepare AOC/ECC for arsenic blending plan
7	Morristown Water Co	07-111	Conduct electrical evaluation
8	Morristown Water Co	07-111	Prepare a system evaluation & asset management plan
9	Morristown Water Co	07-111	Video well, perform pump test & recommend new pump size
10	Oak Creek Water Co.	13-041	Prepare DWID boundary map
11	Old Concho	01-011	Prepare addendum to update 2014 PER
12	Papago Butte DWID	11-097	Update compliance options report for nitrate
13	Pinedale Estates DWID	09-040	Recommend best location for a new well & approximate alignment to bring water back to the community
14	Ponderosa Water LLC	04-020	Prepare options report - treatment, new source, or connect to adjacent DWID
15	Q Mountain Water Co.	15-096	Prepare engineer's opinion of probable cost for system improvements
16	Q Mountain Vista	15-509	Update engineering report for phase 2 distribution system replacement
17	Sanders School District	01-022	Prepare an O&M manual & disposal protocols for uranium treatment system
18	Sequoia Village School	09-088	Prepare compliance options report for selenium
19	Sequoia Village School	09-088	Design 2-in service line to connect school to White Mountain Water Co. ~ 1000 ft of poly pipe and master meter
20	Shepard Water Co	14-014	Prepare ATC/AOC for arsenic treatment system
21	Sun Valley Farms Unit 6	11-111	Provide assistance with WIFA loan application
22	Tierra Mesa Estates Phase 1	14-080	Preliminary design considerations and EEOPC for an AdEdge uranium treatment system, treatment building, backwash tank
23	Town of Springerville	01-013	Construction management & prepare AOC for installation of a blending vault for combined radium
24	Valley Vista Water Co.	14-009	Design 1.25 mi 12-in water line to connect housing complex to City of Somerton potable system to resolve lead & copper issues
25	White Hills Unit 1	08-149	Conduct tank inspection
26	White Hills Unit 1 - Phase 2	08-149	Prepare blending plan & ATC for installation of Isolux adsorption system for arsenic
27	White Hills Unit 1 - Phase 3	08-149	Conduct startup monitoring for treatment & blending plan
28	Yuma County ID # 2017-01 (fka Sun Leisure Estates)	14-075	Prepare blending plan & ATC to permit a second backup well to be treated for uranium

Provided Training in Preparing Consumer Confidence Reports for 17 PWSs		
29	Alpine DWID	01-001
30	American Indian Christian Mission	09-074
31	Citrus Park Water Co	14-107
32	Green Acres Water Co	14-065
33	Jones Coop	14-070
34	Laguna Mobile Home & RV Park	14-322
35	Mountain View Mobile Village	14-432
36	Rancheros Bonitos Water Co	14-073
37	River RV Ranch	14-086
38	Sanders School District	01-022
39	Shepard Water Co	14-014
40	Sierra Pacific Mobile Manor	14-098
41	Tacna Water Management Co	14-018
42	Tierra Mesa Estates Ph1	14-080
43	Timber Knoll DWID	01-015
44	Yuma Lakes Resort	14-314
45	Yuma West MHP	14-391
Conducted Risk & Resilience Assessment & Prepared Emergency Response Plans for 10 PWSs		
46	City of Benson	02-005
47	City of Cottonwood VV2	13-104
48	City of Cottonwood VV6	13-106
49	City of Page	03-017
50	City of Willcox	02-035
51	Doney Park Water	03-005
52	Kachina Village DWID	03-013
53	Town of Eagar	01-004
54	Town of Wickenburg	07-045
55	Valley Pioneer Water	08-038
Conducted Training on AWIA Requirements for RRA and ERPs		
-	AWIA training curriculum	January 22, 2020 in Pinetop, AZ & June 24, 2020 by webinar

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. In FY20, the Drinking Water Program conducted a total of eleven outreach events.

Three of these events were contaminant specific workshops: arsenic in Prescott, nitrates in Florence and trihalomethanes (done via webinar due to the COVID-19 pandemic). These workshops enable discussion between owners, operators, and managers with ADEQ staff and technical experts in the areas of rule compliance, non-treatment vs. treatment options, how to optimize a current treatment plant, and

the financial impacts of these contaminants. The audience also heard from vendors and manufacturers of treatment systems and media. Depending on the topic, these trainings help improve all three (TMF) capacities.

4.1.4: Leveraging Construction Funds

In FY20, the Water Infrastructure Improvements for the Nation (WIIN) Act allocated Arizona \$763,000, in federal grant dollars, to assist in building capacity for small and disadvantaged public water systems. The WIIN grant provides up to 55% of the total project cost and requires a 45% non-federal match. ADEQ’s Drinking Water Value Stream was awarded the full allocation in April 2020 and used the Small Drinking Water Systems Fund (SDWSF) as the 45% match where the small water system could not provide funding or in-kind match. The Technical Assistance team has identified 8 small public water system construction projects to utilize the WIIN funding. Four projects were completed in FY20. The remaining four should be completed in FY21. The construction costs for all 8 projects, both WIIN grant and match, is estimated at \$1.3 million. Approximately \$332,000 in technical assistance funds were spent on design and construction management for these 8 projects bringing total project costs to over \$1,632,000. Unfortunately, in FY21, no additional funding was appropriated for the SDWSF which will delay other small water systems from resolving their issues quickly. Using WIIN funds to help small systems with construction costs can improve all three (TMF) capacities. ADEQ wants to ensure those systems have adequate skills in all three areas to maintain the improvements over time.

4.1.5: Analytics Program for Systems Predicted to Exceed the Arsenic MCL

Small water systems often lack the technical, managerial, and financial resources to unexpectedly address a Maximum Contaminant Limit (MCL) exceedance. To assist PWSs with filling this gap, ADEQ is piloting a predictive modeling tool that can identify when a PWS may exceed the arsenic MCL. Using this information, ADEQ is conducting a compliance consultation with identified systems statewide, visiting systems forecasted to have arsenic exceedances, and identifying conditions causing changes to water quality at the impacted sites. This voluntary consultation program is at no cost to water systems and may provide insight into how water systems can avoid a future arsenic MCL violation.

To better leverage staff knowledge and experience, this program includes staff from all the units in the Drinking Water Value Stream - Technical Assistance, Source Water Protection, Engineering Review, Monitoring and Protection, and Inspections and Enforcement. In the future, ADEQ plans to expand predictive modeling to other prevalent contaminants in Arizona such as nitrate.

Calendar Year	2019	2020
# of water systems contacted	7	51
# of site visits completed	1	9
# of water systems referred to the Technical Assistance Program	N/A	4
Outreach Hours	21	153
Site Visit Hours	12	108

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

In rule, public water systems are initially identified for capacity development 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 USEPA’s Enforcement Tracking Tool (ETT) score, system classification type, population served, and violation history. The FY21 MPL was updated in the spring and published on April 3, 2020 for a 30-day comment period. As required by rule, an oral proceeding was held on May 4, 2020 to accept comments from the public. There were no comments made on the record so the FY21 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. ADEQ finds the MPL to be of limited value as it provides a snapshot in time. If it could be made a live query, it might be more useful. This is one of several topics to discuss with stakeholders during the strategy review in FY21.

In addition to the MPL, ADEQ has created a unique process for targeting water systems in need: KOUI (pronounced COO-EE). KOUI is an acronym that stands for “Known, On-going, Unauthorized Impacts” to public health and/or the environment. In the Drinking Water Value Stream, KOUI sites are those water systems serving water above a federal national drinking water standard, including sites that exceed the lead and/or copper action level. These KOUIs are a high priority for problem solving to determine the root cause of the impact so that a remedy can be determined and implemented.

KOUI sites have created visibility, transparency, and accountability throughout the agency. From staff to the director, all known environmental or public health problems are captured into one metric or one universe and are worked on daily. Other units in the Drinking Water Value Stream can refer current KOUIs to the technical assistance program to determine the need for contractor support in evaluation, design, system optimization and/or funding.

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 or statewide, ADEQ offers support and assistance primarily through training and the technical assistance program. Examples for FY20 include the contaminant targeted trainings on arsenic, nitrates and trihalomethanes; training and providing assistance to small systems addressing the requirements of AWIA, and providing assistance to 17 small water systems in completing and submitting their Consumer Confidence Reports (CCR) on time. These 17 water systems were some of the nearly 70 PWSs in the six counties with the highest rate of failure to submit in FY19.

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.

No review was conducted in FY20.

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

No modifications were made to the existing system strategy in FY20. However, Arizona's Capacity Development Strategy has been in place for nearly two decades. While many of the issues facing small water systems have not changed dramatically, the regulatory environment certainly has with many new rules and regulations. Over the next year, Arizona will convene a stakeholder group to revisit the strategy and incorporate revisions as needed. Among topics to discuss:

- The ability to do TMF review of existing or recently discovered water systems
- Incorporating asset management into the strategy and the program
- Brainstorm ways to get dedicated funding sources for SDWSF
- Expanding allowable SDWSF sources to other than Legislative appropriations
- Developing a self-assessment tool for ADEQ and/or the PWS to determine TMF capacity
- Improve elementary business plan document and process