

CALIFORNIA CAPACITY DEVELOPMENT STRATEGY FOR PUBLIC WATER SYSTEMS

2022 DRAFT STRATEGY OUTLINE

2022 CAPACITY DEVELOPMENT STRATEGY UPDATE

BACKGROUND

The California State Water Resource Control Board (State Water Board) is developing an updated Capacity Development Strategy to improve the performance of public water systems in consistently providing safe drinking water. This effort is being undertaken pursuant to Federal initiatives and incentives developed by the United States Environmental Protection Agency (U.S. EPA). The Capacity Development Strategy will be developed systematically with input from stakeholders and the public. The results of this effort will be documented in the 2022 Capacity Development Strategy finalized by December 2022.

The Capacity Development program was established as a key component of the 1996 Federal Safe Drinking Water Act (SDWA) Amendments. The Capacity Development program provides a framework for states and water systems to work together to protect public health. The Amendments have provided incentives (including funding) for each state to develop a Capacity Development program to assist public water systems in building technical, managerial, and financial (TMF) capacity. California's initial Capacity Development Strategy was adopted in 2000. The Capacity Development Strategy has developed and evolved over time since then.

- **[Website:](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/TMF.html)**
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/TMF.html
- **[2020 Capacity Development Strategy:](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/cd_strategy.pdf)**
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/cd_strategy.pdf
- **[2020-2021 Annual Report to U.S. EPA:](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/2022/capdev-report-2020-21.pdf)**
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/2022/capdev-report-2020-21.pdf

In 2012 the State of California established the Human Right to Water (HR2W) in statute. 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.

The State Water Board adopted an annual Strategic Work Plan in both 2020 and 2021. These Work Plans cover the full range of the State Water Board’s regulation responsibilities of public water systems under the Safe Drinking Water Act. Section 1.1.2 of the 2021 Strategic Work Plan references the SAFER program and the foundational need to develop Technical, Managerial and Financial (TMF) capacity. That Section reads as follows:

1.1.2. SAFER. *Develop and implement the Safe and Affordable Funding for Equity and Resilience (SAFER) Drinking Water Program Plan, including efforts, such as consolidations, to ensure systems have the needed technical, managerial, and financial capacity. Develop a public engagement plan regarding safe and affordable drinking water. Develop the Needs Analysis on the state of drinking water in California. Develop drinking water performance measures, including a suite of new measures for Human Right to Water and Safe and Affordable Drinking Water initiatives. [DDW, DFA, COMMS] (WRP 1.1, 1.2.)*

STRATEGY REQUIREMENTS

The State Water Board’s updated Capacity Development Strategy is intended to incorporate the new SAFER program as a key element of the Strategy. Federal SDWA Section 1420(c)(2) requires that States, in preparing their Capacity Development Strategies, solicit and consider public comment on, and include as appropriate the following:

1. The methods or criteria that the State will use to identify and prioritize the public water systems most in need of improving technical, managerial, and financial capacity
2. A description of the institutional, regulatory, financial, tax, or legal factors at the Federal, State, or local level that encourage or impair capacity development
3. A description of how the State will use the authorities and resources of this title or other means to assist public water systems in complying with regulations, encourage the development of partnerships between public water systems to enhance the

technical, managerial, and financial capacity of the systems, and assist public water systems in the training and certification of operators

4. A description of how the State will establish a baseline and measure improvements in capacity with respect to federal regulations and State drinking water law
5. An identification of the persons that have an interest in and are involved in the development and implementation of the capacity development strategy (including all appropriate agencies of Federal, State, and local governments, private and nonprofit PWSs and PWS customers)

In addition, America's Water Infrastructure Act of 2018 (AWIA) amended this section of the SDWA to include:

6. 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.

ASSET MANAGEMENT

Asset Management is a planned and systematic method of managing and monitoring all the required physical components of a mechanical system and the desired level of service for a community. For public water systems, major components include: Pumping equipment; Water distribution/storage; Protection and treatment systems; Backflow prevention; Cross-connection systems; Computer, software, etc.

Asset Management Plans help identify a system's equipment age and determine the equipment's criticality, nature of risk, and reliability. Managing these assets helps the system plan for repairs, maintenance, and replacements, and helps avoid unplanned breakdowns that can lead to interruptions in service.

DRAFT 2022 REVISED CAPACITY DEVELOPMENT STRATEGY

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INTRODUCTION & BACKGROUND

FEDERAL SAFE DRINKING WATER ACT

The Capacity Development program was established as a key component of the 1996 Federal Safe Drinking Water Act (SDWA) Amendments. The Amendments were passed by Congress in part because of the significant problems small public water systems were having providing safe and reliable drinking water to their customers. The SDWA emphasizes prevention and assistance, both financial and technical, to resolve the problems. The Amendments have provided incentives (including funding) for each state to develop a Capacity Development program to assist public water systems in building technical, managerial, and financial capacity. The Capacity Development program provides a framework for states and water systems to work together to protect public health.

The SDWA allows the states the flexibility to develop their own strategy to meet the individual needs of the state. However, the SDWA requires that the strategy be developed with adequate input from identified stakeholders including the public. California’s initial Capacity Development Strategy was adopted in 2000.¹ The Capacity Development Strategy has developed and evolved over time since then.

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:

¹ 2020 Capacity Development Strategy:
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/cd_strategy.pdf

Technical Capacity: The ability of a public water system to effectively treat and deliver safe drinking water.

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.

THE CHALLENGE

California has approximately 350 failing public water systems and approximately 450 at-risk public water systems. Based on the State Water Board's engagement with failing water systems, it has become clear that TMF capacity limitations are a key driver towards a water system's inability to stay in compliance.

GOALS

CURRENT STRATEGY GOALS

- To assure that the statutory requirements are met for new public water systems and public water systems undergoing a change of ownership.
- Develop in all public water systems the TMF capacity to meet the declaration of the H&SC.
- Develop and utilize state/federal/local government and private party organization resources to build capacity in public water systems.

PROPOSED DRAFT REVISED GOALS

- **Achieving the HR2W:** 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 service excellence.

- To promote continuous improvement through monitoring, assessment, and strategic planning.

CAPACITY DEVELOPMENT TOOLS AND BARRIERS

LEGISLATIVE TOOLS

ASSEMBLY BILL 685

On September 12, 2012, Governor Edmund G. Brown Jr. signed Assembly Bill (AB 685), making California the first state in the nation to legislatively recognize the human right to water. Now in the Water Code as Section 106.3, the State statutorily recognizes that: "... every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes."

The Human Right to Water extends to all Californians, including disadvantaged individuals and groups and communities in rural and urban areas. Further, the bill required state agencies to consider this policy "when revising, adopting, or establishing policies, regulations, and grant criteria."

On February 16, 2016, the State Water Board adopted a resolution identifying the Human Right to Water statute as a top priority and core value of the State Water Board and Regional Water Quality Control Boards (collectively the 'Water Boards'). The resolution stated the Water Boards will work "to preserve, enhance, and restore the quality of California's water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper water resource allocation and efficient use, for the benefit of present and future generations."

The resolution cements the Water Boards commitment to considering how its activities impact and advance the human right to safe, clean, affordable, and accessible water to support basic human needs. The Human Right to Water statute will be considered in actions taken by the Water Boards that pertain to the sustainability of drinking water.

These actions may include revising or establishing water quality control plans, policies, and grant criteria; permitting; site remediation and monitoring; and water right administration.

Under the resolution, State Water Boards staff will work with relevant stakeholders, as resources allow, to develop new systems or enhance existing systems to collect data and identify and track communities that do not have, or are at risk of not having, safe, clean, affordable, and accessible water for drinking, cooking, and sanitary purposes. State Water Boards staff will also work with relevant groups to develop performance

measures to evaluate the Water Boards' progress toward making the human right to water a reality, and such information will be made available to the public.

The State Water Board has developed and will continue to enhance a set of criteria used to identify "failing" public water systems that are failing to meet the goals of the Human Right to Water.

SENATE BILL 88

In 2015, Senate Bill 88 (SB 88) authorized the State Water Board to require water systems serving disadvantaged communities that consistently fail to provide safe drinking water to consolidate with, or receive an extension of service from, another public water system. The consolidation can be physical or managerial. Although for many years the State Water Board has encouraged -- and will continue to encourage -- voluntary consolidations of public water systems, the legislation allows the State Water Board to mandate consolidation of water systems where appropriate. Extension of service to domestic wells is authorized only when agreed to by the well owner. The changes to the California Health and Safety Code, as defined in SB 88, gives the State Water Board authority to mandate such consolidations or extension of service only following a series of specific actions.

The State Water Board's Division of Drinking Water must issue letters to water systems to consolidate with, or seek an extension of service, from a public water system. The recipients of such letters have up to six months from the date the letter is issued to voluntarily consolidate with, or receive extension of service from, a public water system. All letters to public water systems, consolidation orders, petitions, responses, and administrative indices are available to the public upon request and at least two public meetings are required to ensure community engagement and transparency.

SENATE BILL 1263

In 2016, Senate Bill 1263 (SB 1263) required a person submitting an application for a permit for a proposed new public water system to first submit a preliminary technical report to the State Water Board at least six months before initiating construction of any water-related improvement. It is the policy of the state to discourage the establishment of new, unsustainable public water systems when there is a feasible alternative. The purpose of the preliminary technical report is to ensure the sustainability of new water systems and evaluate alternatives prior to developers investing capital into new water systems.

The bill also prohibits a local primacy agency (LPA) from issuing a permit to operate a public water system without the agreement of the State Water Board. The proposed new public water system that would be regulated by the LPA, must also submit a copy of the preliminary technical report to the State Water Board. Furthermore, the bill prohibits a city, including a charter city, or a county from issuing a building permit for the construction of a new residential development where a source of the water supply is water transported by a water hauler, bottled water, a water-vending machine, or a retail water facility.

The preliminary technical report shall include all of the following:

1. The name of each community water system within three miles of applicant's proposed public water system's service area.
2. Discussion of the feasibility of each of the adjacent community water system identified through annexing, connecting, or otherwise supplying domestic water to the proposed new public water system.
3. Discussion of all actions taken to secure a supply of domestic water from an existing community water system.
4. All sources of domestic water supply for the proposed new public water system.
5. Estimated costs to construct, operation and maintenance (O&M), and long-term O&M costs and a potential rate structure.
6. Cost comparison of the costs associated with the construction, O&M, and long-term sustainability of the proposed new public water system to the costs associated with receiving water through annexation by, consolidation with, or connection to an existing community water system.
7. Discussion of all actions taken by the applicant to pursue a contract for managerial or operational oversight from an existing community water system.
8. Analysis of whether a proposed new public water system's total projected water supplies available during normal, single dry, or multiple dry water years during a 20-year projection will meet the projected water demand for the service area.
9. Any information provided by the local formation commission (LAFCo). Applicant shall consult LAFCo if any adjacent public water systems are identified.

The requirements in SB 1263 do not apply to a service area where an applicant certifies in writing to the State Water Board that the applicant will not rely on the establishment of a new public water system for its water supply. This bill and subsequent amended California Health and Safety Code Section 116540 by adding subsections (c) and (d), which require the State Water Board to consider future climate change and possible contamination impacts on new water systems and authorized the State Water Board to deny the permit of a proposed public water system if it determines that it is feasible for the service area of the proposed public water system to be served by an existing water

system, respectively.

SENATE BILL 552

On September 28, 2016, the Governor signed Senate Bill 552 (SB 552) which expanded the mandatory consolidation authorities in SB 88 and also authorized the State Water Board to contract with an administrator to provide administrative and managerial services to a designated water system. This authority allows the State Water Board to order a consolidation where a public water system or state small water system is serving, rather than within, a disadvantaged community and limits the authority to order a consolidation or extension of service to only disadvantaged communities. Mobile home parks (MHPs) are included for these purposes as a disadvantage community, even if it is not an unincorporated area or served by a mutual water company. The consolidation cannot result in increasing charges on existing customers of the receiving water system solely as a consequence of the consolidation or extension of service unless the customer receives a corresponding benefit. The following actions must be taken before ordering a consolidation or extension of service:

1. Consult with specified entities.
2. Hold at least one initial public meeting (unless the potentially subsumed area is only served by domestic wells).
3. Obtain written consent from any domestic well owner. If any effected resident within the service does not provide written consent, they are ineligible for any future water-related grant funding from the state.

Additionally, upon ordering the consolidation or extension of service, owners of a privately owned subsumed water system must be adequately compensated for the fair market value of the system as determined by the California Public Utilities Commission.

SB 552 also authorizes the State Water Board to contract with an administrator to provide administrative and managerial services to a designated water system and to order the designated public water system to accept those services if sufficient funding is available and certain findings are made. Public notice and a public meeting are required as part of determining that a public water system should receive an administrator. This bill authorizes the administrator of a designated public water system to spend available money on capital infrastructure improvements needed to provide an adequate and affordable supply of safe drinking water, to set and collect user water rates and fees, and to spend money for operations and maintenance. The goal of an administrator is to develop, within the shortest feasible timeframe, adequate technical, managerial, and financial capacity to deliver safe drinking water so that the administrator is no longer

necessary.

ASSEMBLY BILL 2501

On September 28, 2018, the Governor signed Assembly Bill 2501 (AB 2501) which expands the State Water Board's authority to require consolidation of public and state small drinking water systems and individual wells that serve disadvantaged communities which consistently fail to deliver safe drinking water. The bill also authorizes the appointment of administrators to provide administrative and managerial services to struggling water systems that fail to deliver an adequate and affordable supply of safe drinking water, particularly if consolidation is not a viable option. It also requires the State Water Board to develop standards, terms, and procedures for the management of the designated water system by the administrator.

SENATE BILL 200

On July 24, 2019, the Governor signed Senate Bill 200 (SB 200) establishing the Safe and Affordable Drinking Water Fund in the California State Treasury to help water systems provide an adequate, affordable supply of safe drinking water in the near and long terms. SB 200 provide funding until 2030 to improve the water quality of disadvantaged communities that lack clean water.

In the first year, \$100 million of the funding will come from the Greenhouse Gas Reduction Fund (GGRF) and \$30 million from the General Fund under the Budget Act. After the first year, SB 200 provides the funding will be 5% of the GGRF, continuously appropriated but capped at \$130 million per year.

The funding and authorities granted to the State Water Board through SB 200 enabled the establishment of the Safe and Affordable Funding for Equity and Resilience (SAFER) Program. The State Water Board prioritizes SAFER Program funding and technical assistance annually through the Fund Expenditure Plan (FEP). The annual FEP is to be informed by "data and analysis drawn from the drinking water Needs Assessment", per California Health and Safety Code section 116769. The State Water Board's Drinking Water Needs Assessment (Needs Assessment) consists of three core components: the Risk Assessment, Cost Assessment, and Affordability Assessment.

SB 200 updated Section 116530(a)² of California's Health and Safety Code allowing for the State Water Board to request information regarding technical, managerial, and

² California Health and Safety Code Section 116530(a)
https://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC§ionNum=116530

financial capacity for existing public water systems. California Health and Safety Code Section 116530 now states:

- (a) A public water system shall submit a technical report to the state board as part of the permit application or when otherwise required by the state board. This report may include, but not be limited to, detailed plans and specifications, water quality information, physical descriptions of the existing or proposed system, information related to technical, managerial, and financial capacity and sustainability, and information related to achieving the goals of Section 106.3 of the Water Code, including affordability and accessibility.

SENATE BILL 403

On September 23, 2021, the California legislature passed Senate Bill 403 (SB 403) authorizing the State Water Board to conduct mandatory consolidation of at-risk water systems that serve disadvantaged communities or where a disadvantaged community is substantially reliant on at-risk state small water systems or domestic wells.

SENATE BILL 552

On September 23, 2021, the California legislature passed Senate Bill 552 (SB 552) to support planning and implementation of drought resiliency measures by counties and small water systems. SB 552 has four main resiliency areas:

- Implementation of water shortage contingency plans for small community water systems and K-12 schools that are non-community water systems,
- Infrastructural resiliency implementation for small community water systems and K-12 schools that are non-community water systems,
- County planning requirements for domestic wells and state small water systems, and
- State Water Board and California Department of Water Resource tool development and coordination activities.

Under the infrastructure resiliency implementation, SB 552 specifically requires small water suppliers, defined as community water systems serving 15 to 2,999 service connections and non-transient, non-community water systems that are K-12 schools, to implement the following drought resiliency measures, subject to funding availability:

- No later than January 1, 2023, implement monitoring systems sufficient to detect production well groundwater levels.

- Beginning no later than January 1, 2023, maintain membership in the California Water/Wastewater Agency Response Network (CalWARN) or similar mutual aid organization.
- No later than January 1, 2024, to ensure continuous operations during power failures, provide adequate backup electrical supply.
- No later than January 1, 2027, have at least one backup source of water supply, or a water system intertie, that meets current water quality requirements and is sufficient to meet average daily demand.
- No later than January 1, 2032, meter each service connection and monitor for water loss due to leakages.

No later than January 1, 2032, have source system capacity, treatment system capacity if necessary, and distribution system capacity to meet fire flow requirements.

BARRIERS

LIMITED REGULATORY REQUIREMENTS

In California statutes, there are few references to TMF capacity expectations. California's Health and Safety Code Section 116540³ does state that TMF requirements may be added to permits; however, any permit requirements would need to be specific to an individual water system to prevent creating underground regulations.

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 missing 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. The leads to poor operational control, and no maintenance being performed such as flushing to prevent colored water events.
- **Adequate training and transparency for governing boards**
 - Water system board members of mutual water systems are required to have minimal training, while government organized, or privately-owned systems, are not required to have any. Governing boards need training on system finances. Furthermore, the requirements for mutual water system board trainings are not enforceable if they do not comply.

³ California Health and Safety Code Section 116540
<https://codes.findlaw.com/ca/health-and-safety-code/hsc-sect-116540.html>

- **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 this effort, a regulatory framework would support consistency in expectations for all water systems.
- **Preparation and implementation of Capital Improvement Plans (CIP)**
 - Most 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 facilities 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.

TMF CAPACITY DEVELOPMENT STRATEGIC ELEMENTS

ELEMENT 1: ENSURING NEW PUBLIC WATER SYSTEMS HAVE TMF CAPACITY

The State Water Board has implemented elements of the TMF capacity development program since January 1, 1998. On that date, State regulations became effective requiring that all new public water systems and systems changing ownership demonstrate adequate TMF capacity to obtain a water supply permit

Section 116540 of the Health and Safety Code (CHSC) states:

No public water system that was not in existence on January 1, 1998, shall be granted a permit unless the system demonstrates to the department that the water supplier possesses adequate financial, managerial, and technical capability to assure the delivery of pure, wholesome, and potable drinking water. This section shall also apply to any change of ownership of a public water system that occurs after January 1, 1998.

Furthermore, SB 1263 requires applications for new public water system permits to demonstrate that the new water systems can provide affordable, safe drinking water in the reasonably foreseeable future. Applicants are required to submit a preliminary technical report that provides an analysis of the possibility to connecting to a nearby water system, a cost comparison associated with the construction of a new system vs. connected with an existing system, etc. Preliminary technical report guidance is located on our [website](#).

ELEMENT 2: IDENTIFICATION & PRIORITIZATION OF EXISTING SYSTEMS IN NEED OF IMPROVED TMF CAPACITY

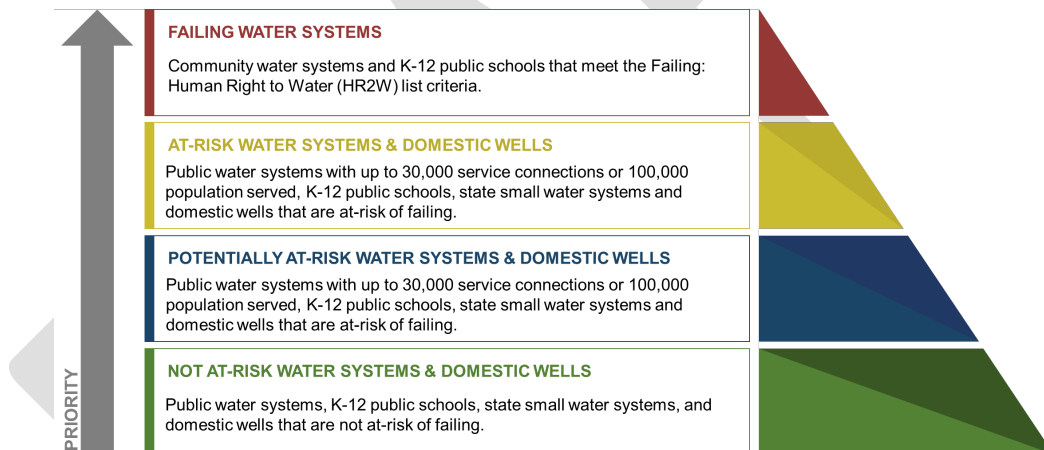
The State Water Board utilizes its regulatory authorities and appropriate data to identify water systems that are failing, or at-risk of failing, to meet the goals of the HR2W. The State Water Board has publicly defined criteria that is developed and enhanced through a stakeholder driven process to identify these systems. SB 200 requires the State Water Board to use this information as part of its funding prioritization process for the Safe and

ANNUAL DRINKING WATER NEEDS ASSESSMENT

In 2019, to advance the goals of the HR2W, California passed SB 200, which enabled the State Water Board to establish the 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 identify and 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. The Needs Assessment goes beyond the federal requirements, by identifying and prioritizing public water systems, state small water systems, and domestic wells for the SAFER program.

Figure 1: SAFER Program Priority Systems



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. 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.

FAILING SYSTEMS

Many Californians still do not have access to safe, affordable drinking water. California is the first state to do an in-depth study of this issue. It follows California's leadership in adopting the first Human Right to Water policy in the nation. The State Water Board

assesses water systems that fail to meet the goals of the Human Right to Water and maintains a list and map of these systems on its website. Systems that are on the Failing: Human Right to Water list (Failing: HR2W list) are those that are out of compliance or consistently fail to meet primary drinking and secondary drinking water standards, have treatment technique violations, and extensive monitoring and reporting violations. Systems that are assessed for meeting the HR2W list criteria include Community Water Systems (CWSs) and Non-Community Water Systems (NCWSs) that serve schools and daycares. Failing: HR2W list criteria is fully documented and updated when appropriate on the State Water Board's HR2W list webpage.⁴ The State Water Board works with stakeholders to routinely review the Failing: HR2W criteria and update it when appropriate to fully capture systems failing to provide safe and accessible drinking water.

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.

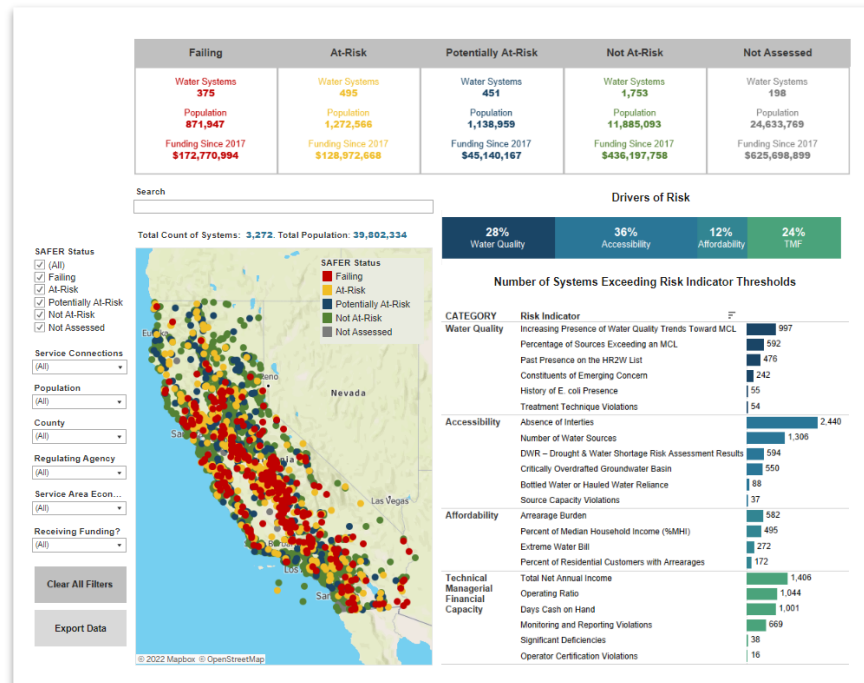
The State Water Board utilizes a set of risk indicators, developed through a stakeholder-driven process, to identify at-risk water systems. Risk indicators are organized into four different categories:

- 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.

⁴ State Water Board Failing: Human Right to Water Webpage
https://www.waterboards.ca.gov/water_issues/programs/hr2w/

Figure 2: SAFER Dashboard



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.” Thus, the Cost Assessment estimates the costs related to the implementation of interim and/or emergency measures and longer-term solutions for Failing: HR2W list 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.

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.” 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 3: 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 results of the Affordability Assessment are displayed in the SAFER Dashboard and are used to inform the prioritization of SAFER program activities as well as funding and technical assistance. The results assist the State Water Board and the public in identifying water systems that may be experiencing financial capacity constraints due to affordability challenges.

ELEMENT 3: SUPPORTING DIRECT CAPACITY BUILDING

This includes work of State Water Board staff conducts as part of the SAFER program and its core regulatory program. The following are areas where the State Water Board supports direct capacity building.

SAFER ENGAGEMENT

With the creation of the SAFER program, the State Water Board has staff dedicated to assisting communities with failing or at-risk water systems in overcoming their

challenges. This work includes the following elements:

WATER SYSTEM PARTNERSHIPS & CONSOLIDATION

Small water systems often are less resilient to natural disasters, such as drought and fire, have more difficulty adjusting to regulatory changes, and struggle to fund infrastructure maintenance and replacement due to poor economies of scale and lack of staff. As a result, the State Water Board supports consolidations and water partnerships. This support includes financial aid from the SAFER funds to help pay for consolidations of small water systems wherever feasible, and consolidation incentives for larger water systems agreeing to take in small water systems. The State Water Board's SAFER Engagement staff assist in initiating discussions between parties, outreaching to other agencies with jurisdiction and helping to conceptually design possible consolidation alternatives.

Since 2016, approximately 200 consolidations have been completed in California. These successes are documented on our California Water Partnerships [mapping tool](#). Additionally, the [Drinking Water System Outreach Tool](#) allows water systems to evaluate what other public water systems, state small water systems may be in their vicinity. The Drinking Water System Outreach Tool also indicates the density of domestic wells in an area, provides census data on where disadvantaged communities may be located, and color codes water systems to indicate if this are on the Failing: HR2W list or At-Risk. These tools support outreach letters and water partnership trainings performed by SAFER Engagement staff and empowers local agencies to know what water systems are in their vicinity so they can initiate partnerships.

ADMINISTRATORS

In September 2019, the State Water Board adopted an Administrator Policy Handbook to provide direction regarding the appointment of administrators by the State Water Board to designated water systems, as authorized by Health and Safety Code section 116686.

Administrators may be individual persons, businesses, non-profit organizations, local agencies including counties or nearby larger utilities, and other entities. Administrators may be assigned broad duties such as acting as general manager for the designated water system, or specific duties, such as managing an infrastructure improvement project on behalf of a designated water system.

As of 2022, qualified administrators include:

- non-profit technical assistance providers
- counties
- for-profit water systems, and

- engineering services providers

RURAL SOLUTIONS ENGAGEMENT

In 2022, the SAFER Program added a new Engagement Unit focused on those isolated water systems where consolidations were not feasible to directly support water systems in achieving long-term sustainability.

OPERATOR CERTIFICATION

In 1971, laws and regulations governing the certification of potable water treatment facility operation were enacted. The regulations establish at what level these facilities should be manned, the minimum qualifications for testing at each of the five grade levels, and the criteria for the renewal and revocation of operator certificates.

In 1998, U.S. EPA established guidelines for the certification and re-certification of operators of community and non-transient non-community public water systems. On January 1, 2001, new state regulations (CCR sections 63765 and 63770) were adopted to comply with these guidelines and the existing water treatment operator certification program was modified accordingly. The new regulations also established a water distribution operator certification program. This program became the Drinking Water Operator Certification Program.⁵

Effective July 1, 2014, the responsibility for California's Drinking Water Operator Certification Program for public water systems was transferred from the California Department of Public Health to the State Water Board. The transfer was accomplished by means of the addition of new Section 116271 to the Health and Safety Code. However, no changes were made to the operator certification program statutes or regulations.

SANITARY SURVEYS

A sanitary survey is a comprehensive inspection to evaluate water system potential to provide safe drinking water to their customers and to ensure compliance with the federal SDWA. The evaluation includes a data verification a review of all monitoring and reporting files in office., and a physical site visit. An inspection must include all aspects of the water system including water source, treatment facilities, distribution system, water storage, pumps, pump facilities, and controls, monitoring, reporting, and data verification, system management and operation, and operator compliance with State requirements. During the sanitary survey, field staff educate water systems on sanitary

⁵ California Drinking Water Operator Certification Program
https://www.waterboards.ca.gov/drinking_water/certlic/occupations/DWopcert.html

hazards that they observe, explain new regulations, and recommend trainings and technical assistance that are available.

U.S. EPA requires that community water systems be inspected every three years and non-community water systems to be inspected at least every five years. The State Water Board's Division of Drinking Water conducts inspections and documents the findings in sanitary survey reports. In some counties, authority has been delegated to LPA staff conduct those inspections for systems under 200 connections.

Significant Deficiencies may be identified by State Water Board staff or LPA staff during a Sanitary Survey and other water system inspections. Significant Deficiencies include, but are not limited to, significant defects in the design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that U.S. EPA determines to be causing or have the potential for causing the introduction of contamination into the water delivered to consumers.

ELEMENT 4: SUPPORTING CAPACITY BUILDING WORK OF THIRD-PARTY ORGANIZATIONS

There are several third-party organizations within California with a strong record (over many years) of providing training and support for public water systems, especially smaller public water systems. Funding for this work has been provided by a variety of sources.

Services provided by third-party organizations include:

- Direct technical assistance including, but not limited to:
 - Coordination and development of capital improvement projects,
 - Facilitation of operation and maintenance,
 - Engineering and environmental analysis,
 - Legal assistance, leak detection/water audits,
 - Compliance audits, financial analysis,
 - TMF assessments,
 - Rate-Setting and rate-planning,
 - Financial planning,
 - Asset management planning, and
 - Board or operator training.
- In-person and virtual trainings on a variety of TMF topics.

ELEMENT 5: ENSURING TMF CAPACITY OF STATE FUNDING & FINANCING RECIPIENTS

UNDER DEVELOPMENT

ELEMENT 6: PROMOTING ASSET MANAGEMENT

U.S. EPA requires the inclusion of how the state will use the five-core-questions framework, as appropriate, to encourage the development of, and assist in the implementation of, asset management plans. The framework is composed of the following five core questions:

1. What is the current state of the utility's assets?
2. What is the utility's required "sustainable" level-of-service?
3. Which assets are critical to sustained performance?
4. What are the utility's best "minimum life-cycle cost" capital improvement plan and operations and maintenance strategies?
5. What is the utility's best long-term financing strategy?

UNDER DEVELOPMENT

ELEMENT 7: BUILDING CAPACITY THROUGH REPORTING REQUIREMENTS

The State Water Board has expanded and given greater visibility to the reporting requirements for public water systems. Examples of reporting requirements include:

- **Electronic Annual Report**
 - The Electronic Annual Report is a survey of public water systems, currently required annually, to collect critical water system information intended to assess the status of compliance with specific regulatory requirements such as source water capacity, provides updated contact and inventory information (such as population and number of service connections), and provides information that is used to assess the financial capacity of water systems, among other information reported.
- **Drought Monitoring and Reporting**
 - As drought conditions worsen, impacts to water systems are expected to continue and increase in severity. The State Water Board has the authority to issue a technical order from the Health and Safety Code, Section 116530, to collect drought related information related to but not limited to: water shortage evaluation, water source evaluation, actions for

demand reduction, and actions for augmenting water sources. The issuance of these drought reporting orders is a crucial part of the State Water Board's Drought Response Program which assists water systems in preparing for and responding to drought emergencies.

- To comply with SB 552 requirements, the State Water Board will be requiring small public water systems with less than 3,000 service connections and K-12 schools to report more frequent production and delivery data. This information will be used by the State Water Board to identify water systems that are currently or are at-risk of experiencing source capacity challenges. Furthermore, the State Water Board will be collecting drought infrastructure resiliency data to ensure systems are complying with SB 552 requirements.
- **Water Quality Reporting**
 - Public water systems are required to perform water quality monitoring to comply with the SDWA, regulatory requirements, monitoring orders, and permit/permit amendment provisions. The results of these analyses must be submitted no later than the 10th day of the following month that the analyses was completed, and for acute contaminants there are additional reporting requirements. Providing timely results to the State Water Board is critical for evaluating the operation of a public water system, as well as identifying potential risks to customers. Timely reporting of water quality results allows the State Water Board to quickly identify potential source contamination or treatment failure, thus facilitating notifying the public of potential health threats and directing a public water system to implement a solution.
 - In September 2021, the California Laboratory Intake Portal (CLIP) was launched replacing the previous intake portals known as Water Quality Management (WQM) and Lab-To-State (LTS). CLIP is planned to be the single point of access for laboratories to submit all drinking water quality data reporting requirements. It is being implemented in phases, with chemical and radiological analyses already being accepted through CLIP. Microbial analyses will be included in a future phase. CLIP also includes data validation elements, which allow laboratories to demonstrate submission of data with known and documented quality

ELEMENT 8: MEASURING TMF CAPACITY BUILDING SUCCESS

The State Water Board will track the implementation and success of the Capacity Development Strategy utilizing metrics that fall within the following categories. These

categories and metrics may evolve over time as the Strategy is implemented and the State Water Board responds to lessons learned and new program requirements.

Water Systems:

- Number of new public water systems permitted each year
- Number of public water systems deactivated each year
- Number of water systems consolidated each year

Water Systems with TMF Capacity Needs:

- Systems on the Failing: HR2W list
- Systems on the at-risk list
- Systems performance in the Risk Assessment

Direct Assistance Provided:

- Technical assistance provided
- Financial support provided
- Sanitary Surveys conducted
- Administrator assistance provided
- Interim solutions supported
- Long-term solutions supported

Program Performance:

- Time to respond to requests and provide assistance
- Number of communities engaged
- Outreach efforts

CAPACITY DEVELOPMENT EXTERNAL PARTNERS

To update the Capacity Development Strategy, significant input was needed from the community. The State Water Board considered a broad range of people involved with state, county, and local governments – as well as non-profit entities – to participate as stakeholders on the updates to the Capacity Development Strategy. These groups and individuals were solicited for their knowledge of the issues public water systems face here in California and their ability to assist other systems in increasing capacity.

The State Water Board will invite and encourage stakeholder participation in the implementation of its Capacity Development program. These external partners include, but are not limited to:

- Local Primacy Agencies (LPAs)
- Department of Water Resources
- California Public Utilities Commission (CPUC)
- California Office of Environmental Health Hazard Assessment (OEHHA)
- California Department of Public Health (CDPH)
- SAFER Advisory Group
- Technical Assistance Providers
- Administrators
- Public Water Systems
- Not for Profit Stakeholders
- Public Water Systems Customers

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