SAFER: 2023 Drinking Water Needs Assessment Results

May 2, 2023 9:00 am *Remote participation only*



SAFER PROGRAM

Meeting Logistics

Kristyn Abhold Needs Analysis Unit Division of Drinking Water State Water Resources Control Board





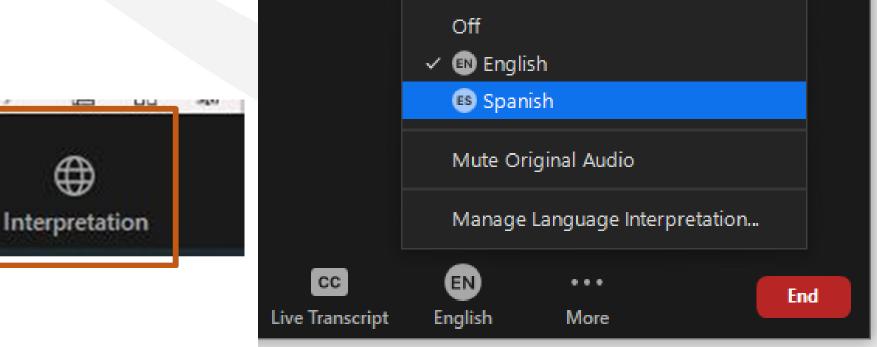
Water Boards' Mission Statement

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.

CALIFORNIA WATER BOARDS

Choose English or Spanish

We have an English and Spanish Channel:





Record



Raise Hand

Ways to Participate-

1. Watch ONLY: Visit video.calepa.ca.gov

2. Email: Submit a comment or ask a question that will be read aloud, send an email to: <u>safer@waterboards.ca.gov</u>

3. Q&A: Submit a question using the Q&A feature at the bottom of your Zoom Screen. You can UPVOTE any question you would like answered.

4. Raise Hand: Attendees will be given the opportunity to provide verbal comment or ask questions, if you're interested in this option, please raise your virtual hand when the time is right.

- Please wait for your name to be called.
- Public comments are 3 minutes each.



Agenda



SAFER PROGRAM & NEEDS ASSESSMENT

RISK ASSESSMENT FOR PUBLIC WATER SYSTEMS, SSWSs, & DOMESTIC WELLS

COST ASSESSMENT UPDATE

AFFORDABILITY ASSESSMENT

NEXT STEPS



CALIFORNIA WATER BOARDS

SAFER Program & Needs Assessment Overview



Audience Poll Question 1

Have you heard about the Drinking Water Needs Assessment?

- Yes
- No

2023 Drinking Water Needs Assessment: https://bit.ly/SAFER-NA-Report-23

2022 Drinking Water Needs Assessment: https://bit.ly/SAFER-NA-Report-22



Audience Poll Question 2

Have you read the report: "2023 Drinking Water Needs Assessment"?

- Yes, read the whole thing
- Yes, I skimmed it
- No, but I plan to
- No, I don't intend to read it

Access report here: <u>https://bit.ly/SAFER-NA-Report-23</u>



2012 - Human Right to Water (HR2W)

Water Code 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."



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SB 200 and the SAFER Program

In 2019, to advance the goals of the Human Right to Water "HR2W", California passed Senate Bill 200, which enabled the State Water Board to establish the **Safe and Affordable Funding for Equity and Resilience** (SAFER) Program.

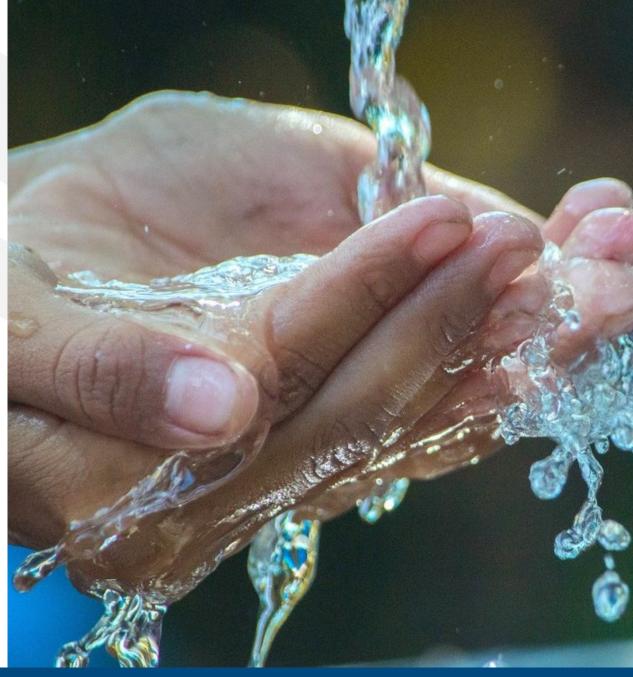


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Safe and Affordable Drinking Water Fund

Up to \$130 million per year through 2030.

The annual **Fund Expenditure Plan** prioritizes projects for funding, documents past and planned expenditures, and is "based on data and analysis drawn from the drinking water **Needs Assessment**" (Health and Safety Code §116769).



Needs Assessment Components



https://bit.ly/SAFER-NA

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SAFER Program Priority Systems

FAILING WATER SYSTEMS

Community water systems and K-12 public schools that meet the Failing criteria.

AT-RISK WATER SYSTEMS & DOMESTIC WELLS

Public water systems with up to 30,000 service connections and 100,000 population served, K-12 public schools, state small water systems and domestic wells that are at-risk of failing.

POTENTIALLY AT-RISK WATER SYSTEMS & DOMESTIC WELLS

Public water systems with up to 30,000 service connections and 100,000 population served, K-12 public schools, state small water systems and domestic wells that are potentially at-risk of failing.

NOT AT-RISK WATER SYSTEMS & DOMESTIC WELLS

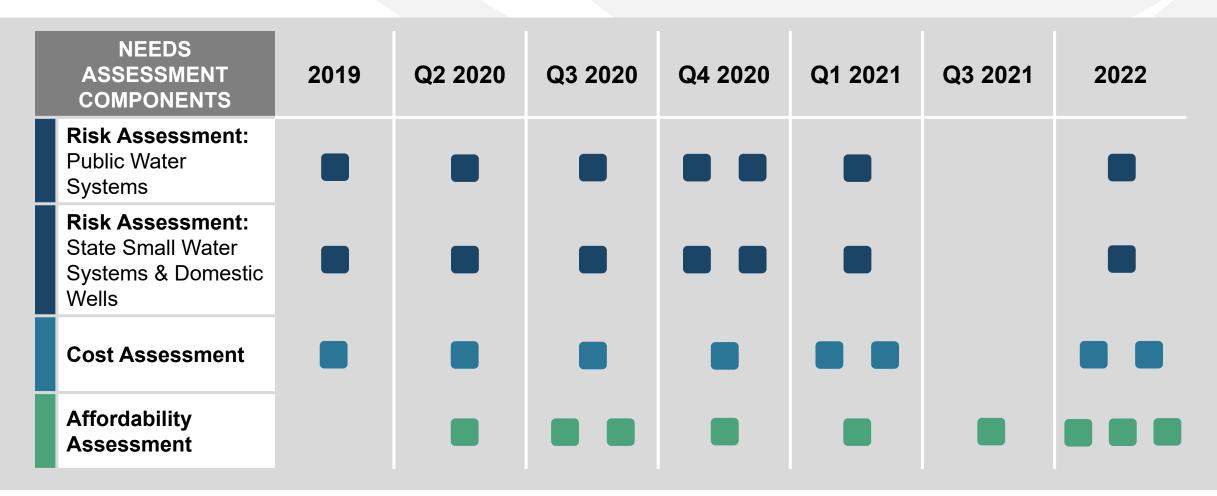
Public water systems, K-12 public schools, state small water systems, and domestic wells that are not at-risk of failing.

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PRIORITY

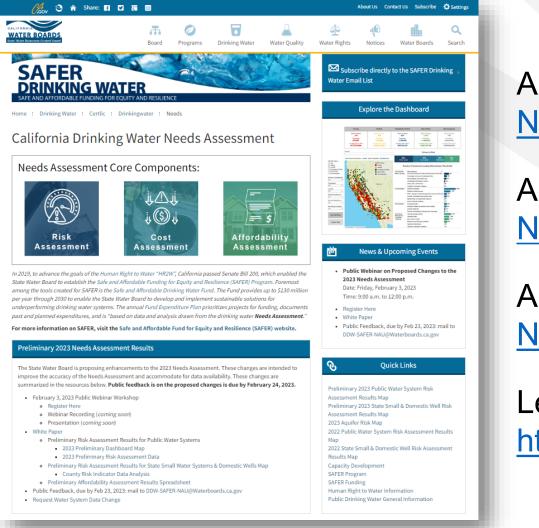
Past Workshops on Needs Assessment Methodologies

The State Water Board has hosted workshops for public feedback on the methodologies utilized in the Needs Assessment since 2019.



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Access the Full 2023 Needs Assessment Report



Access **2023** report here: <u>https://bit.ly/SAFER-</u> <u>NA-Report-23</u>

Access **2022** report here: <u>https://bit.ly/SAFER-</u> <u>NA-Report-22</u>

Access **2021** report here: <u>https://bit.ly/SAFER-</u> <u>NA-Report-21</u>

Learn more about the Needs Assessment here: https://bit.ly/SAFER-NA

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Needs Assessment and the SAFER Program



NEEDS ASSESSMENT

Identifies Failing & At-Risk water systems. Quantifies interim & long-term needs.

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SAFER ADVISORY GROUP

Uses the Needs Assessment to advise State Water Board SAFER Priorities.



SAFER FUND EXPENDITURE PLAN

Needs Assessment & SAFER Advisory Group inform funding priorities for the Fund.

- Cr BODD

COMMUNITY ENGAGEMENT

Staff & technical assistance providers engage with Failing & At-Risk communities.



ACHIEVE HUMAN RIGHT TO WATER

SAFER funding & technical assistance used to implement long-term solutions.

2022 SAFER Program Accomplishments & Activities

Activity	Number of Water Systems	State Water Board Funding	
Consolidations	27	\$4,328,791	
Administrator Projects	3	\$1,109,852	
Construction Funding	42	\$751,823,022	
Planning Funding	13	\$6,214,740	
Technical Assistance	357	\$21,641,362	

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SAFER Drinking Water Strategy for State Small Water Systems and Domestic Wells

Key Components:

- 1. Centralized domestic well and state small water system data
- 2. Funding for counties to develop programs to address local needs
- 3. Implementing a Point-of-Use/Point-of-Entry pilot

More information will be available soon at <u>www.waterboards.ca.gov/safer</u>



Failing Water Systems



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SAFER Program Priority Systems: Failing Water Systems

FAILING WATER SYSTEMS

Community water systems and K-12 public schools that meet the Failing criteria.

AT-RISK WATER SYSTEMS & DOMESTIC WELLS

Public water systems with up to 30,000 service connections and 100,000 population served, K-12 public schools, state small water systems and domestic wells that are at-risk of failing.

POTENTIALLY AT-RISK WATER SYSTEMS & DOMESTIC WELLS

Public water systems with up to 30,000 service connections and 100,000 population served, K-12 public schools, state small water systems and domestic wells that are potentially at-risk of failing.

NOT AT-RISK WATER SYSTEMS & DOMESTIC WELLS

Public water systems, K-12 public schools, state small water systems, and domestic wells that are not at-risk of failing.

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Failing Water Systems

State Water Board has been tracking failing water systems since 2017.

Failing criteria was expanded in Spring 2021 beyond water quality violations.

There are currently **387** Failing systems.

Learn more: <u>https://bit.ly/HR2W-</u> <u>FailingWaterSystems</u> Current list here: <u>https://bit.ly/SAFER-</u> <u>Dashboard</u>

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Expanded Criteria for Failing 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
E. coli Violation with an open Enforcement Action	No	Yes
 Treatment Technique Violations (in lieu of an MCL): 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. 	Partially	Expanded
 Monitoring and Reporting Violations (related to an MCL and TTs): 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. 	Νο	Yes

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2022 Failing List Systems

In 2022 there were **441** unique water systems on the Failing list.

Water Systems	Number of Unique Systems	Total Population Served	Average Number of Service Connections	# of Systems on List Greater than 3- Years
Small Water Systems	353 (80%)	318,209 (26%)	249	195 (44%)
Medium Water Systems	23 (5%)	893,557 (73%)	9,868	11 (3%)
K-12 Schools	65 (15%)	17,905 (1%)	6	45 (10%)
TOTAL:	441	1,229,671	715	251 (57%)

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Predictive Power of the 2022 Risk Assessment

Approximately **87%** of systems that were on the Failing list in 2022 were designated At-Risk or Potentially At-Risk in the 2022 Risk Assessment.

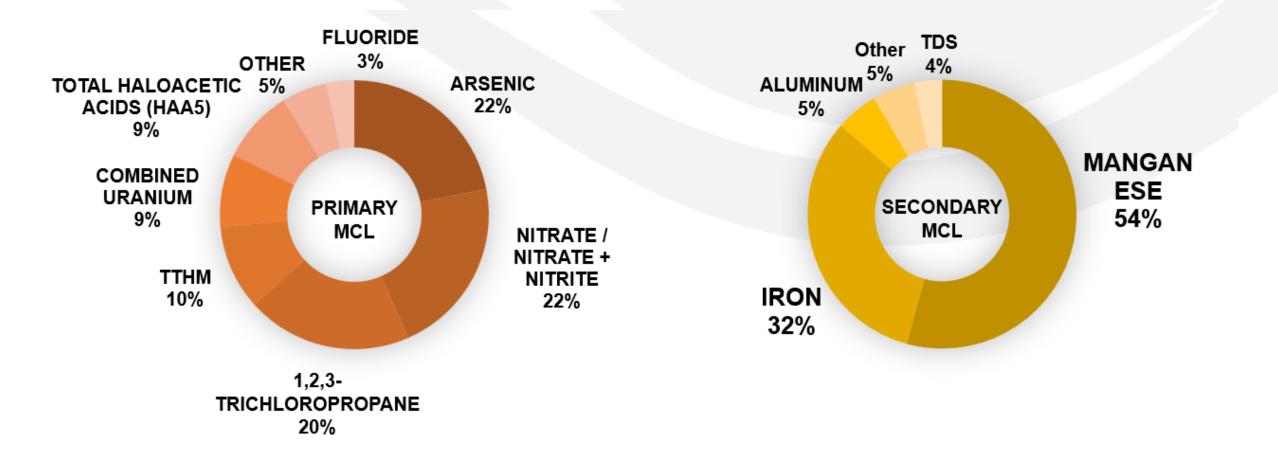
2022 Risk Assessment Result <i>(based on 2021 data)</i>	Total Systems	Systems on the 2022 Failing List	Predictive Power of Risk Assessment
At-Risk	701	281	69.21%
Potentially At-Risk	481	71	17.49%
Not At-Risk	1,884	54	13.30%
TOTAL:	3,066	406	100%

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2022 Failing List Systems Criteria Met

Water Systems	Primary MCL Violation	Secondary MCL Violation	<i>E. coli</i> Violation	Treatment Technique Violation	Monitoring & Reporting Violations
Small Water Systems	259	38	12	27	53
Medium Water Systems	18	2	0	4	2
K-12 Schools	54	0	2	4	8
TOTAL:	331	40	14	35	63

2022 Primary and Secondary Violation Contaminants



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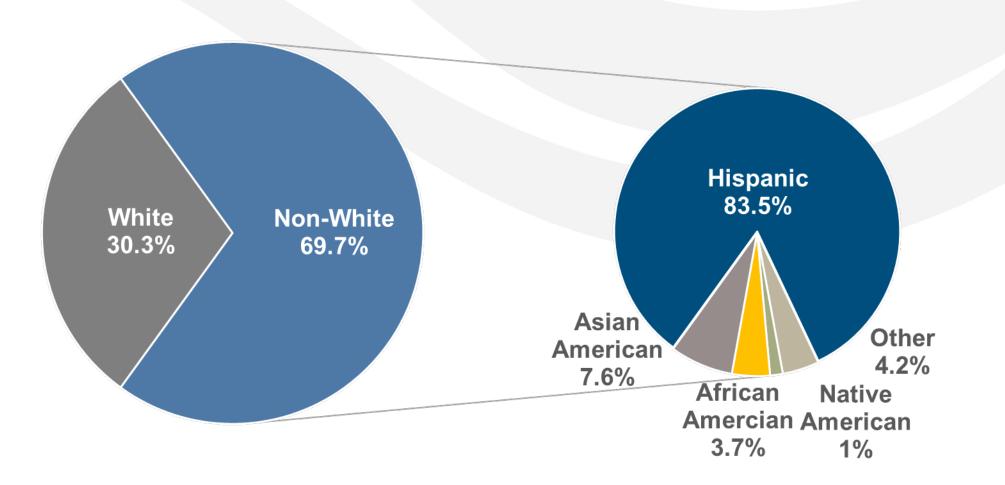
Demographic Analysis of Failing Systems on 1.1.2023

	Statewide (all areas)	Failing
Total Count of Systems	3,053	381
Average CalEnviroScreen 4.0 Pollution Burden Percentile	45.4	53.6
Average percentage of households 2x below federal poverty	30.4%	36.9%
Percent of non-white customers served	57.8%	69.7%

Additional demographic data in the Needs Assessment report.



Distribution of Failing Systems by Majority Race/Ethnicity of Census Tract



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Providing Assistance to Failing Systems

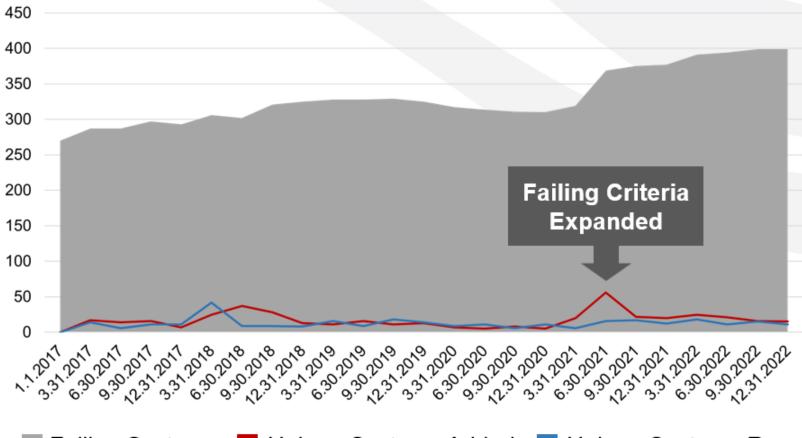
Approximately **90%** of Failing water systems are progressing towards long-term solutions.

Reach out to the State Water Board if you're looking for financial or technical assistance:

- Financial Assistance: <u>https://bit.ly/DFA-Funding</u>
- Technical Assistance: https://bit.ly/TA-FundingProgram

The Challenge

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Approximately **71** unique water systems come on the **Failing list** each year.

To be proactive, the State Water Board needed to develop an **early warning approach** to identify water systems that are **at-risk of failing**.

Failing Systems 📕 Unique Systems Added 📃 Unique Systems Removed

Risk Assessment Results: Public Water Systems



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SAFER Program Priority Systems

FAILING WATER SYSTEMS

Community water systems and K-12 public schools that meet the Failing criteria.

AT-RISK WATER SYSTEMS & DOMESTIC WELLS

Public water systems with up to 30,000 service connections and 100,000 population served, K-12 public schools, state small water systems and domestic wells that are at-risk of failing.

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NOT AT-RISK WATER SYSTEMS & DOMESTIC WELLS

Public water systems, K-12 public schools, state small water systems, and domestic wells that are not at-risk of failing.

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The Inventory: Public Water Systems

Included:

- Community water systems with up 30,000 service connections and 100,000 populations served.
- Non-transient, non-community water systems that are K-12 schools.

Excluded:

- Wholesalers
- Community water systems with more than 30,000 connections or 100,000 population served.
- Military bases are excluded from the <u>financial</u> risk indicators.

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Risk Assessment for Public Water Systems

Public Water System





RISK ASSESSMENT METHODOLOGY

RISK INDICATORS

Quantifiable measurements of key data used to assess a water system's risk of becoming noncompliant with water quality standards.



RISK INDICATOR THRESHOLDS

Values associated with a risk indicator that designates when a water system is more at-risk of becoming non-compliant with water quality standards.



WEIGHTS / SCORES

Application of weight to each risk indicator and indicator category – some are more critical than others in contributing to overall risk.

2022 Risk Indicator Changes

The State Water Board removed 5 risk indicators and added 8 new indicators.

WATER QUALITY

E. Coli Presence

Increasing Presence of Water Quality Trends Towards MCL

Treatment Technique Violations

Past Presence on the Failing List

Maximum Duration of High Potential Exposure (HPE)

Percentage of Sources Exceeding an MCL

Constituents of Emerging Concern

ACCESSIBILITY

Number of Sources

Absence of Interties

Water Source Types

DWR – Drought & Water Shortage Risk Assessment Results

Critically Overdrafted Groundwater Basin

Bottled or Hauled Water Reliance

Source Capacity Violations

AFFORDABILITY

% Median Household Income

Extreme Water Bill

% Shut-Offs

% of Residential Arrearages

Residential Arrearage Burden

TMF CAPACITY

of Service Connections

Operator Certification Violations

Monitoring and Reporting Violations

Significant Deficiencies

Extensive Treatment Installed

Income

Operating Ratio

Days Cash on Hand

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2023 Risk Indicator Changes

The State Water Board removed 2 and added 1 affordability risk indicator. 21 total indicators.

WATER QUALITY

E. Coli Presence

Increasing Presence of Water Quality Trends Towards MCL

Treatment Technique Violations

Past Presence on the Failing List

Percentage of Sources Exceeding an MCL

Constituents of Emerging Concern

ACCESSIBILITY

Number of Sources

Absence of Interties

DWR – Drought & Water Shortage Risk Assessment Results

Critically Overdrafted Groundwater Basin

Bottled or Hauled Water Reliance

Source Capacity Violations

AFFORDABILITY

% Median Household Income

Extreme Water Bill

NEW: Household Socioeconomic Burden

% of Residential

Arrearages

Residential Arrearage Burden

TMF CAPACITY

Operator Certification Violations

Monitoring and Reporting Violations

Significant Deficiencies

Income

Operating Ratio

Days Cash on Hand

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Risk Indicator Thresholds, Scores, and Weights

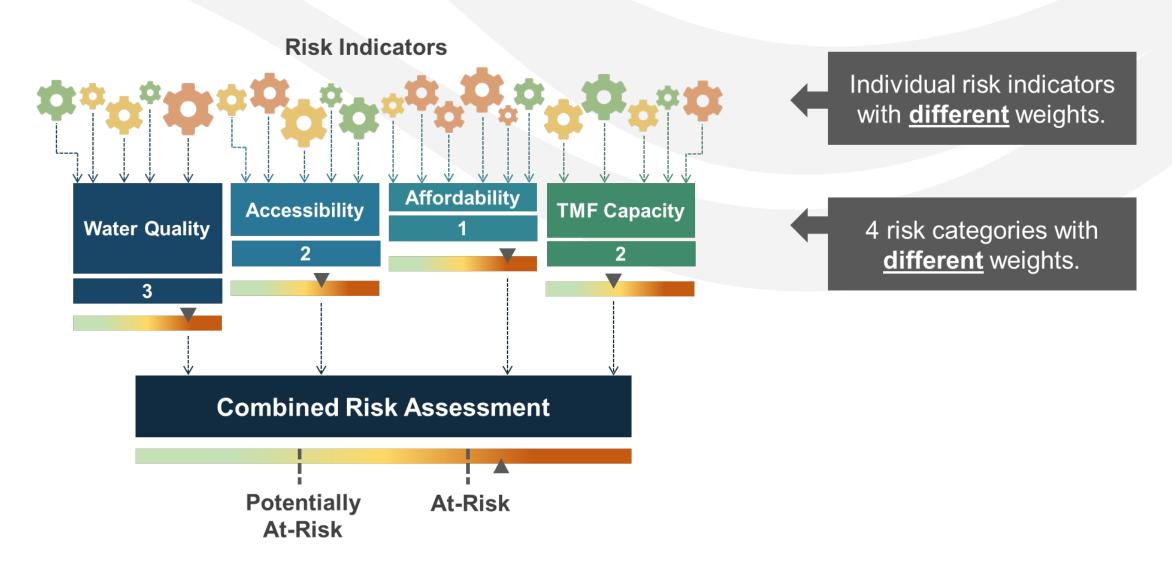
To enable the evaluation and comparison of risk indicators, a standardized **score** range between 0 and 1 was applied to each risk indicator threshold.

Weights between 1 and 3 were applied to each risk indicator to indicate which risk indicators are comparatively more critical.

Example:

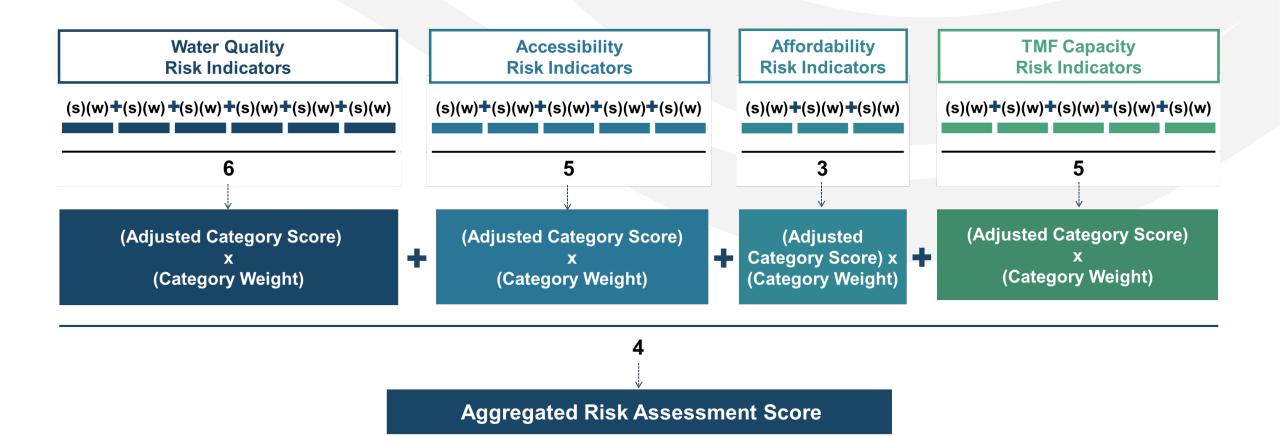
Risk Indicator	Thresholds	Raw Score	Weight	Max Risk Score	Risk Level
Past Presence on the Failing:	Threshold 0 = 0 occurrences over the last three years	0	N/A	0	None
List	Threshold 1 = 1 occurrences over the last three years.	0.5	2	1	Medium
	Threshold 2 = 2 or more occurrences over the last three years	1	2	2	High

Aggregated Risk Assessment with Indicator & Category Weights



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Aggregated Risk Assessment Calculation Methodology Example



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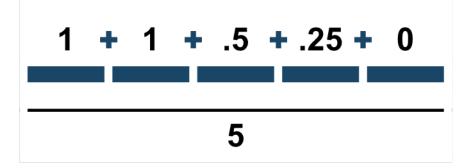
Adjusting for Missing Risk Indicator Data

A system may have failed to report necessary data or the system may not have data to report.

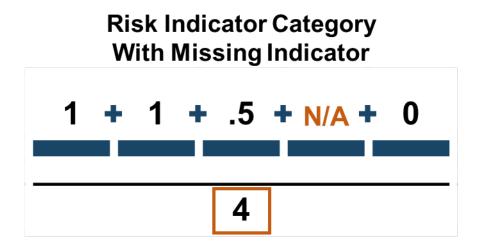
The Risk Assessment removed any value for a missing risk indicator and redistributed the scores/weights to risk indicators within the same category which did have valid values.

The same approach was used for risk indicator categories as well.

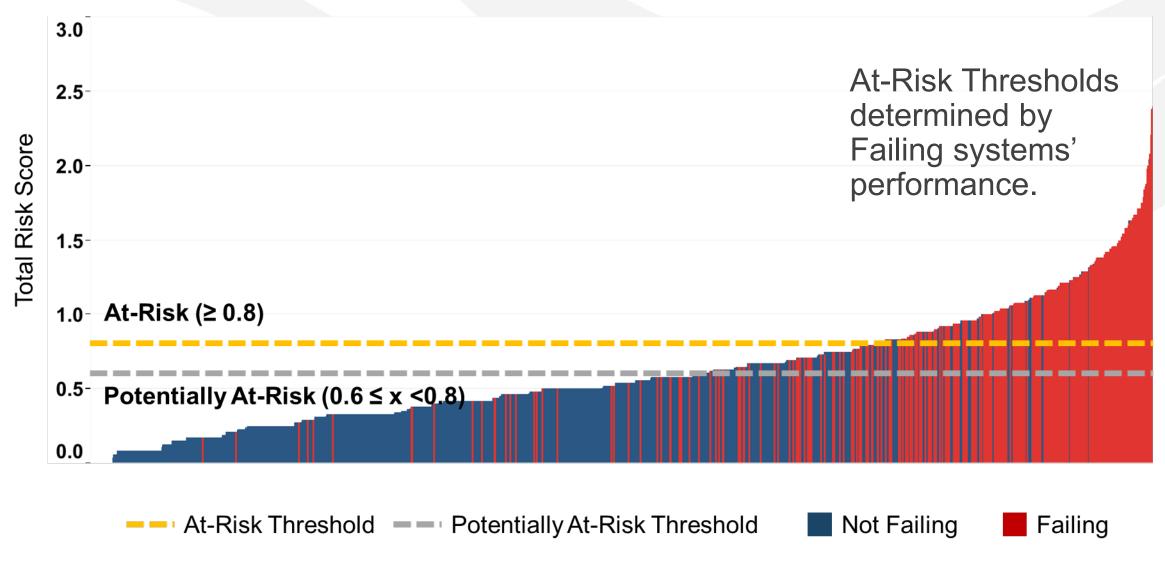
Risk Indicator Category With No Missing Indicator



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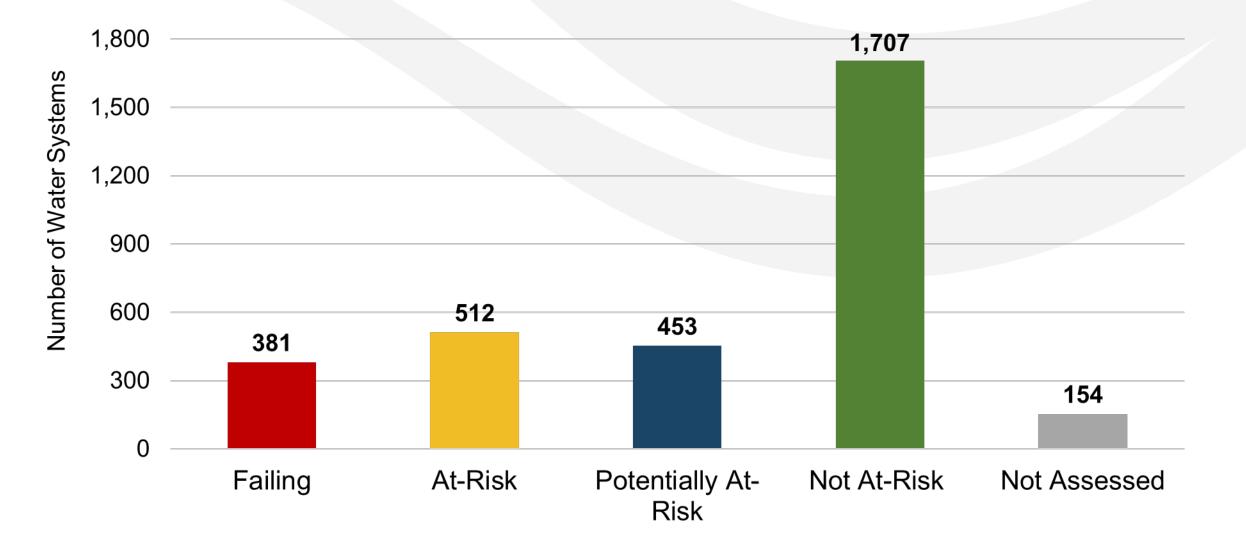


Risk Assessment: Aggregated Distribution of Weighted Scores



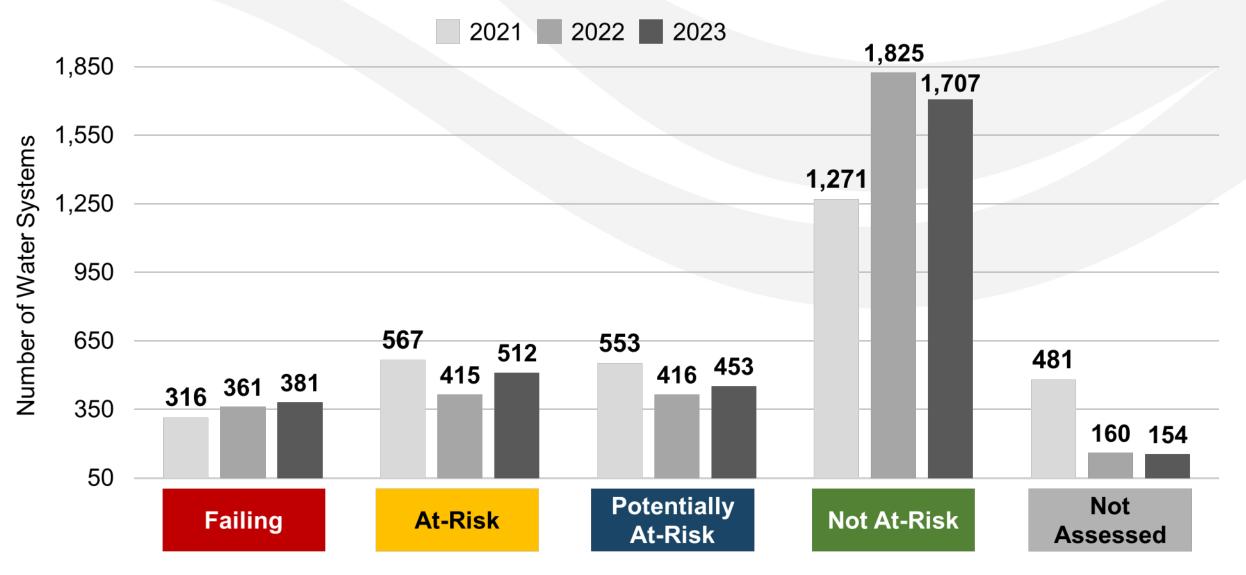
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2023 Risk Assessment Results (n=3,053)



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Risk Assessment Results 2021-2023



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2022 vs. 2023 Risk Assessment Results Comparison

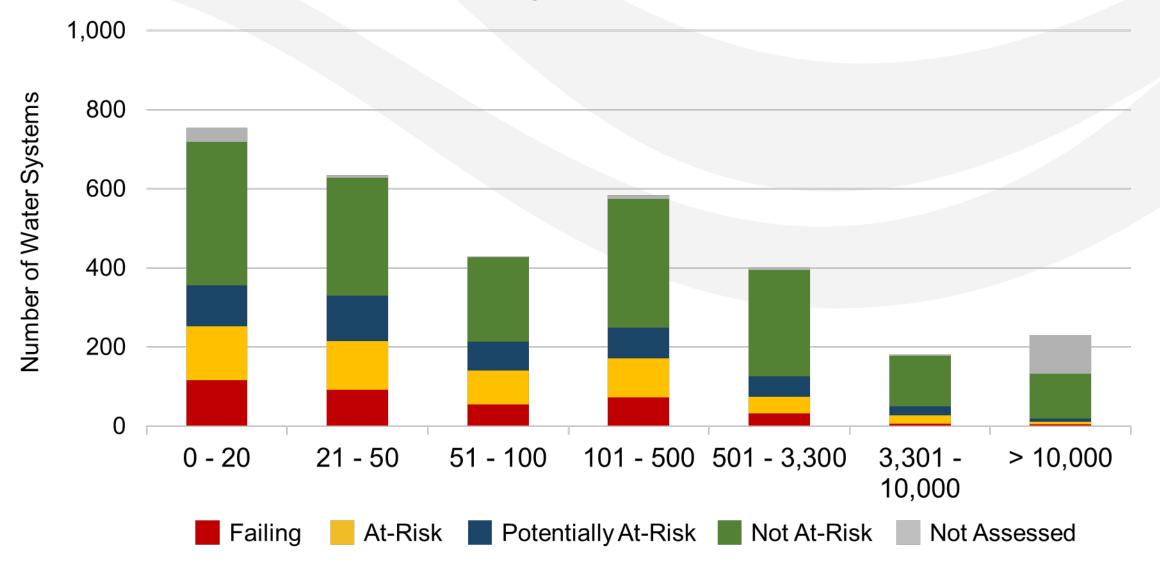
Compared to 2022, the 2023 Assessment identifies **113 more At-Risk** water systems and a statewide increase in total average risk scores.

- The Affordability category changes and new affordability risk indicator 'Household Socioeconomic Burden.' Learn more in Appendix A.
- 119 (4%) of At-Risk systems were automatically at-risk, because they have relied on bottled and/or hauled water to meet customer demand within the last three years.

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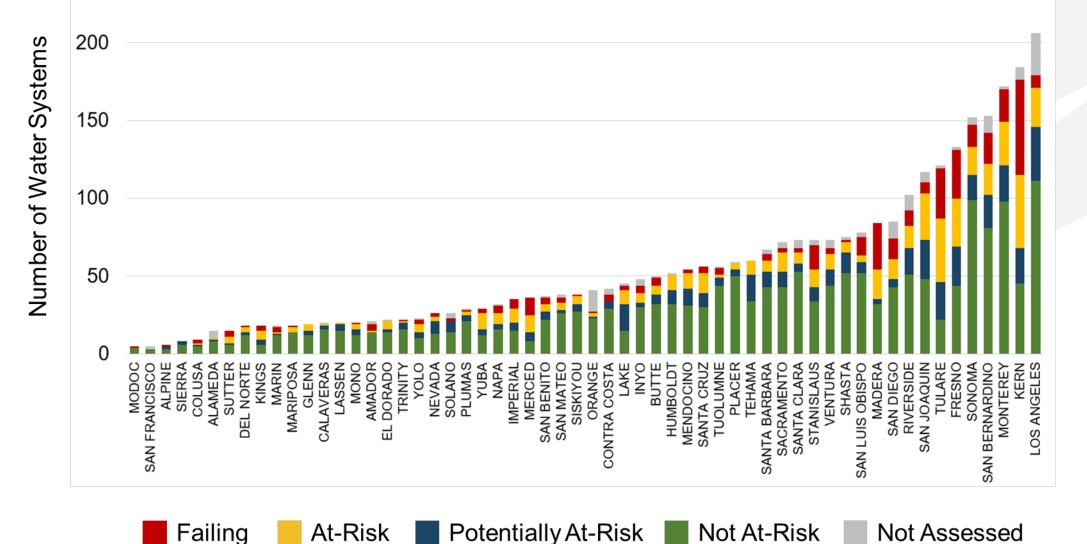
• In 2023, there were **30 more systems** automatically At-Risk compared to the 2022 Risk Assessment.

2023 Risk Assessment Results by Connection Size



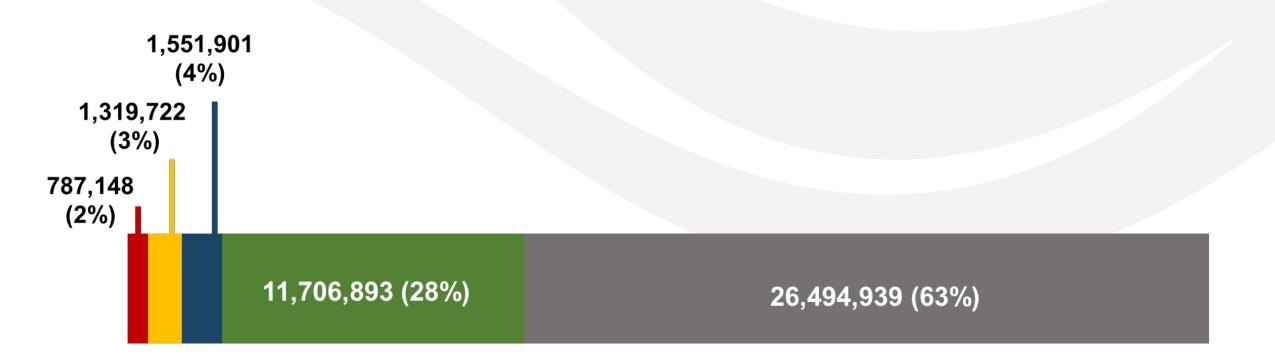
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Risk Assessment Results by County, Proportional to All Community Water Systems & Non-Transient, Non-Community K-12 Schools



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Population Served of Systems in the Risk Assessment*



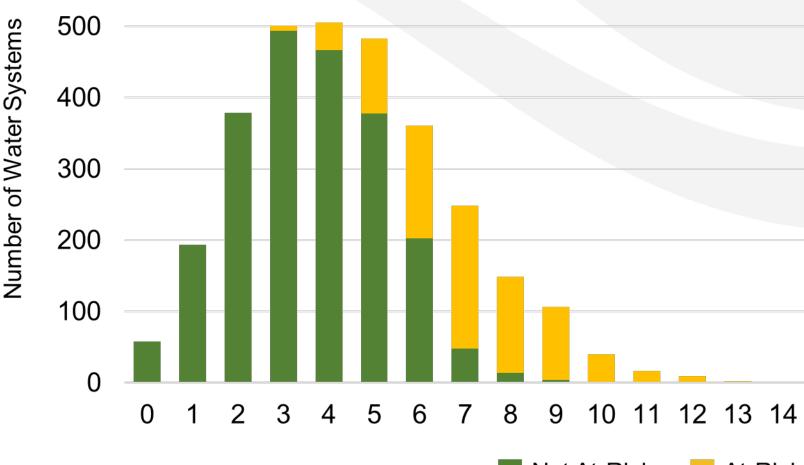
Failing At-Risk Potentially At-Risk Not At-Risk Not Assessed

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* The Risk Assessment excluded large water systems that serve the majority of Californians.

Distribution of the Number of Risk Indicator Thresholds Exceeded

600



All At-Risk systems exceed a threshold of concern for **at least 3 risk indicators**.

The **average** At-Risk system exceeded more than **7 risk indicator** thresholds.

This means that systems were not designated as At-Risk based on a single or even a handful of risk indicators.

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Not At-Risk

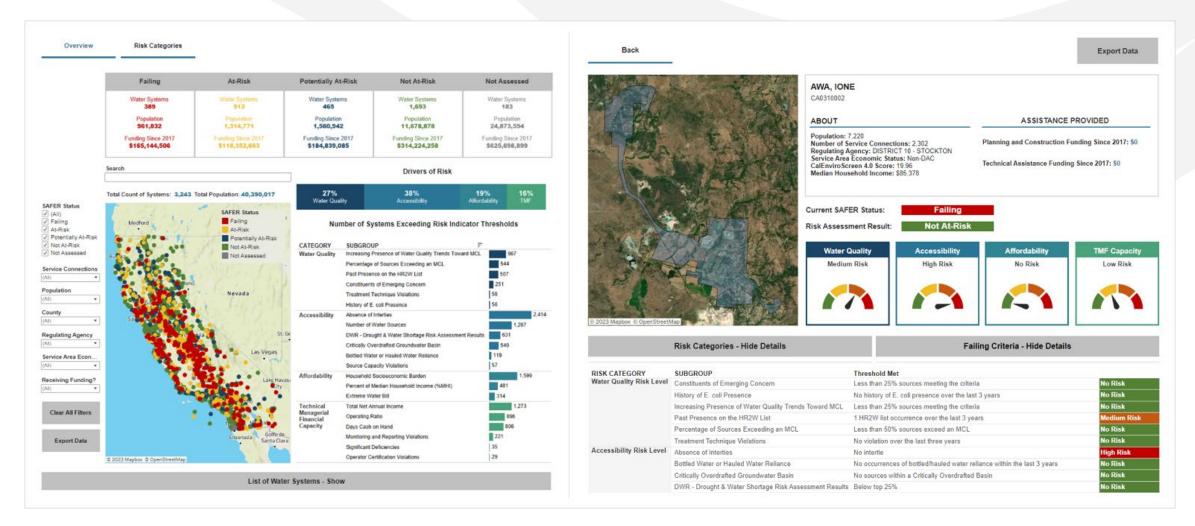
Demographic Analysis of At-Risk Systems

	Statewide (all areas)	Not At-Risk	Potentially At-Risk	At-Risk	Failing
Total Count of Systems	3,053	1,707	453	512	381
Average CalEnviroScreen 4.0 Pollution Burden Percentile	45.4	37.7	45.4	50.7	53.6
Average percentage of households 2x below federal poverty	30.4%	25.8%	35%	37%	36.9%
Percent of non-white customers served	57.8%	53.7%	67.5%	75.4%	69.7%

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Additional demographic data in the Needs Assessment report.

Access the At-Risk List and Raw Data: SAFER Dashboard



https://bit.ly/SAFER-Dashboard-23

CALIFORNIA WATER BOARDS

Water System Data Change Requests

See something that isn't right? Water systems can submit a **data change request** here:

https://forms.office.com/g/BdNjFNFZvJ

Requests will be reviewed by State Water Board staff.



Needs Assessment Data Change Request Form

The purpose of this form is to provide California water systems the opportunity to request underlying data changes related to the 2021 Risk Assessment and Affordability Assessment.

Hi Kristyn, when you submit this form, the owner will be able to see your name and email address.

* Required

1. Please provide your PWSID *

Enter your answer

2. Please provide your Water System Name *

Enter your answer

3. First Name, Last Name

4. Job Title *

Enter your answer

5. Email Address *

Enter vour answer

6. Phone Number

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Discussion Topic 1: Risk Assessment for Public Water Systems

Do you have any questions or comments about the Risk Assessment for public water systems results?

Ways to Participate

1. Watch ONLY: Visit video.calepa.ca.gov

2. Email: Submit a comment or ask a question that will be read aloud, send an email to: <u>safer@waterboards.ca.gov</u>

3. Q&A: Submit a question using the Q&A feature at the bottom of your Zoom Screen. You can UPVOTE any question you would like answered.

4. Raise Hand: Attendees will be given the opportunity to provide verbal comment or ask questions, if you're interested in this option, please raise your virtual hand when the time is right.

- Please wait for your name to be called.
- Public comments are 3 minutes each.

Risk Assessment Results: State Small Water Systems & Domestic Wells

Emily Houlihan

GAMA Unit, Division of Water Quality State Water Resources Control Board

Komal Bangia

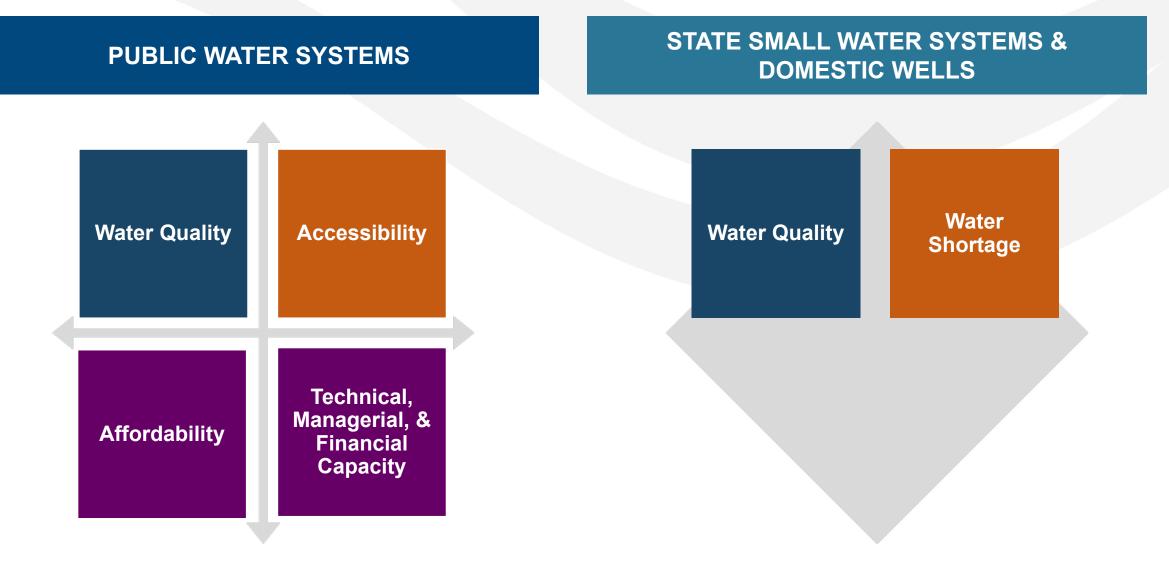
Research Scientist 3

Office of Environmental Health Hazard Assessment



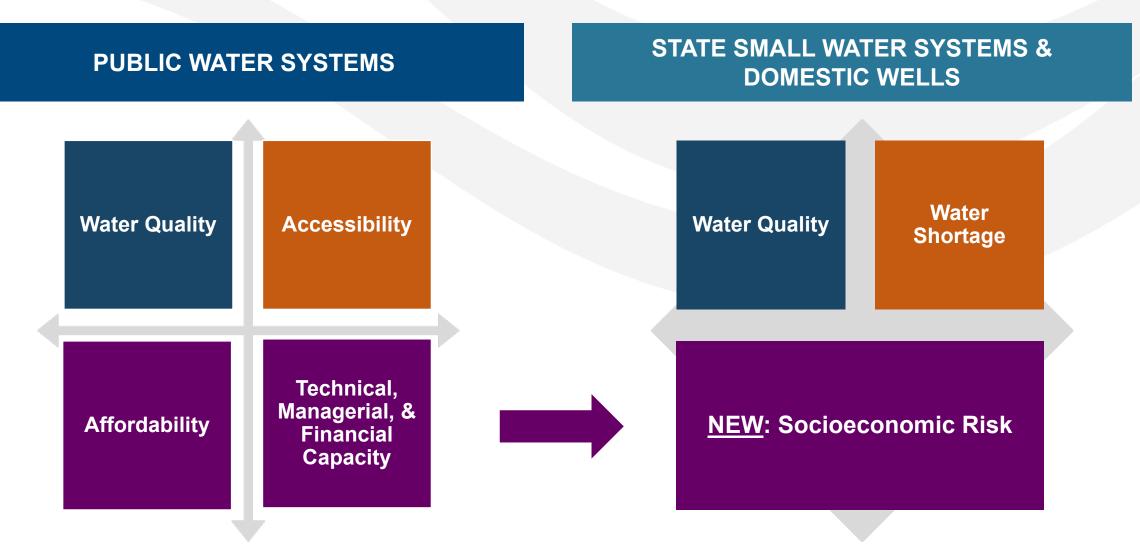
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Risk Assessment Categories: 2022



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Risk Assessment Categories: 2023



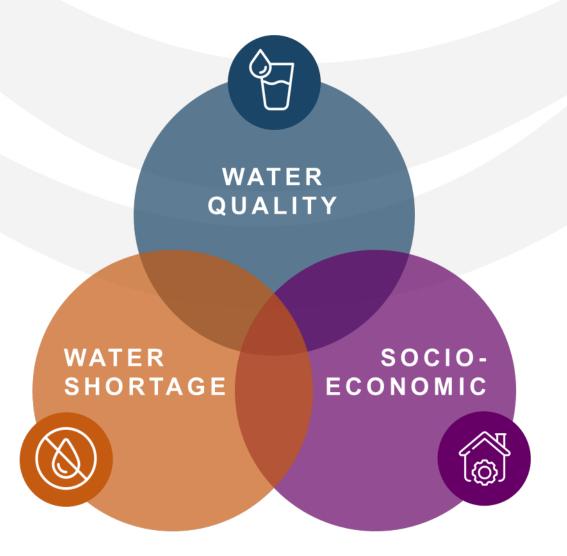
Goal is better alignment between Assessments

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Risk Assessment for State Small Water Systems & Domestic Wells

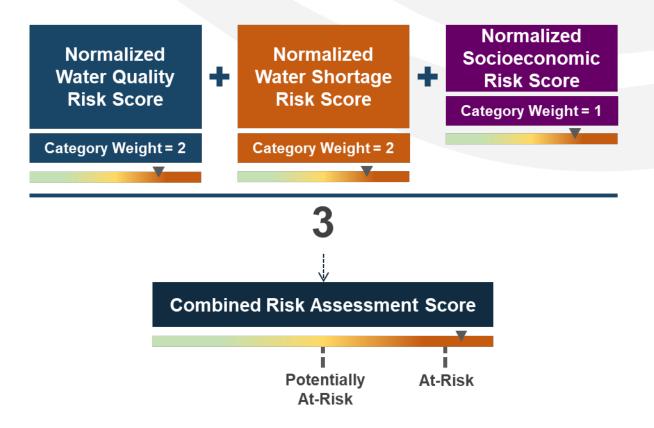
The State Water Board (SWB) worked with Office of Environmental Health Hazard Assessment (OEHHA) to develop the new Socioeconomic Risk Layer



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2023 Methodology: Risk Assessment for State Small Water Systems & Domestic Wells

The normalized scores for water quality, water shortage, and socioeconomic risk for each square mile section where state small water systems and domestic wells are located were added together and divided by the number of variables (three).



NEW Socioeconomic Risk Category

	Census Data			
County Water Quality Testing for Domestic Wells	County Level Services for Domestic Wells	Well Costs	Economic Characteristics	
Testing Requirements	Administrative Services	Replacement Well Permit	Household Socioeconomic	
Testing Type	Website Quality	Cost	Burden	
		Average Number of Wells	Linguistic Isolation	
Testing Impacts on Permitting	Funding Resources Available to Domestic Well	Drilled Per Unique Driller in the Past Two Years	Unemployment	
Water Quality Monitoring Owners			Transportation Limitations	

County Data: OEHHA Comprehensive Data Collection Effort

In 2022, OEHHA and the State Water Board reviewed county-specific information about domestic wells for all 58 California counties to develop 8 risk indicators. This effort included:

- 1. Evaluation of publicly available information related to domestic wells on each county's website, including attachments and links.
- 2. Review of domestic well ordinances, fee schedules, and drought assistance programs.
- 3. In cases where information was unavailable online, counties were contacted via phone.

These indicators are used in the Risk Assessment to capture risk associated with resource availability and County managerial capacity to support communities served by state small water systems and domestic wells.

County data available here: *https://bit.ly/3RhZ3SU*

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2023 Risk Assessment Results for State Small Water Systems & Domestic Wells

Systems	At-Risk	Potentially At-Risk	Not At-Risk
State Small Water Systems	245 (19%)	620 (48%)	432 (33%)
Domestic Wells	81,588 (28%)	103,986 (36%)	105,827 (36%)

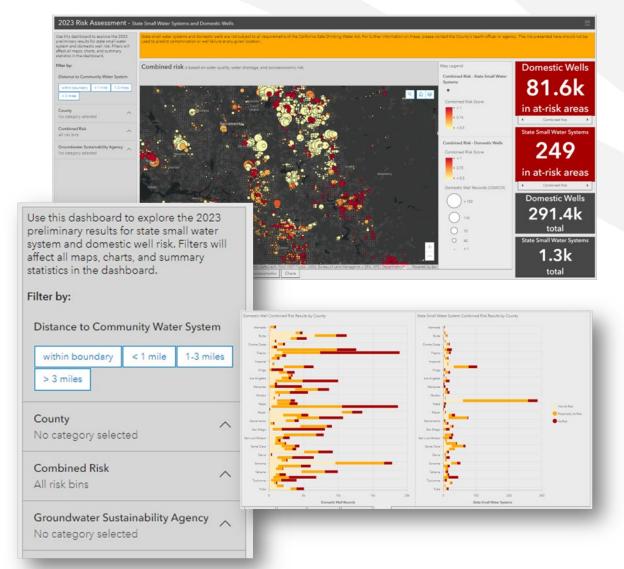


Demographic Analysis of Risk Assessment Results for State Small Water Systems (SSWS) & Domestic Wells (DW)

	Statewide	Not At-Risk	Potentially At- Risk	At-Risk
Total Count of SSWS	1,297	105,827	103, 986	81,588
Total Count of DW	291,401	432	620	245
Average CalEnviroScreen 4.0 Pollution Burden Percentile	50.0	36.3 (SSWS) 33.5 (DW)	43.3 (SSWS) 46.6 (DW)	40.0 (SSWS) 47.9 (DW)
Average percentage of households 2x below federal poverty	28.2%	26.3% (SSWS) 23.9% (DW)	26.1% (SSWS) 27.4% (DW)	29.3% (SSWS) 31.4% (DW)
Percent of non-white customers served	42.7% (SSWS) 19.8% (DW)	30.3% (SSWS) 14.2% (DW)	56.8% (SSWS) 22.9% (DW)	29% (SSWS) 23.2% (DW)



Explore the Data: NEW Dashboard



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Explore the Dashboard: <u>https://bit.ly/RA-</u> Dashboard-23

New Dashboard Features:

- Well density bubble to better identify well locations
- New filters:
 - Distance to nearby community water system
 - County
 - Risk level
 - Groundwater Sustainability Agency
- Dashboard updates summary of At-Risk systems when filters are applied.
- User tabs to explore different risk categories

Distance to Nearest Community Water System

New Dashboard Feature: Distance to existing community water systems is important for planning how to mitigate risk, because after a well has gone dry or experiencing water quality issues, it can take a considerable amount of time for a long-term solution to be implemented.

Distance to Nearest Community Water System	At-Risk State Small Water Systems	At-Risk Domestic Wells
Within boundary	81 (33%)	14,675 (18%)
< 1 mile	99 (40%)	26,579 (33%)
1 – 3 miles	39 (16%)	22,424 (27%)
> 3 miles	26 (11%)	17,910 (22%)

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Discussion Topic 2: Risk Assessment for State Small Water Systems & Domestic Wells

Do you have any questions or comments about the Risk Assessment for state small water systems & domestic wells results?

Ways to Participate

1. Watch ONLY: Visit video.calepa.ca.gov

2. Email: Submit a comment or ask a question that will be read aloud, send an email to: safer@waterboards.ca.gov

3. Q&A: Submit a question using the Q&A feature at the bottom of your Zoom Screen. You can UPVOTE any question you would like answered.

4. Raise Hand: Attendees will be given the opportunity to provide verbal comment or ask questions, if you're interested in this option, please raise your virtual hand when the time is right.

- Please wait for your name to be called.
- Public comments are 3 minutes each.

5 Minute Break



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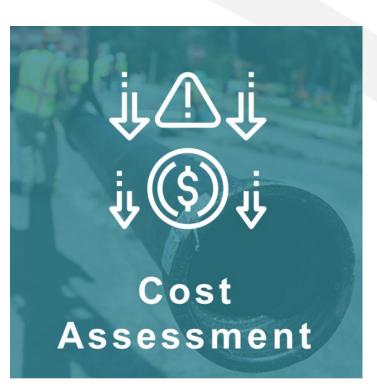
Cost Assessment Update

Mawj Khammas Needs Analysis Unit Division of Drinking Water State Water Resources Control Board



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Cost Assessment



Failing & At-Risk Systems and Domestic Wells **2021:** Conducted a full **Cost Assessment** for Failing and At-Risk community water systems, SSWSs, and domestic wells working with contractors.

2022: Conducted a **Drought Infrastructure Cost Assessment** in response to stakeholder feedback and the need to support SB 552 planning.

2023-24: State Water Board is **re-building** the Cost Assessment Model to update cost assumptions, decision criteria & incorporate drought infrastructure needs.

Re-build will take 2 years, updated Cost Assessment results expected for <u>2024</u> Needs Assessment Report.

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Summary of Proposed Changes to Cost Model



Updating cost assumptions embedded in the model through an analysis of State Water Board funding projects, contractor, vender, and stakeholder outreach.



Determine if physical consolidation is a viable model solution based on (1) physical location criteria and (2) estimated cost per connection.



The results of the Risk Assessment will be incorporated to better match long-term solutions to water systems and domestic wells.



The Model will incorporate system-level drought infrastructure cost estimates into the total estimated costs. Technical Assistance and Administrator costs will be separated.



The sustainability and resiliency assessment will be removed to allow for the new approach for identifying the best modeled solution per system – utilizing clear selection criteria.

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2023 Cost Assessment Workshops

The State Water Board will be hosting at least three public workshops in 2023 to solicit public and stakeholder feedback on the proposed enhancements to the Cost Assessment.

These three workshops will cover the following:

- 1. Physical consolidation GIS analysis and cost assumptions.
- 2. Modeled treatment methodologies and cost assumptions.
- 3. Complementary long-term solutions and emergency solutions cost assumptions.

Discussion Topic 3: Cost Assessment Update

Do you have any questions or comments about the Cost Assessment Update?

Ways to Participate

1. Watch ONLY: Visit video.calepa.ca.gov

2. Email: Submit a comment or ask a question that will be read aloud, send an email to: safer@waterboards.ca.gov

3. Q&A: Submit a question using the Q&A feature at the bottom of your Zoom Screen. You can UPVOTE any question you would like answered.

4. Raise Hand: Attendees will be given the opportunity to provide verbal comment or ask questions, if you're interested in this option, please raise your virtual hand when the time is right.

- Please wait for your name to be called.
- Public comments are 3 minutes each.

Affordability Assessment Results

Kristyn Abhold Needs Analysis Unit, SAFER Section Division of Drinking Water State Water Resources Control Board



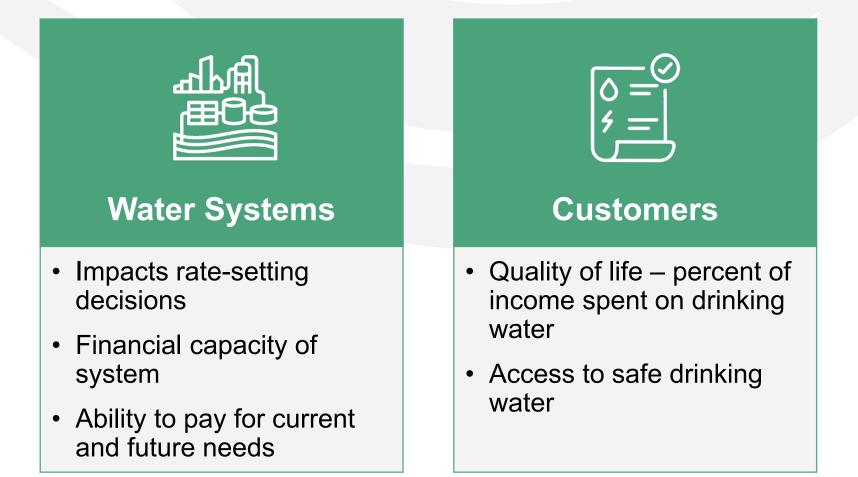
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Why Measuring Affordability Matters



State & Federal Gov.

- Funding eligibilities: Grant vs. Loan
- Prioritization for & access to technical assistance
- Fee waivers



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Affordability Assessment Purpose

Identify **disadvantaged community water systems**, that have instituted customer charges that **exceed** the **"Affordability Threshold."**

Legislation does not define what the Affordability Threshold should be. The State Water Board is working with partners to develop an approach for defining what the Affordability Threshold should be.



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.

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SB 200 Requirements: Annual Affordability Assessment: STEP 1

State Water Board must identify disadvantaged community water systems, that have instituted customer charges that exceed the "Affordability Threshold" established by the State Water Board in order to provide drinking water that meets State and Federal

water that meets State and Federa standards.

STEP 1

Identifying Systems to Analyze

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SB 200 Requirements: Annual Affordability Assessment: STEP 2

State Water Board must identify disadvantaged community water systems, that have instituted customer charges that exceed the "Affordability Threshold"

established by the State Water Board in order to provide drinking water that meets State and Federal standards.

STEP 1

STEP 2

Conduct Affordability Assessment

2022 Affordability Assessment Workshops

Workshop 1: Overview of Drinking Water Affordability

Presentation: https://bit.ly/AffordabilityWorkshop1-22

Workshop 2: Potential Affordability Indicators

- Presentation: https://bit.ly/AffordabilityWorkshop2-22
- White Paper: <u>https://bit.ly/AffordabilityWP-0922</u>

Workshop 3: Affordability Assessment Methodology & Threshold Setting

- Presentation: https://bit.ly/AffordabilityWorkshop3-22
- White Paper: <u>https://bit.ly/AffordabilityWP-1122</u>



STEP 1 DAC Determination



STEP 1: Identifying Systems Included in the Affordability Assessment



STEP 1

Identify Systems Serving Disadvantaged Communities Disadvantaged (DAC) and Severely Disadvantaged (SDAC) communities are currently identified using U.S. Census **Median Household Income (MHI)** data within a system's service area.

Established thresholds in regulation:

- DAC: MHI is less than 80% statewide MHI.
- **SDAC**: MHI is less than 60% statewide MHI.

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STEP 1: 2022 Results for Public Water Systems



STEP 1

Identify Systems Serving Disadvantaged Communities

2,845 Community Water Systems Assessed

1,483 (52%) DAC & SDAC Systems

This means that community water systems do <u>48%</u> of not get to Step 2.

STEP 2 Affordability Assessment



SB 200 Requirements: Annual Affordability Assessment: STEP 2

State Water Board must identify disadvantaged community water systems, that have instituted customer charges that exceed the "Affordability Threshold"

established by the State Water Board in order to provide drinking water that meets State and Federal standards.



STEP 2

Conduct Affordability Assessment

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Community Water Systems | Affordability Assessment Indicators

2020	2021	2022	2023
% Median Household Income	% Median Household Income	% Median Household Income	% Median Household Income
	Extreme Water Bill	Extreme Water Bill	Extreme Water Bill
	% Shut-Offs	% Shut-Offs	% of Residential
		% of Residential	Arrearages
		Arrearages	Residential Arrearage
		Residential Arrearage	Burden
		Burden	Poverty & Housing Burden = " <mark>Household</mark> Socioeconomic Burden"

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STEP 2: Affordability Indicators Over Time

Affordability Indicators	2020	2021	2022	2023	2024	2025
% Median Household Income	X	X	x	Х	Х	Х
Extreme Water Bill		X	X	Х	Х	Х
% Shut-Offs		X				Х
% of Residential Arrearages			x			X
Residential Arrearage Burden			Х			Х
NEW Household Socioeconomic Burden				X	X	Х



% Median Household Income

This indicator measures the annual system-wide average residential water bill for six hundred cubic feet (HCF) per month relative to the annual Median Household Income (MHI) within a water system's service area.

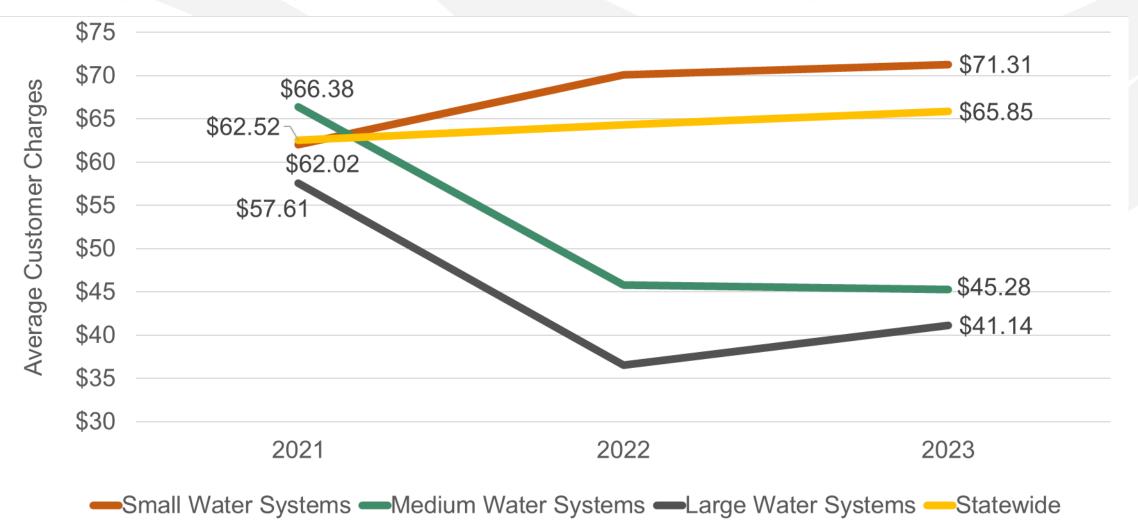
Affordability Indicator	Thresholds	Risk Level = Affordability Burden
Percent of Median	Threshold 0 = Less than 1.49%	None
Household Income (%MHI)	Threshold 1 = 1.5% or greater	High

Extreme Water Bill

Measures a system's residential customer charges for 6 HCF compared the state-wide average. Identifies communities that are paying much higher rates.

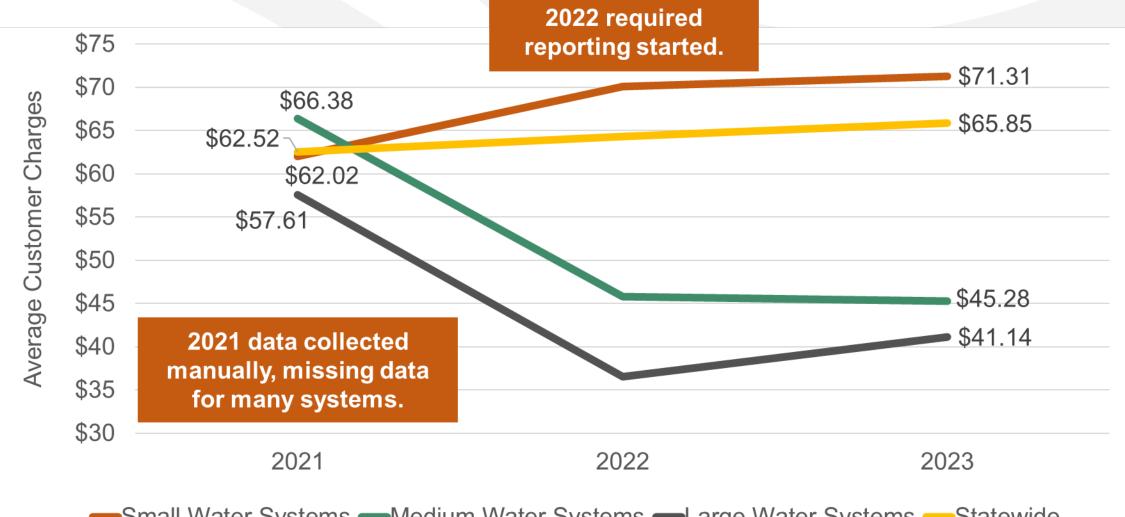
Affordability Indicator	Thresholds	Risk Level = Affordability Burden
Extreme Water	Threshold 0 = Below 149.99% of the statewide average.	None
Bill	Threshold 1 = 150% or greater of the statewide average.	High

Average Monthly Residential Customer Charges for 6 HCF



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Average Monthly Residential Customer Charges for 6 HCF



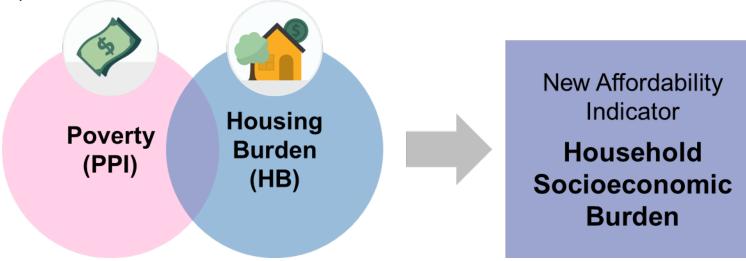
-Small Water Systems - Medium Water Systems - Large Water Systems - Statewide

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NEW Household Socioeconomic Burden

This indicator identifies systems that serve communities that have both high levels of poverty and high housing costs for low-income households. These communities may be struggling to pay their current water bill and/or afford future customer charge increases when their disposable income is constrained by high housing costs. This indicator is a composite indicator of two data points:

- **Poverty Prevalence** measures the percent of the population living below two times the federal poverty level and can be represented reliably at the census block group, tract, and county level.
- Housing Burden Indicator measures the percent of households in a census tract that are both low income (making less than 80% of the Housing and Urban Development (HUD) Area Median Family Income) and severely burdened by housing costs (paying greater than 50% of their income to housing costs).



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Household Socioeconomic Burden with Component Threshold Scores

Poverty (PPI)	High Risk ≥ 35%	Score = 1	N/A	0.5	0.625	1
	High Risk 20% - 35%	Score = 0.25	N/A	0.125	0.25	0.625
	None < 20%	Score = 0	N/A	0	0.125	0.5
	Unknown	Score = N/A	N/A	N/A	N/A	N/A
			Score = N/A	Score = 0	Score = 0.25	Score = 1
			Unknown	None < 14%	High Risk 14% - 21%	High Risk ≥ 21%
				Ηοι	ising Burden (HB)

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Household Socioeconomic Burden

Affordability Indicator	Thresholds	Risk Level = Affordability Burden
Household	Threshold 0 = Combined score below 0.125	None
Socioeconomic Burden	Threshold 1 = Combined score 0.25 of higher	High

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"Affordability Threshold" Updated for 2023 Affordability Assessment

Based on the total sum of threshold met for all affordability indicators.



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Affordability Assessment Results by DAC/SDAC SAFER Status

High: 3 indicator thresholds metMedium: 2 indicator thresholds metLow: 1 indicator threshold met

Community Status	Total Systems	High Affordability Burden	Medium Affordability Burden	Low Affordability Burden	None
DAC/SDAC	1,483	75 (5%)	246 (17%)	889 (60%)	272 (18%)
Non-DAC	1,347	19 (1%)	107 (8%)	394 (29%)	828 (61%)
Missing DAC Status	15	0 (0%)	1 (7%)	8 (53%)	6 (40%)
TOTAL:	2,845	94 (3%)	354 (12%)	1,291 (45%)	1,106 (39%)

Affordability Assessment Results by DAC/SDAC SAFER Status

High: 3 indicator thresholds metMedium: 2 indicator thresholds metLow: 1 indicator threshold met

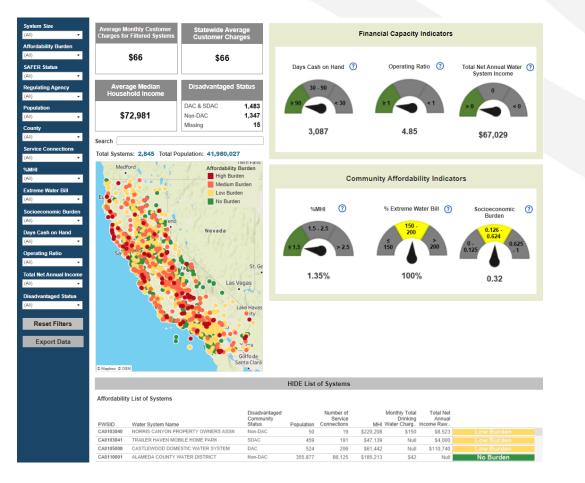
Community Status	Total Systems	High Affordability Burden	Medium Affordability Burden	Low Affordability Burden	None
Failing DAC/SDAC	203	13 (6%)	50 (25%)	120 (59%)	20 (10%)
At-Risk DAC/SDAC	324	30 (9%)	85 (26%)	177 (55%)	32 (10%)
Potentially At-Risk DAC/SDAC	257	15 (6%)	45 (18%)	171 (67%)	26 (10%)
Not At-Risk DAC/SDAC	656	18 (3%)	64 (10%)	395 (60%)	179 (27%)
Not Assessed DAC/SDAC	43	0 (0%)	2 (5%)	26 (60%)	15 (35%)
TOTAL:	1,483	76 (5%)	246 (17%)	889 (60%)	272 (18%)

Demographic Analysis of Community Water Systems & Affordability Assessment Results

	Statewide (all CWSs)	No Afford. Burden CWSs	Low Afford. Burden CWSs	Medium Afford. Burden CWSs	High Afford. Burden CWSs
Total Count of Systems	2,845	1,105	1,291	354	95
Average CalEnviroScreen 4.0 Pollution Burden Percentile	42.8	39.9	45.8	42	40.2
Average percentage of households 2x below federal poverty	30.2%	16.9%	38.1%	38.2%	41.4%
Percent of non-white customers served	43.1%	36.2%	49.4%	41.6%	39.2%

Additional demographic data in the Needs Assessment report.

Explore the Data: NEW Financial Capacity & Affordability Dashboard



Explore the Dashboard: https://bit.ly/43W8vRK

Explore relationships between water system financial capacity and affordability.

New Dashboard Features:

- Filter by SAFER Status, Affordability and Financial Capacity indicators.
- Includes DAC/SDAC status.
- Auto-calculated averages based on filtered selection.
- Can look-up individual water systems.

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Access the Affordability Assessment Results and Raw Data

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	ystem Name	Number of Service Connections	%MHI Affordability Assessment Score	%Shut-Offs Affordability Assessment Score	Extreme Waterbill Affordability Assessment Score		Community Status	SAFE Statu
	S - RC FARMS WS	2	Missing	Missing	Missing	Missing	Missing	Non HR
	HILL WS #01	29	Missing	Missing	Missing	Missing	Non-DAC	Non HF
	FACILITIES AUTHORITY O COMMUNITY SERVI	72	Missing	Missing Missing	Missing	Missing	Missing DAC	Non HR
6 CAS200526 LPA62 - TERAMA COUNTY	HIDDEN HARBOR MARINA & R	70	Missing	Missing	Missing	Missing	Missing	Non HR
7 CA3310075 DISTRICT 20 - RIVERSIDE 8 CA3310083 DISTRICT 20 - RIVERSIDE	WESTERN MWD (ARLINGTON) CHINO BASIN DESALTER AUTH	DESALTER 2	Missing	Missing Missing	Missing	Missing	Missing	Non HR
9 CA3500930 DISTRICT 05 - MONTEREY	BENITO VALLEY FARMS	11	Missing	Missing	Missing	Missing	Missing	Non HR
10 CA4200867 LPA72 - SANTA BARBARA COUNT		13	Missing	Missing	Missing	Missing	Missing	At-Ri
11 CA4200885 LPA72 - SANTA BARBARA COUNT 12 CA4210028 DISTRICT 06 - SANTA BARBARA	CACHUMA PROJECT	15 40	Missing	Missing Missing	Missing	Missing	Missing Missing	Non HF
13 CA1800522 DISTRICT 02 - LASSEN	HONEY LAKE CAMPGROUND	11	Missing	Missing	Missing	Missing	Missing	Non HF
14 CA1710010 DISTRICT 03 - MENDOCINO 15 CA2700624 LPA57 - MONTEREY COUNTY	LOWER LAKE COUNTY WATER	23	Missing	Missing	Missing	Missing	SDAC	Non HR
15 CA2700624 LPAS7 - MONTEREY COUNTY 16 CA2700629 LPAS7 - MONTEREY COUNTY	LEAFWOOD COMMUNITY WA MANZANITA HILLS WA	31	Missing	Missing	Missing	Missing	Non-DAC Non-DAC	Non HF
17 CA1000054 DISTRICT 23 - FRESNO	LAS DELTAS MUTUAL WATER	107	Missing	Missing	Missing	Missing	SDAC	HR2
18 CA1000585 DISTRICT 23 - FRESNO 19 CA0300011 DISTRICT 10 - STOCKTON	MURRIETA/HERNANDEZ FARM SUTTER PINES MHP	10	Missing	Missing	Missing	Missing	SDAC Non-DAC	At-Ri At-Ri
20 CA0400020 LPA34 - BUTTE COUNTY	PLEASANT GROVE MHP	88	Missing	Missing Missing	Missing	Missing	SDAC	Non HF
21 CA5200546 LPA82 - TEHAMA COUNTY	ANTELOPE-HOMEWOOD MHP	24	Missing	Missing	Missing	Missing	SDAC	At-Ri
22 CA3700962 LPA67 - SAN DIEGO COUNTY 23 CA4600056 DISTRICT 02 - LASSEN	OAKVALE PARK SIERRA CITY WATER WORKS.	125 89	Missing	Missing Missing	Missing Missing	Missing	Non-DAC Non-DAC	At-Ri Non Hi
24 CA5610056 DISTRICT 06 - SANTA BARBARA	VINEYARD AVE ESTATES MW	342	Missing	Missing	Missing	Missing	DAC	Non HF
25 CA2701687 LPA57 - MONTEREY COUNTY	VALLEY OAKS MHP WS	46	Missing	Missing	Missing	Missing	DAC	Non H
26 CA2701701 LPA57 - MONTEREY COUNTY 27 CA2701063 LPA57 - MONTEREY COUNTY	BRADLEY-LOCKWOOD RD WS RIVER RD WS #25	16 19	Missing	Missing Missing	Missing	Missing	DAC	Non HF HR2
28 CA3701793 LPA67 - SAN DIEGO COUNTY	TWIN LAKES RESORT	145	Missing	Missing	Missing	Missing	SDAC	HR2
9 CA4600009 DISTRICT 02 - LASSEN	SIERRA CSA #5, SIERRA BROO	191	Missing	Missing	Missing	Missing	DAC	Non HF
0 CA4900508 DISTRICT 18 - SONOMA 11 CA4900720 DISTRICT 18 - SONOMA	CAZADERO WATER COMPANY MOBILE HOME ESTATES	157	Missing Missing	Missing Missing	Missing Missing	Missing Missing	DAC SDAC	HR2 Non HF
2 CA1800516 DISTRICT 02 - LASSEN	LITTLE VALLEY CSD	44	Missing	Missing	Missing	Missing	DAC	Non HF
33 CA1805007 DISTRICT 02 - LASSEN	HERLONG PUBLIC UTILITY DIST	297	Missing	Missing	Missing	Missing	SDAC	Non HF
34 CA5610011 DISTRICT 06 - SANTA BARBARA 35 CA5610002 DISTRICT 06 - SANTA BARBARA	CITY OF SANTA PAULA FILLMORE WATER DEPT	7508 3917	1.5	1	1.5	4	DAC	Non HF
36 CA1910092 DISTRICT 07 - HOLLYWOOD	MONTEREY PARK-CITY, WATE	13631	1.5	1	1.5	4	DAC	Non HF
37 CA4810004 DISTRICT 04 - SAN FRANCISCO 38 CA3301491 LPA63 - RIVERSIDE COUNTY	CITY OF RIO VISTA	5389 60	1.5	1	1.5	4	Non-DAC	Non HF
38 CA3301491 LPA63 - RIVERSIDE COUNTY 39 CA3610001 DISTRICT 13 - SAN BERNARDINO	ALPINE VILLAGE ADELANTO, CITY OF	8301	1.5		1.5	4	DAC SDAC	HR2V Non HR
CA3310016 DISTRICT 20 - RIVERSIDE	HEMET, CITY OF	9325	1.5	1	1.5	4	SDAC	Non HR

Download the Affordability Assessment Results Spreadsheet: https://forms.office.com/g/BdNjF NFZvJ

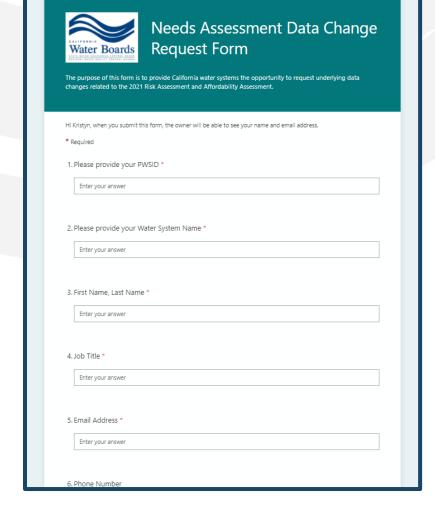
This spreadsheet will be updated periodically with data refreshes.

Water System Data Change Requests

See something that isn't right? Water systems can submit a **data change request** here:

https://bit.ly/SAFER-NA-DataChangeRequest-23

Requests will be reviewed by State Water Board staff.



Discussion Topic 4: Affordability Assessment

Do you have any questions or comments about the Affordability Assessment and/or its results?

Ways to Participate

1. Watch ONLY: Visit video.calepa.ca.gov

2. Email: Submit a comment or ask a question that will be read aloud, send an email to: safer@waterboards.ca.gov

3. Q&A: Submit a question using the Q&A feature at the bottom of your Zoom Screen. You can UPVOTE any question you would like answered.

4. Raise Hand: Attendees will be given the opportunity to provide verbal comment or ask questions, if you're interested in this option, please raise your virtual hand when the time is right.

- Please wait for your name to be called.
- Public comments are 3 minutes each.

Conclusions



Future Iterations of the Needs Assessment

The Needs Assessment is designed to be conducted annually. The methodologies will be further refined as the SAFER Program develops and additional data becomes available.



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Needs Assessment Refinement Opportunities

- Improved data
- Better alignment across Needs
 Assessment components
- Focused scope
- Alignment with other State efforts
- Learning by doing and continued public engagement



Next Steps and Announcements



SAFER Timeline*

April - June

5/2 Release of Needs Assessment

5/2 Needs Assessment Webinar

5/24 Advisory Group Mtg #2

July - September

7/TBD Advisory Group Application Window Opens

7/31 Release of Draft FEP

8/TBD Advisory Group Application Workshop

8/24 Advisory Group Mtg #3

8/TBD Advisory Group Application Window Closes

October - December

10/TBD Tribal Workshop

10/3 Board Considers Adoption of FEP

12/7 Advisory Group Mtg #4

12/TBD Advisory Group Members Selected

* Timeline does not include future Needs Assessment refinement workshops. Scheduling coming soon.

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Immediate Next Steps

- Water system data change requests:
 - <u>https://bit.ly/SAFER-NA-DataChangeRequest-23</u>
- General feedback on the Needs Assessment results and methodologies:
 - 2023 Drinking Water Needs Assessment: <u>https://bit.ly/SAFER-NA-Report-23</u>

- Submit feedback to: <u>SAFER@waterboards.ca.gov</u>
- Please submit feedback on the report by 06.02.2023

Tribal Drinking Water Needs

• The State Water Board is working with the U.S. Environmental Protection Agency to identify tribal water systems that are failing.

Information about these systems should be released by the Summer 2023.

 The State Water Board is also undertaking an effort to better understand the needs of tribal systems not regulated by the U.S.
 EPA. More information will be shared soon on this effort.



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Tribal Drinking Water Funding Gaps and Opportunities

The State Water Board is collaborating with its partners to better understand the funding gaps and opportunities for tribal water systems.

More information about this effort will be released by Summer 2023.



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Audience Poll Question 3

Would you be interested in training sessions on how to navigate the Needs Assessment related Dashboards?

- Yes
- No
- Maybe

SAFER Dashboard: https://bit.ly/SAFER-Dashboard-23

Risk Assessment Results for State Small Water Systems & Domestic Wells Dashboard: <u>https://bit.ly/RA-Dashboard-23</u>

SAFER PROGRAM

Affordability Dashboard: <u>https://bit.ly/AA-Dashboard-23</u>

Discussion Topic 5: General Questions & Feedback

Do you have any general questions or comments about the Needs Assessment?

Ways to Participate

1. Watch ONLY: Visit video.calepa.ca.gov

2. Email: Submit a comment or ask a question that will be read aloud, send an email to: <u>safer@waterboards.ca.gov</u>

3. Q&A: Submit a question using the Q&A feature at the bottom of your Zoom Screen. You can UPVOTE any question you would like answered.

4. Raise Hand: Attendees will be given the opportunity to provide verbal comment or ask questions, if you're interested in this option, please raise your virtual hand when the time is right.

- Please wait for your name to be called.
- Public comments are 3 minutes each.

THANK YOU

