



DRINKING WATER FINANCIAL CAPACITY & COMMUNITY AFFORDABILITY DASHBOARD USER GUIDE

LAST UPDATED: APRIL 2024

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INTRODUCTION

In 2023, the State Water Board released a new web-based dashboard to help staff and interested external stakeholders explore the relationship between a water system's financial capacity and community affordability. The Water System Financial Capacity & Community Affordability Dashboard displays reported and calculated metrics/indicators that are used in the State Water Board's annual Drinking Water Needs Assessment. Figure 1 illustrates the nexus between affordability and water system financial capacity.

Figure 1: Nexus of Affordability and Water System Financial Capacity



- (1) Household Affordability:** The ability of individual households to pay for an adequate supply of water. Metrics measuring household level affordability have been included in both the annual Affordability Assessment and Risk Assessment.
- (2) Community Affordability:** The ability of households within a community to pay for water services to financially support a resilient water system. Metrics measuring community level affordability are included in both the annual Affordability Assessment and Risk Assessment.
- (3) & (4) Water System Financial Capacity:** The ability of the water system to financially meet current and future operation and infrastructure needs to deliver safe drinking water. The financial capacity of water systems affects future rate impacts on households. The inability to provide adequate services may lead households served by the system to rely on expensive alternatives such as bottled water. Metrics measuring the financial capacity of water systems are included in the annual Risk Assessment only.

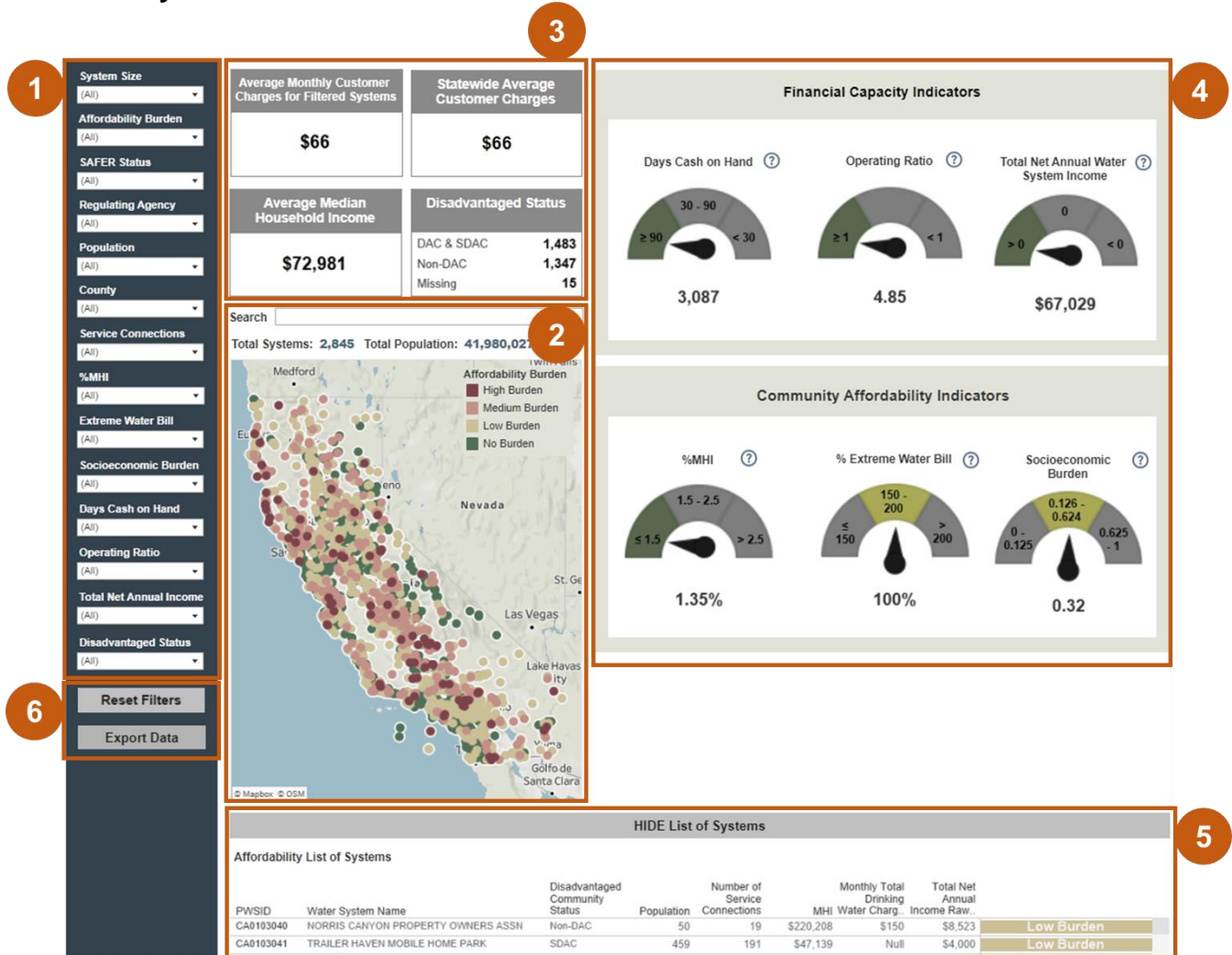
NAVIGATING THE DASHBOARD

The Dashboard can be viewed in the State Water Board's website at the URL below:

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

By default, the Dashboard displays the full statewide dataset of community water systems and their affordability and financial capacity information. Figure 2 and the sections below provide an overview of the information and functionality currently available in the Dashboard.

Figure 2: Statewide View of the Water System Financial Capacity & Community Affordability Dashboard



1. FILTER OPTIONS

Users can filter the Dashboard to change the data summaries displayed. Users can select multiple filters at a time using the drop-down menu options on the left side of the Dashboard. Table 1 summarizes the filter options currently available.

Table 1: Filter Options in the Affordability Dashboard

Filter Option	About
System Size	The water system size filter is determined by population served and the number of service connections. For small water systems, they have 3,000 service connections or less. For medium water systems, they have between 3,001-30,000 service connections or serve a population of less than 100,000. For large water systems, they have

Filter Option	About
	more than 30,000 service connections or serve a population that is 100,000 or more.
Affordability Assessment	Whether a water system is High, Medium, Low or No Affordability Burden.
SAFER Status¹	Whether a water system is Failing, At-Risk or Potentially At-Risk of failing, Not At-Risk of failing, or Not Assessed.
Service Connections	The total number of service connections served by the water system.
Population	The total estimated population served by the water system.
County	The primary County where the water system is physically located.
Regulating Agency	The State Water Board District Office or Local Primacy Agency that is responsible for regulatory oversight of the system.
	The disadvantage community status of the water system, determined with U.S. Census median household income (MHI) data.
Service Area Economic Status	“Disadvantaged community” or “DAC” means the entire service area of a community water system, or a community therein, in which the MHI is less than 80% of the statewide annual MHI level. ²
	“Severely disadvantaged community” or “SDAC” means the entire service area of a community water system in which the MHI is less than 60% of the statewide MHI. ³
%MHI	This indicator measures annual system-wide monthly residential customer charges for six hundred cubic feet (HCF) relative to the annual Median Household Income (MHI) within a water system’s service area.
Extreme Water Bill	This indicator measures drinking water customer charges that meet or exceed 150% of the statewide average drinking water customer charges for the six hundred cubic feet (HCF) level of consumption. 2021 statewide average is \$65.85.
Socioeconomic Burden	This indicator is a combination of two metrics: the Poverty Prevalence Indicator (PPI) and Housing Burden. The two

¹ Failing criteria is summarized in the Drinking Water Needs Assessment and detailed online at the link below. The criteria used to determine At-Risk, Potentially At-Risk, and Not At-Risk water systems is detailed in Appendix A of the annual Drinking Water Needs Assessment report.

[Failing Criteria: https://www.waterboards.ca.gov/water_issues/programs/hr2w/docs/hr2w_expanded_criteria.pdf](https://www.waterboards.ca.gov/water_issues/programs/hr2w/docs/hr2w_expanded_criteria.pdf)

² Health & Saf. Code, § 116275, subd. (aa).

³ Water Code § 13476, subd. (j)).

Filter Option	About
	components of Household Socioeconomic Burden were combined using a matrix approach detailed in Appendix D of the Needs Assessment.
Days Cash on Hand	This indicator measures the estimated number of days a water system can cover its daily operations and maintenance costs, relying only on their current cash or liquid reserves, before running out of cash. Days cash on hand measures a system's financial capacity and is an estimate of how long a water system can operate without new revenues or additional funding.
Operating Ratio	This indicator is a ratio of the water system's annual revenues compared to annual operating expenses. To be self-supporting, a water system should have at least as much annual revenue as it has operating expenses, e.g., an operating ratio equal to or greater than 1.0. The operating ratio does not include planned investments in future years.
Total Net Annual Income	The purpose of this risk indicator is to identify water systems whose total annual revenue is unable to cover their total annual expenses. A water system should generate enough revenue to cover all incurred annual expenses (including operational expenses). Total Net Annual Income of a water system should be a positive value.

2. MAP DISPLAY & SEARCH OPTIONS

Users can use the search box to look-up a water system. Users can enter either a water system's name or a Public Water System ID (PWSID) number to search the list of active community water systems and schools.

Note: To clear the search box and re-set the map, the user must select the entered text, delete it, and hit enter with your keyboard within the search box.

The map will display the systems that meet the filtered criteria (1) or the water system the user has looked-up using the search box.' The color of the point location represents the Affordability Burden of the water system (Learn more in Appendix D of the Drinking Water Needs Assessment). Above the map is a summary of the total number of systems meeting the filter criteria and the total population served by those water systems.

3. INFORMATION ON THE SYSTEMS DISPLAYED IN THE MAP

The top of the Dashboard contains both static and dynamic data points. As filters are applied to the Dashboard, the dynamic numbers will automatically update to reflect the systems meeting the filtered criteria.

Table 2: Informational Data Summary

Informational Data	About
Average Monthly Statewide Customer Charges for 6 HCF (static)	The average monthly statewide customer charges for 6 HCF that is static and does not change when filters are applied.
Monthly Average Statewide Customer Charges for 6 HCF (Dynamic)	The average monthly statewide customer charges for 6 HCF that is dynamic and does change when filters are applied.
Average Median Household Income (MHI)	The average median household income is based on the U.S Census MHI. The MHI for each water system is a population weighted MHI, using census block group area and population data. The water system MHI is then calculated using population adjusted MHIs for each census block group that falls within the water system boundary.
Disadvantaged Status	A Disadvantaged Community or DAC means the entire service area of a community water system, or a community therein, in which the MHI is less than 80% of the statewide annual MHI level. A Severely Disadvantaged Community or SDAC means the entire service area of a community water system in which the MHI is less than 60% of the statewide MHI. DAC and SDAC are presented together in the Affordability Dashboard and are compared to Non-DAC and missing status systems.

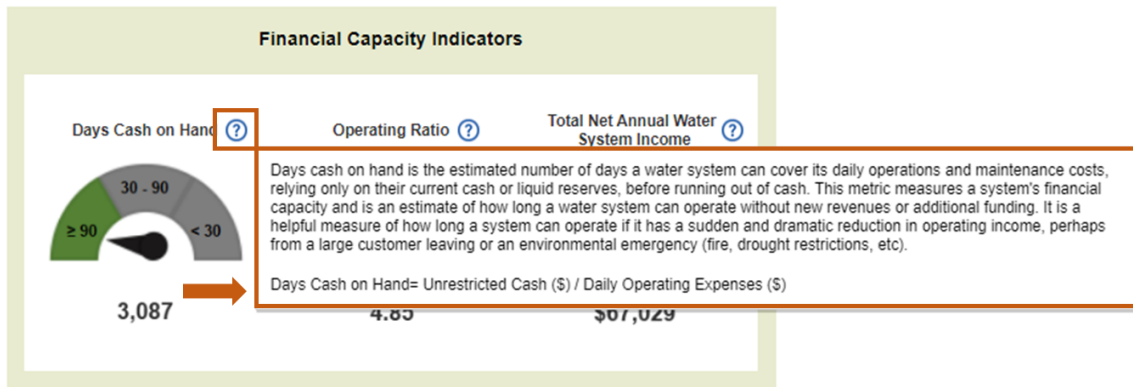
4. COMMUNITY AFFORDABILITY AND FINANCIAL CAPACITY INDICATORS

The right-side of the Dashboard displays how water systems are performing in the individual affordability and financial capacity indicators used in the Drinking Water Needs Assessment. The dials display the thresholds used in the Needs Assessment to identify high, medium, low and/or no risk associated with the values displayed per indicator.

The blue value displayed under the dial represents the average value for all community water systems meeting the filter criteria applied in the Dashboard. If a single water system is selected, the value displayed reflects that individual water system’s data/information.

Learn More: Users can hover over the question mark icon to reveal the indicator’s definition (Figure 3).

Figure 3: Accessing Indicator Definitions



5. LIST OF WATER SYSTEMS

Selecting the 'List of Water Systems' button at the bottom of the Dashboard will Show and Hide the list of water systems that are meeting the applied filter criteria (1) or search box fields (2).

6. CLEAR FILTERS & EXPORT DATA BUTTONS

Selecting the 'Clear All Filters' button will de-select and re-set the filter options on the left side of the Dashboard (1). *Note:* This button will NOT clear the search box fields (2). To clear the search box, the user must select the entered text, delete it, and hit enter with your keyboard within the search box.

The 'Export Data' button will open a pop-up window with options for how to download the data displayed in the Dashboard. *Note:* This feature in the Dashboard is known to have issues. Users are encouraged to use the links above the Dashboard to access the data in a more user-friendly format.

DATA REFRESH RATE

The Dashboard displays data from many different sources that is collected and analyzed at different frequencies. The sections below provide a summary of the data refresh rate.

FAILING WATER SYSTEMS

The Failing list of water systems is updated **daily** in the Dashboard before noon. The Failing list of water systems is generated by reviewing all new and historical violation and enforcement data for active community water systems and non-community schools and identifying which systems are currently meeting the Failing criteria.⁴ Systems that are meeting the criteria are

⁴ [Failing Criteria](#)

https://www.waterboards.ca.gov/water_issues/programs/hr2w/docs/hr2w_expanded_criteria.pdf

listed as Failing in the Dashboard, those that are not Failing will have their results from the Risk Assessment displayed: At-Risk, Potentially At-Risk, Not At-Risk, or Not Assessed.

SAFER STATUS & INDICATOR DATA

The SAFER Status (Risk Assessment results) and corresponding performance for individual indicators are updated in the Dashboard on a **quarterly** basis. Important to note that all of the indicators in the Dashboard are dependent on data that is not collected or updated more than **once a year**. For example, 'Days Cash in Hand,' is dependent on water system reporting through the electronic Annual Report (eAR). This indicator will stay constant throughout the year unless a data change request is made or when new eAR data becomes available.

ACCESSING THE DATA

A hyperlink for a user-friendly excel spreadsheet is accessible at the top of the Dashboard screen. It contains a snapshot in time of the Affordability Assessment results and the Failing list.