



CALIFORNIA CAPACITY DEVELOPMENT PROGRAM FOR PUBLIC WATER SYSTEMS

2019 – 2022 Report to the Governor



DECEMBER 2023

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

CONTENTS

Executive Summary	2
Introduction & Background.....	2
Definitions	2
Federal Safe Drinking Water Act.....	3
2022 Revised Capacity Development Strategy.....	4
Strategy Goals	4
TMF Capacity Development Strategic Elements.....	4
Capacity Development Strategy Revisions.....	5
Program Accomplishments & Improvements.....	6
SAFER Program.....	6
Drinking Water Needs Assessment.....	7
Expansion of Technical Assistance.....	24
Planning and Construction Funding	26
Capacity Development Successes	27
Water System Compliance	27
Consolidations	37
Administrators.....	41
Barriers.....	43
Limited Regulatory Requirements	43
Insufficient Data & Limited Data Systems	45
Coordination Amongst State and Federal Agencies	46
Local Barriers	46

EXECUTIVE SUMMARY

This is the triennial Report to the Governor prepared by the California Water Resources Control Board (State Water Board) drinking water capacity development program as required by the provisions of the federal Safe Drinking Water Act (SDWA). The U.S. Environmental Protection Agency (EPA) has delegated primacy to the State Water Board for enforcement of the provisions of the federal SDWA. Within the State Water Board, the Division of Drinking Water (DDW) oversees enforcement of drinking water standards and requirements of public water systems in California under the SDWA.

To assist public water systems in meeting the standards of the SDWA, EPA provides funds to the State Water Board through the Safe Drinking Water State Revolving Fund (SRF) program, which enables the State Water Board to administer low-interest loans and grants to public water systems for infrastructure improvement projects.

Within the SRF program, EPA provides set-aside funds for the capacity development program which seeks to improve the viability of public water systems by improving their technical, managerial, and financial (TMF) capacity. Capacity can be defined as those TMF elements that affect the ability of public water systems to operate in compliance with the federal SDWA on a sustained basis.

This report is intended to document the efficacy of California's capacity development strategy and the progress made toward improving the TMF capacity of public water systems. In 2022, EPA approved California's revised Capacity Development Strategy. The overall goal of the Strategy is to increase the ability of public water system operators, managers, and decision-makers to consistently operate, maintain, and manage their public water systems in a manner that protects public health.

The capacity development program's accomplishments and improvements are detailed in this report as well as the successes and challenges the program has experienced in the past three years. With the establishment of the Safe and Affordable Drinking Water Fund under SB 200 in 2019, the California legislature enhanced the State Water Board's toolkit to proactively assist with increasing water system capacity. As the State Water Board looks to the next three years, challenges remain, but the components of the capacity development program are in place to provide assistance to public water systems where needed.

INTRODUCTION & BACKGROUND

DEFINITIONS

All public water systems should have the technical, managerial, and financial (TMF) capacity to plan for, achieve, and maintain long term compliance with drinking water

standards, thereby ensuring the quality and adequacy of the water supply. These three areas of capacity are interrelated:

Technical Capacity: The ability of a public water system to effectively treat and deliver safe drinking water with appropriately certified operators that meets state and federal water quality standards.

Managerial Capacity: A public water system's ability to conduct its affairs in a manner enabling it to achieve and maintain compliance with the California SDWA requirements while maintaining best practices in accountability and interactions with customers and regulatory agencies.

Financial Capacity: A public water system's ability to generate sufficient revenue for current and future budget needs, maintain creditworthiness, and manage funds through budgeting, accounting, and other methods of fiscal control.

FEDERAL SAFE DRINKING WATER ACT

Under the provisions of United States Codes, Section 1420(c)(3) of the federal Safe Drinking Water Act (SDWA), the California Water Resources Control Board (State Water Board) Division of Drinking Water (DDW) is required to prepare a report to the Governor every three years on its capacity development program. These reports are to be made available to the public and are intended to document the efficacy of California's capacity development strategy and the progress made toward improving the technical, managerial, and financial (TMF) capacity of public water systems.

This report spans the calendar years 2019 through 2022.

The U.S. Environmental Protection Agency (EPA) has delegated primacy to the State Water Board for enforcement of the provisions of the federal SDWA. The State Water Board has subdelegated primacy for the oversight of small water systems to 27 counties¹. These Local Primacy Agencies (LPAs) are local environmental health agencies that regulate small community public water systems with less than 200 service connections, or any transient noncommunity or nontransient noncommunity water systems within their county. However, the State Water Board retains regulatory oversight of the 27 counties that chose to have an LPA drinking water program under a Local Primacy Delegation Agreement.

To assist public water systems in meeting the standards of the federal SDWA, EPA provides funds from the Safe Drinking Water State Revolving Fund (SRF) to the State

¹ [State of California Drinking Water Program Annual Compliance Report, Calendar Year 2022](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/2022/acr-2022-final.pdf)
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/2022/acr-2022-final.pdf

Water Board to administer low-interest loans and grants to public water systems for infrastructure improvement projects. In addition, EPA allows states to set-aside a portion of those funds for capacity development and technical assistance. These two set-aside funding sources are combined in this report as the capacity development program.

California's initial Capacity Development Strategy was adopted in 2000.² The Capacity Development Strategy has developed and evolved over time since then. In 2022, EPA approved the State Water Board's revised Capacity Development Strategy. This approval was required by the federal SDWA to enable California to access the federal matching funds available through the SRF.

2022 REVISED CAPACITY DEVELOPMENT STRATEGY

STRATEGY GOALS

Achieving the Human Right to Water: All water systems can provide consistently safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes to their customers.

- To protect public health by ensuring consistent compliance with drinking water standards.
- To enhance performance beyond compliance through measures that encourage efficiency, effectiveness, and high level of service.
- To promote continuous improvement through monitoring, assessment, and strategic planning.

TMF CAPACITY DEVELOPMENT STRATEGIC ELEMENTS

The revised Capacity Development Strategy's core elements:

1. Ensuring new public water systems have TMF capacity.
2. Identification and prioritization of existing systems in need of improved TMF capacity.
3. Supporting direct capacity building.
4. Supporting capacity building work of third-party organizations.
5. Ensuring TMF capacity of State funding and financing recipients.
6. Promoting asset management.
7. Building capacity through complete and accurate data gathering and reporting.

² 2000 Capacity Development Strategy:
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/cd_strategy.pdf

8. Measuring TMF capacity building success.

CAPACITY DEVELOPMENT STRATEGY REVISIONS

Two key drivers that led to the revised Capacity Development Strategy:

1. After California adopted its Capacity Development Strategy in 2000, the State legislature established the Human Right to Water (HR2W) in statute (2012). This is now established in California Water Code Section 106.3, which recognizes that “every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.” To advance the goals of the HR2W, California passed Senate Bill 200 (SB 200) in 2019, which enabled the State Water Board to establish the Safe and Affordable Funding for Equity and Resilience (SAFER) Program. SB 200 established a set of tools, funding sources, and regulatory authorities that the State Water Board harnesses through the SAFER Program to help struggling public water systems build capacity to sustainably and affordably provide safe drinking water.
2. In 2018, America’s Water infrastructure Act amended the SDWA to require state Capacity Development Strategies to include:

A description of how the state will, as appropriate—(i) encourage development by public water systems of asset management plans that include best practices for asset management; and (ii) assist, including through the provision of technical assistance, public water systems in training operators or other relevant and appropriate persons in implementing such asset management plans.

In 2022, the State Water Board hosted two public workshops to seek feedback and recommendations on the revised Capacity Development Strategy. Stakeholders helped identify barriers to capacity development and shaped the Strategy’s core Elements. Many existing Elements have been revised to incorporate the activities implemented through the SAFER Program³ (see Element 2, “Identification & Prioritization of Existing Systems in Need of Improved TMF Capacity” and Element 3, “Supporting Direct Capacity Building”).

The State Water Board solicited public feedback on how best to incorporate asset management into the revised Strategy through the development of Element 6. Stakeholders were given the opportunity to suggest data and metrics that could be collected in the future to better help the State identify asset management resource

³ SAFER Program:
<https://www.waterboards.ca.gov/safer/>

needs and better track the successful implementation of asset management strategies by public water systems over time.

The final updated Capacity Development Strategies and accompanying workshop materials are available on the State Water Board's Capacity Development webpage.⁴

PROGRAM ACCOMPLISHMENTS & IMPROVEMENTS

SAFER PROGRAM

In 2019, to advance the goals of the HR2W, California passed Senate Bill 200 (SB 200), which enabled the State Water Board to establish the Safe and Affordable Funding for Equity and Resilience (SAFER) Program. SB 200 established a set of tools, funding sources, and regulatory authorities that the State Water Board harnesses through the SAFER Program to help struggling water systems sustainably and affordably provide safe drinking water.

The annual Drinking Water Needs Assessment (Needs Assessment) required to be carried out by the SAFER Program provides foundational information and recommendations to guide this work.⁵ The Needs Assessment is comprised of Risk, Affordability, and Cost Assessment components. Enhancement of the 2022 Needs Assessment consisted of internal workgroup recommendations and a public workshop in February 2022, all of which were detailed in a publicly available white paper.⁶ The public feedback was incorporated into the final methodology and results.

The results of the annual Needs Assessment are utilized by the State Water Board and the SAFER Advisory Group⁷ to inform the prioritization of available state funding and technical assistance within the Safe and Affordable Drinking Water Fund (SADWF) Fund Expenditure Plan (FEP).⁸ The State Water Board typically hosts a series of workshops throughout the year to inform the FEP.

⁴ California State Water Resources Control Board, Capacity Development Webpage: https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/TMF.html

⁵ California Health and Safety Code section 116769 (b) states "The fund expenditure plan shall be based on data and analysis drawn from the drinking water needs assessment..."

⁶ January 28, 2022 White Paper: [Proposed Changes for the 2022 Drinking Water Needs Assessment](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/needs-assessment-whitepaper-draft.pdf)
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/needs-assessment-whitepaper-draft.pdf

⁷ [SAFER Advisory Group | California State Water Resources Control Board](https://www.waterboards.ca.gov/safer/advisory_group.html)
https://www.waterboards.ca.gov/safer/advisory_group.html

⁸ [Safe and Affordable Funding for Equity and Resilience | California State Water Resources Control Board](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/sustainable_water_solutions/safer.html)

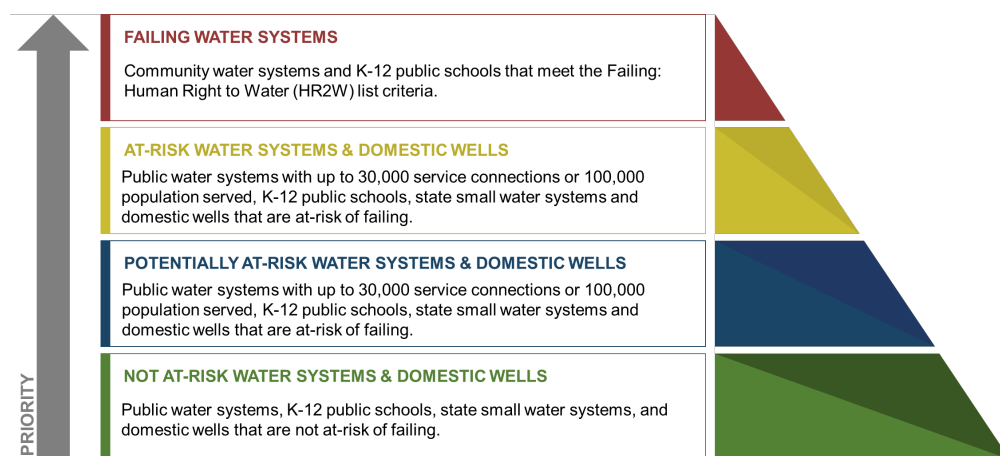
https://www.waterboards.ca.gov/water_issues/programs/grants_loans/sustainable_water_solutions/safer.html

The Needs Assessment is not a static analysis. The State Water Board annually updates the Needs Assessment, and it provides a valuable snapshot of the overall resources needed to bring failing systems into compliance with drinking water standards and prevent At-Risk water systems from failing. By incorporating this Needs Assessment into the SAFER Program and implementation of SADWF, the State Water Board will continue to lead on long-term drinking water solutions. At the same time, this Needs Assessment gives clarity to the work that must collectively be done by state, federal, local and stakeholder partners. Only together will we be successful in achieving the Human Right to Water goal for all Californians.

DRINKING WATER NEEDS ASSESSMENT

The annual Needs Assessment allows the State of California, through the Water Resources Control Board, to identify public water systems, with a focus on community water systems and K-12 schools, that may be at risk of failing to provide an adequate supply of safe drinking water. This assessment is required to be carried out by the SAFER program and provides foundational information and as well as recommendations to guide this work.⁹ The Needs Assessment goes beyond the federal requirements of identifying systems in need of improved TMF capacity, by identifying and prioritizing public water systems, state small water systems, and domestic wells for the SAFER program.

Figure 1: SAFER Program Priority Systems



In addition, the Needs Assessment also sets up a guideline of clear and cohesive criteria for identifying Failing and At-Risk water systems. These criteria help to (1)

⁹ Drinking Water Needs Assessment
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/needs

prioritize funding, technical assistance, and engagement and (2) provide a quantifiable method for tracking water system performance over time.

The methodologies utilized in the Needs Assessment to identify water systems and communities were developed, and continue to be enhanced, through a robust internal and external stakeholder engagement process. Since 2019, the State Water Board has hosted more than 20 workshops to solicit public feedback on the methodologies utilized in the Needs Assessment.

The State Water Board fully documents the development and implementation of the Needs Assessment, all of which are detailed in a publicly available white papers, reports, webinar recording, etc. on the State Water Board’s Needs Assessment website.¹⁰

- 2020-2021 Fund Expenditure Plan¹¹
- 2021 Drinking Water Needs Assessment¹²
- 2022 Drinking Water Needs Assessment¹³

Figure 2: Past Workshops on Needs Assessment Methodologies

NEEDS ASSESSMENT COMPONENTS	2019	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q3 2021	2022
Risk Assessment: Public Water Systems	■	■	■	■ ■	■		■
Risk Assessment: State Small Water Systems & Domestic Wells	■	■	■	■ ■	■		■
Cost Assessment	■	■	■	■	■ ■		■ ■
Affordability Assessment		■	■ ■	■	■	■	■ ■ ■

¹⁰ Drinking Water Needs Assessment
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/needs

¹¹ FY 2020-21 Fund Expenditure Plan (ca.gov)
https://www.waterboards.ca.gov/water_issues/programs/grants_loans/sustainable_water_solutions/docs/sadwfep_2020_07_07.pdf

¹² 2021 Drinking Water Needs Assessment (ca.gov)
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/2021_needs_assessment.pdf

¹³ 2022 Drinking Water Needs Assessment (ca.gov)
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/2022needsassessment.pdf

FAILING SYSTEMS

Approximately 850,000 Californians still do not have access to safe, affordable drinking water.¹⁴ California is the first state to do an in-depth study of this issue by adopting the first Human Right to Water (HR2W) policy in the nation. The HR2W as defined in Assembly Bill 685, recognizes that “every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking and sanitary purposes.” The State Water Board assesses water systems that fail to meet the goals of the HR2W and maintains a list and map of these systems on its website. Systems that are on the Failing list are those that are out of compliance or consistently out of compliance.

The specific Failing criteria were expanded in April 2021 to meet the statutory definition of what it means for a water system to “consistently fail” to meet drinking water standards.¹⁵ The original Failing criteria identified community water systems with primary or secondary MCL violations with open enforcement actions. The 2021 expanded Failing criteria include unresolved *E. coli* violations, treatment technique violations, and repeated unresolved monitoring and reporting violations.

Table 1: Expanded Criteria for Failing List Water Systems

Criteria	Before 3.2021	After 4. 2021
Primary MCL Violation with an open Enforcement Action	Yes	Yes
Secondary MCL Violation with an open Enforcement Action	Yes	Yes
<i>E. coli</i> Violation with an open Enforcement Action	No	Yes
Treatment Technique Violations (in lieu of an MCL):	Partially	Expanded
<ul style="list-style-type: none"> • One or more Treatment Technique violations (in lieu of an MCL), related to a primary contaminant, with an open enforcement action; and/or • Three or more Treatment Technique violations (in lieu of an MCL), related to a primary contaminant, within the last three years 		
Monitoring and Reporting Violations (related to an MCL or Treatment Technique):	No	Yes

¹⁴ [2022 Drinking Water Needs Assessment \(ca.gov\)](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/2022needsassessment.pdf#32)

https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/2022needsassessment.pdf#32

¹⁵ Primary drinking water standards are defined in CHSC Section 116275(c).

Criteria	Before 3.2021	After 4. 2021
----------	---------------	---------------

- Three Monitoring and Reporting violations (related to an MCL) within the last three years where at least one violation has been open for 15 months or greater.

Systems that are assessed for meeting the Failing criteria include Community Water Systems (CWSs) and Non-Community Water Systems (NCWSs) that serve schools and daycares. The Failing criteria are fully documented and updated when appropriate on the State Water Board’s HR2W list webpage.¹⁶ The State Water Board works with stakeholders to routinely review the Failing criteria and updates it when appropriate to fully capture systems failing to provide safe and accessible drinking water.

Figure 3: Quarterly changes to the failing list from 1.1.2017 through 1.1.2023

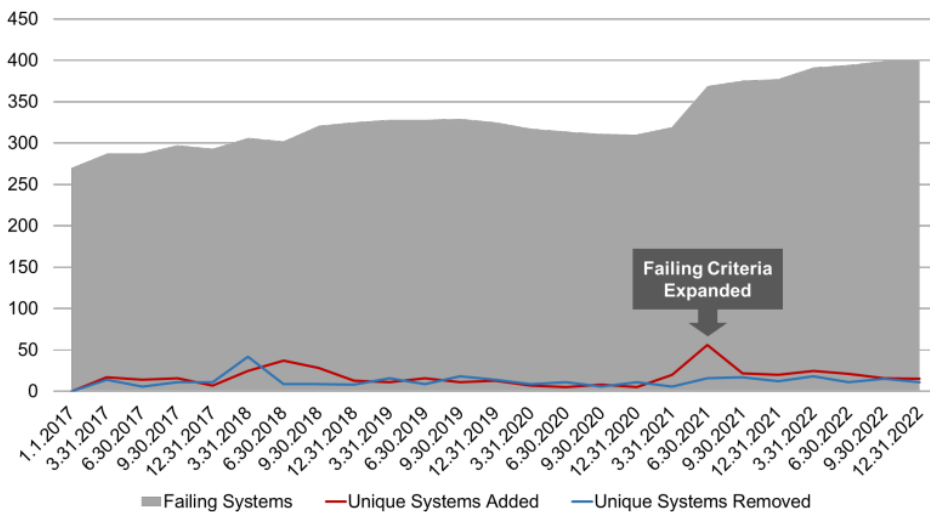


Table 2: Total Counts of Failing Systems from 2019-2022

	2019 ¹⁷	2020 ¹⁸	2021	2022
Failing	315	309	326	438

¹⁶ State Water Board Failing: Human Right to Water Webpage https://www.waterboards.ca.gov/water_issues/programs/hr2w/

¹⁷ Pulled from SAFER Clearinghouse Failing status start date 1/01/19.

¹⁸ Pulled from SAFER Clearinghouse Failing status start date 1/01/20.

AT-RISK SYSTEMS

SB 200 calls for the identification of “public water systems, community water systems, and state small water systems that may be at risk of failing to provide an adequate supply of safe drinking water.” As well as “an estimate of the number of households that are served by domestic wells or state small water systems in high-risk areas.” Therefore, different Risk Assessment methodologies have been developed for different system types: public water systems, state small water systems, and domestic wells.

- **2019** State Water Board did not conduct a Risk Assessment. The Risk Assessment methodology was under development. Water systems in need of capacity development were identified through sanitary surveys and violations data.
- **2020** State Water Board did not conduct a Risk Assessment, the methodology was still under development. However, the State Water Board did develop a list of At-Risk water systems through consultations with District Engineers. This list was published with the 2020-2021 Fund Expenditure Plan.¹⁹
- The **2021 Inaugural Risk Assessment**²⁰ for public water systems was conducted for community water systems with 3,300 service connections or less and all non-transient non-community water systems which serve K-12 schools.
- For the **2022 Risk Assessment**²¹ the inventory for public water systems was expanded to include medium-size community water systems with service connections between 3,300 and 30,000 or a population served up to 100,000. This inventory aligns with the expanded State Water Board funding eligibilities for medium size systems. The inclusion of larger community water systems allows the State Water Board to track the performance and capacity of community water systems more thoroughly, especially the larger water systems that are or have been on the Failing list.

Large community water systems with greater than 30,000 service connections or more than 100,000 population served have been excluded from the Risk Assessment. Historically, large water systems are not often on the Failing list. Therefore, the Risk

¹⁹ [FY 2020-21 Fund Expenditure Plan \(ca.gov\)](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/sustainable_water_solutions/docs/sadwfep_2020_07_07.pdf)

https://www.waterboards.ca.gov/water_issues/programs/grants_loans/sustainable_water_solutions/docs/sadwfep_2020_07_07.pdf

²⁰ [2021 Drinking Water Needs Assessment \(ca.gov\)](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/2021_needs_assessment.pdf)

https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/2021_needs_assessment.pdf

²¹ [2022 Drinking Water Needs Assessment \(ca.gov\)](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/2022needsassessment.pdf)

https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/2022needsassessment.pdf

Assessment has focused on small and medium sized systems that are more likely to fail.

The State Water Board utilizes a set of risk indicators, developed through a stakeholder-driven process, to identify at-risk water systems. Risk indicators are organized into four different categories:

- Water Quality
- Accessibility
- Affordability
- TMF Capacity

Water system performance across all four risk categories within the Risk Assessment helps the State Water Board and communities identify current capacity and operational risks that need to be addressed. Water system performance in the Risk Assessment is publicly available in an interactive SAFER Dashboard.²²

The 2021 Risk Assessment utilized 19 risk indicators. These risk indicators were identified and developed from 2019-2021 in partnership between the State Water Board and UCLA. A concerted effort was made to select a range of risk indicators that measure water quality, accessibility, affordability, and TMF capacity based on their criticality as it relates to a water system’s ability to remain in compliance with safe drinking water standards. In response to public feedback after the 2021 release of the Risk Assessment results, the State Water Board has removed five of the original risk indicators and added eight new risk indicators in the 2022 analysis.

Table 3: List of 2022 Risk indicators compared to the 2021 Risk Indicators.

Category	2021 Risk Indicators	2022 Risk Indicators
Water Quality	History of <i>E. coli</i> Presence	History of <i>E. coli</i> Presence
	Increasing Presence of Water Quality Trends Toward MCL	Increasing Presence of Water Quality Trends Toward MCL
	Treatment Technique Violations	Treatment Technique Violations
	Past Presence on the HR2W List	Past Presence on the HR2W List
	Maximum Duration of High Potential Exposure (HPE) (Removed 2022)	Percentage of Sources Exceeding an MCL

²² SAFER Dashboard of Failing and At-Risk Public Water Systems
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/2022.html

Category	2021 Risk Indicators	2022 Risk Indicators
Accessibility	Percentage of Sources Exceeding an MCL	NEW: Constituents of Emerging Concern
	Number of Sources	Number of Sources
	Absence of Interties	Absence of Interties
	Water Source Types (Removed 2022)	DWR – Drought & Water Shortage Risk Assessment Results
	DWR – Drought & Water Shortage Risk Assessment Results	Critically Overdrafted Groundwater Basin
Affordability	Critically Overdrafted Groundwater Basin	NEW: Bottled or Hauled Water Reliance
		NEW: Source Capacity Violations
	Percent of Median Household Income (%MHI)	Percent of Median Household Income (%MHI)
	Extreme Water Bill	Extreme Water Bill
	% Shut -Offs (Removed 2022)	NEW: Residential Arrearage Burden
TMF Capacity		NEW: Percentage of Residential Arrearages
	Number of Service Connections (REMOVED 2022)	Operator Certification Violations
	Operator Certification Violations	Monitoring and Reporting Violations
	Monitoring and Reporting Violations	Significant Deficiencies
	Significant Deficiencies	NEW: Days Cash on Hand
	Extensive Treatment Installed (Removed 2022)	NEW: Operating Ratio
		NEW: Net Annual Income

In 2022, the State Water Board released the web-based SAFER Dashboard.²³ The SAFER Dashboard displays the current list of Failing water systems and the results of the Risk Assessment for public water systems. This is a core component of the State Water Board’s annual Drinking Water Needs Assessment. To learn more about the Risk

²³ [SAFER Dashboard | California State Water Resources Control Board](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/saferdashboard.html)
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/saferdashboard.html

Assessment for public water systems please see the 2022 Needs Assessment Appendix A²⁴. The Dashboard displays risk drivers for public water systems. The Dashboard includes source data from the State Water Board, the Department of Water Resources, and the Office of Environmental Health Hazard Assessment. The Dashboard is used by internal staff and members of the public to identify and explore Failing and At-Risk public water systems and how they perform in the following risk categories: water quality, accessibility, affordability, and TMF (technical, managerial, and financial) capacity. The Dashboard displays summary statistics of the number of Failing and At-risk public water systems in different risk categories and shows users the locations of these systems. Users can apply filters to view regional or system-level statistics.

Figure 4: SAFER Dashboard

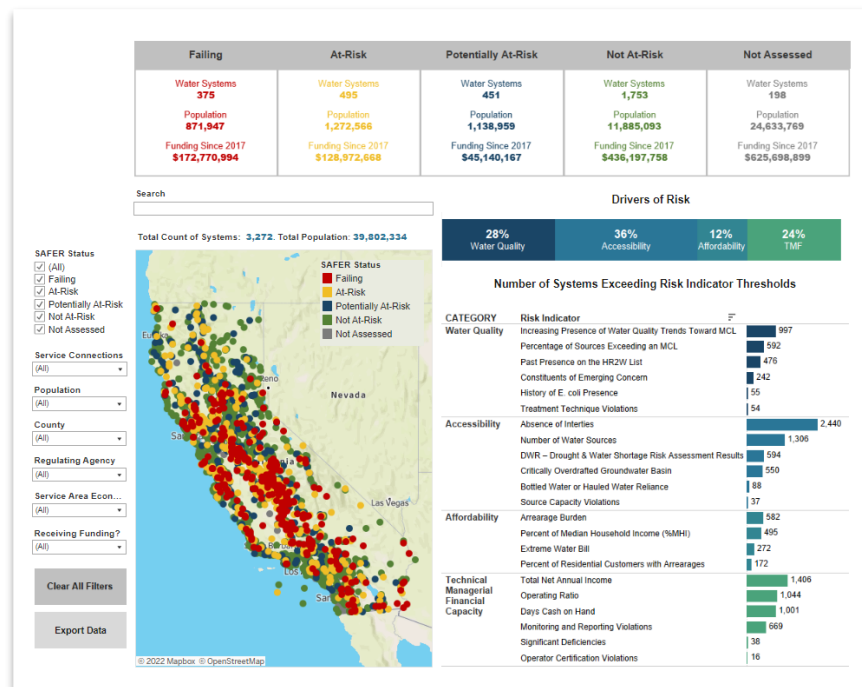


Table 4: 4-year Comparison of the Total Count of At-Risk Systems From 2019 to 2022.

	2019	2020	2021	2022
At Risk	n/a	339 ²⁵	617	508

²⁴ [2022 Drinking Water Needs Assessment \(ca.gov\)](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/2022needsassessment.pdf#118)

https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/2022needsassessment.pdf#118

²⁵ [DRAFT FY 2020-21 Fund Expenditure Plan XIV. Appendices \(ca.gov\)](https://www.waterboards.ca.gov/board_info/agendas/2020/jul/070720_6_draftfinal_sadwfep_appendices_clean.pdf)

https://www.waterboards.ca.gov/board_info/agendas/2020/jul/070720_6_draftfinal_sadwfep_appendices_clean.pdf

The total number of public water systems assessed for the 2022 Risk Assessment increased compared to 2021 due to expanding the inventory to include larger systems.

COST ASSESSMENT

SB 200 directs the State Water Board to prepare an “estimate of the funding needed for the next fiscal year based on the amount available in the fund, anticipated funding needs, other existing funding sources, and other relevant data and information.” (Health & Saf. Code, § 116769, subd. (a)(5).) Thus, the Cost Assessment estimates the costs related to the implementation of interim and/or emergency measures and longer-term solutions for Failing and At-Risk systems. The Cost Assessment Model includes costs for not only the technical needs of implementing these solutions, but also costs associated with the long-term operations of these solutions as well.

The Cost Assessment results are utilized by the State Water Board to inform the broader demands of the SAFER program as well as the annual funding needs. The embedded assumptions and cost estimates detailed in the Needs Assessment are not intended to be used to inform site-specific decisions but rather give an informative analysis on a statewide basis. Local solutions and actual costs will vary from system to system and will depend on site-specific details.

No Cost Assessment was conducted from 2019-2020, the first was in 2021, and is reported annually alongside the Risk Assessment. Both will continue to incorporate new data as it becomes available.

Table 5 summarizes the important differences between the 2021 Cost Assessment and the 2022 Drought Infrastructure Cost Assessment. There are some overlapping cost estimates that span the two Cost Assessments; therefore, it is not advised for the 2022 Drought Cost Assessment results to be added to the 2021 Cost Assessment results. The 2022 Drought Infrastructure Cost Assessment results should be considered separately as a targeted cost estimate for SB 552 requirements. The 2022 Drought Infrastructure Cost Assessment estimates also do not include costs related to other non-infrastructure portions of SB 552, such as planning and technical assistance.

Table 5: Key 2021 and 2022 Cost Assessment Differences

	2021 Cost Assessment	2022 Drought Cost Assessment
Systems Included	<ul style="list-style-type: none"> • Failing systems • At-Risk public water systems 	<ul style="list-style-type: none"> • Small community water systems (15 to 2,999 connections)

	2021 Cost Assessment	2022 Drought Cost Assessment
	<ul style="list-style-type: none"> • At-Risk state small water systems & domestic wells 	<ul style="list-style-type: none"> • K-12 schools
Long-Term Cost Estimate Infrastructure/Activity	<ul style="list-style-type: none"> • Treatment • Physical consolidation • Point of use/Point of entry (POE/POU)²⁶ • Other Essential Infrastructure (OEI): storage tanks, new wells, well replacement, upgraded electrical, backup power, distribution replacement, additional meters, etc. • Technical assistance 	<ul style="list-style-type: none"> • Monitor static well levels • Mutual aid participation • Backup electrical supply • Back-up source: new well or intertie • Meter all service connections • Excluded: Fire flow requirements
Interim Cost Estimate	<ul style="list-style-type: none"> • POU • POE • Bottled Water 	<ul style="list-style-type: none"> • Excluded
20-Year Operation & Maintenance Costs	<ul style="list-style-type: none"> • Included 	<ul style="list-style-type: none"> • Excluded

2021 COST ASSESSMENT

For Failing systems, the 2021 Cost Assessment Model identified multiple potential solutions based on the system’s identified challenges and additional site-specific information. These long-term solutions included: treatment, physical consolidation, Point of Use (POU) or Point of Entry (POE) treatment technologies, other essential infrastructure (OEI), and technical assistance (TA). A sustainability and resiliency assessment was conducted for each system’s set of identified potential solutions to identify the top two most sustainable model solutions. The 2021 Cost Assessment Model then compared the long-term costs of these potential model solutions to select the best model solution for the system. The selected solution counts are summarized in Table 6.

²⁶ Point-of-use (POU) is a water treatment device that treats water at the location of the customer. Point-of-entry (POE) application is a water treatment device that is located at the inlet to an entire building or facility.

Table 6: 2021 Count of Selected Modeled Long-Term Solutions

System Type	# of Systems	Treatment	Physical Consol.	POU/POE	OEI & TA	No Solution
Failing	305	138 (45%)	61 (20%)	106 (35%)	305 (100%)	0
At-Risk PWS ²⁷	630	N/A	N/A	145 (23%)	630 (100%)	0
At-Risk SSWS ²⁸	455	N/A	N/A	142 (31%)	N/A	10 (2%)
At-Risk Domestic Wells	62,607	N/A	25,696 (41%)	36,911 (59%)	N/A	0

The total estimated capital cost range of long-term solutions for all Failing and At-Risk Public Water Systems, State Small Water Systems and domestic wells is estimated between \$2.3 and \$9.1 billion (See Table: 7 below)

Table 7: 2021 Selected Modeled Solution Capital Cost, by System Type

System Type	# of Systems	Total Cost Range Total:
Failing	305	\$887 M - \$3,550 M
At-Risk PWS	630	\$819 M - \$3,280 M
At-Risk SSWS	445	\$27 M - \$106 M
At-Risk Domestic Wells	62,607	\$548 M - \$2,190 M
Total:		\$2,280 M - \$9,120 M

2022 DROUGHT INFRASTRUCTURE PLAN

Table 8 and Figure 5 summarizes the 2022 Drought Infrastructure Cost Assessment results. Local solutions and actual costs will vary from system to system and will depend

²⁷ “Public water system” or “PWS” means a system for the provision to the public of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year. A PWS includes any collection, pre-treatment, treatment, storage, and distribution facilities under control of the operator of the system that are used primarily in connection with the system, any collection or pretreatment storage facilities not under the control of the operator that are used primarily in connection with the system; and any water system that treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption. (Health & Saf. Code, § 116275, subd. (h).))

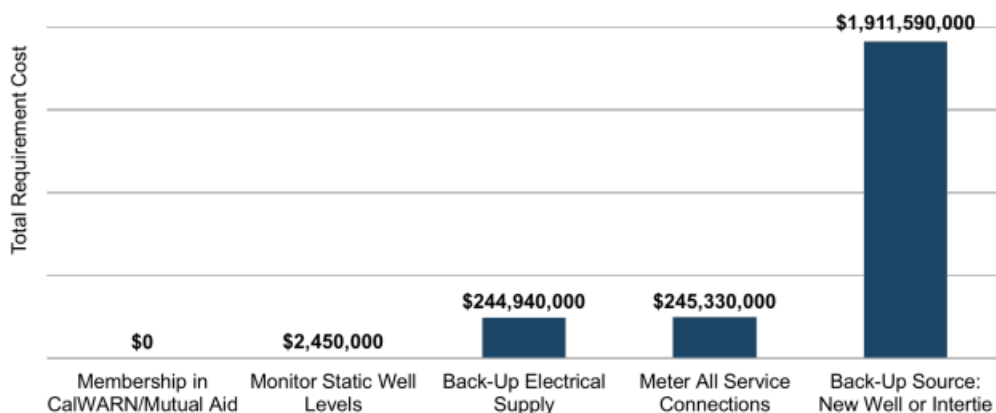
²⁸ “State small water system” or “SSWS” means a system for the provision of piped water to the public for human consumption that serves at least five, but not more than 14, service connections and does not regularly serve drinking water to more than an average of 25 individuals daily for more than 60 days out of the year. (Health & Saf. Code, § 116275, subd. (n).)

on site-specific details. Therefore, the Cost Assessment should not be used to inform site-specific decisions but rather should be viewed as an informative statewide estimate of need.

Table 8: Drought Cost Assessment Results for Small Water Systems

Drought Requirement	# Small CWS	Point Est. Total	Range Total in \$ Millions
Monitor Static Well Levels	1,213 (46%)	\$2,450,000	\$1 M - \$5 M
Membership CalWARN/ Mutual Aid	2,634 (100%)	\$0	\$0
Back-up electrical supply	1,872 (71%)	\$244,940,000	\$122 M - \$490 M
Back-up source: New Well	753 (29%)	\$1,651,620,000	\$826 M - \$3,303 M
Back-up source: Intertie	142 (5%)	\$259,970,000	\$130 M - \$520 M
Meter all Service Connections	1,275 (48%)	\$245,330,000	\$123 M - \$491 M
Total	2,634	\$2,404,320,000	\$1,202 M - \$4,809 M

Figure 5: Cost Assessment Results for K-12 Schools & Small Water Systems



AFFORDABILITY ASSESSMENT

SB 200 calls for the identification of “any community water system that serves a disadvantaged community that must charge fees that exceed the affordability threshold established by the board in order to supply, treat, and distribute potable water that

complies with federal and state drinking water standards.” (Health & Saf. Code, § 116769, subd. (a)(2)(B).) The Affordability Assessment evaluates several different stakeholder-developed affordability indicators to identify communities that may be experiencing affordability challenges. Legislation does not define what the Affordability Threshold should be. Nor is there specific guidance on the perspective in which the State Water Board should be assessing the Affordability Threshold. The figure below illustrates the nexus of affordability definitions that exist and why household and community affordability are important to understand when assessing a water system’s financial capacity.

Figure 6: Nexus of Affordability Definitions



- (1) **Household Affordability:** The ability of individual households to pay for an adequate supply of water.
- (2) **Community Affordability:** The ability of households within a community to pay for water services to financially support a resilient water system.
- (3) & (4) **Water System Financial Capacity:** The ability of the water system to financially meet current and future operations and infrastructure needs to deliver safe drinking water. The financial capacity of water systems affects future rate impacts on households.

The Affordability Assessment was under development in 2019 and therefore not conducted that year.

2020 was the first iteration of the Affordability Assessment for community water systems. The 2020 Affordability Assessment utilized one affordability indicator, water charges as a percent of median household income (%MHI), for the fiscal year (FY) 2020-21 Safe and Affordable Drinking Water Fund Expenditure Plan. The FY 2020-21 Fund Expenditure Plan uses 1.5 percent of the annual median household income (MHI) of the community served by the water system as the Affordability Threshold. Any community water systems with an annual water rate, based on water usage of 6 hundred cubic feet (CCF) of water per month, that exceeds 1.5 percent of the MHI is identified on the list.

- **% Median Household Income:** This indicator measures annual system-wide average residential customer charges for six Hundred Cubic Feet (HCF) per

month relative to the annual Median Household Income (MHI) within a water system's service area. Percent median household income (%MHI) is commonly used by state and federal regulatory agencies and by water industry stakeholders for assessing community-wide water charges affordability for decades. The State Water Board uses MHI to determine DAC status and has for some time used the 1.5% MHI.

State Water Board staff analyzed 2,780 community water systems, of which approximately 1,140 community water systems lacked the data necessary to estimate water rates. Of the 1,640 with sufficient data, staff identified 190 systems that exceeded the 1.5 percent MHI affordability threshold. Of those, 92 systems were identified that serve DACs.

In the 2021 Needs Assessment, the State Water Board incorporated two new affordability indicators, 'Extreme Water Bill' and '% Shut-offs,' to identify disadvantaged communities (DAC) and Severely Disadvantaged Communities (SDAC) that may be experiencing affordability challenges.

- **Extreme Water Bill:** This indicator measures drinking water customer charges that meet or exceed 150% and 200% of statewide average drinking water customer charges at the six HCF level of consumption. The State Water Board's AB 401 report²⁹ recommended statewide low-income rate assistance program elements which utilize the two recommended tiered indicator thresholds of 150% and 200% of the state average drinking water bill for six HCF.
- **% Shut Offs:** This affordability indicator measures the percentage of a water system's residential customer base which experienced service shut-offs due to non-payment in a given year. For the purposes of the State Water Board's Needs Assessment a threshold of 10% or greater customer shut-offs over the last calendar year for non-payment was utilized.

The 2021 Affordability Assessment was conducted for 2,877 community water systems. The Affordability Assessment included large and small community water systems but excluded non-transient, non-community water systems, like schools. It also excluded tribal water systems, SSWs, and households supplied by domestic wells. For the Affordability Assessment, the State Water Board analyzed three affordability indicators that were also utilized in the Risk Assessment.

²⁹ AB 401 Final Report: [Recommendations for Implementation of a Recommendations for Implementation of a Statewide Low-Income Water Rate Assistance Program Report \(ca.gov\)](https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/assistance/docs/ab401_report.pdf)
https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/assistance/docs/ab401_report.pdf

Table 9: 2021 Assessment Results by Community Economic Status

Community Status	Total Systems	% MHI Min Threshold Met	Extreme Water Bill Min Threshold Met	% Shut-Offs Threshold Met
DAC	578	121 (21%)	113 (20%)	35 (6%)
SDAC	993	313 (32%)	122 (12%)	62 (6%)
Non-DAC	1,210	158 (13%)	393 (32%)	40 (3%)
Missing DAC	96	0 (0%)	0 (0%)	2 (2%)
Total	2,877	592 (21%)	628 (22%)	139 (5%)
Missing Data		201 (7%)	118 (4%)	49 (2%)

Table 10: 2021 Affordability Assessment Results by Water System SAFER Status

SAFER Program Status	Total Systems Assessed	None	Low Affordability Burden	Medium Affordability Burden	High Affordability Burden
Failing	276	168 (61%)	58 (21%)	28 (10%)	18 (7%)
DAC/SDAC	187	107 (57%)	41 (23%)	21 (11%)	14 (7%)
At-Risk	467	311 (67%)	63 (13%)	54 (12%)	34 (7%)
DAC/SDAC	292	194 (66%)	44 (15%)	17 (6%)	21 (7%)
Not At-Risk	2,134	1,432 (67%)	407 (19%)	185 (7%)	87 (4%)
DAC/SDAC	1,092	742 (68%)	185 (17%)	96 (9%)	57 (5%)
TOTAL	2,877	1,911 (66%)	528 (18%)	267 (9%)	139 (5%)
Missing Data		32 (1%)			

- For the 2022 Needs Assessment, the State Water Board had to remove ‘% Shut-offs’ affordability indicator from the Affordability Assessment. In 2020 Governor Newsom issued an Executive Order that prohibited water shut-offs beginning March 4, 2020 through December 31, 2021. This information was therefore unavailable for the majority of 2020 and was not collected from water systems in

the 2020 Electronic Annual Report (eAR). The State Water Board replaced ‘% Shut-offs’ with two new affordability indicators: ‘Percentage of Residential Arrearages’ and ‘Residential Arrearage Burden.’ These new affordability indicators were meant to identify water systems that have a community that is experiencing household affordability challenges and are a direct measure of household drinking water affordability. These changes are reflected below in Table 11. **Percent of Residential Arrearages:** This risk indicator identifies water systems that have a high percentage of their residential customers that have not paid their water bill and are at least 60 days or more past due.

- **Residential Arrearage Burden:** This risk indicator identifies water systems that would have a high residential arrearage burden if they were to distribute their residential arrearages accrued during the COVID-19 pandemic period (March 4, 2020, through June 15, 2021) across their total residential rate base. This indicator measures how large of a burden non-payment is across the water system’s full residential customer base.

The data used for the two new arrearage affordability indicators came from the State Water Board’s 2021 Drinking Water Arrearage Payment Program. The State Water Board received \$985 million to address community water system residential and commercial customer water debt that accrued during the COVID-19 pandemic (March 4, 2020, through June 15, 2021). The State Water Board collected residential arrearage information from an initial survey on outstanding debt and during the Program’s application period. This data was utilized to calculate the new arrearage affordability indicators. It is important to note that some community water systems chose not to participate in the initial survey or Program. Therefore, this dataset may not represent the total amount of outstanding arrearages statewide. Moving forward, additional State assistance programs and datasets may be used to supplement this dataset as they become available.

Table 11: Affordability Indicators 2020 - 2022

2020	2021	2022
Percent of Median Household Income (%MHI)	Percent of Median Household Income (% MHI)	Percent of Median Household Income (% MHI)
	Extreme Water Bill % Shut off (Removed 2022)	Extreme Water Bill NEW: Percentage of Residential Arrearages
		NEW: Residential Arrearage Burden

For the 2022 Affordability Assessment, State Water Board staff analyzed 2,868 community water systems, of which, approximately 32 water systems lacked the data necessary to calculate any of the four affordability indicators. Water systems that had partial data for some, but not all, of the affordability indicators were included in the analysis and are summarized in Table 12. Overall, comparing the four indicators in cases where data was available, more community water systems exceeded the affordability threshold for ‘Residential Arrearage Burden’ (22%) than the affordability threshold for ‘%MHI’ (17%). However, more DAC and SDAC community water systems exceeded the ‘%MHI’ affordability threshold (27%) than ‘Residential Arrearage Burden’ affordability threshold (21%). Table 12 summarizes the number of water systems, by their community economic status, that exceeded the minimum affordability threshold for each indicator assessed.

Table 12: 2022 Total Number of Systems that Exceed a Minimum Risk Indicator Affordability Threshold

Community Status	Total Systems	% MHI	Extreme Water Bill	% Res. Arrearages	Res. Arrearage Burden
DAC/SDAC	1,408	377 (27%)	96 (7%)	111 (8%)	299 (21%)
Non-DAC	1,287	122 (9%)	178 (14%)	50 (4%)	314 (24%)
Missing DAC Status	173	0 (0%)	0 (0%)	6 (3%)	13 (8%)
Total	2,868	499 (17%)	274 (10%)	167 (6%)	626 (22%)
Missing Data ³⁰		263 (9%)	524 (18%)	442 (15%)	442 (15%)
Not applicable ³¹		869 (30%)	608 (21%)	879 (31%)	879 (31%)

To assess which systems may be facing the greatest affordability burden, the State Water Board further analyzed how water systems, by SAFER status, exceeded thresholds for multiple affordability indicators. Affordability burden is ranked from low

³⁰ Missing data: %MHI; lacked water rates data, lacked data to calculate MHI; Extreme Water Rates, lacked data on water rate charges, water rate was outside of \$5-\$500 range; Percent of Residential Arrearages/Residential Arrearage Burden, no arrearage survey data was submitted.

³¹ Not applicable refers to systems who did not qualify to meet an indicator threshold: % MHI, systems who did not charge for water; Extreme Water Bill, systems that did not charge for water; % Residential Arrearages/ Residential Arrearage Burden, systems that did not charge for water, claimed no arrearages, or did not have residential arrearages.

(only one affordability indicator threshold exceeded), medium, (two affordability indicator thresholds exceeded), or high (three or four affordability indicator thresholds exceeded). As summarized in Table 13, a relatively higher percentage of Failing list systems and At-Risk water systems had Higher Affordability Burden when compared to Potentially At-Risk and Not At-Risk water systems.

Table 13: 2022 Affordability Assessment Results by SAFER Program Status

SAFER Program Status	Total Systems Assessed	High Affordability Burden	Medium Affordability Burden	Low Affordability Burden
Failing	295	21 (7%)	52 (17%)	70 (24%)
DAC/SDAC	184	19 (10%)	34 (18%)	48 (26%)
At-Risk	459	40 (9%)	87 (19%)	74 (16%)
DAC/SDAC	276	32 (12%)	46 (17%)	55 (20%)
Potentially At-Risk	418	12 (3%)	67 (16%)	89 (21%)
DAC/SDAC	234	8 (3%)	36 (15%)	59 (25%)
Not At-Risk	1,696	16 (1%)	117 (7%)	400 (23%)
DAC/SDAC	714	10 (1%)	59 (8%)	149 (21%)
TOTAL	2,868	89 (3%)	323 (11%)	633 (22%)

EXPANSION OF TECHNICAL ASSISTANCE

Technical Assistance (TA) providers partner with small water systems and provide assistance through technical experts who assist by providing mutual aid and assistance, leveraging their expertise to assist in consolidation efforts with larger entities when feasible. These services are provided consistent with the scope of work that is developed for each program, and the capabilities of the current TA providers, and may not be available at the statewide level. The State Water Board’s Division of Financial Assistance (DFA) plans to expand access to these programs by continuing to work with and provide funding to new and existing TA providers.

The State Water Board continues to expand investments in the TA program, with a focus on small, disadvantaged communities and consolidations. Legislation enacted in Fall 2021 added qualified ‘Technical Assistance Providers’ as a new eligible funding recipient for monies from the Safe and Affordable Drinking Water Fund. The State Water Board developed a Request for Qualifications (RFQ) process to identify qualified

TA Providers,³² including for-profit entities. In 2022, DFA approved \$64 million to be awarded to 6 new TA providers. An expanded list of qualified TA Providers will potentially allow for new types of and a greater volume of services to be available to communities and public water systems as well as expansion of services to other areas of the state.

To accelerate the implementation of long-term solutions, the State Water Board will use TA providers to accelerate the planning efforts for small systems prioritizing those serving small DACs or low-income households by providing planning through TA to support the submittal of a complete application for construction funding. Consistent with the priorities established in the FEP, planning through TA may be provided for systems out of compliance and consolidation projects. Additionally, now equipped with the results of the annual Needs Assessment, TA will also be utilized to accelerate planning for At-Risk systems as program capacity permits. In general, planning tasks will include development of an engineering report, a cost estimate, plans and specifications, and necessary environmental documentation for the most feasible solution.

In addition, for greater efficiency under the SAFER Program, the State Water Board may use a regional approach where appropriate and provide pooled services to multiple systems within an area to reduce costs. In all cases, DFA staff will be assigned to oversee and manage the scope, cost, and progress of all TA work, with increased attention given to new types of services that have been approved under the SAFER Program.

Table 14: Number of SAFER Systems that Received Technical Assistance from 2019- 2022.

SAFER Status	2019	2020	2021	2022
Failing	46	38	164	111
At-Risk	n/a	n/a	94	58
Potentially At-Risk	n/a	n/a	65	39
Not At-Risk or Not Assessed	125	122	231	149
TOTAL:	171	160	554	357

³² [Drinking Water Technical Assistance Provider Request For Qualifications Guidelines](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/docs/2022/rfq-guidelines.pdf)
https://www.waterboards.ca.gov/water_issues/programs/grants_loans/docs/2022/rfq-guidelines.pdf

PLANNING AND CONSTRUCTION FUNDING

Under the SAFER Program new types of services and pilot programs are being provided and will continue to be developed. New services include providing 0% interest revolving bridge loans (via a third-party provider) for interim construction financing, and emergency fund grants.

In 2021, the SAFER Program provided short-term solutions, such as emergency well repairs, and bottled and hauled water provision to nearly 28,000 individuals. Long-term solutions, such as construction and consolidation, were completed for 81 communities, including nearly 200,000 individuals. Planning assistance (towards construction of long-term solutions) was provided to 171 communities, including over 135,000 individuals.

The Budget Act of 2021³³, added funds that can benefit drinking water projects in small, disadvantaged communities, including \$650 million for drinking water infrastructure projects, \$16 million for interim or immediate solutions to drinking water drought emergencies, and \$30 million for technical and financial assistance to drinking water systems to address Per- and Polyfluoroalkyl Substances (PFAS).³⁴ New federal infrastructure funds were also approved and will begin to be administered to projects in 2022. The State Water Board is implementing a County-wide and Regional Funding Program³⁵, intended to assist counties in developing programs for communities and households served by state small water systems and domestic wells to address both drought and water quality issues. The goal is to expand geographically on an already robust program being implemented in eight counties in the San Joaquin Valley.

The State Water Board worked on several funding process improvements that are currently being implemented. These are described further in the 2021/22 Safe and Affordable Drinking Water FEP,³⁶ which was adopted by the Board October 19, 2021. In 2021, the FEP for the first-time included data on racial and other demographics, and in future iterations staff will be further evaluating racial equity in the program.

In 2019 33 projects involving 37 systems received a total of \$194,991,817 in construction and planning funding. For 2020 there was an increase in the total number of projects (55) involved in construction and planning funding, The total amount of

³³ [Fact Sheet - Budget Act of 2021 - Drinking Water Infrastructure Appropriation \(ca.gov\)](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/docs/2021/dw-infrastructure-appropriation-fact-sheet.pdf)
https://www.waterboards.ca.gov/water_issues/programs/grants_loans/docs/2021/dw-infrastructure-appropriation-fact-sheet.pdf

³⁴ [Per- and Polyfluoroalkyl Substances \(PFAS\) Funding - Grants and Loans | California State Water Resources Control Board](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/pfas.html) https://www.waterboards.ca.gov/water_issues/programs/grants_loans/pfas.html

³⁵ [County-wide and Regional Funding Programs | California State Water Resources Control Board](https://www.waterboards.ca.gov/safer/funding_solicitation.html)
https://www.waterboards.ca.gov/safer/funding_solicitation.html

³⁶ [FY 2021-22 Fund Expenditure Plan \(ca.gov\)](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/sustainable_water_solutions/docs/2021/draft-final-2021-22-sadwfep-clean.pdf)
https://www.waterboards.ca.gov/water_issues/programs/grants_loans/sustainable_water_solutions/docs/2021/draft-final-2021-22-sadwfep-clean.pdf

funds, \$214,655,135, involved in 2020 increase by \$16,663,218 from 2019. This increase in the number of projects, systems involved, and the total amount of funding provided continued in 2021, with a difference of \$305,029,139 in total funding from 2020 to 2021. 2022 was the first year a decrease in the number of projects (48) and number of systems involved (55) from the previous year (73 and 60 respectively) was observed. However, the total amount of funding provided increased overall due to an increase in construction funding, with a difference in the total funding amount from 2021 to 2022 being \$235,516,014. The annual breakdown of construction and planning funding is provided in Table 15 below.

Table 15: Total Annual Counts and Breakdown of Construction and Funding between 2019-2020

	2019	2020	2021	2022
# of Systems	37	55	73	55
# of Projects	33	40	60	48
Construction Funding Amount (\$)	\$187,971,625	\$209,449,708	\$511,418,947	\$748,985,548
Planning Funding Amount (\$)	\$7,020,192	\$5,205,427	\$8,265,327	\$6,214,740
Total Amount (\$)	\$194,991,817	\$214,655,135	\$519,684,274	\$755,200,288

CAPACITY DEVELOPMENT SUCCESSES

WATER SYSTEM COMPLIANCE

When a public water system exceeds a drinking water standard, the Drinking Water Program issues enforcement actions that prescribe what must be done for the public water system to return to compliance (RTC). The criteria for when RTC is achieved may depend on the rule, type of violation, and contaminant.

As an example, for an MCL violation of a chemical with chronic health effects, RTC is achieved when the public water system stops providing water that exceeds the MCL, issues the public notification, and submits the information required in the enforcement action, such as a corrective action plan.

Public water systems may inactivate the source that exceeds the MCL, provide an alternate source of water that complies with drinking water standards, or provide reliable treatment such that the treated source of supply complies with the MCL.

Depending on factors such as TMF capacity and resiliency of the public water system, the MCL violation can be resolved in a manner of days, or it can take years.

Public water systems that remain out of compliance with a MCL are typically required to provide regular public notification and conduct increased monitoring until such time that the public water system returns to compliance with the MCL. Failures to conduct monitoring and public notification resulting from an MCL violation are also considered violations.

For monitoring and reporting violations, the criteria for when return to compliance is achieved is generally when the delinquent samples are collected, when the report is submitted, or when the results reported to the State Water Board and all actions required in the enforcement action have been completed. Depending on the rule, return to compliance can be achieved within a month; for rules such as the Lead Copper Rule, where sampling must occur in specific periods of the year, delinquent samples may not be collected for several months.

The rate of return to compliance is generally higher for monitoring and reporting violations than MCL/TT violations³⁷. There may be delays in updating records to accurately reflect when a public water system has returned to compliance for a monitoring and reporting violation due to reporting delays and staffing limitations. DDW implements a limited process to correct data validation errors and update inventory records to ensure that the recorded compliance status of public water systems is consistent with the compliance status determined by the local DDW and LPA staff. DDW continues to work to improve data procedures and data systems to ensure timely reporting of accurate compliance information for public water systems.

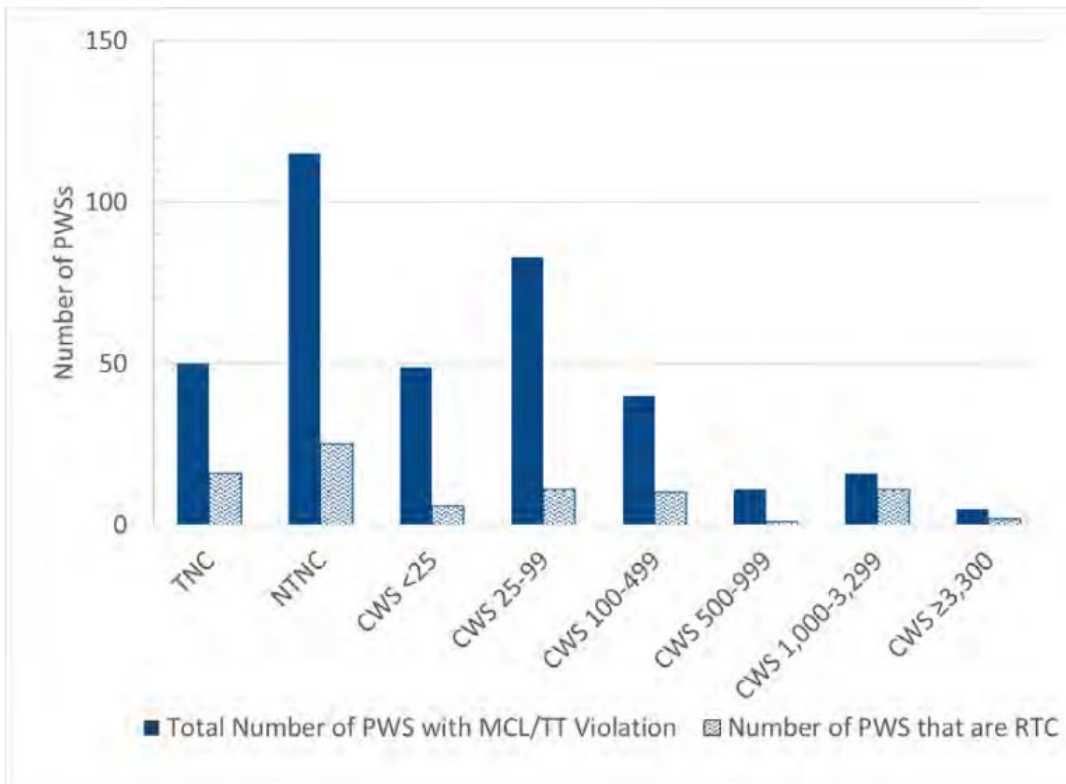
DDW split up systems into distinct categories for analyzing annual return to compliance data. These categories are: transient non-community (TNC), non-transient non-community (NTNC), community water systems under 25 service connections (CWS < 25), community water systems with 25 or more to 99 or less service connections (CWS 25 - 99), community water systems with 100 or more to 499 or less service connections (CWS 100 - 499), community water systems with 500 or more to 999 or less service connections (CWS 500 - 999), community water systems with 1,000 or more to 3,299 or less service connections (CWS 1,000 – 3,299), community water systems with 3,300 or more service connections (CWS ≥ 3,300).

³⁷ Maximum Contaminant Level (MCL): the highest permissible amount of a Contaminant statutorily allowed in water. (Health & Saf. Code, § 116275, subd. (f).)

A treatment technique (TT) is an enforceable procedure or level of technological performance, which public water systems must follow to ensure control of a contaminant.

2019 Return to Compliance

Figure 7: Number of public water systems of each classification and community water systems system size that have returned to compliance in 2019 following an MCL/TT violation that was incurred in 2019 or prior years.³⁸

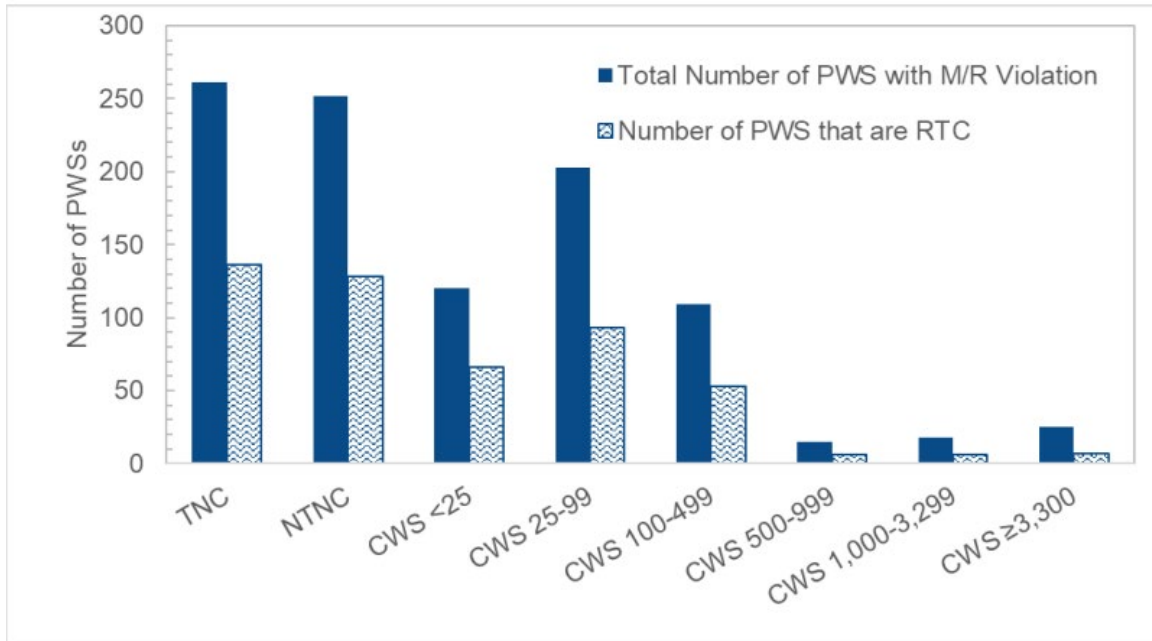


Overall, 20% of public water systems that incurred a MCL/TT violation returned to compliance in 2019.

³⁸ [2019 Annual Compliance Report \(ca.gov\)](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/acr_2019_final.pdf)

https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/acr_2019_final.pdf

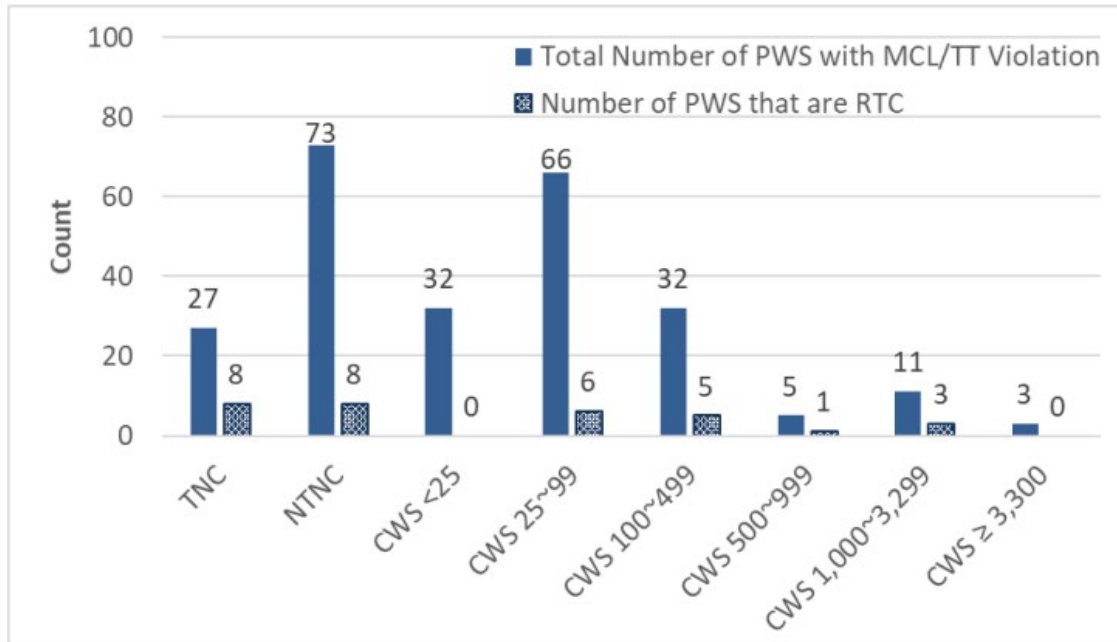
Figure 8: Number of public water systems of each classification and community water systems system size that have returned to compliance in 2019 following a monitoring or reporting violation that was incurred in 2019 or prior years.



Overall, 50% of public water systems that incurred a monitoring/reporting violation returned to compliance in 2019.

2020 Return to Compliance

Figure 9: Number of public water systems of each classification and community water system size that have returned to compliance in 2020 following an MCL/TT violation that was incurred in 2020 or prior years.³⁹

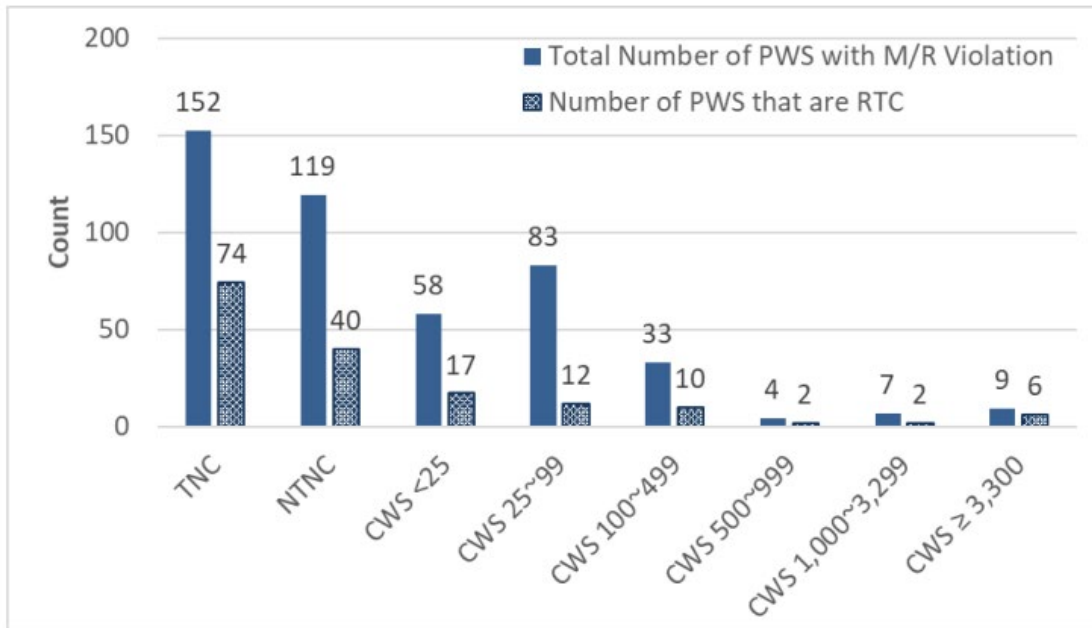


Overall, 12% of public water systems that incurred an MCL/TT violation returned to compliance in 2020.

³⁹ [2020 Annual Compliance Report \(ca.gov\)](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/acr_2020_final.pdf)

https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/acr_2020_final.pdf

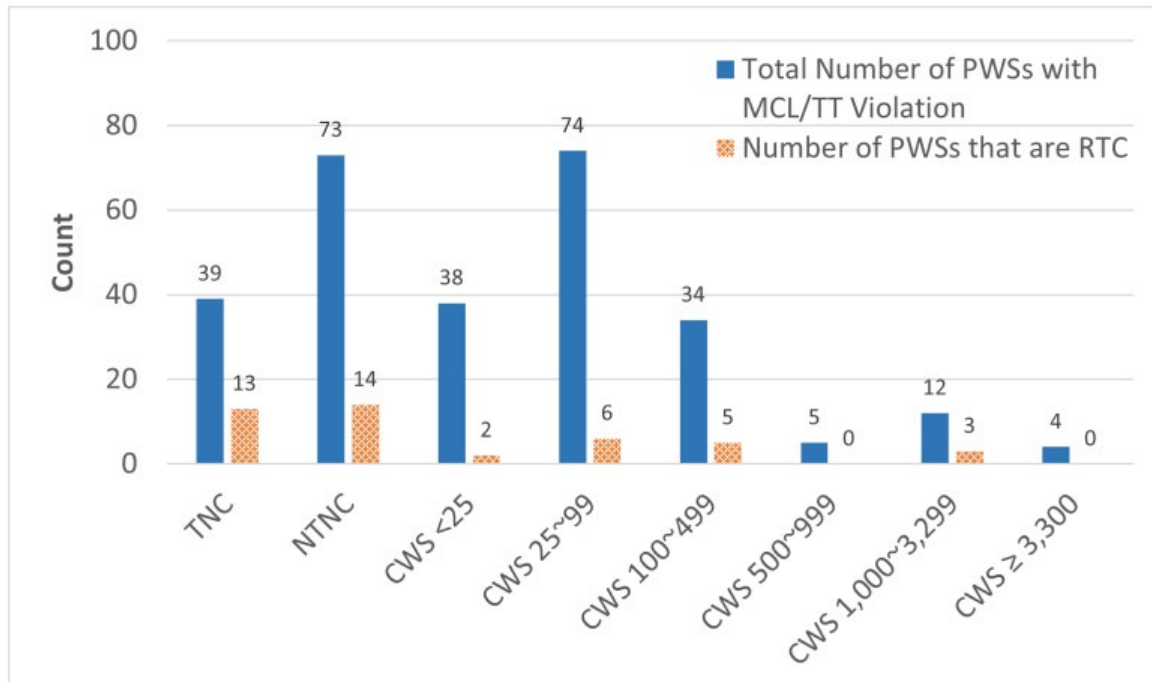
Figure 10: Number of public water systems of each classification and community water systems system size that have returned to compliance in 2020 following a monitoring or reporting violation that was incurred in 2020 or prior years.



Overall, 35% of public water systems that incurred a monitoring/reporting violation returned to compliance in 2020.

2021 Return to Compliance

Figure 11: number of PWSs of each classification and CWS size that have returned to compliance in 2021 following a federal MCL/TT violation that was incurred in 2021 or prior years.⁴⁰



The counts in figure 11 include public water systems that are newly out of compliance in 2021; and public water systems that have been and continue to be out of compliance from previous years. Additionally, Figure 11 shows the total number of public water systems that have returned to compliance in 2021 for federal MCL/TT violations. Overall, 15% of public water systems that incurred an MCL/TT violation returned to compliance in 2021.

⁴⁰ [State of California Drinking Water Program Annual Compliance Report, Calendar Year 2021](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/2022/acr-2021-final.pdf)
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/2022/acr-2021-final.pdf

Figure 12: Number of public water systems of each classification and community water system size that have returned to compliance in 2021 following a federal monitoring or reporting violation that was incurred in 2021 or prior years.

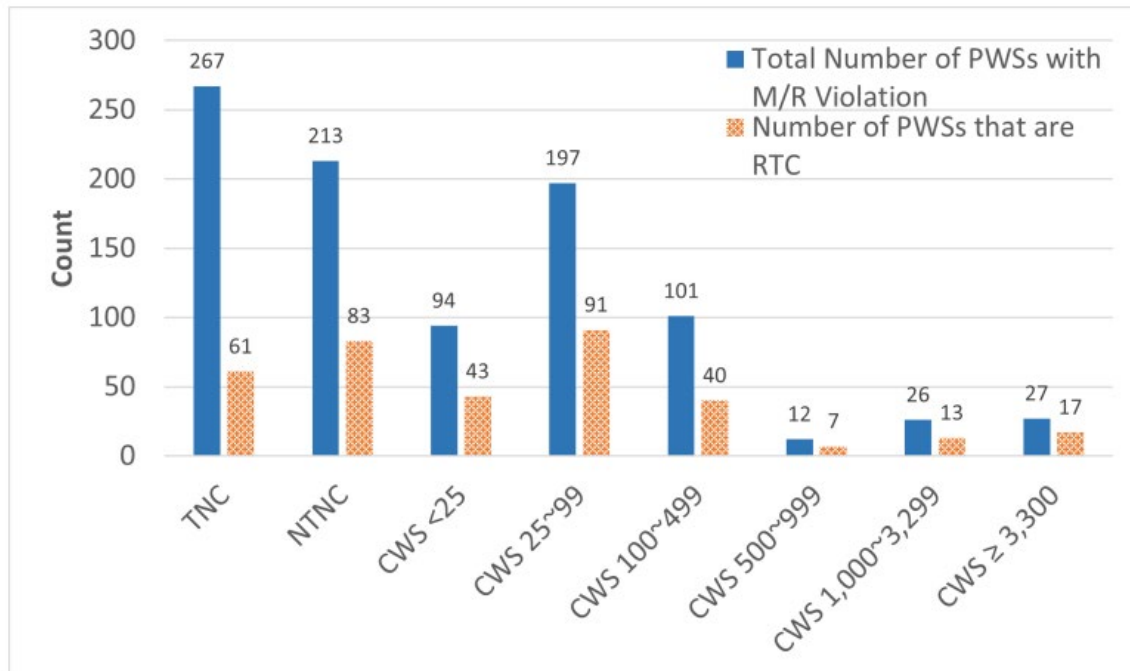
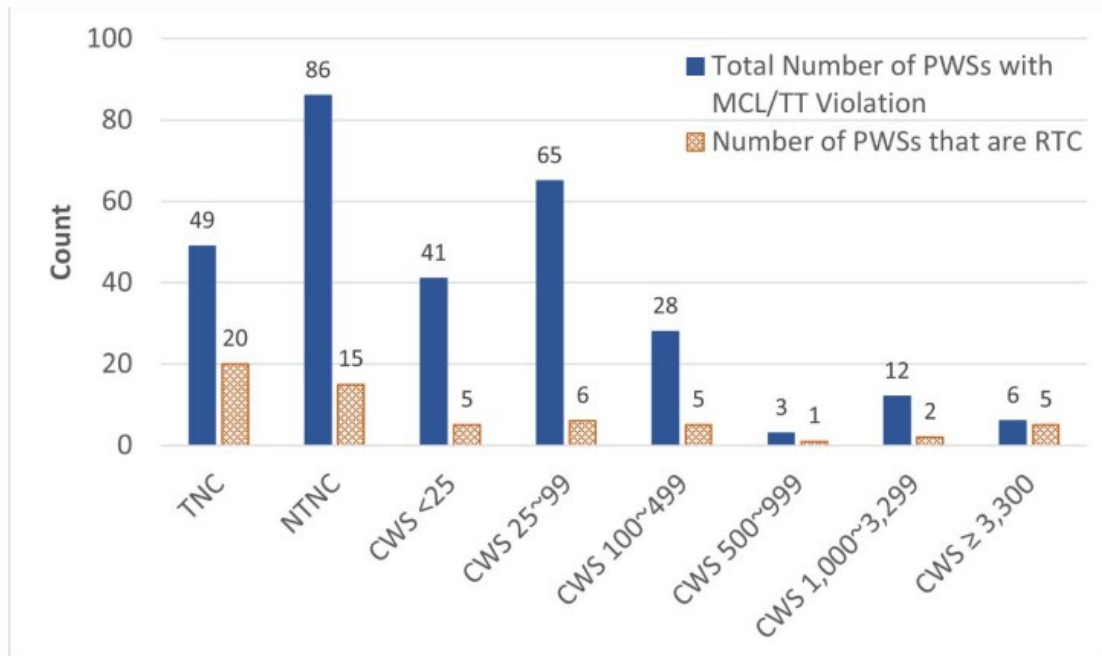


Figure 12 shows the total number of PWSs that have returned to compliance in 2021 for federal monitoring or reporting violations. Overall, 38% of public water systems that incurred a monitoring/reporting violation returned to compliance in 2021.

2022 Return to Compliance

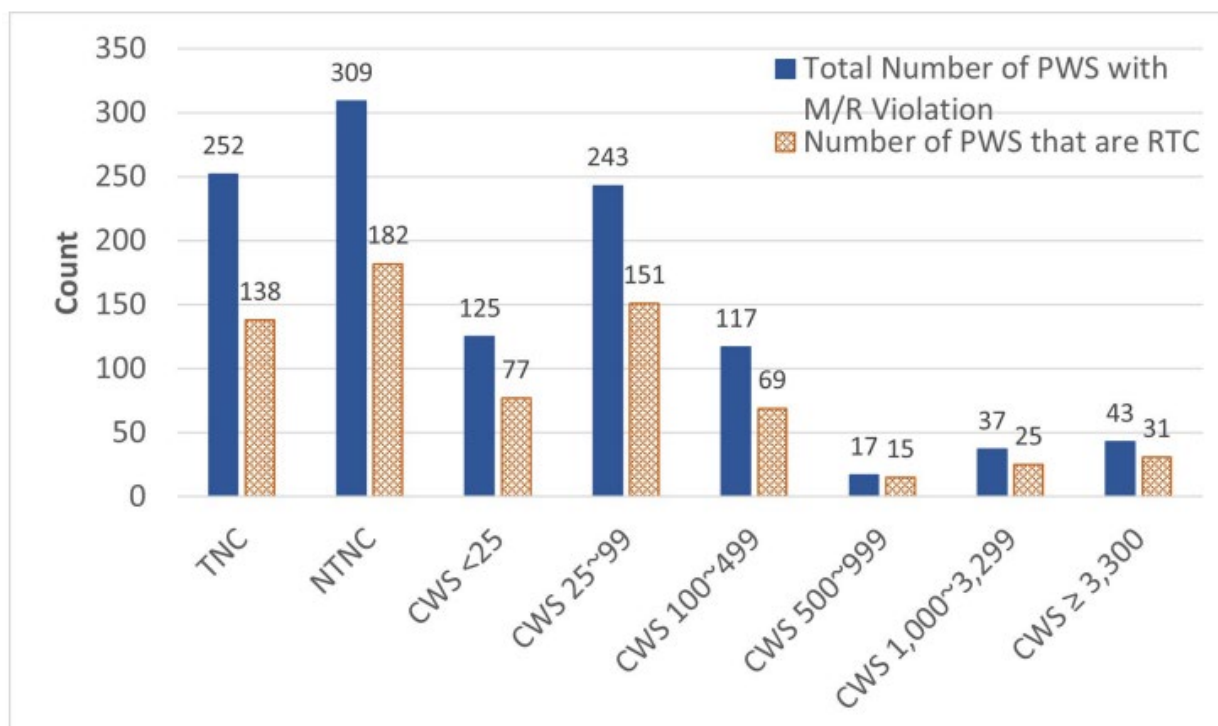
Figure 13: number of public water systems of each classification and community size that have returned to compliance in 2022 following a federal MCL/TT violation that was incurred in 2022 or prior years.⁴¹



Overall, 20% of public water systems that incurred an MCL/TT violation returned to compliance in 2022.

⁴¹ [State of California Drinking Water Program Annual Compliance Report, Calendar Year 2022](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/2022/acr-2022-final.pdf)
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/2022/acr-2022-final.pdf

Figure 14: number of PWSs of each classification and CWS size that have returned to compliance in 2022 following a federal monitoring or reporting violation that was incurred in 2022 or prior years.



Overall, 60% of PWSs that incurred a monitoring/reporting violation returned to compliance in 2022.

Total Return to Compliance

Table 16: Count of public water systems that have returned to compliance based off MCL/TT violations from 2019-2022.

Public Water System Category	2019	2020	2021	2022
TNC	16 / 50 (32%) ⁴²	8 / 27 (30%)	13 / 39 (33%)	20 / 49 (41%)
NTNC	25 / 115 (22%)	8 / 73 (11%)	14 / 73 (19%)	15 / 86 (17%)
CWS < 25	6 / 49 (12%)	0 / 32 (0%)	2 / 38 (5%)	5 / 41 (12%)
CWS 25-99	11 / 83 (13%)	6 / 66 (0%)	6 / 74 (8%)	6 / 65 (9%)
CWS 100-499	10 / 40 (25%)	5 / 32 (16%)	5 / 34 (15%)	5 / 28 (18%)
CWS 500-999	1 / 11 (9%)	1 / 5 (20%)	0 / 5 (0%)	1 / 3 (33%)

⁴² Data is presented as number of systems returned to compliance / total number of systems with violation (% of total number of systems per category that have returned to compliance).

Public Water System Category	2019	2020	2021	2022
CWS 1,000-3,299	11 / 16 (69%)	3 / 11 (27%)	3 / 12 (25%)	2 / 12 (17%)
CWS >= 3,300	2 / 5 (40%)	0 / 3 (0%)	0 / 4 (0%)	5 / 6 (83%)
% Total PWS returned to compliance:	82 / 369 (22%)	31 / 249 (12%)	43 / 279 (15%)	59 / 290 (20%)

Table 17: Count of public water systems that have returned to compliance based off M&R violations from 2019-2022.

Public Water System Category	2019	2020	2021	2022
TNC	149 / 284 (53%)	74 / 152 (49%)	61 / 267 (23%)	138 / 252 (55%)
NTNC	83 / 191 (44%)	40 / 119 (34%)	83 / 213 (39%)	182 / 309 (59%)
CWS < 25	50 / 95 (53%)	17 / 58 (29%)	43 / 94 (46%)	77 / 125 (62%)
CWS 25-99	70 / 146 (48%)	12 / 83 (14%)	91 / 197 (46%)	151 / 243 (62%)
CWS 100-499	44 / 80 (55%)	10 / 33 (30%)	40 / 101 (40%)	69 / 117 (59%)
CWS 500-999	6 / 10 (60%)	2 / 4 (50%)	7 / 12 (58%)	15 / 17 (88%)
CWS 1,000-3,299	14 / 29 (48%)	2 / 7 (29%)	13 / 26 (50%)	25 / 37 (68%)
CWS >= 3,300	7 / 19 (37%)	6 / 9 (67%)	17 / 27 (63%)	31 / 43 (72%)
% Total of PWS returned to compliance:	423 / 854 (50%)	163 / 465 (35%)	355 / 937 (38%)	688 / 1,143 (60%)

CONSOLIDATIONS

Small water systems are often less resilient to natural disasters like drought and wildfire, have more difficulty adjusting to regulatory changes, and struggle to fund infrastructure maintenance and replacement. Consolidating water systems leverages economies of scale and can result in cost savings from resource sharing. SAFER funds help pay for consolidations of small water systems and provide incentives for larger water systems agreeing to consolidate small water systems where feasible. Consolidations typically require community engagement, water system governance changes, complex engineering, and multiple agreements between numerous parties. State Water Board

Division of Drinking Water Engagement Unit staff and engineers assist with initiating partnership discussions, outreach to other agencies and stakeholders, and help to help to facilitate possible consolidation alternatives.

2019 – 2020

The State Water Resources Control Board had not conducted a consolidation analysis as part of the Annual Needs Assessment during this timeframe. However total counts of completed physical consolidations are available for both 2019⁴³ and 2020.

- In 2019, 35 water systems were physically consolidated.
- In 2020, 18 water systems were physically consolidated.

In 2020 there were two systems where the mandatory consolidation process had been initiation:

- Six Acres Water Company with the City of Cloverdale (Sonoma County)
- West Water Company with CSA 41-Fitch (Sonoma County)

2021

In 2021, the State Water Board developed a Drinking Water System Outreach Tool⁴⁴ (Outreach Tool). The Outreach Tool shows the locations of public water systems, state small water systems, and domestic well density. The Outreach Tool also indicates what systems are failing or at-risk, as well as disadvantaged block groups. This tool allows public stakeholders to evaluate their own potential for consolidation with nearby water systems and allows larger water systems to investigate the potential for regional projects. In addition to the Outreach Tool, the California Water Partnerships Tool⁴⁵ (Partnership Tool) was created to highlight the approximately 200 water partnerships and consolidations that have been completed since 2016. The Partnership Tool provides a visual method to highlight for residents where other consolidations and/or partnerships have recently taken place near their community. These tools combined with the results of the 2020-2021 Risk Assessment results and input from local Division of Drinking Water staff was utilized to outreach to water systems where physical consolidation appeared to be a good alternative. In 2021, the State Water Board's

⁴³ [Consolidation Data Dashboard | California State Water Resources Control Board](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/dashboard.html)
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/dashboard.html

⁴⁴ [Drinking Water System Outreach Tool \(ca.gov\)](https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=70d27423735e45d6b037b7fbaea9a6a6)

<https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=70d27423735e45d6b037b7fbaea9a6a6>

⁴⁵ [California Water Partnerships](https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=fabf64fbe50343219a5d34765eb7daad)

<https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=fabf64fbe50343219a5d34765eb7daad>

Engagement staff sent out approximately 1,100 letters to water systems recommending consolidation and hosted 12 Water Partnership Training events.

Table 18: 2021 Consolidated Water Systems⁴⁶

2021 SAFER Status	# of Systems	Total Population Served	# Funded by State Water Board
Failing	3	759	2
At-Risk	2	183	1
Potentially At Risk	3	2,551	1
Not At-Risk or Not Assessed	19	10,158	2
Total:	27	13,651	6

Approximately 30% of water systems on the Failing list were considering consolidation or were moving forward with consolidation. For Failing list systems where consolidation was a potential alternative or in development, monthly meetings were held with State Water Board staff and the involved water systems to ensure that the project progressed and provide additional support, as appropriate. Additionally, the State Water Board initiated two new mandatory consolidation actions in 2021:

- NorCal Water Works with Del Oro Water Company (Tehama County) and
- Tooleville Mutual Non-Profit Association with the City of Exeter (Tulare County)

2022

In 2022, the State Water Board hosted 12 Water Partnership workshops and sent over 3,000 outreach letters to public drinking water systems to engage water system managers and community partners in achieving sustainable solutions across the State. 27 water systems were consolidated, impacting 7,663 California residents (Table 20). A full list of the systems is available on the State Water Board's website.⁴⁷

⁴⁶ [Consolidation Data Dashboard | California State Water Resources Control Board](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/dashboard.html)
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/dashboard.html

⁴⁷ https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/dashboard.html
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/dashboard.html

Table 19: 2022 Consolidated Water Systems

2022 SAFER Status	# of Systems	Total Population Served	State Water Board Funding⁴⁸
Failing	4	1,720	\$1,097,630
At-Risk	3	1,182	\$77,632
Potentially At Risk	6	2,399	\$2,420,297
Not At-Risk or Not Assessed	14	2,362	\$733,232
Total:	27	7,663	\$4,328,791

In addition to the water systems successfully consolidated in 2022, the SAFER program has approximately 316 ongoing consolidation projects and an additional 56 potential consolidations in the early stages of engagement. The State Water Board initiated nine new mandatory consolidation actions in 2022 (Table 21).

Table 20: 2022 Mandatory Consolidation Water Systems

System Name	Receiving System	Population	County
Athal MWC	Lamont PUD	150	Kern
Fuller Acres MWC	Lamont PUD	545	Kern
East Wilson Road WC	East Niles CSD	35	Kern
Oasis Property Owners Assoc.	East Niles CSD	100	Kern
San Joaquin Estates MWC	East Niles CSD	165	Kern
Wilson Road WC	East Niles CSD	66	Kern
Wini Mutual Water Company	East Niles CSD	29	Kern
Del Oro WC – Country Estates District	East Niles CSD	297	Kern
Victory MWC	East Niles CSD	849	Kern
Total:		2,236	

⁴⁸ This funding amount represents the proportion of funding provided by the State Water Board used for consolidation projects and does not reflect the total cost of the consolidation projects. Some systems either partially or fully-funded the consolidation project.

SAFER Engagement staff actively manage consolidation projects for failing water systems, including ongoing engagement with State Water Board staff, water systems involved in the project, and other stakeholders and partners to ensure projects progress and to identify and provide additional needed support.

ADMINISTRATORS

In September 2019 (revised in 2023⁴⁹), the State Water Board adopted an Administrator Policy Handbook⁵⁰ to provide direction regarding the appointment of administrators by the State Water Board to designated water systems.

Administrators may be individual persons, businesses, non-profit organizations, local agencies like counties or nearby larger utilities, and other entities. Administrators generally act as a water system general manager, or may be assigned limited specific duties, such as managing an infrastructure improvement project on behalf of a designated water system. Administrators are named for a limited term to help a water system through the consolidation process or to otherwise come into compliance.

The appointment of an administrator is an authority that the State Water Board considers when necessary to provide an adequate supply of affordable, safe drinking water. Water systems in need of an administrator are identified based on the Needs Assessment and the direct local knowledge and expertise of State Water Board staff. The State Water Board recognizes the significance and, in some cases, the potentially disruptive effect of ordering acceptance of an administrator and therefore uses the authority carefully and incorporates significant community engagement as outlined in the Administrator Policy Handbook.

For 2019 there were no administrator appointments.

In 2020, the California Rural Water Association (CRWA) was appointed to North Edwards Water District (CA1510052). In 2021, the State Water Board developed administrator master agreements with Provost & Pritchard Consulting Group and Stantec. The State Water Board continues to accept Statements of Qualifications from potential administrators. More information

At present, qualified administrators include:

- non-profit technical assistance providers (e.g., CRWA)
- counties (e.g., Sonoma and Tulare)

⁴⁹ [Administrator Policy Handbook \(ca.gov\)](https://www.waterboards.ca.gov/safer/docs/2023/administrator-policy-handbook-2023-revision.pdf) <https://www.waterboards.ca.gov/safer/docs/2023/administrator-policy-handbook-2023-revision.pdf>

⁵⁰ [Administrator Policy Handbook \(ca.gov\)](https://www.waterboards.ca.gov/board_info/agendas/2019/sept/091719_6_cs1_cleanversion.pdf) https://www.waterboards.ca.gov/board_info/agendas/2019/sept/091719_6_cs1_cleanversion.pdf

- for-profit water systems (e.g., Russian River Utilities), and
- engineering services providers (e.g., Provost and Prichard, Stantec)

Since obtaining a list of qualified administrators in 2020, the State Water Board has designated 16 public water systems⁵¹ in need of an administrator and held public meetings for the impacted communities, representing approximately 3,812 people and 1,140 service connections in 7 counties.⁵²

In 2022 there were two more administrator projects with appointments and funding approved by the State Water Board (Table 22). Ten additional water systems have identified administrators and await executed funding agreements and/or are working through liability concerns before being ordered the administrator is ordered (Table 23). The administrator process was started for three water systems, which as of 2022 did not have an administrator identified.

Table 21: Total 2022 Administrator Projects with Appointments

System Name	Administrator Appointed	Population	County	Funding Approved by State Water Board	Administrator Appointed
East Orosi CSD	2022	932	Tulare	\$585,923	County of Tulare
Six Acres Water	2022	66	Sonoma	\$214,472	Marlene Demery & Associates
Total:		998		\$800,395	

Table 22: Total Initiated Administrator Projects without an Appointed Administrator

System Name	Population	County	Year Administrator Identified	Administrator Identified
Sierra Vista Water Association	44	Tulare	2021	Provost and Pritchard
Teviston Community Services District	343	Tulare	2022	Stantec

⁵¹ Ten systems in 2020, three were initiated in 2021, and three were initiated in 2022.

⁵² [Water System Administrators: Community and Program Info | California State Water Resources Control Board](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/administrator.html) https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/administrator.html

System Name	Population	County	Year Administrator Identified	Administrator Identified
Valley Ford Water Association	61	Sonoma	2020	Russian River Utilities
South Kern Mutual Water Company	32	Kern	2021	Provost and Pritchard
Old River Mutual Water Company	128	Kern	2021	Provost and Pritchard
Las Deltas Mutual Water System	375	Fresno	2021	Provost and Pritchard
NorCal Water Works	45	Tehama	2020	Provost and Pritchard
Cazadero Water Company	250	Sonoma	2020	Russian River Utilities
West Water Company	40	Sonoma	2020	County of Sonoma
William Fisher Memorial Water Company	56	Kern	2022	Provost and Pritchard
Keeler Community Service District	66	Inyo	n/a	Pending
Athal Mutual Water Company	150	Kern	n/a	Pending
Hornbrook Community Service District	280	Siskiyou	n/a	Pending
Total:	1,870			

The State Water Board is working with Administrators that are likely to have multiple Administrator projects spanning multiple years, which led to the development of administrator master agreements to simplify the process and create expedited future administrator appointments for multiple water systems.

BARRIERS

LIMITED REGULATORY REQUIREMENTS

In California statutes, there are few references to TMF capacity expectations. Subsection g of section 116375 of the Health and Safety Code allows DDW to set by

regulation the minimum acceptable financial assurances that a public water system must submit as a demonstration of its capability to provide for ongoing operation, maintenance, and upgrading of the system, including compliance with monitoring and treatment requirements and contingencies; however, no regulations have been adopted. California's Health and Safety Code Section 116540⁵³ does state that TMF requirements may be added to permits; however, because there are no regulations setting general TMF requirements for public water systems, any permit requirements would need to be specific to an individual water system.

At present, there are no specific requirements for TMF capacity for water systems in California regulations, although guidelines do exist in industry standards and regulations in other States. Industry standards and regulations in other states not present in California include:

Limitations on contract water treatment operators

Contract operators with too many water systems offer only the minimum monitoring to keep a system in compliance and in some cases take on upwards of 60 to 70 systems. This leads to poor operational control and limited, or no maintenance being performed such as flushing to prevent colored water events.

Adequate training and transparency for governing boards

Board members of mutual water systems are required to have minimal training regarding the duties of board members, including avoiding conflict of interest, the duties of public water systems to provide drinking water that complies with the federal and state Safe Drinking Water Acts, and long-term management of a public water system. There is no such training required for government organized or privately-owned systems. Governing boards need training on system finances. Furthermore, there is no enforcement mechanism within the Safe Drinking Water Act if the mutual water system board members do not comply with the training requirements.

Asset management evaluation requirements

The distribution piping, source wells, and treatment equipment in many systems are nearing or at the end of their useful life. While technical assistance can be provided to support efforts to upgrade equipment, a regulatory framework that sets out clear, specific requirements for ensuring equipment was evaluated and

⁵³ [Codes Display Text \(ca.gov\)](https://leginfo.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&division=104.&title=&part=12.&chapter=4.&article=7)

https://leginfo.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&division=104.&title=&part=12.&chapter=4.&article=7.

replaced on a set schedule would support consistency in expectations for all water systems.

Preparation and implementation of Capital Improvement Plans (CIP)

Many systems do not have replacement plans for their equipment and operate to failure, which then creates a crisis and hurried replacement.

Assessment of revenue projections, revenue requirements, & cost allocation

Many systems do not formally and publicly plan their budgets. Additionally, the State Water Board has no regulatory authority defining what level of financial capacity is acceptable or unacceptable.

Clarifying reserve and debt management requirements

California does not have reserve requirements so systems may operate without any reserve, and instead use debt when needed, at increased cost to users.

Adequate revenues to meet CIP needs and other reserves.

Very few disadvantaged community systems set revenues high enough to fund future facility needs that are necessary to maintain water quality and quantity standards.

Uniform accounting and reporting requirements to the State Water Board

The State Water Board collects some data to assess TMF capacity of water systems through the Electronic Annual Report. However additional information is needed, for example, water systems are not required to submit data on asset inventories, asset conditions, and general information on the implementation of asset management plans.

Standardized thresholds indicating distress across all water system types, including municipal, investor-owned, private and non-community

Due to the lack of centralized reports or standards, financial health of water systems across the different governing types is not consistently performed.

INSUFFICIENT DATA & LIMITED DATA SYSTEMS

The State Water Board's primary violation, enforcement and regulatory tracking database, Safe Drinking Water Information Systems (SDWIS), was designed for reporting compliance to the U.S. EPA for national tracking purposes. The database was not designed for the type of complex risk assessments being done in California or

tailored to California's specific water quality regulations or drought-monitoring needs. SDWIS is limited in its ability to store TMF data and currently does not separate out other key system-level data components, such as source capacity enforcement actions, boil water notices, how water system connections are utilized, water quality trends, asset inventory or condition information, etc.

Several efforts to augment this data collection and management have been made by the State Water Board through project-specific efforts, such as the Modified Drinking Water Watch, the Electronic Annual Report and the creation of the SAFER Clearinghouse. The ideal solution would likely entail the creation of a comprehensive data management system to fully support the transparent and data driven work required to implement the Capacity Development Strategy.

COORDINATION AMONGST STATE AND FEDERAL AGENCIES

Lack of timely coordination between the State Water Board and other State and Federal agencies can result in missed opportunities for advancing public water system capacity development. The State Water Board has partnered closely with the Department of Water Resources, the California Public Utilities Commission, the Office of Environment Health Hazard Assessment, the Department of Housing and Community Development, the U.S. Environmental Protection Agency, and many others to foster better relationships and identify areas where better coordination can result in improved outcomes for public water systems and communities. Work will continue to enhance data and information sharing across agencies to improve coordination, better decision-making, and reduce redundant data reporting needs.

LOCAL BARRIERS

The State Water Board used a series of workshops to identify local barriers to TMF capacity development. Identified barriers include:

- Workforce development limitations
- Difficulty raising rates
- Board member education and lack of participation
- Lack of public participation in water system governance or decision-making
- Lack of management and/or technical experience
- Inadequate infrastructure
- Difficulty tracking state and federal regulatory requirements
- Inadequate financial capacity and financial accountability