

SAFER: 2023 Drinking Water Needs Assessment Results

May 2, 2023

9:00 am

Remote participation only



Meeting Logistics

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

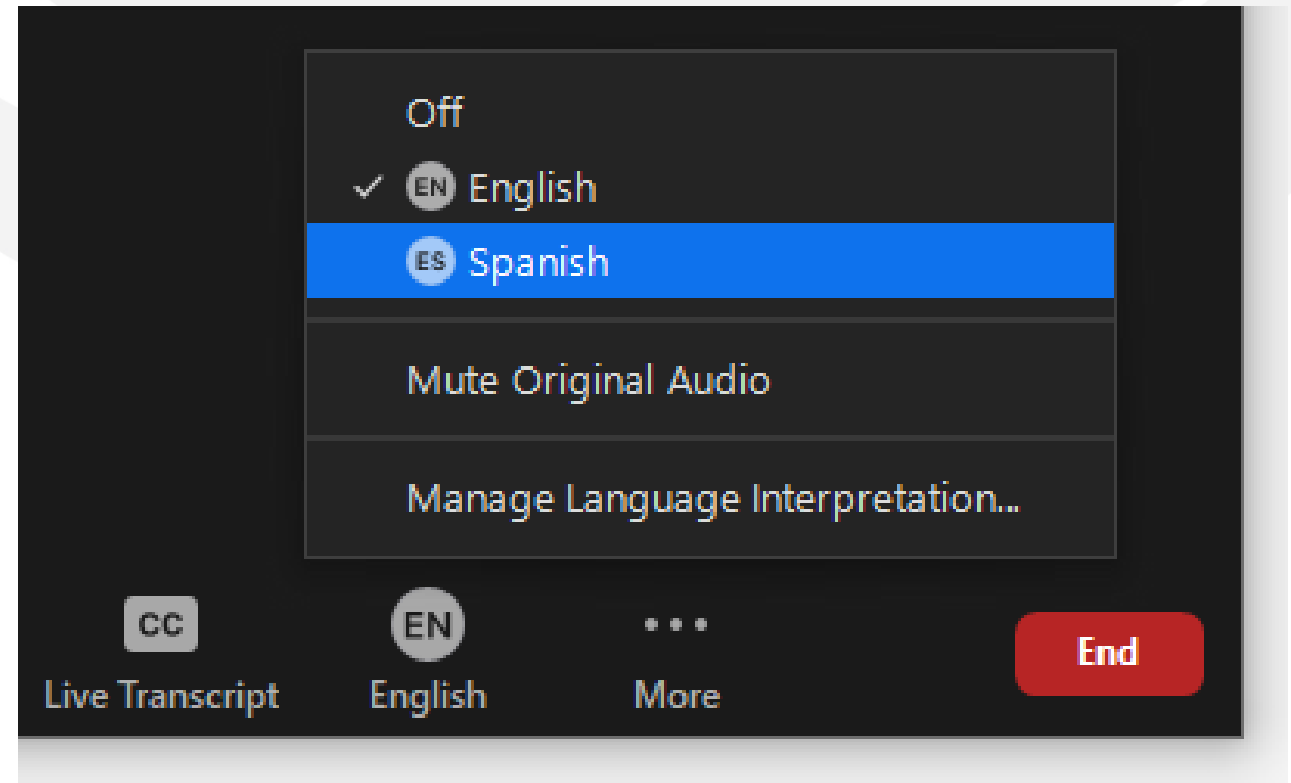
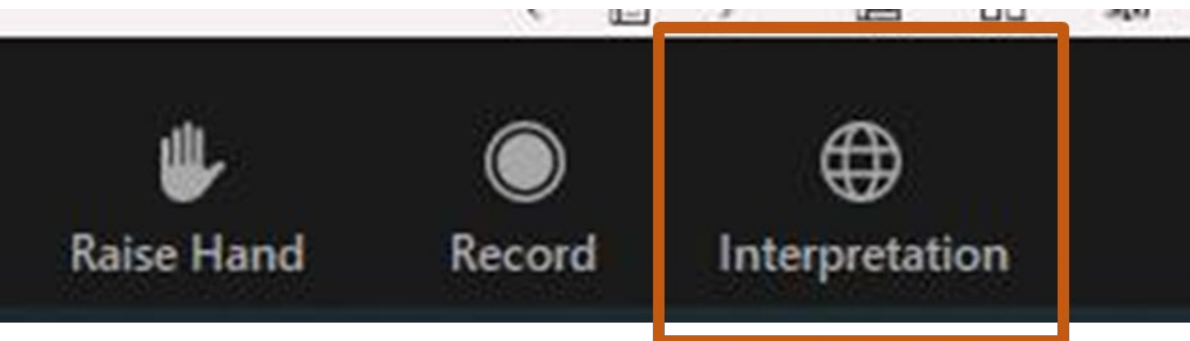


Water Boards' Mission Statement

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.

Choose English or Spanish

We have an English and Spanish Channel:



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.

Agenda

- 1 SAFER PROGRAM & NEEDS ASSESSMENT
- 2 RISK ASSESSMENT FOR PUBLIC WATER SYSTEMS, SSWSs, & DOMESTIC WELLS
- 3 COST ASSESSMENT UPDATE
- 4 AFFORDABILITY ASSESSMENT
- 5 NEXT STEPS





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: <https://bit.ly/SAFER-NA-Report-23>

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.”



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**.



Safe and Affordable
Drinking Water Fund



Data Collection
& Analysis



Consolidation &
Regional Solutions



Administrators

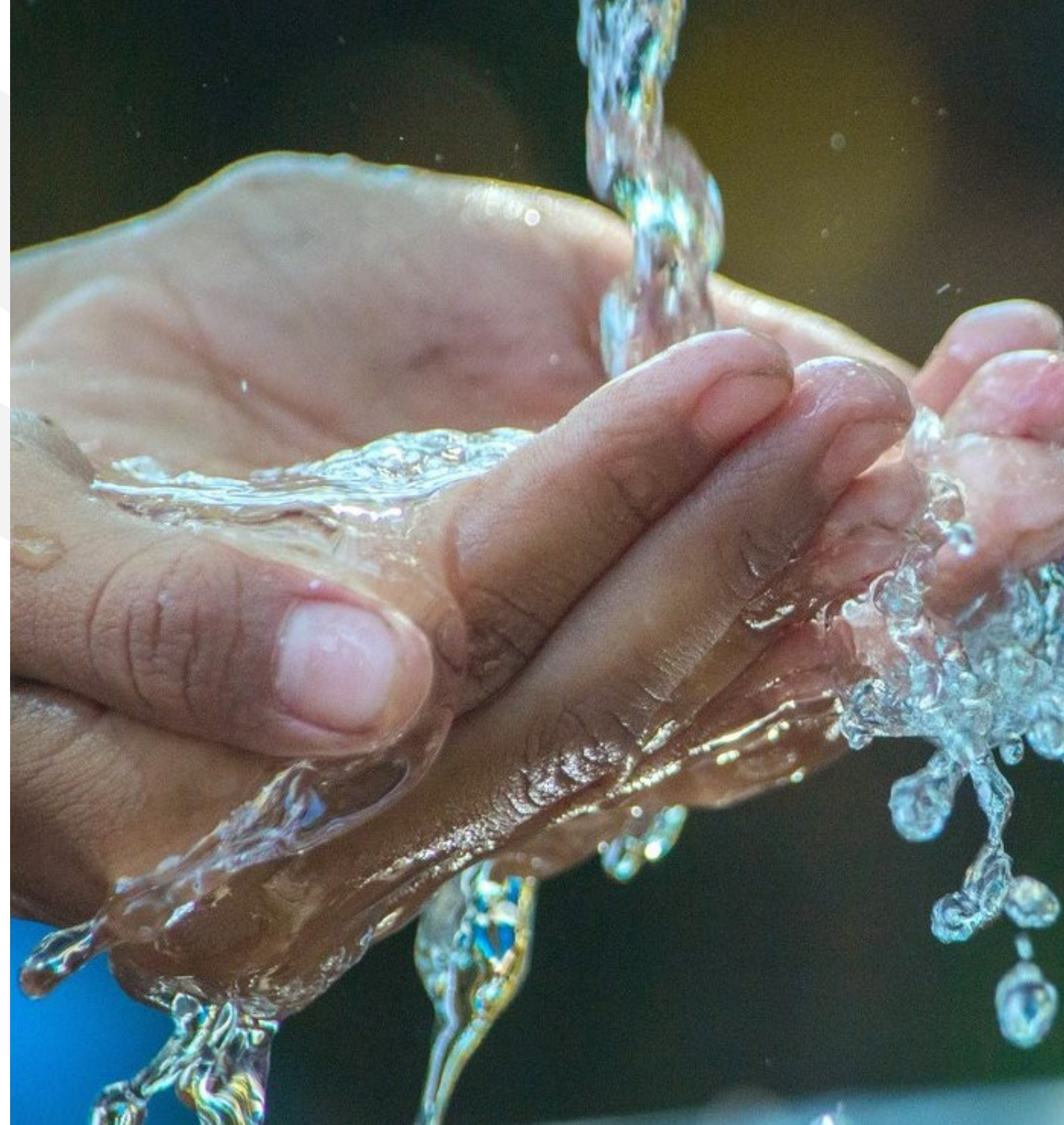


Technical Assistance
& Capacity Building

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



Failing Water System List

Community Water Systems & K-12 Schools



Risk Assessment

Small and Medium Community Water Systems; K-12 Schools; SSWS; & DWs



Cost Assessment

Failing & At-Risk Systems and Domestic Wells

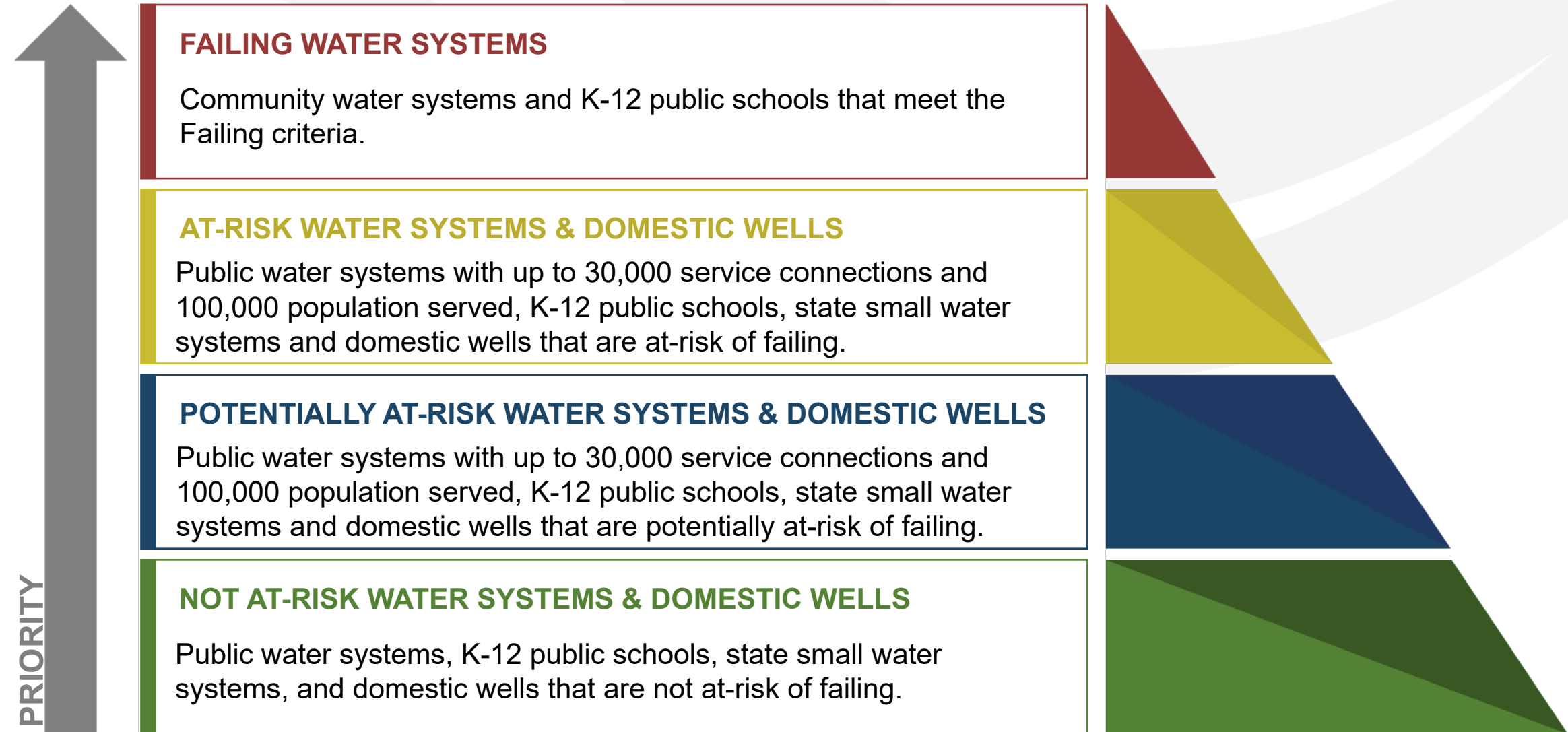


Affordability Assessment

DAC/SDAC Community Water Systems

<https://bit.ly/SAFER-NA>

SAFER Program Priority Systems



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.

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

Access the Full 2023 Needs Assessment Report

The screenshot shows the California Water Boards website with the following sections:

- Header:** Includes the CA.gov logo, social media links, and navigation links like About Us, Contact Us, Subscribe, and Settings.
- Navigation Bar:** Features icons and labels for Board, Programs, Drinking Water, Water Quality, Water Rights, Notices, Water Boards, and Search.
- SAFER DRINKING WATER:** A banner with the text "SAFE AND AFFORDABLE FUNDING FOR EQUITY AND RESILIENCE".
- Home | Drinking Water | Certifications | Drinkingwater | Needs**
- California Drinking Water Needs Assessment**
- Needs Assessment Core Components:** Three icons representing Risk Assessment, Cost Assessment, and Affordability Assessment.
- News & Upcoming Events:**
 - Public Webinar on Proposed Changes to the 2023 Needs Assessment**
 - Date: Friday, February 3, 2023
 - Time: 9:00 a.m. to 12:00 p.m.
 - Register Here
 - White Paper
 - Public Feedback, due by Feb 23, 2023: mail to DOW-SAFER-NAU@Waterboards.ca.gov
- Quick Links:**
 - Preliminary 2023 Public Water System Risk Assessment Results Map
 - Preliminary 2023 State Small & Domestic Well Risk Assessment Results Map
 - 2023 Aquifer Risk Map
 - 2022 Public Water System Risk Assessment Results Map
 - 2022 State Small & Domestic Well Risk Assessment Results Map
 - Capacity Development
 - SAFER Program
 - SAFER Funding
 - Human Right to Water Information
 - Public Drinking Water General Information
- Preliminary 2023 Needs Assessment Results**

The State Water Board is proposing enhancements to the 2023 Needs Assessment. These changes are intended to improve the accuracy of the Needs Assessment and accommodate for data availability. These changes are summarized in the resources below. **Public feedback is on the proposed changes is due by February 24, 2023.**

 - February 3, 2023 Public Webinar Workshop
 - Register Here
 - Webinar Recording (coming soon)
 - Presentation (coming soon)
 - White Paper
 - Preliminary Risk Assessment Results for Public Water Systems
 - 2023 Preliminary Dashboard Map
 - 2023 Preliminary Risk Assessment Data
 - Preliminary Risk Assessment Results for State Small Water Systems & Domestic Wells Map
 - County Risk Indicator Data Analysis
 - Preliminary Affordability Assessment Results Spreadsheet
 - Public Feedback, due by Feb 23, 2023: mail to DOW-SAFER-NAU@Waterboards.ca.gov
 - Request Water System Data Change

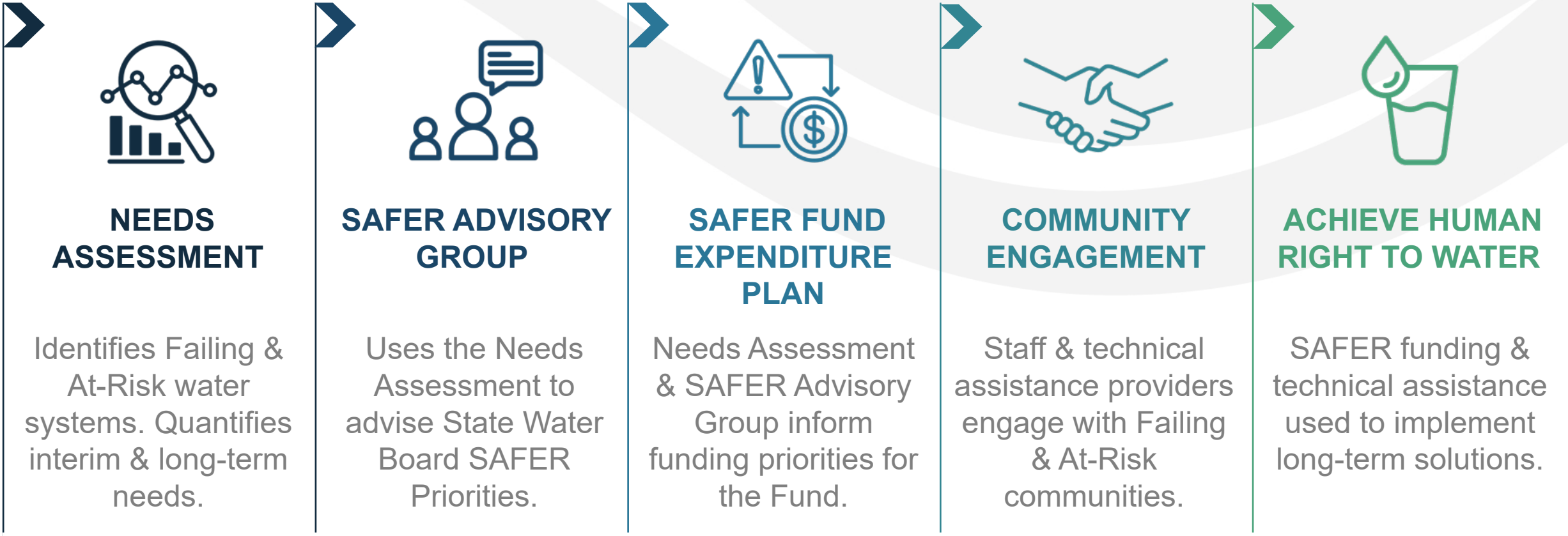
Access **2023** report here: <https://bit.ly/SAFER-NA-Report-23>

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

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

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

Needs Assessment and the SAFER Program



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

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 www.waterboards.ca.gov/safer

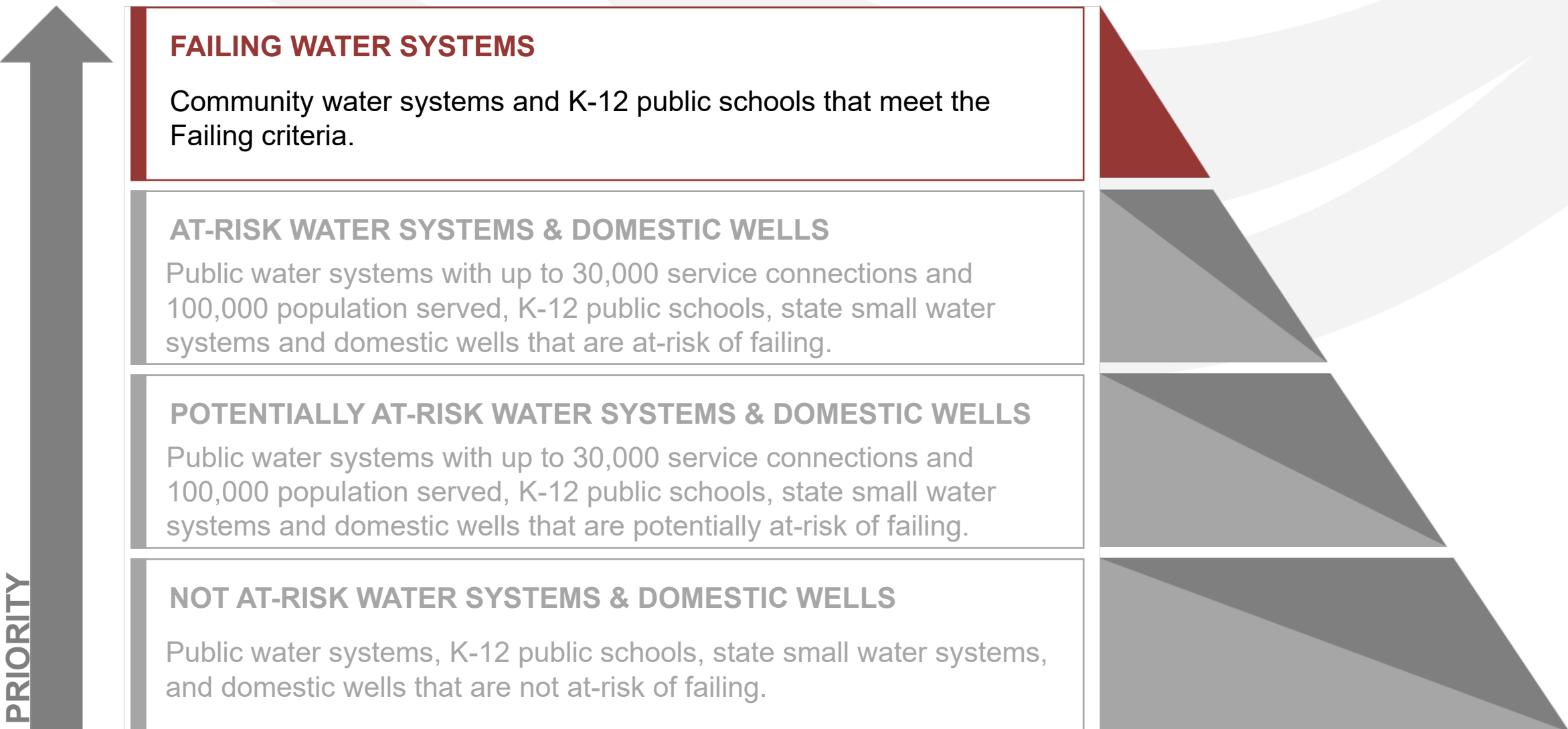
Failing Water Systems



CALIFORNIA WATER BOARDS

SAFER PROGRAM

SAFER Program Priority Systems: Failing Water Systems





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: <https://bit.ly/HR2W-FailingWaterSystems>

Current list here: <https://bit.ly/SAFER-Dashboard>

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.	No	Yes

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%)

Predictive Power of the 2022 Risk Assessment

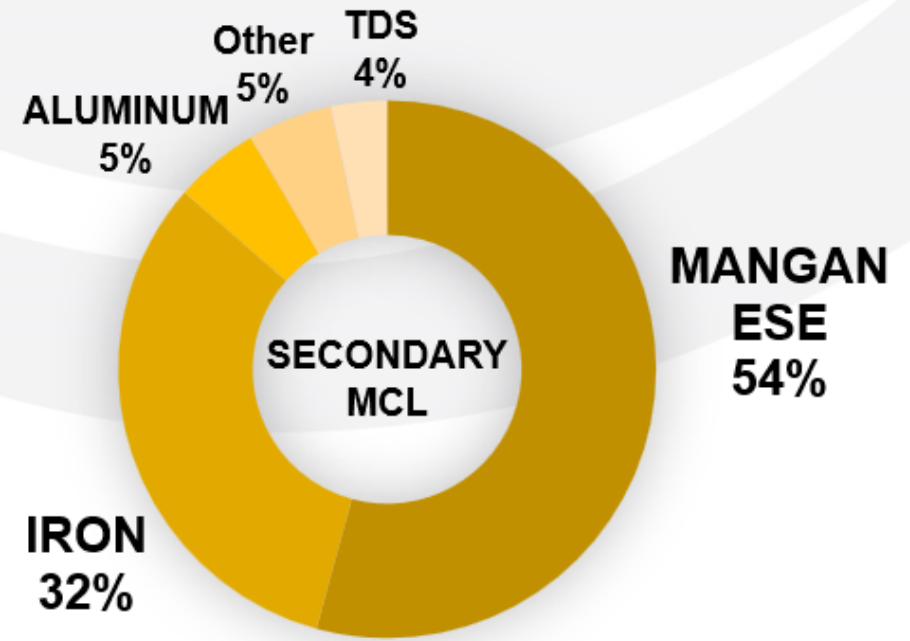
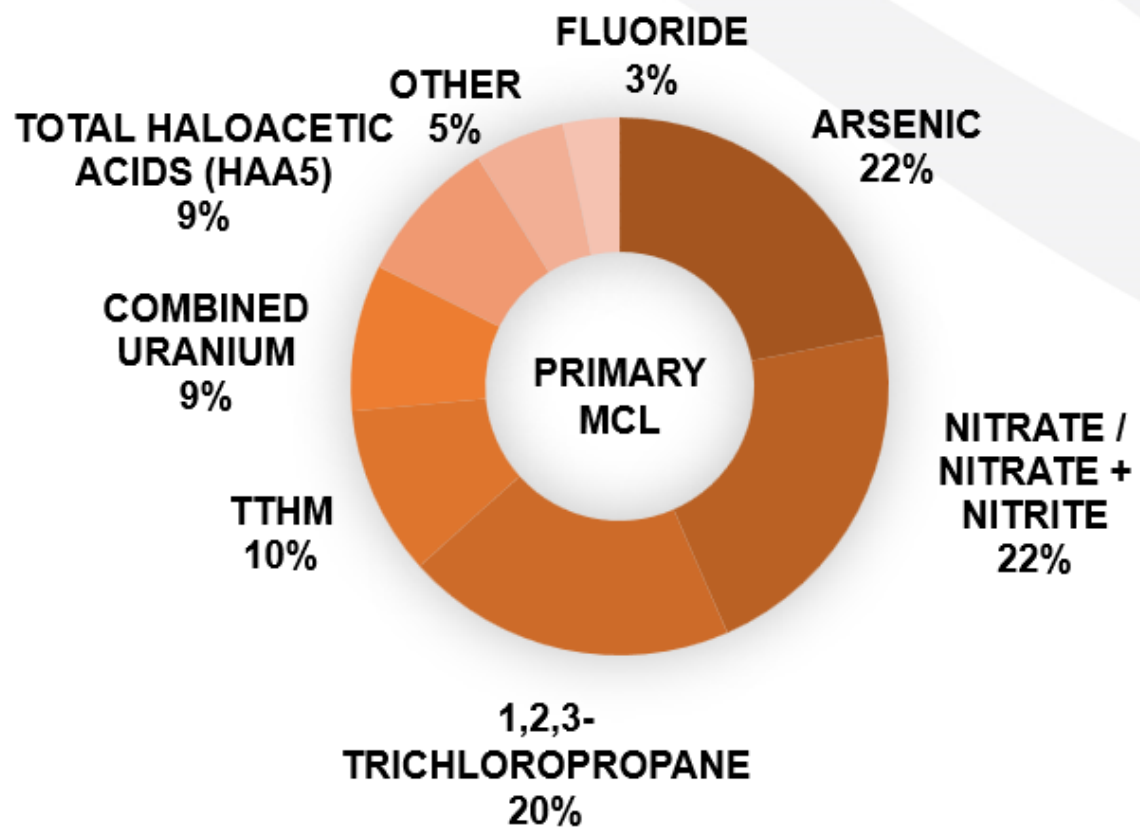
Approximately **87%** of systems that were on the Failing list in 2022 were designated At-Risk or Potentially At-Risk in the 2022 Risk Assessment.

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%

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

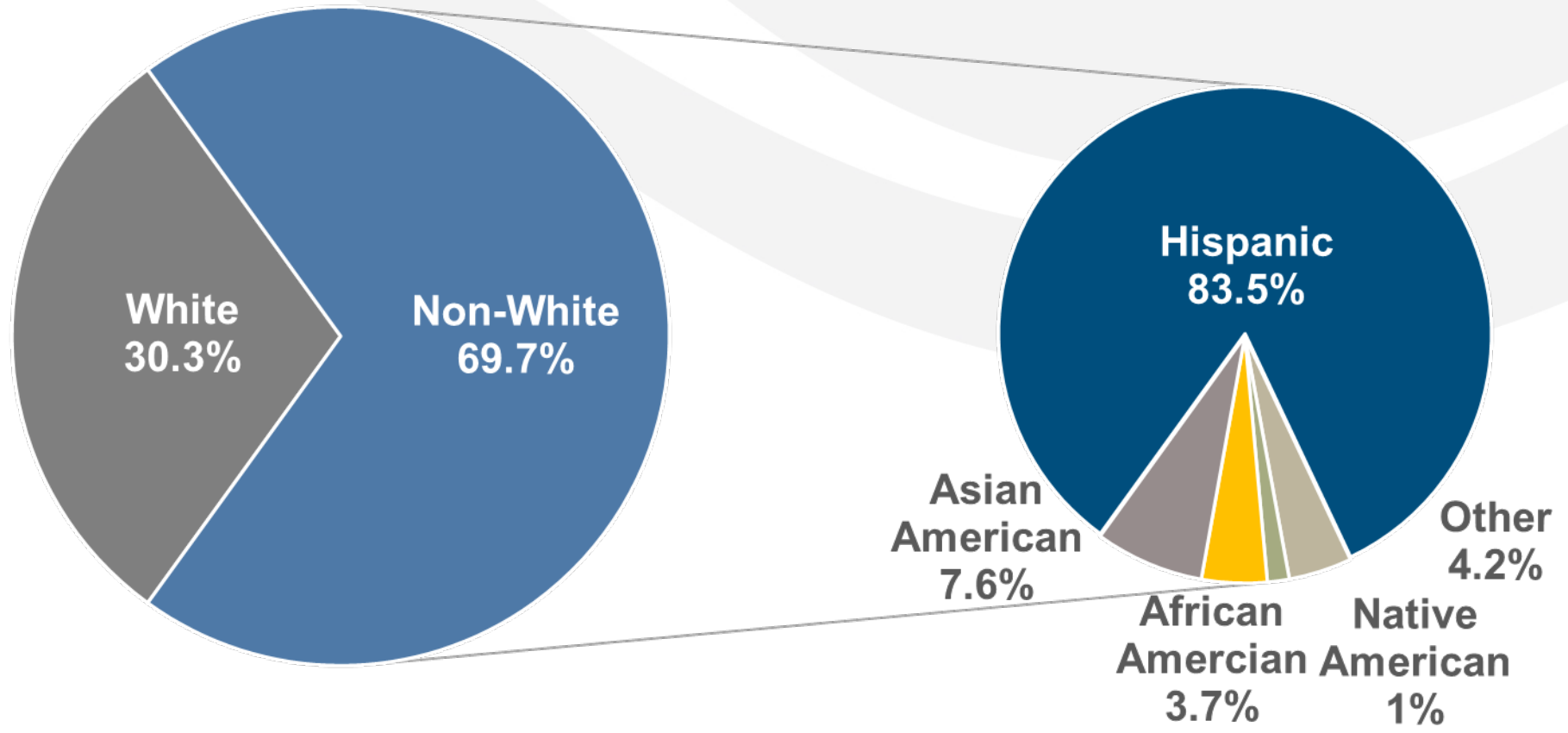


Demographic Analysis of Failing Systems on 1.1.2023

	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



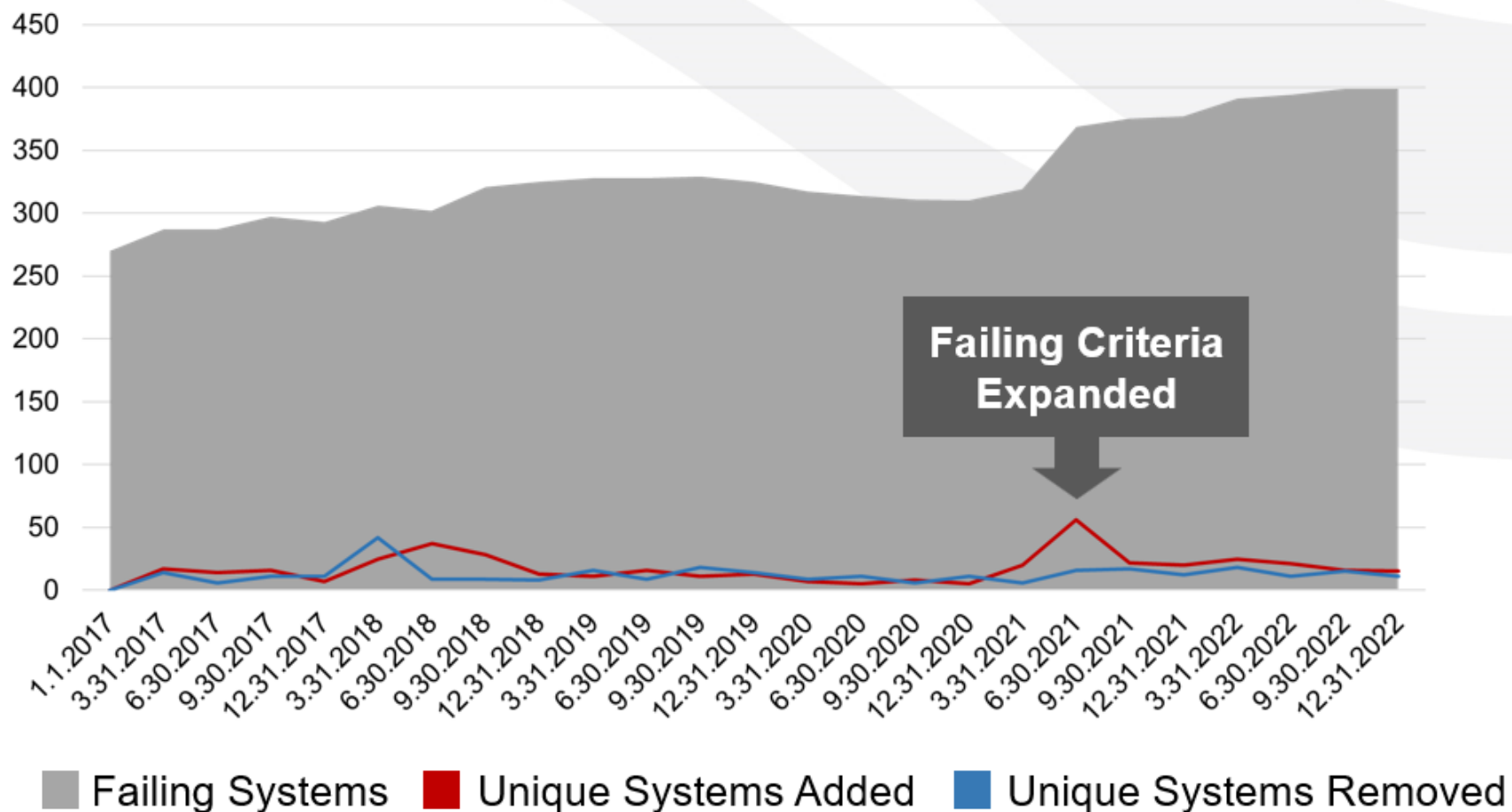
Providing Assistance to Failing Systems

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

The Challenge



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**.

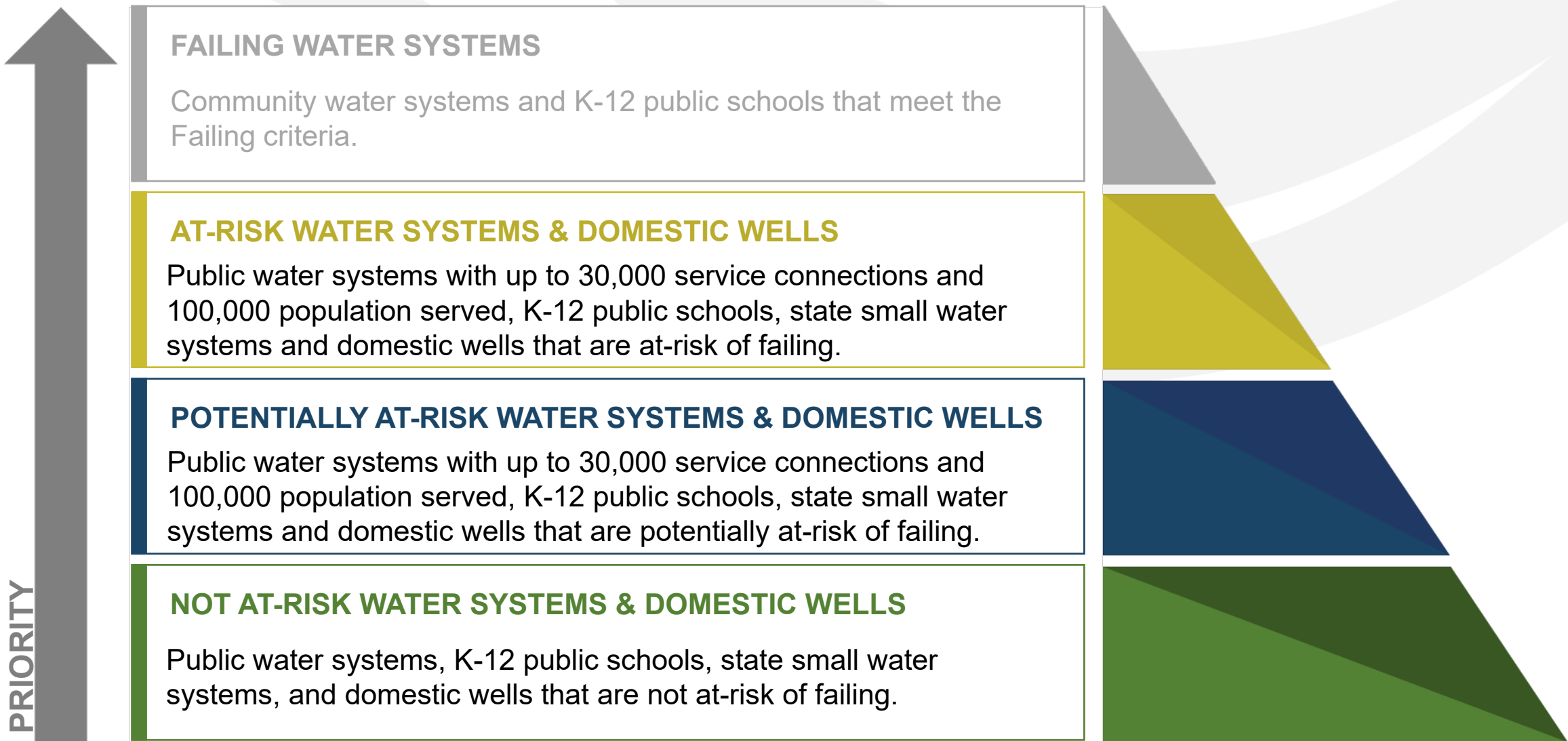
Risk Assessment Results: Public Water Systems



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SAFER PROGRAM

SAFER Program Priority Systems





The Inventory: Public Water Systems

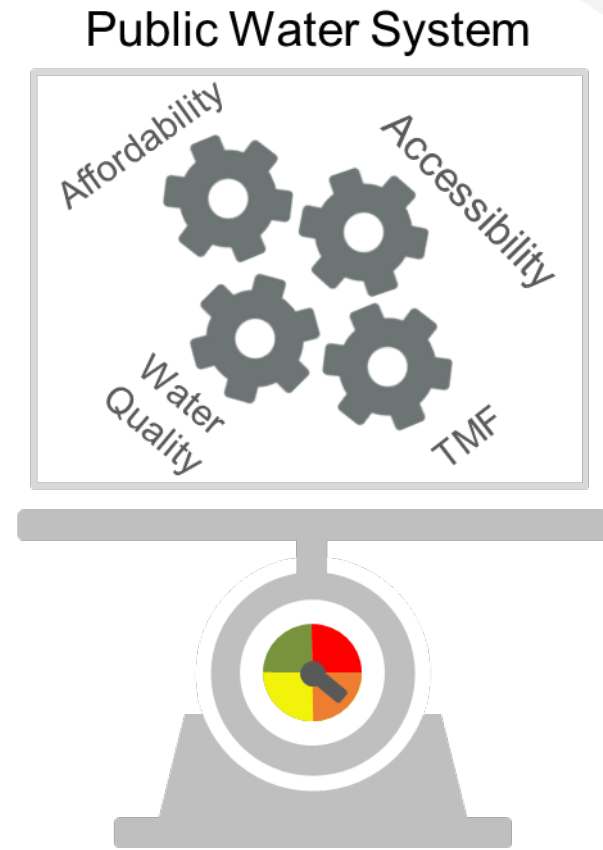
Included:

- 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 financial risk indicators.

Risk Assessment for Public Water Systems



RISK ASSESSMENT METHODOLOGY



RISK INDICATORS

Quantifiable measurements of key data used to assess a water system's risk of becoming non-compliant 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	ACCESSIBILITY	AFFORDABILITY	TMF CAPACITY
E. Coli Presence	Number of Sources	% Median Household Income	# of Service Connections
Increasing Presence of Water Quality Trends Towards MCL	Absence of Interties	Extreme Water Bill	Operator Certification Violations
Treatment Technique Violations	Water Source Types	% Shut-Offs	Monitoring and Reporting Violations
Past Presence on the Failing List	DWR – Drought & Water Shortage Risk Assessment Results	% of Residential Arrearages	Significant Deficiencies
Maximum Duration of High Potential Exposure (HPE)	Critically Overdrafted Groundwater Basin	Residential Arrearage Burden	Extensive Treatment Installed
Percentage of Sources Exceeding an MCL	Bottled or Hauled Water Reliance		Income
Constituents of Emerging Concern	Source Capacity Violations		Operating Ratio
			Days Cash on Hand

2023 Risk Indicator Changes

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

WATER QUALITY	ACCESSIBILITY	AFFORDABILITY	TMF CAPACITY
E. Coli Presence	Number of Sources	% Median Household Income	Operator Certification Violations
Increasing Presence of Water Quality Trends Towards MCL	Absence of Interties	Extreme Water Bill	Monitoring and Reporting Violations
Treatment Technique Violations	DWR – Drought & Water Shortage Risk Assessment Results	NEW: Household Socioeconomic Burden	Significant Deficiencies
Past Presence on the Failing List	Critically Overdrafted Groundwater Basin	% of Residential Arrearages	Income
Percentage of Sources Exceeding an MCL	Bottled or Hauled Water Reliance	Residential Arrearage Burden	Operating Ratio
Constituents of Emerging Concern	Source Capacity Violations		Days Cash on Hand

Risk Indicator Thresholds, Scores, and Weights

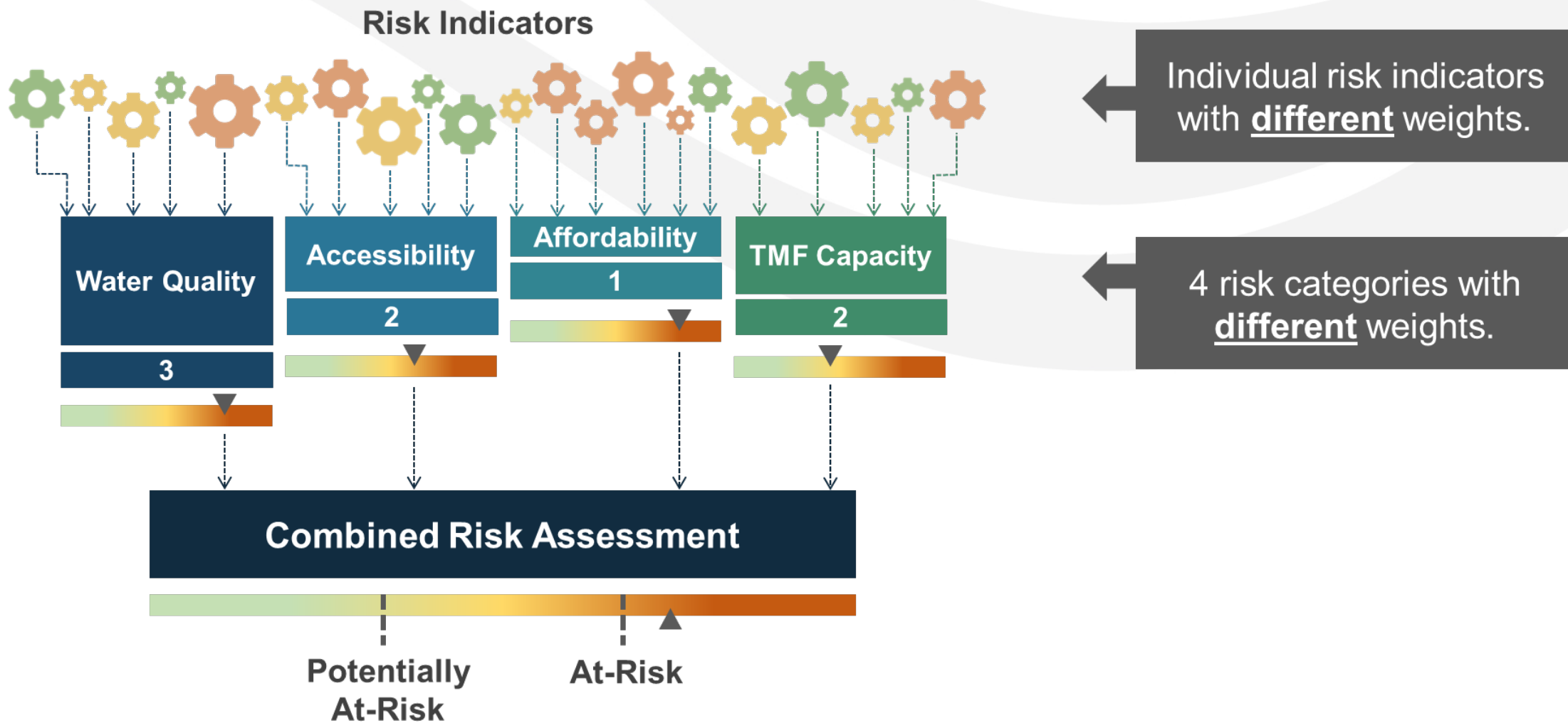
To enable the evaluation and comparison of risk indicators, a standardized **score range between 0 and 1** was applied to each risk indicator threshold.

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

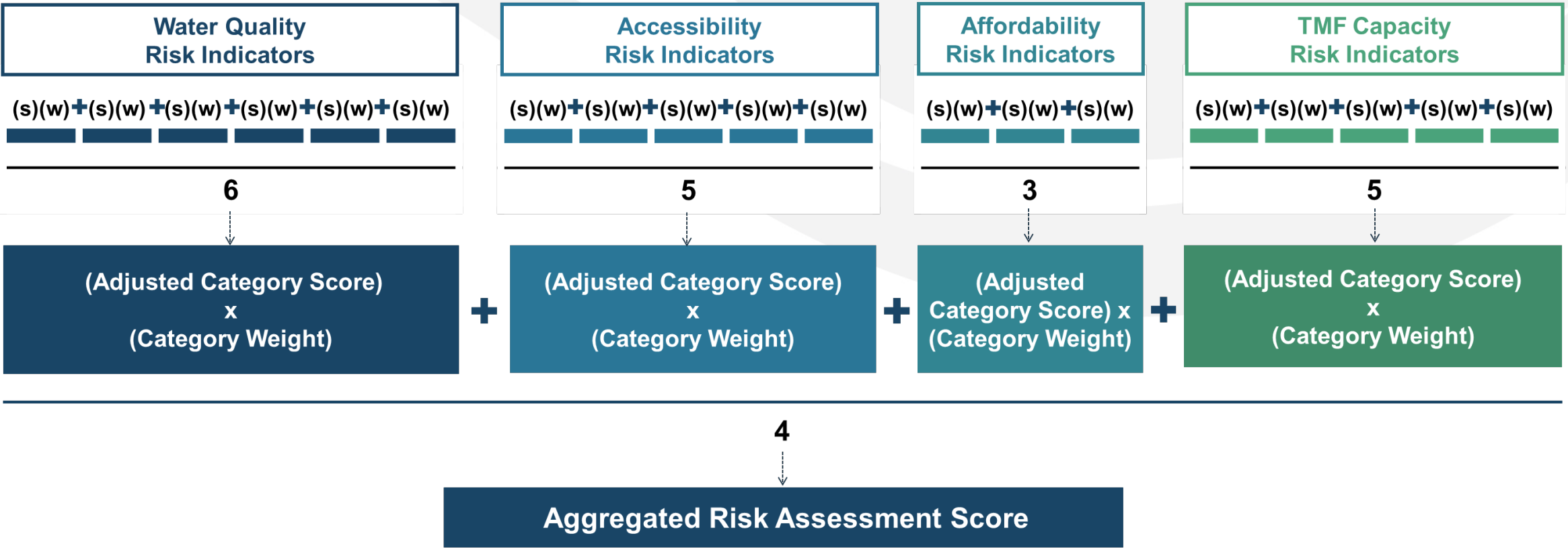
Example:

Risk Indicator	Thresholds	Raw Score	Weight	Max Risk Score	Risk Level
Past Presence on the Failing: List	Threshold 0 = 0 occurrences over the last three years	0	N/A	0	None
	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



Aggregated Risk Assessment Calculation Methodology Example



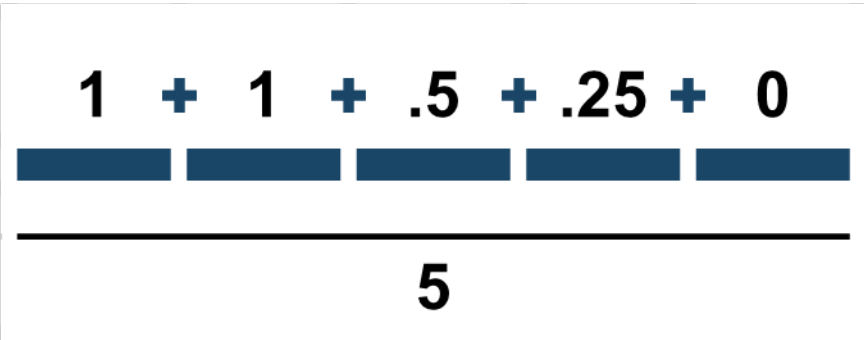
Adjusting for Missing Risk Indicator Data

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

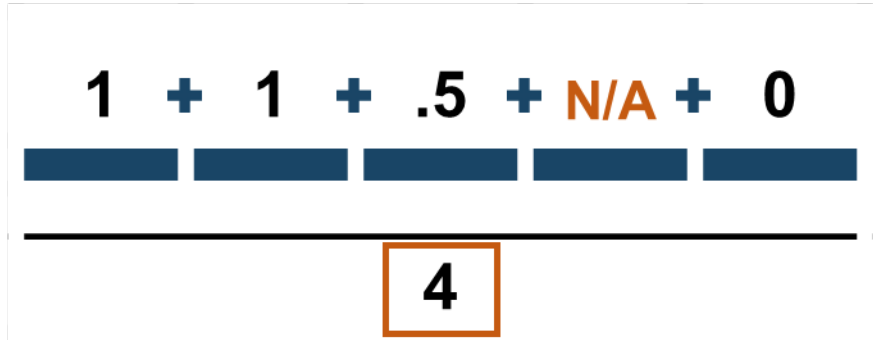
The Risk Assessment removed any value for a missing risk indicator and re-distributed the scores/weights to risk indicators within the same category which did have valid values.

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

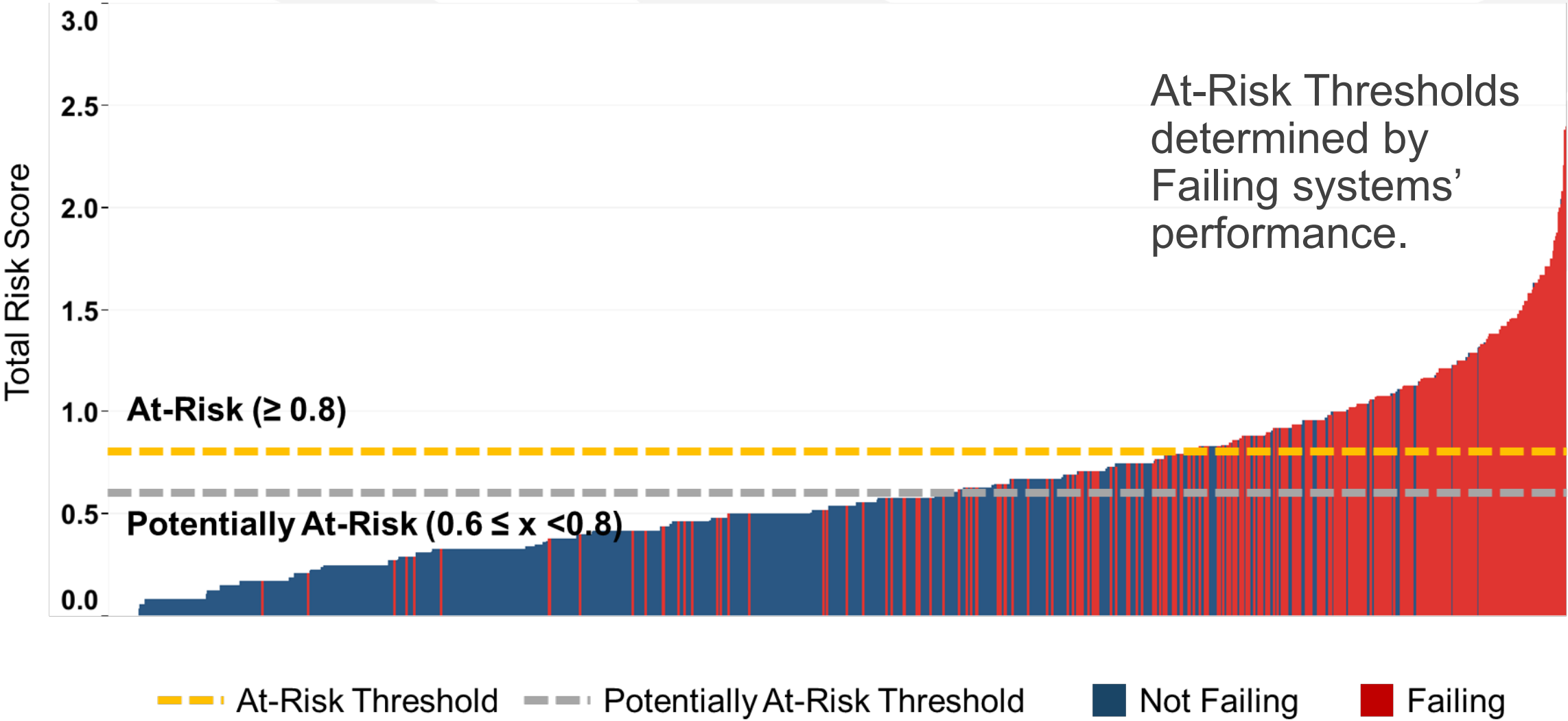
**Risk Indicator Category
With No Missing Indicator**



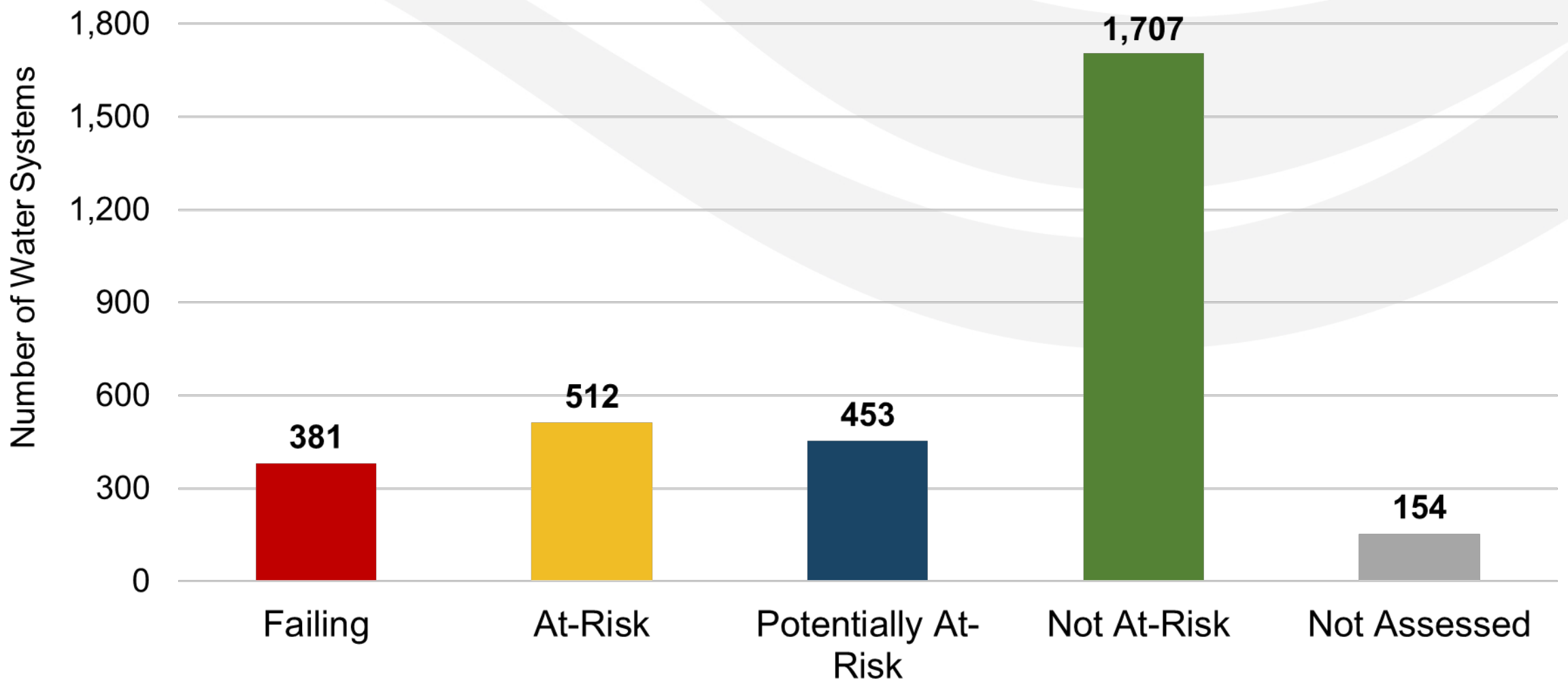
**Risk Indicator Category
With Missing Indicator**



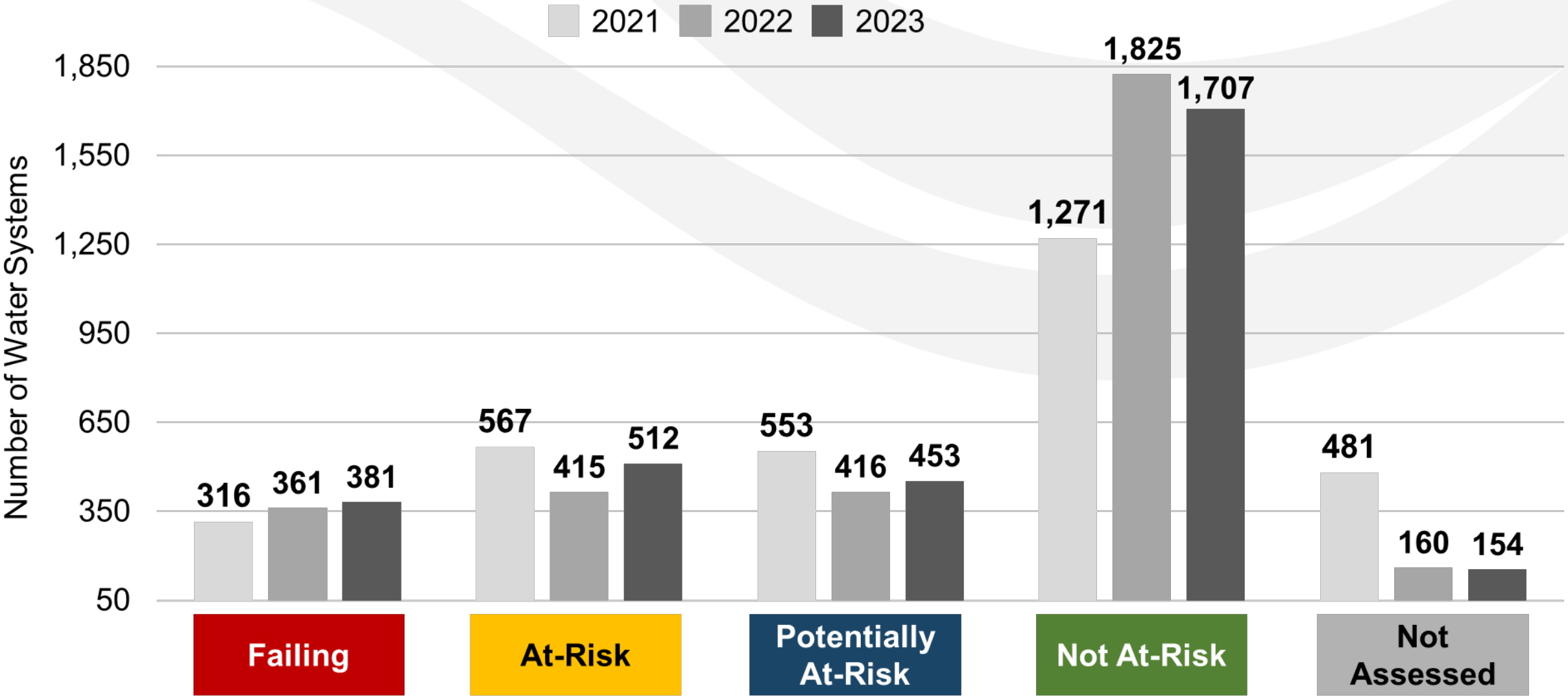
Risk Assessment: Aggregated Distribution of Weighted Scores



2023 Risk Assessment Results (n=3,053)



Risk Assessment Results 2021-2023

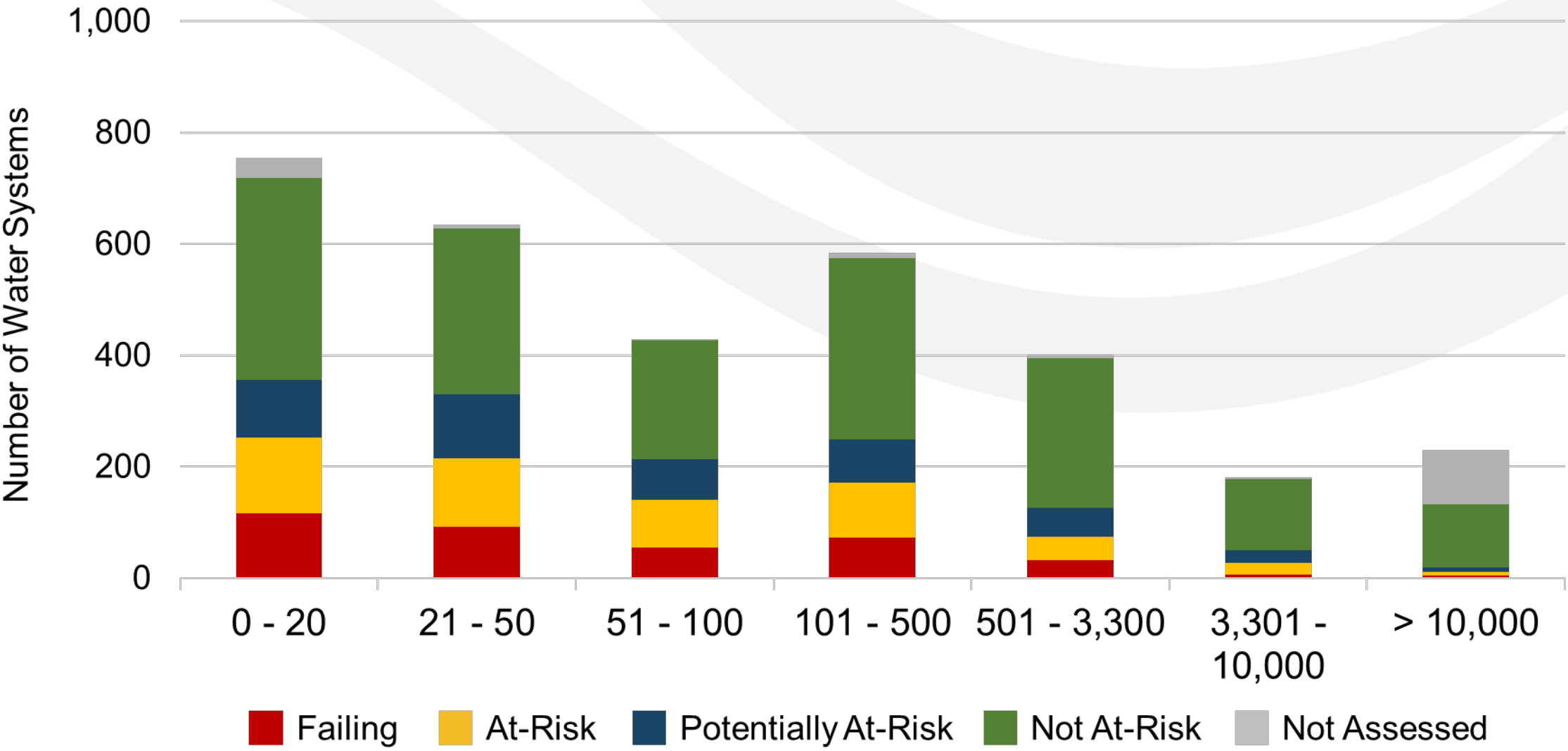


2022 vs. 2023 Risk Assessment Results Comparison

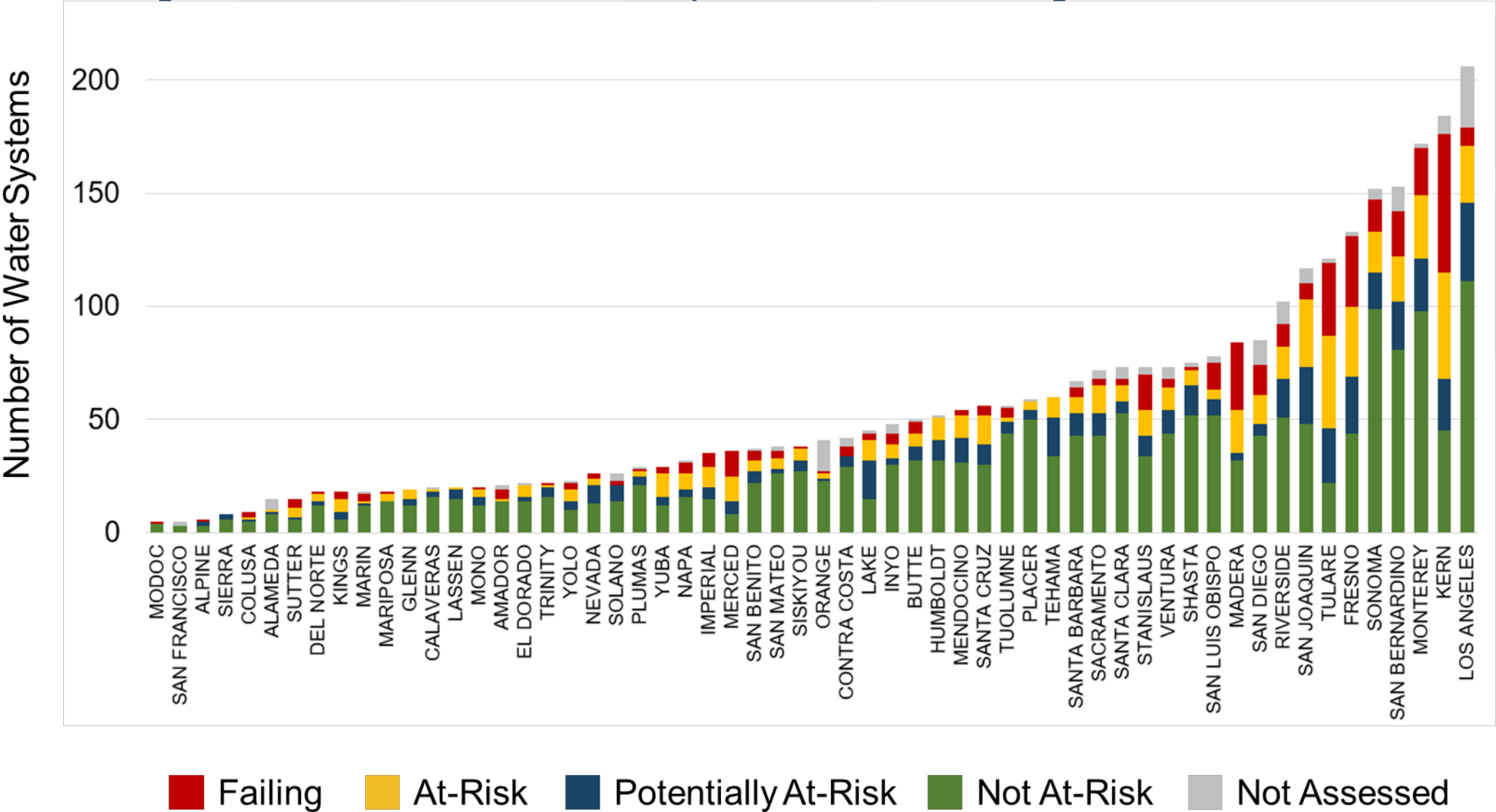
Compared to 2022, the 2023 Assessment identifies **113 more At-Risk** water systems and a statewide increase in total average risk scores.

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

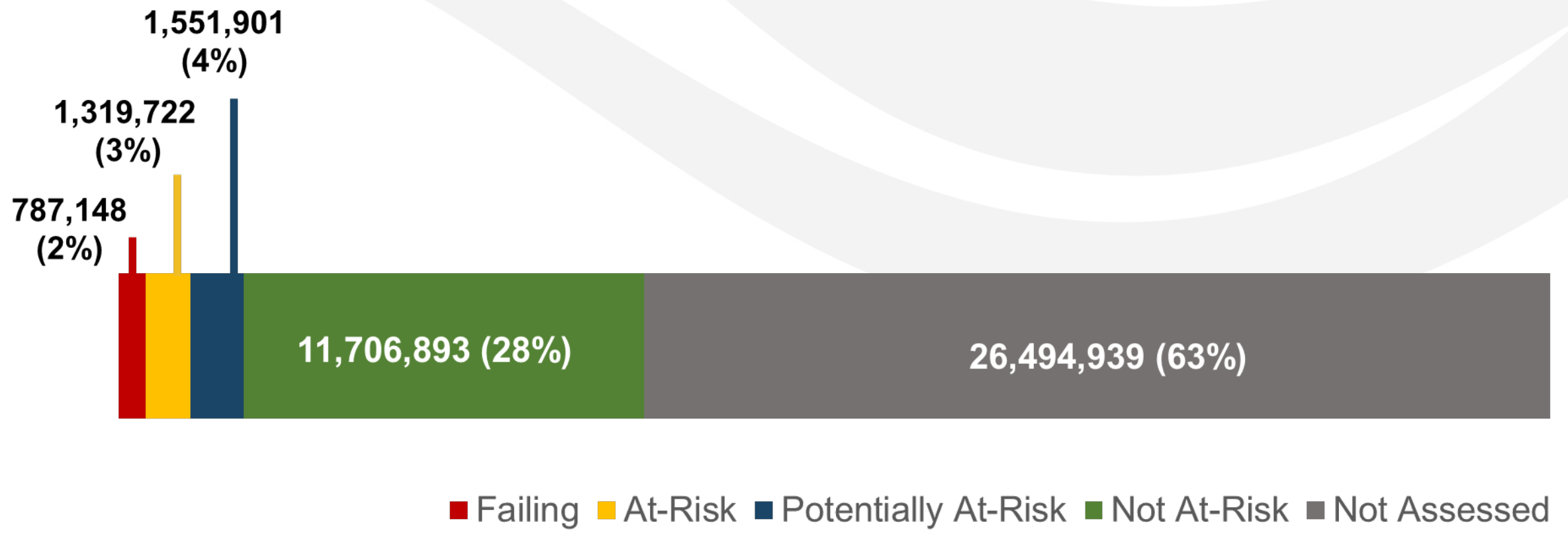
2023 Risk Assessment Results by Connection Size



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

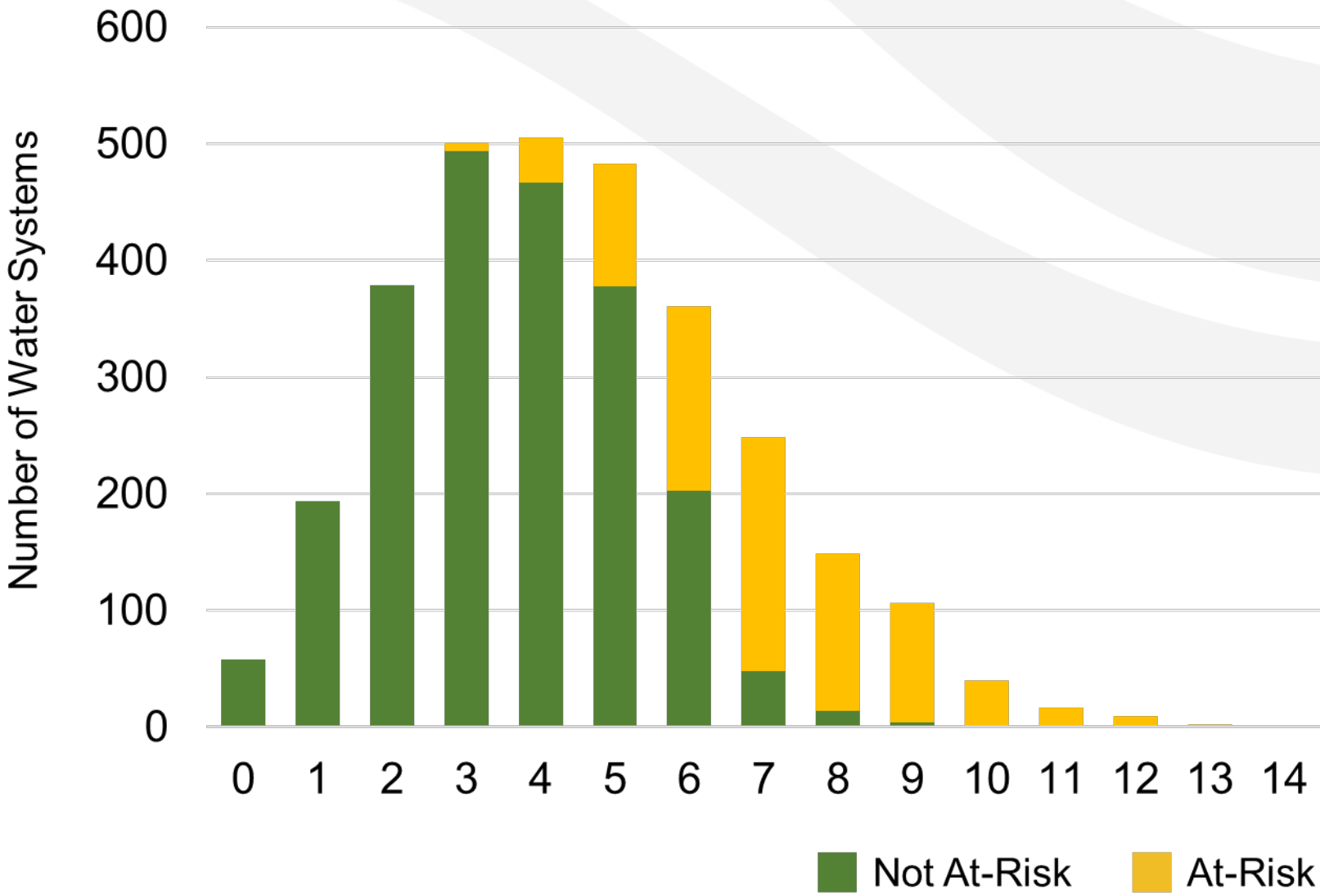


Population Served of Systems in the Risk Assessment*



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

Distribution of the Number of Risk Indicator Thresholds Exceeded



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.

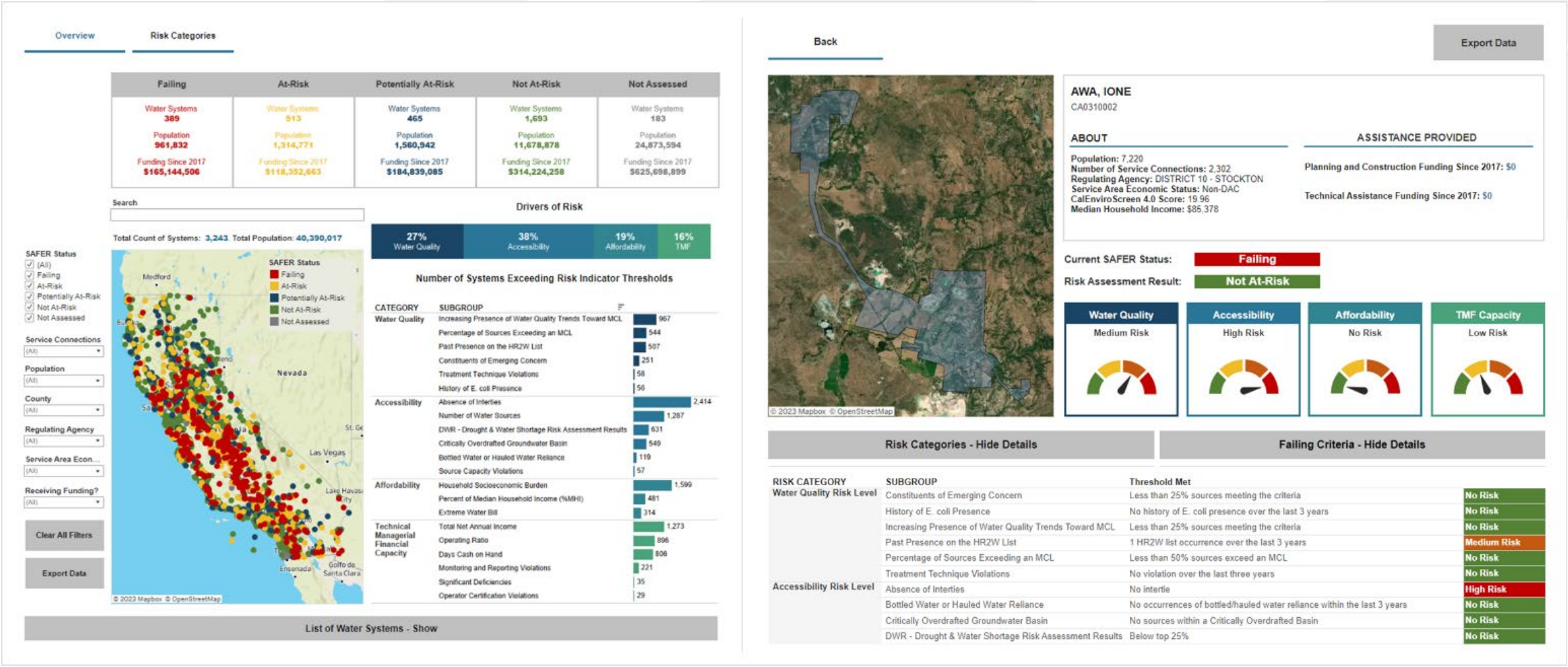
This means that systems were not designated as At-Risk based on a single or even a handful of risk indicators.

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%

Additional demographic data in the Needs Assessment report.

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



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

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 *

2. Please provide your Water System Name *

3. First Name, Last Name *

4. Job Title *

5. Email Address *

6. Phone Number

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:
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.
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- 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

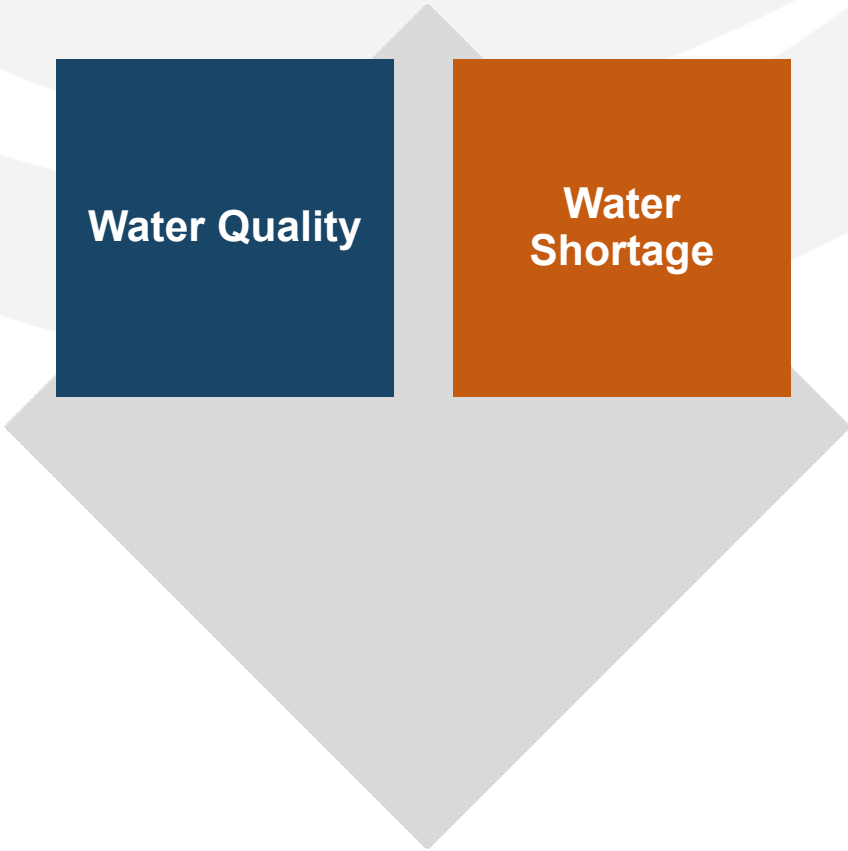
Research Scientist 3
Office of Environmental Health Hazard Assessment



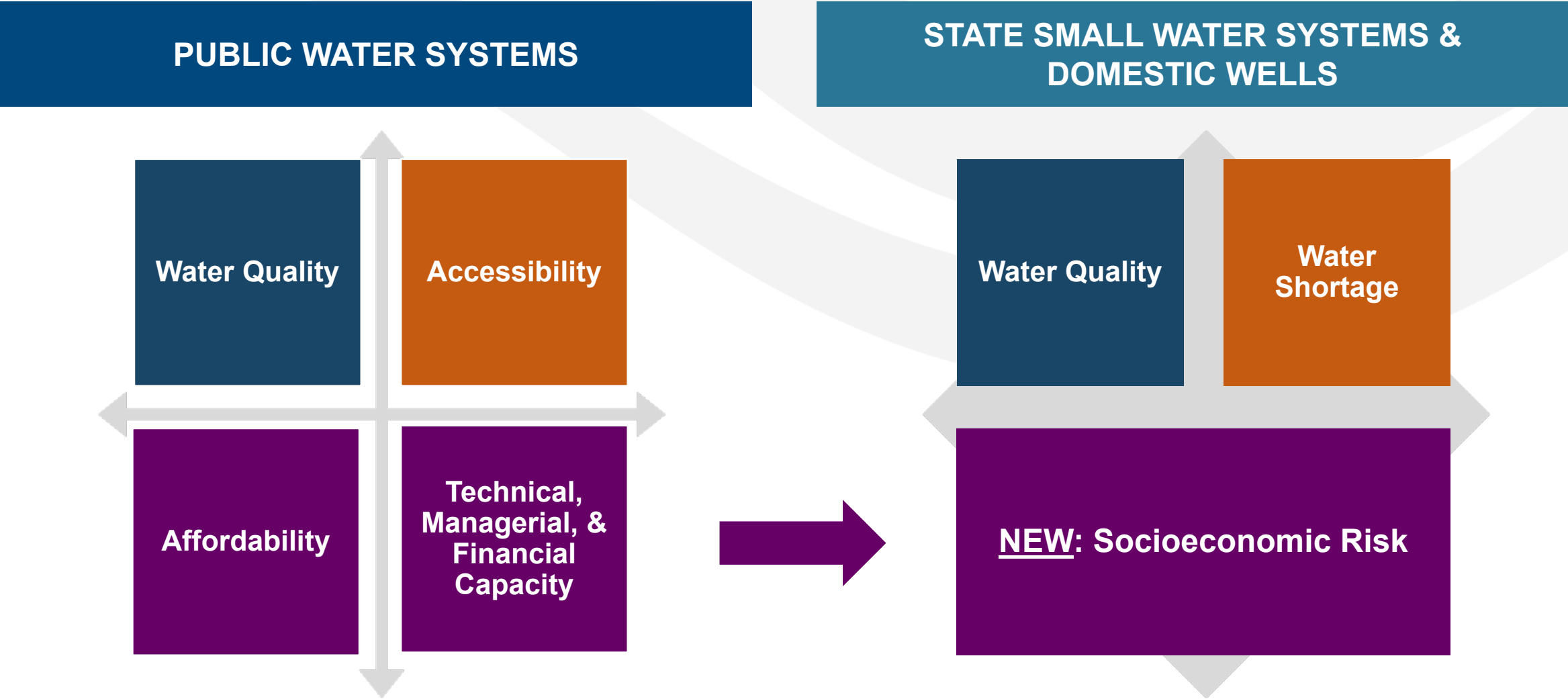
Risk Assessment Categories: 2022

PUBLIC WATER SYSTEMS

STATE SMALL WATER SYSTEMS & DOMESTIC WELLS



Risk Assessment Categories: 2023



Goal is better alignment between Assessments

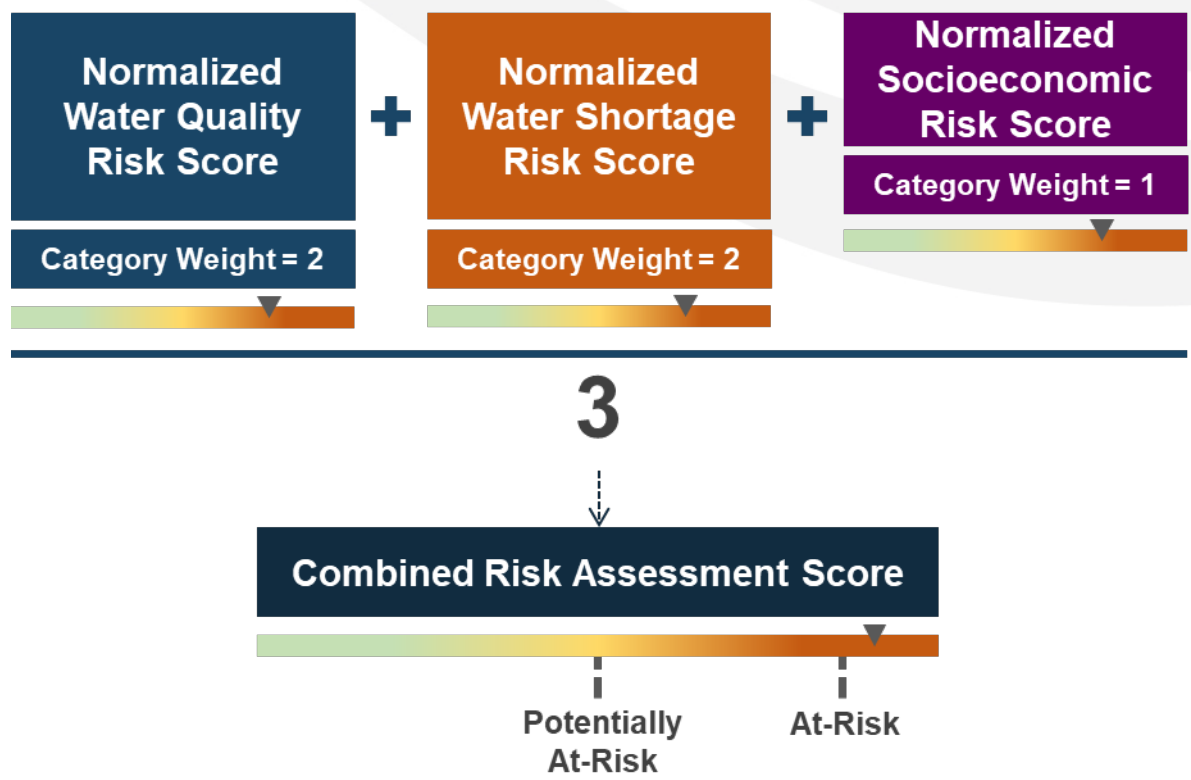
Risk Assessment for State Small Water Systems & Domestic Wells

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

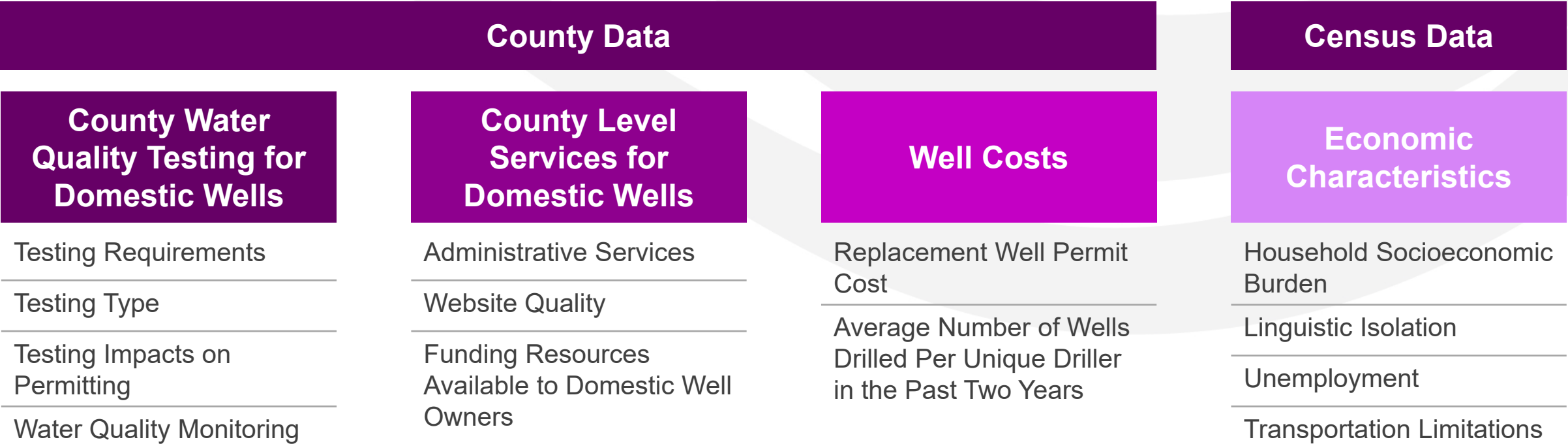


2023 Methodology: Risk Assessment for State Small Water Systems & Domestic Wells

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



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>

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)

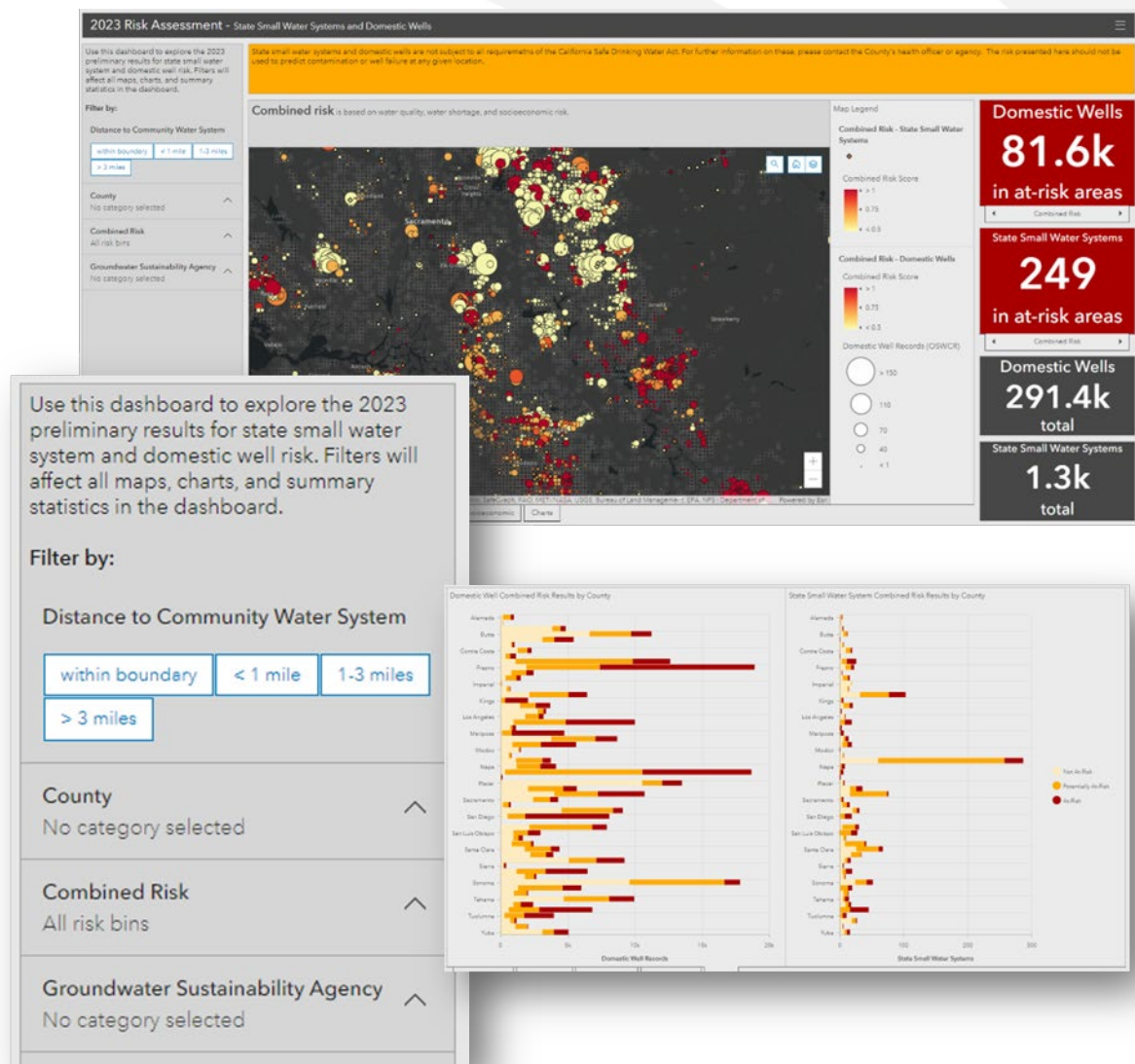
	Statewide	Not At-Risk	Potentially At-Risk	At-Risk
Total Count of SSWS	1,297	105,827	103, 986	81,588
Total Count of DW	291,401	432	620	245
Average CalEnviroScreen 4.0 Pollution Burden Percentile	50.0	36.3 (SSWS) 33.5 (DW)	43.3 (SSWS) 46.6 (DW)	40.0 (SSWS) 47.9 (DW)
Average percentage of households 2x 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

Explore the Dashboard: <https://bit.ly/RA-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%)

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



CALIFORNIA WATER BOARDS

SAFER PROGRAM

Cost Assessment Update

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



Cost Assessment



Failing & At-Risk Systems
and Domestic Wells

2021: Conducted a full **Cost Assessment** for Failing and At-Risk community water systems, SSWs, 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 **2024 Needs Assessment Report**.

Summary of Proposed Changes to Cost Model

**1**

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

**2**

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

**3**

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

**4**

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

**5**

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.

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



Why Measuring Affordability Matters



State & Federal Gov.

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



Water Systems

- Impacts rate-setting decisions
- Financial capacity of system
- Ability to pay for current and future needs



Customers

- Quality of life – percent of income spent on drinking water
- Access to safe drinking water

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.

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 standards.

STEP 1

Identifying Systems
to Analyze

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: <https://bit.ly/AffordabilityWP-0922>

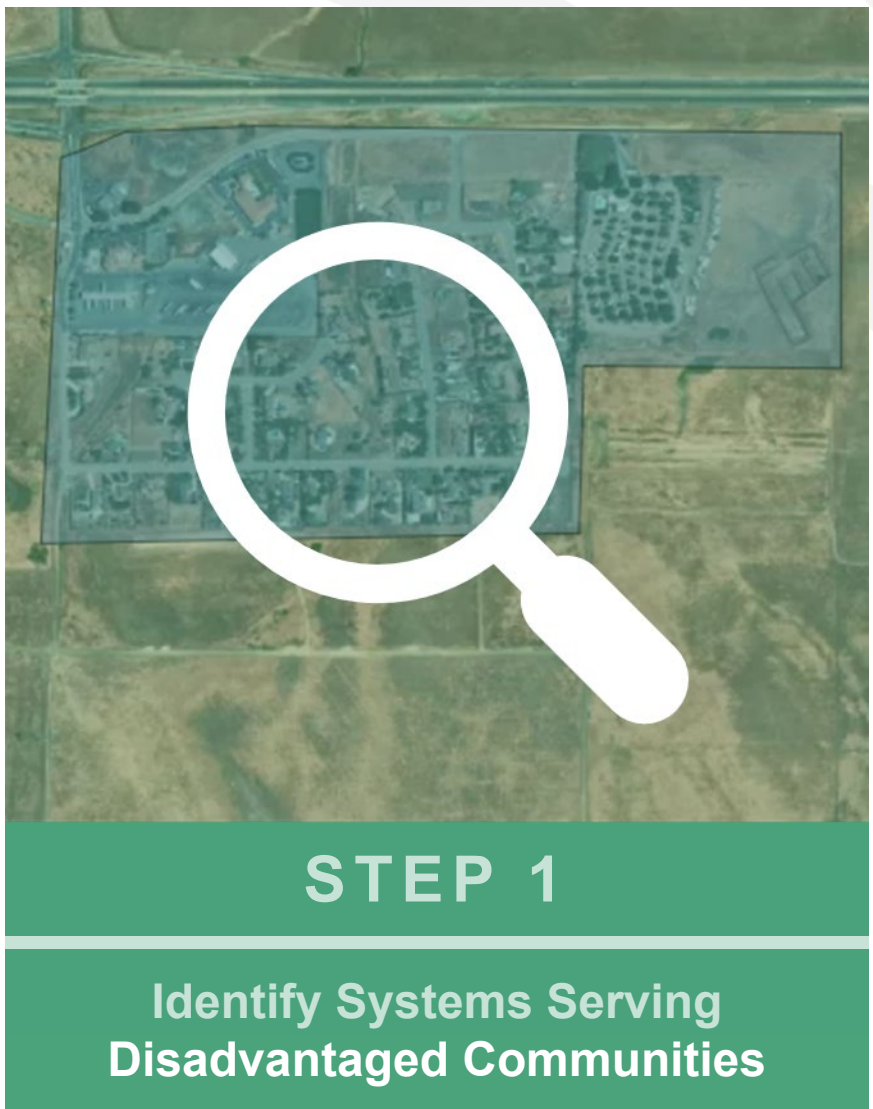
Workshop 3: Affordability Assessment Methodology & Threshold Setting

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

STEP 1

DAC Determination

STEP 1: Identifying Systems Included in the Affordability Assessment



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:

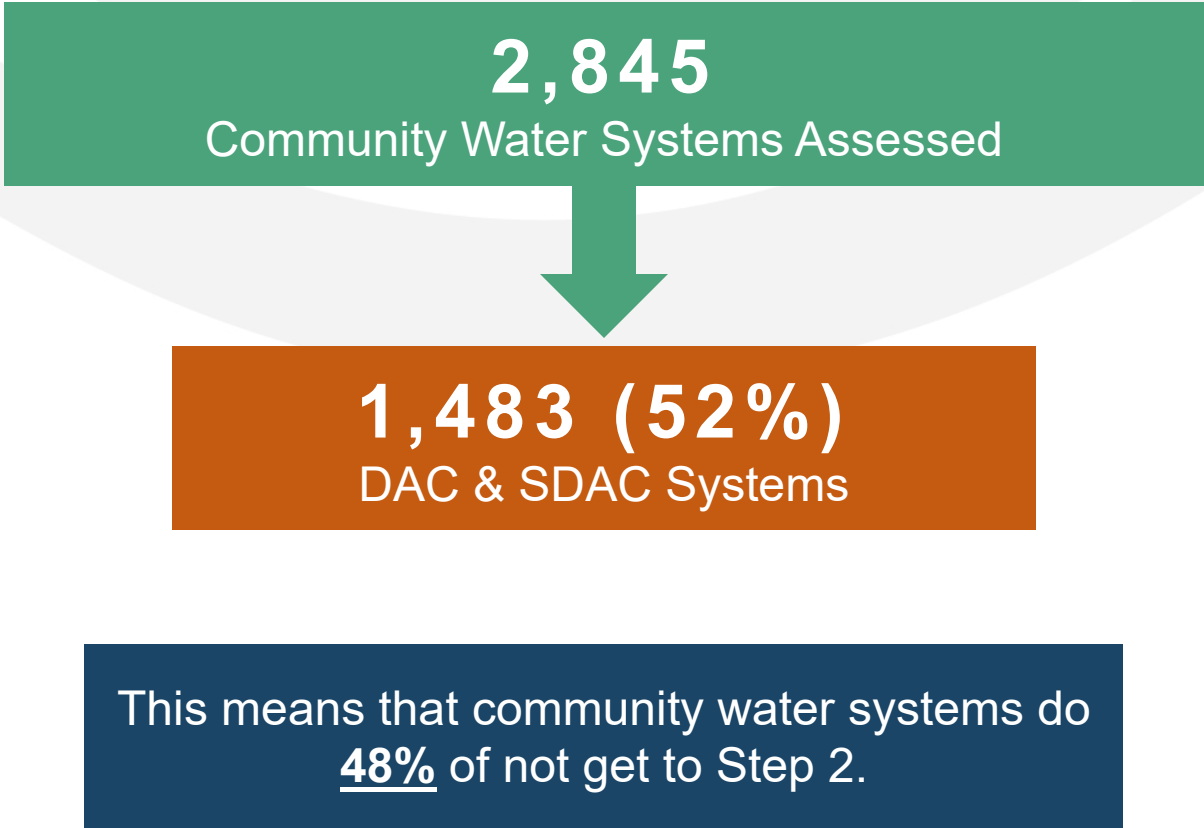
- **DAC:** MHI is less than 80% statewide MHI.
- **SDAC:** MHI is less than 60% statewide MHI.

STEP 1: 2022 Results for Public Water Systems



STEP 1

Identify Systems Serving Disadvantaged Communities

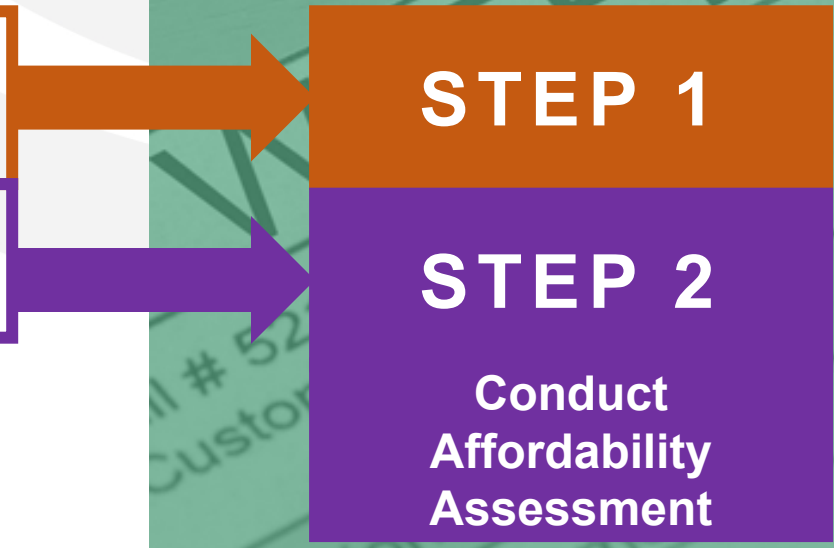


STEP 2

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.



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 Arrearages
		% of Residential Arrearages	Residential Arrearage Burden
		Residential Arrearage Burden	Poverty & Housing Burden = <u>“Household Socioeconomic Burden”</u>

STEP 2: Affordability Indicators Over Time

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

% 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.

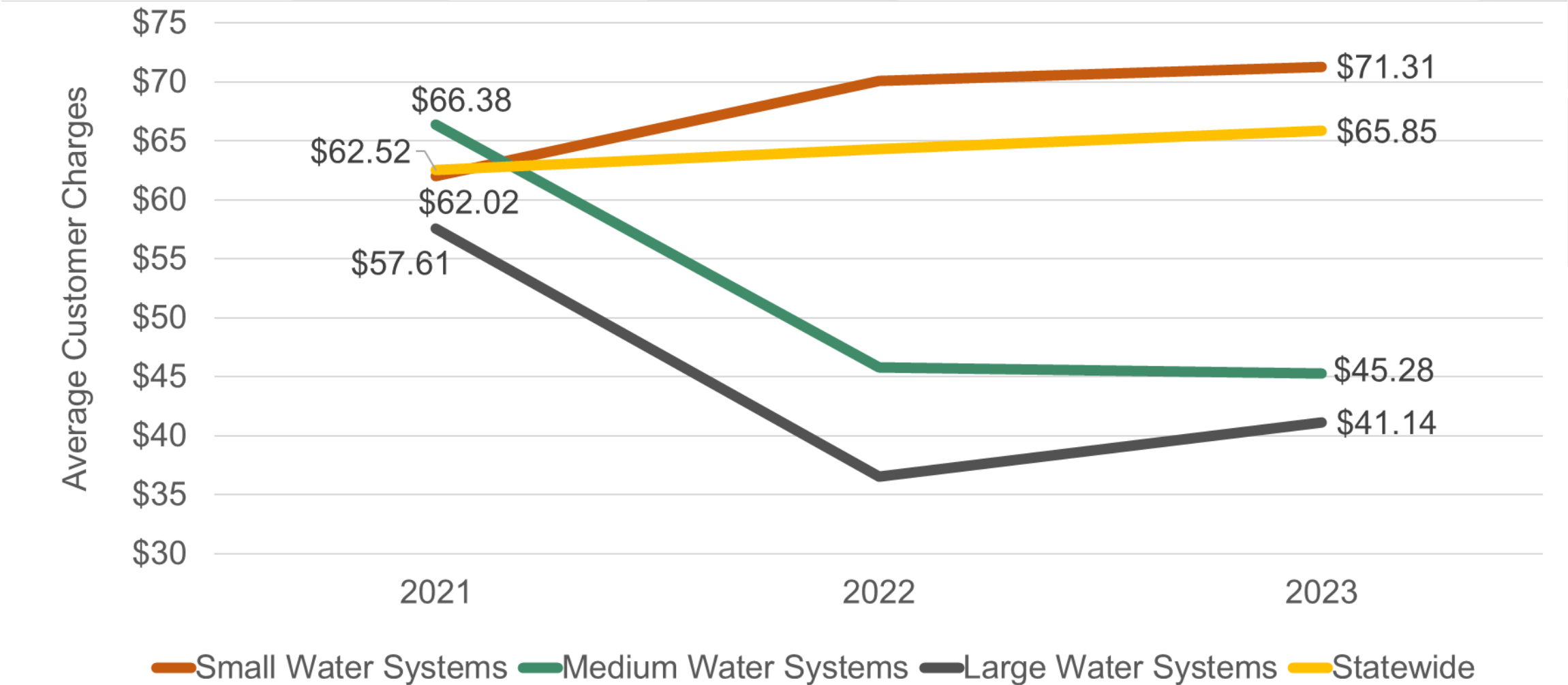
Affordability Indicator	Thresholds	Risk Level = Affordability Burden
Percent of Median Household Income (%MHI)	Threshold 0 = Less than 1.49%	None
	Threshold 1 = 1.5% or greater	High

Extreme Water Bill

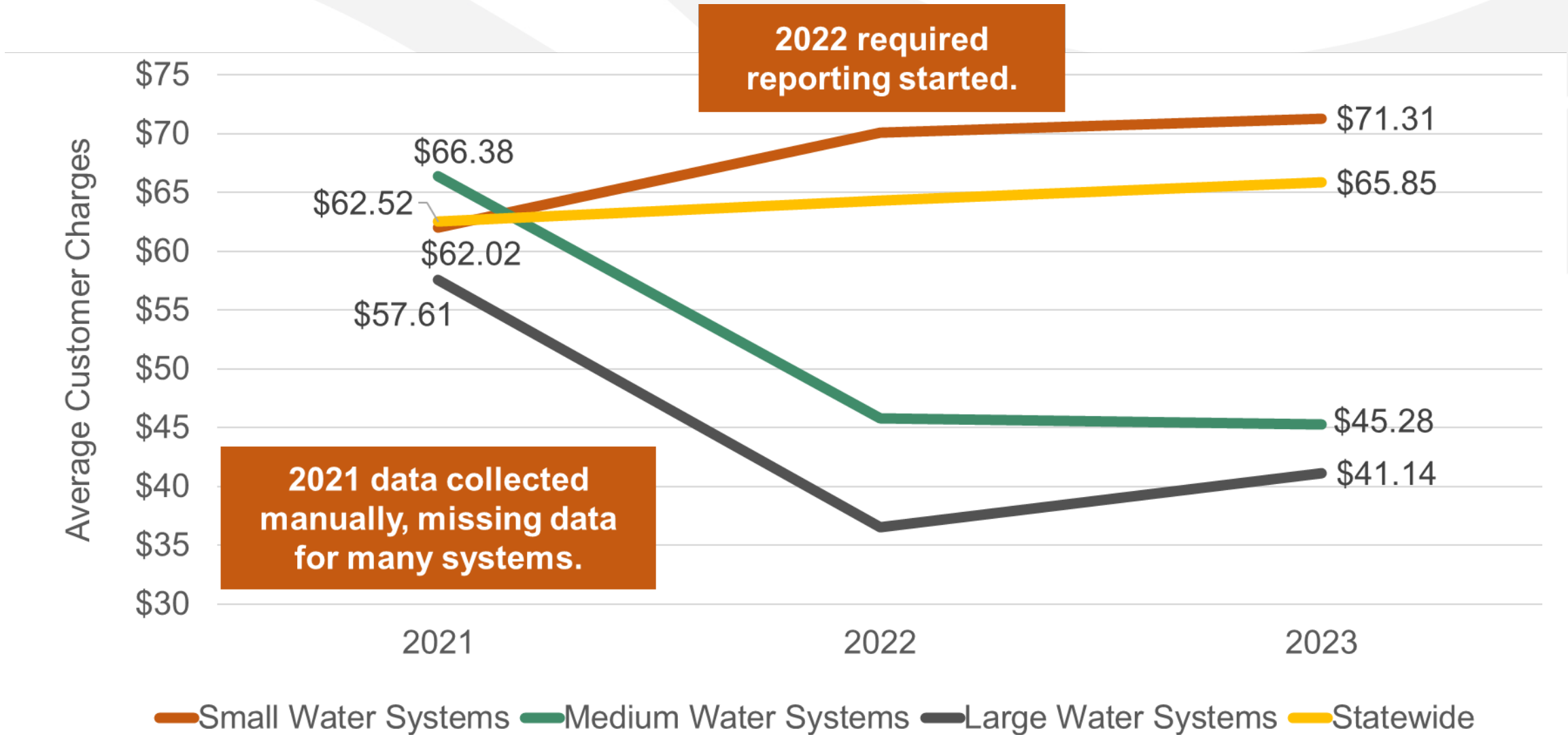
Measures a system’s residential customer charges for 6 HCF compared the state-wide average. Identifies communities that are paying much higher rates.

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

Average Monthly Residential Customer Charges for 6 HCF



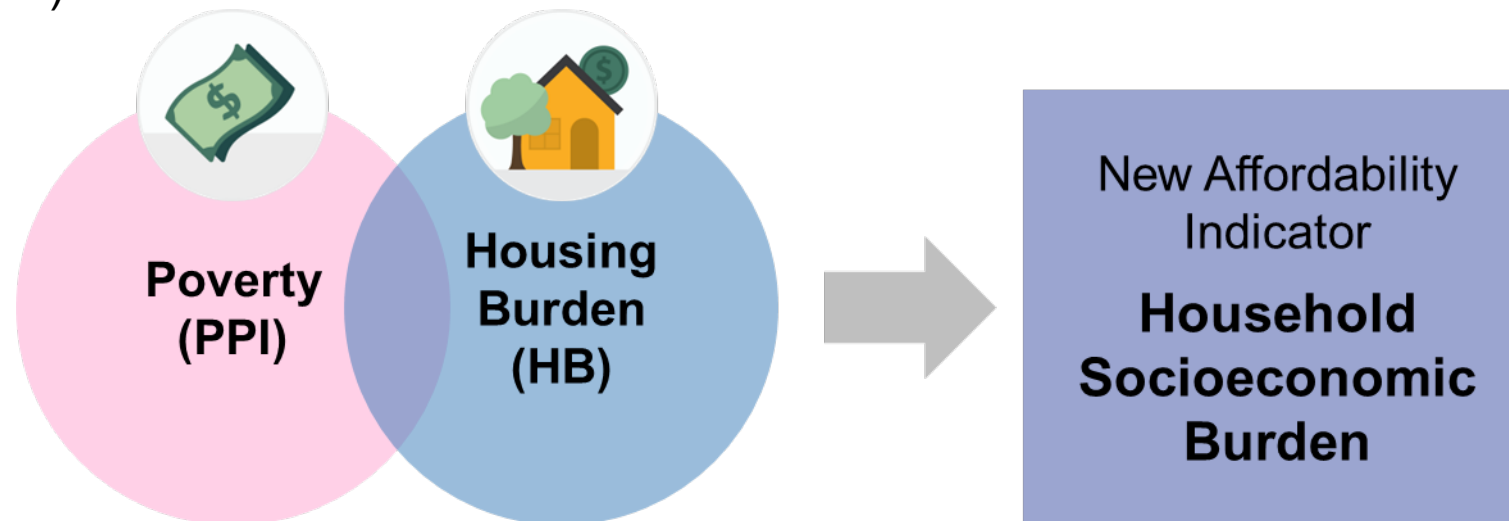
Average Monthly Residential Customer Charges for 6 HCF



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).



Household Socioeconomic Burden with Component Threshold Scores

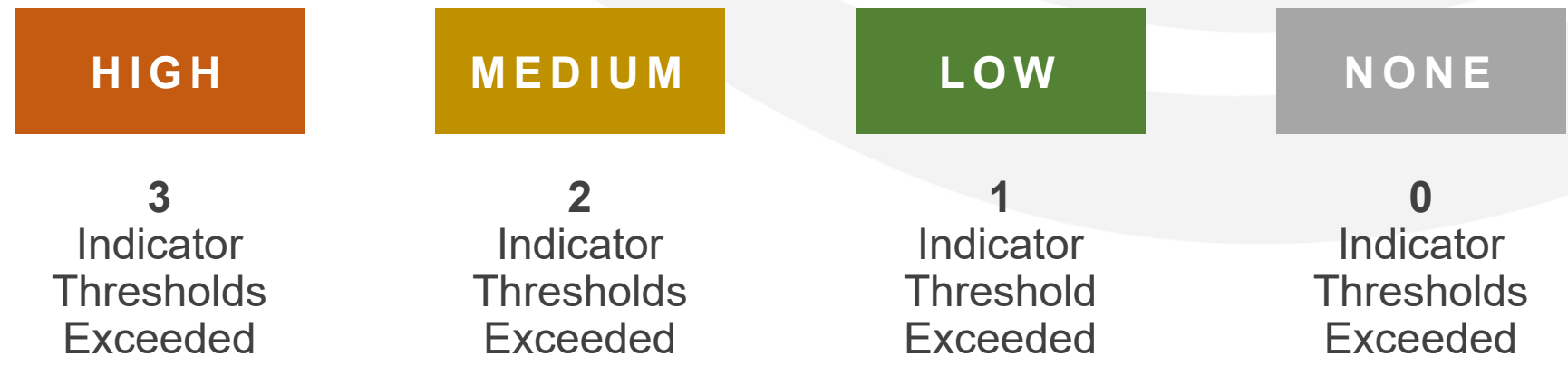
Poverty (PPI)	High Risk ≥ 35%	Score = 1	N/A	0.5	0.625	1
	High Risk 20% - 35%	Score = 0.25	N/A	0.125	0.25	0.625
	None < 20%	Score = 0	N/A	0	0.125	0.5
	Unknown	Score = N/A	N/A	N/A	N/A	N/A
			Score = N/A	Score = 0	Score = 0.25	Score = 1
			Unknown	None < 14%	High Risk 14% - 21%	High Risk ≥ 21%
Housing Burden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

Household Socioeconomic Burden

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

“Affordability Threshold” Updated for 2023 Affordability Assessment

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



Affordability Assessment Results by DAC/SDAC SAFER Status

High: 3 indicator thresholds met
Medium: 2 indicator thresholds met
Low: 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 met
Medium: 2 indicator thresholds met
Low: 1 indicator threshold met

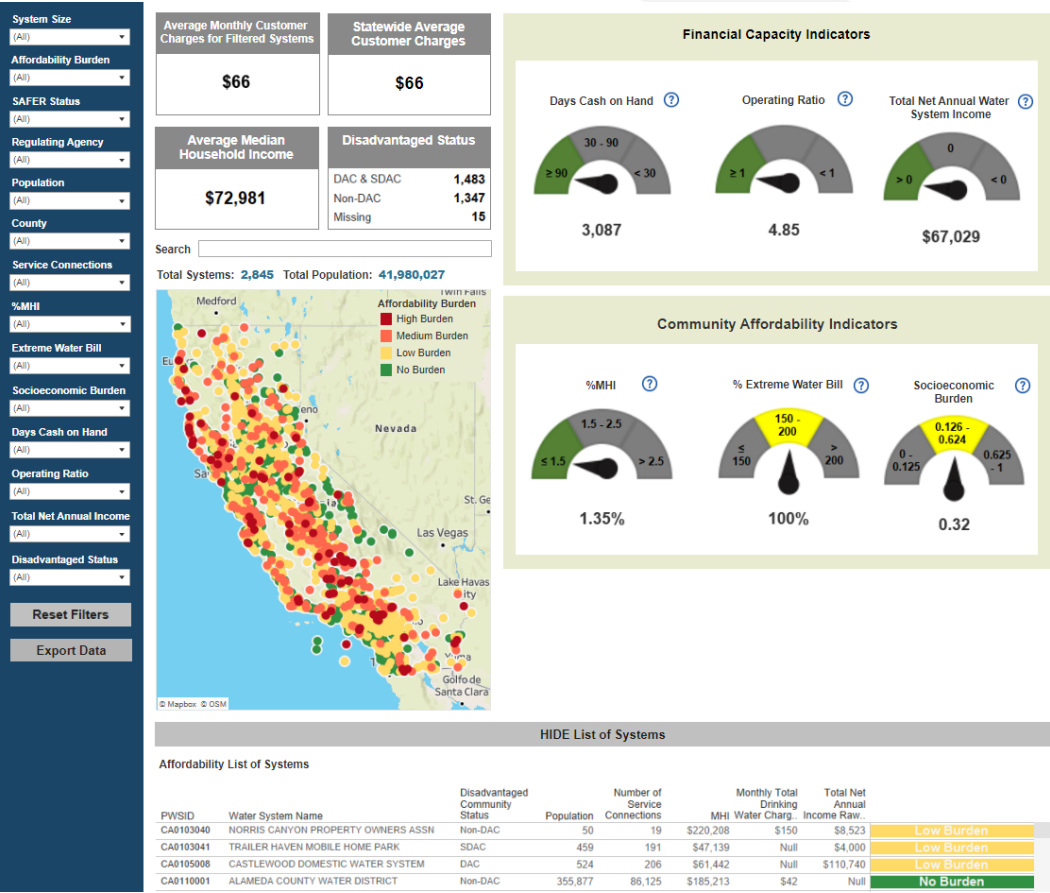
Community Status	Total Systems	High Affordability Burden	Medium Affordability Burden	Low Affordability Burden	None
Failing DAC/SDAC	203	13 (6%)	50 (25%)	120 (59%)	20 (10%)
At-Risk DAC/SDAC	324	30 (9%)	85 (26%)	177 (55%)	32 (10%)
Potentially At-Risk DAC/SDAC	257	15 (6%)	45 (18%)	171 (67%)	26 (10%)
Not 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

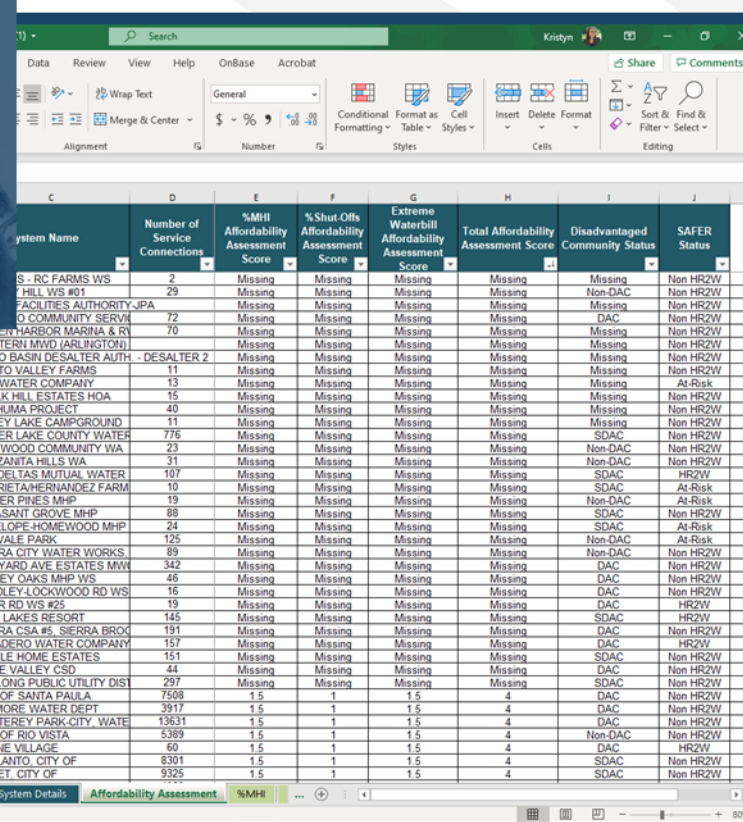


Explore the Dashboard: <https://bit.ly/43W8vRK>

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.

Access the Affordability Assessment Results and Raw Data

System Name	Number of Service Connections	%MHI Affordability Assessment Score	%Shut-Offs Affordability Assessment Score	Extreme Waterbill Affordability Assessment Score	Total Affordability Assessment Score	Disadvantaged Community Status	SAFER Status
S - RC FARMS WS	2	Missing	Missing	Missing	Missing	Missing	Non HR2W
HILL WS #01	29	Missing	Missing	Missing	Missing	Non-DAC	Non HR2W
FACILITIES AUTHORITY - JPA	70	Missing	Missing	Missing	Missing	Missing	Non HR2W
COMMUNITY SERV	72	Missing	Missing	Missing	Missing	DAC	Non HR2W
PORT HARBOR MARINA & RY	70	Missing	Missing	Missing	Missing	Missing	Non HR2W
WESTERN MWD (ARLINGTON)	70	Missing	Missing	Missing	Missing	Missing	Non HR2W
CHEVO BASIN DESALTER AUTH - DESALTER 2	11	Missing	Missing	Missing	Missing	Missing	Non HR2W
BENITO VALLEY FARMS	13	Missing	Missing	Missing	Missing	Missing	At-Risk
RAY WATER COMPANY	15	Missing	Missing	Missing	Missing	Missing	Non HR2W
CHALK HILL ESTATES HOA	40	Missing	Missing	Missing	Missing	Missing	Non HR2W
CACHUMA PROJECT	11	Missing	Missing	Missing	Missing	Missing	Non HR2W
HONEY LAKE CAMPGROUND	776	Missing	Missing	Missing	Missing	SDAC	Non HR2W
LOWER LAKE COUNTY WATER	23	Missing	Missing	Missing	Missing	Non-DAC	Non HR2W
LEAFWOOD COMMUNITY WA	31	Missing	Missing	Missing	Missing	Non-DAC	Non HR2W
MANZANITA HILLS WA	107	Missing	Missing	Missing	Missing	SDAC	HR2W
LAS DELTAS MUTUAL WATER	10	Missing	Missing	Missing	Missing	SDAC	At-Risk
MURRIETA/HERNANDEZ FARM	19	Missing	Missing	Missing	Missing	Non-DAC	At-Risk
SUTTER PINES MHP	88	Missing	Missing	Missing	Missing	SDAC	Non HR2W
PLEASANT GROVE MHP	24	Missing	Missing	Missing	Missing	SDAC	At-Risk
ANTELOPE-HOMEWOOD MHP	125	Missing	Missing	Missing	Missing	Non-DAC	At-Risk
OAKVALE PARK	89	Missing	Missing	Missing	Missing	Non-DAC	Non HR2W
SIERRA CITY WATER WORKS	342	Missing	Missing	Missing	Missing	DAC	Non HR2W
VINEYARD AVE ESTATES MHW	46	Missing	Missing	Missing	Missing	DAC	Non HR2W
VALLEY OAKS MHP WS	16	Missing	Missing	Missing	Missing	DAC	Non HR2W
BRADLEY-LOCKWOOD RD WS	19	Missing	Missing	Missing	Missing	DAC	HR2W
RIVER RD WS #25	145	Missing	Missing	Missing	Missing	SDAC	HR2W
TWIN LAKES RESORT	191	Missing	Missing	Missing	Missing	DAC	Non HR2W
CITY OF SANTA PAULA	157	Missing	Missing	Missing	Missing	DAC	HR2W
SIERRA CSA #5 - SIERRA BROOK	151	Missing	Missing	Missing	Missing	SDAC	Non HR2W
CAZADERO WATER COMPANY	44	Missing	Missing	Missing	Missing	DAC	Non HR2W
MOBILE HOME ESTATES	297	Missing	Missing	Missing	Missing	SDAC	Non HR2W
LITTLE VALLEY CSD	7508	1.5	1	1.5	4	DAC	Non HR2W
HERLONG PUBLIC UTILITY DIST	3917	1.5	1	1.5	4	DAC	Non HR2W
CITY OF SANTA PAULA	13631	1.5	1	1.5	4	DAC	Non HR2W
FILLMORE WATER DEPT	5389	1.5	1	1.5	4	Non-DAC	Non HR2W
MONTEREY PARK-CITY WATER	60	1.5	1	1.5	4	DAC	HR2W
CITY OF RIO VISTA	8301	1.5	1	1.5	4	SDAC	Non HR2W
ALPINE VILLAGE	9325	1.5	1	1.5	4	SDAC	Non HR2W
ADELANTO, CITY OF							
HEMET, CITY OF							

Download the **Affordability Assessment Results Spreadsheet**:

<https://forms.office.com/g/BdNjFNfZvJ>

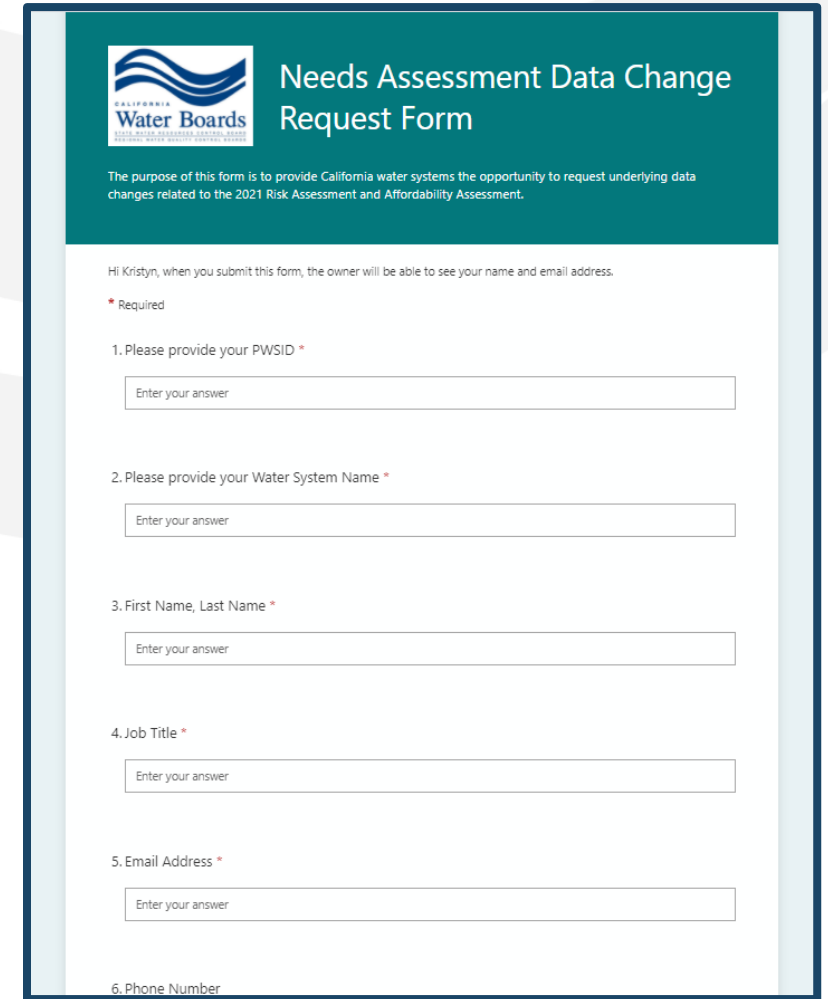
This spreadsheet will be updated periodically with data refreshes.

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.



The screenshot shows a web form titled "Needs Assessment Data Change Request Form" with the California Water Boards logo. The form includes a header with the logo and title, a purpose statement, and a list of required fields. The fields are: 1. PWSID, 2. Water System Name, 3. First Name, Last Name, 4. Job Title, 5. Email Address, and 6. Phone Number. Each field has a text input box with the placeholder "Enter your answer".

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 *

Enter your answer

4. Job Title *

Enter your answer

5. Email Address *

Enter your answer

6. Phone Number

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.



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	July - September	October - December
5/2 Release of Needs Assessment 5/2 Needs Assessment Webinar 5/24 Advisory Group Mtg #2	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	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.

Immediate Next Steps

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



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.



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

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

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: 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.



THANK YOU

CALIFORNIA WATER BOARDS

SAFER PROGRAM