



ADDRESSING WATER AFFORDABILITY IN CALIFORNIA

An Analysis Conducted for SPUR

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Definitions of Key Terms

This section defines key terms used throughout the report.

- **Arrearage:** Unless otherwise specified, an arrearage will refer to “money owed to a water system or wastewater treatment provider from nonpayment of residential and commercial accounts.”¹ Arrearage does not include late fees or interest on outstanding balances.
- **California State Water Resources Control Board (State Water Board):** The State Water Board is one of the six branches of the California Environmental Protection Agency. The Board has regulatory responsibility for protecting water quality.
- **Community Water System (CWS):** “a public water system that serves at least 15 service connections used by permanent residents or regularly serves at least 25 permanent residents of the area served by the system.”²
- **Commercial Customer:** “A water system or wastewater treatment provider customer or connection that serves a commercial/institutional customer” such as hotels, restaurants, nursing homes, prisons, and health facilities. The term commercial customer does not include industrial customers or agriculture and landscape irrigation.³
- **Payment Plan:** “A plan for deferred or reduced payment including, but not limited to, minimum payments, alternate payment schedules, or amortization of unpaid balances.”⁴
- **Public Water System:** A public water system provides water for human consumption to at least 15 service connections or an average of at least 25 people for at least 60 days a year. A public water system may be publicly or privately owned.⁵
- **Residential Customer:** “Water service or wastewater treatment provider customers, including groundwater well owners charged for water in managed basins, residing in single-family residences, multifamily residences, mobile homes, including, but not limited to, mobile homes in mobile home parks, or farmworker housing that receive a bill for water or wastewater service.”⁶

¹ California Water Boards. 2022. “California Water and Wastewater Arrearage Payment Program Guidelines: Water Arrearages.” January 19. https://www.waterboards.ca.gov/arrearage_payment_program/docs/2022/adopted-wastewater-guidelines.pdf.

² Ibid.

³ Ibid.

⁴ Ibid.

⁵ United States Environmental Protection Agency. n.d. “Information about Public Water Systems.” Accessed May 8, 2022. <https://www.epa.gov/dwreginfo/information-about-public-water-systems>.

⁶ California Water Boards. “California Water and Wastewater Arrearage Payment Program Guidelines: Water Arrearages.”

- **Water Shutoff:** “Discontinuation of water service for nonpayment.”⁷

Additionally, this report differentiates CWSs by system size. This report uses the U.S. Environmental Protection Agency’s (EPA) categorical definitions of system size, which divides systems into five categories based on the size of the population the system serves. A table defining these size categories is provided below.⁸

Table 1: System Size Categories

Size Category	Population Served by System
Extremely Small	≤ 500
Very Small	501 – 3,300
Moderately Small	3,301 – 10,000
Moderately Large	10,001 – 100,000
Very Large	> 100,000

⁷ Ibid.

⁸ United States Environmental Protection Agency. n.d. “Analyze Trends: EPA/State Drinking Water Dashboard.” Enforcement And Compliance History Online. Accessed May 8, 2022. <https://echo.epa.gov/trends/comparative-maps-dashboards/drinking-water-dashboard>.

Executive Summary

Too many Californians still lack access to affordable drinking water. When families cannot afford to pay their water bill, they risk accruing hundreds of dollars in debt. A January 2021 State Water Board analysis estimated that Californians collectively owed over \$1 billion in water bill debt.⁹ If families are unable to pay down their debt, they may face the discontinuation of their water service. Indeed, hundreds of thousands of Californians have their water shutoff each year, cutting off their access to a basic necessity.¹⁰

The onset of the COVID-19 pandemic in March 2020 spotlighted the inequitable access to affordable drinking water in California. Just weeks into the pandemic, Governor Gavin Newsom recognized water service “as critically important” to Californians’ wellbeing and to reducing the spread of coronavirus.¹¹ As low-income Californians faced mounting financial pressures from twin health and economic crises, the Newsom administration and the California state legislature rolled out several policies and programs to prevent water shutoffs and reduce water bill debt.

Among these programs was the California Water and Wastewater Arrearage Payment Program (CWWAPP). Established by the state legislature in July 2021, the \$985 million program provides financial relief to CWSs and customers for unpaid bills accrued during the COVID-19 pandemic. CWWAPP was intended to address the following key concerns.

- “Smaller water systems experiencing significant revenue losses may face near-term bankruptcy.
- Systems without the ability to pay for operations may not be able to deliver safe drinking water.
- Financially impacted customers are not able to pay their water bill.
- Potential for significant debt accumulation and widespread shutoffs after shutoff moratorium is lifted.”¹²

Available data suggest that CWWAPP successfully addressed drinking water debt in California. Approximately 80 percent of California’s population was covered by CWWAPP, and more than 535,500 residential and commercial customers had nearly \$300 million drinking water arrearages

⁹ California Water Boards. 2021. “COVID-19 Drinking Water Survey.” (PowerPoint presentation, Board Meeting, January 19, 2021). https://www.waterboards.ca.gov/drinking_water/programs/documents/ddwem/covid_financial_survey_board_ppt_20210119.pdf

¹⁰ Feinstein, Laura. 2021. “Keeping the Water On: Addressing Rising Water-Bill Debt during the COVID-19 Economic Crisis.” SPUR. January. https://www.spur.org/sites/default/files/2021-03/spur_keeping_the_water_on.pdf.

¹¹ John Myers, “Californians won’t have water service turned off for unpaid bills during coronavirus crisis, Newsom says.” *Los Angeles Times*, April 2, 2020. <https://www.latimes.com/california/story/2020-04-02/water-shutoff-bills-moratorium-gavin-newsom-california-coronavirus>

¹² Max Gomberg. 2020. “Response to COVID-19 Water Sector Impacts.” (PowerPoint Presentation, Joint Workshop on Water Affordability, October 30, 2020). https://www.cpuc.ca.gov/-/media/cpuc-website/files/uploadedfiles/cpucwebsite/content/news_room/newsupdates/2020/final-water-affordability-workshop-slides---oct-30-corrected.pdf

relieved.¹³ The program prevented debt accrual, and ultimately, water shutoffs, by relieving customer debt and helping systems continue operations.

At the same time, because it was a new, first-of-its-kind program, the implementation of CWWAPP was imperfect. For example, because CWS participation in CWWAPP was voluntary, not all of California’s drinking water customers who could have benefitted from program funding received funding. At least 95 eligible water systems, with a total service population of at least 1.2 million Californians, did not apply for CWWAPP funding.¹⁴ Additionally, CWWAPP did not eliminate the threat of a water shutoff due to nonpayment because the program did not relieve all water bill debt; some customers still have outstanding arrearages for other charges that may appear on a water bill, such as stormwater, fines, taxes, and fees.

Moreover, systems reported that implementing the program was difficult and time consuming. Systems struggled to isolate the drinking water portion of customer debt; align system billing cycles with the program implementation timeline; analyze customer debt for the surveys, application, and reporting requirements; apply credits to customer bills; and notify customers of the CWWAPP credit.

Recommendations

Though CWWAPP was a pioneering first attempt at a statewide water affordability program, the program also unearthed several structural problems. California’s drinking water system is made up of a patchwork of approximately 3,000 CWSs.¹⁵ The number of CWSs and their diverse governing structures and operating practices present challenges for policymakers. This report presents several recommendations that emerged from this research to help policymakers better navigate the water affordability landscape.

1. Fund a Statewide Water Payment Assistance Program to Ensure the Right to Water

The state legislature should fully fund a statewide water payment assistance program. As multiple research participants shared, existing programs at the CWS level are not enough to meet the need in the state. Moreover, many systems do not have the resources to establish their own payment assistance programs. A fully funded statewide water payment assistance program is the best path forward for ensuring that water is affordable for every Californian.

2. Reduce the Administrative Strain of a Fragmented Water System

- **Fund updates to CWS billing systems:** The state should fund necessary updates to CWS billing systems so that CWSs can more easily administer a statewide payment assistance program. The best available estimate of the amount needed for billing system updates projects that it would take \$86 million over two years to ensure that all 2,900 CWS billing systems were capable of delivering a monthly water assistance credit; training personnel about a water payment assistance program; modifying CWS marketing, education, and outreach programs; and complying with “applicable

¹³ California Water Boards. “Drinking Water Arrearages Lessons Learned.” (PowerPoint Presentation, Water Foundation Convening, March 14, 2022).

¹⁴ California Water Boards. “Drinking Water Arrearage Program Survey and Application Tracking Spreadsheet.”

¹⁵ California Water Boards. n.d. “Safe Drinking Water Plan for California.” Accessed May 8, 2020.

https://www.waterboards.ca.gov/drinking_water/safedrinkingwaterplan/

requirements for reimbursement with state funding.”¹⁶

- **Promote data sharing with other payment programs:** One reported challenge CWSs face when implementing water payment assistance programs is identifying who might be eligible for the program. In order to help systems identify and support their low-income customers, the state could mandate data sharing between the California Alternate Rates for Energy (CARE) program, water systems, and the agency tapped to administer a statewide water payment assistance program. Data sharing would reduce the administrative burden on systems and the implementation agency by tying customer eligibility to the CARE program’s eligibility requirements.
- **Consider the operational consolidation of systems:** Approximately 3,000 CWSs currently serve California, and over 80 percent of these systems have fewer than 10,000 service connections.¹⁷ The system is also very decentralized; one 2022 study identified 26 distinct types of government arrangements with systems based on a system’s legal structure or derived authority.¹⁸ To help ensure that the design and implementation of a water affordability program is effective and equitable for systems and customers, policymakers should consider ways to operationally consolidate the water sector. This could involve sharing financial, managerial, or technical capacity, such as billing systems or staff.¹⁹ The State Water Board could help incentivize consolidation by providing grants to interested systems and also offering technical assistance during the operational merge process. This could help provide smaller CWSs with access to existing affordability programs; keep water retail rates low for customers; and make it easier to implement a statewide program in the future.
- **Consider appointing a regional administrator for water programs:** The state legislature should consider appointing a regional administrator, perhaps at the county or regional water board level, to oversee water rate assistance programs for systems that do not operate their own programs. Regional administrators could provide operational, technical, or managerial services to help administer customer rate assistance programs.

3. Continue Research Efforts on Water Assistance Programs

- **Evaluate LIHWAP and compare results with CWWAPP:** The standing up and implementation of both LIHWAP and CWWAPP present a natural experiment for researchers. Since LIHWAP and CWWAPP represent two very different approaches to a water payment assistance plan, an evaluation comparing the two programs would be useful to inform the design and implementation of a future statewide affordability plan.

¹⁶ Gregory Pierce et al. 2020. “Recommendations for Implementation of a Statewide Low-Income Water Rate Assistance Program.” California State Water Boards and University of California, Los Angeles Luskin Center for Innovation. February.

https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/assistance/docs/ab401_report.pdf

¹⁷ Kristin Dobbins and Amanda Fencl. “Who governs California’s drinking water systems?” *California WaterBlog*. January 23, 2022. <https://californiawaterblog.com/2022/01/23/who-governs-californias-drinking-water-systems/>

¹⁸ Ibid.

¹⁹ Nell Green Nylen, Camille Pannu, and Michael Kiparsky. (2018). “Learning from California’s Experience with Small Water System Consolidations.” Berkeley Law Center for Law, Energy, & the Environment. May.

https://www.law.berkeley.edu/wp-content/uploads/2018/05/SmallWaterSystemConsolidation_2018-05-02.pdf

- **Research approaches to implementing the renter’s credit described in SB-222:** The introduced water rate assistance program legislation specifies that money would be available for “water bill credits to renters and individuals or households that pay other amounts, fees, or charges related to residential water or wastewater service.”²⁰ Among households with incomes at or below 200 percent of the federal poverty line, approximately 60 percent (or 2.6 million households) do not pay for their water bill directly.²¹ This suggests that in order to support a majority of low-income families with their water bill, the state would need to offer an alternative delivery method to a direct bill credit. Service delivery options have not been tested at scale in California. Further research efforts could include pilot programs of one or multiple approaches to service delivery. Researchers could also compare the delivery service options using available data to evaluate their effectiveness and feasibility.
- **Evaluate the implementation and enforcement of SB-998:** SB-998 requires that CWSs with more than 200 connections have a written water shutoff policy for cases of nonpayment. All qualifying water systems were mandated to comply with SB-998 by April 1, 2020. Researchers should analyze the extent to which CWSs have established, published, and adhered to their shutoff policies. This analysis would help water policy experts better understand existing holes in affordability policies and could help ensure that future legislation addresses those gaps.
- **Study the implementation of the energy sector’s arrearage relief program:** Research participants wanted to learn more about how energy arrearages changed over time and whether the sector’s COVID-19 relief program observed similar implementation barriers as CWWAPP. More research could be done to evaluate the program in order to better understand how CWWAPP compared.

About this Report

This report aims to evaluate the effectiveness of CWWAPP in addressing the concerns of stakeholders in the water affordability space. It explores some of the program’s strengths, some of the systemic weaknesses the program unearthed, and the need for an ongoing, statewide water affordability program. This analysis seeks to guide policymakers as they strive to accomplish their goal of meeting every Californian’s human right to affordable drinking water.

The author developed this report with the support of SPUR, a Bay Area nonprofit think tank dedicated to prosperity, sustainability, and equity. This report is also the outcome of a semester-long research project at the University of California, Berkeley’s Goldman School of Public Policy.

²⁰ Water Rate Assistance Program, SB-222, 2021 – 2022 Regular Session.

https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220SB222

²¹ Pierce et al. “Recommendations for Implementation of a Statewide Low-Income Water Rate Assistance Program.”

I. Introduction

In 2012, former California Governor Jerry Brown signed Assembly Bill (AB) 685 into law, enshrining the human right to water. The bill, the first of its kind in the United States, statutorily recognized that “every human being has the right to safe, clean, affordable, and accessible water.”²² As in many areas of public policy, California led the nation in recognizing the human right to water and received praise from organizations like the United Nations, which called the move an “inspiring example” for governments worldwide.²³

A decade later, California has failed to fulfill its promise. Too many Californians still lack access to affordable drinking water. Approximately 20 percent of households spend almost 5 percent of their annual income on water, well above the federal government’s recommended range of 1.5 – 2.5 percent.²⁴ Across the state, the inflation-adjusted cost of water increased by 45 percent between 2007 and 2015.²⁵ By comparison, the real median household income in the state increased by just 4 percent in the same time period.²⁶

For water to be affordable, it cannot compromise the ability to pay for other essential items, such as food, rent, or healthcare.²⁷ Unfortunately, millions of Californians are forced to make these difficult tradeoffs. When families cannot afford to pay their water bill, they risk accruing hundreds of dollars in debt. A January 2021 State Water Board analysis estimated that Californians collectively owed over \$1 billion in water bill debt.²⁸ The same survey found that 155,000 households owed over \$1,000 in debt.²⁹ If families are unable to pay down their debt, they may face the discontinuation of their water service. Indeed, hundreds of thousands of Californians have their water shutoff each year, cutting off their access to a basic necessity.³⁰

The unaffordability of water disproportionately impacts people of color. In 2021, California zip codes with higher percentages of Black and Hispanic households had a higher percentage of households with water bill debt and a higher level of overall debt.³¹ Nationwide, water shutoffs are typically concentrated in areas with a higher proportion of racial minorities.³²

²² California Water Code. 100-113-106.3 (2012)

[https://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=WAT§ionNum=106.3#:~:text=\(a\)%20it%20is%20hereby%20declared,%2C%20cooking%2C%20and%20sanitary%20purposes.](https://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=WAT§ionNum=106.3#:~:text=(a)%20it%20is%20hereby%20declared,%2C%20cooking%2C%20and%20sanitary%20purposes.)

²³ United Nations. “California Law on Human Right to Water Sets Example for Others.” *UN News*. September 28, 2012. <https://news.un.org/en/story/2012/09/421852>

²⁴ Gabriel Petek. 2020. “Expanding Access to Safe and Affordable Drinking Water in California: A Status Update.” Legislative Analyst’s Office. November. <https://lao.ca.gov/reports/2020/4294/drinking-water-access-111020.pdf>

²⁵ Pierce et al. “Recommendations for Implementation of a Statewide Low-Income Water Rate Assistance Program.”

²⁶ Federal Reserve Economic Data. “Real Median Household Income in California. Accessed May 8, 2022. <https://fred.stlouisfed.org/series/MEHOINUSCAA672N>

²⁷ Green Nylen, Pannu, and Kiparsky. “Learning from California’s Experience with Small Water System Consolidations.”

²⁸ California Water Boards. “COVID-19 Drinking Water Survey.”

²⁹ Ibid.

³⁰ Feinstein. “Keeping the Water On.”

³¹ California Water Boards. “COVID-19 Drinking Water Survey.”

³² Coty Montag. (2019) “Water/Color: A Study of Race and the Water Affordability Crisis in America’s Cities.” NAACP Legal Defense Fund. May 19. https://www.naacpldf.org/wp-content/uploads/Water_Report_FULL_5_31_19_FINAL_OPT.pdf

A driving factor in the affordability crisis is that the cost of providing water has increased over time. Climate change and aging infrastructure continue to hike up water systems' operating costs, and legislative efforts to improve water safety impose stricter, costly quality regulations on CWSs. Unless water affordability is addressed in tandem with water quality concerns, customers will continue to bear the costs of necessary infrastructure updates and safety improvements.

To help customers access affordable water, many water systems in California offer some form of a customer assistance program (CAPs), such as bill discounts or special rate structures. These programs can offer many Californians essential financial assistance to prevent a water shutoff. However, not all CWSs offer CAP programs. One survey from 2019 estimated that just 37 percent of water systems nationwide offer some form of a CAP program.³³

Additionally, research on CAPs suggests that they are too limited in their scope and reach. According to the Environmental Policy Innovation Center, CAPs are “notoriously under-subscribed or cater to a small section of the population.”³⁴ Many CAPs also have eligibility limitations; lack funds for dedicated rate assistance; or lack staff or administrative capacity to administer such a program.³⁵ Without additional funding from the state or federal government, it seems unlikely that CAPs will fully meet the statewide need for water payment assistance.

A Spotlight on Water Affordability

The onset of the COVID-19 pandemic in March 2020 spotlighted several intersecting economic and racial inequities, both in California and across the country. Among them was inequitable access to affordable drinking water. Just weeks into the pandemic, Governor Gavin Newsom recognized water service “as critically important” to Californians' wellbeing and to reducing the spread of coronavirus.³⁶ As low-income Californians faced mounting financial pressures from twin health and economic crises, the Newsom administration and the California state legislature rolled out several policies and programs to prevent water shutoffs and reduce water bill debt.

Among these programs was the California Water and Wastewater Arrearage Payment Program (CWWAPP). Established by the state legislature in July 2021, the \$985 million program provides financial relief to CWSs and customers for unpaid bills accrued during the COVID-19 pandemic. According to one interviewee for this report, the program was a “pioneer” in the water affordability space. Indeed, as of the writing of this report, no U.S. state has established an ongoing, state-funded water payment assistance program.³⁷

³³ American Water Works Association. (2019) “2019 State of the Water Industry Report.” https://www.awwa.org/Portals/0/AWWA/ETS/Resources/2019_STATE%20OF%20THE%20WATER%20INDUSTRY_post.pdf

³⁴ Sridhar Vedachalam and Randall Dobkin. (2021). “H2Aforddability: How Water Bill Assistance Programs Miss the Mark.” Environmental Policy Innovation Center. May 20. <https://static1.squarespace.com/static/611cc20b78b5f677dad664ab/t/614ceba138df2542c1af1d70/1632431025551/Cap+Report-Final-May.20.2021.pdf>

³⁵ Ibid.

³⁶ Myers. “Californians won't have water service turned off for unpaid bills during coronavirus crisis, Newsom says.”

³⁷ Brett Walton. “California Designs First Statewide Water Affordability Program.” *Circle of Blue*, October 13, 2016. <https://www.circleofblue.org/2016/world/california-designs-first-statewide-water-affordability-program/>

The novelty of the program and the severity of the problem that it tries to solve make CWWAPP worthy of evaluation and further analysis. This report seeks to do just that. This report aims to evaluate the effectiveness of the CWWAPP program in addressing the concerns of stakeholders in the water affordability space, including water systems, customers, and other government actors. It explores some of the program’s strengths, some of the systemic weaknesses the program unearthed, and the need for an ongoing, statewide water affordability program. This analysis is intended to guide policymakers as they strive to accomplish their goal of meeting every Californian’s human right to affordable drinking water.

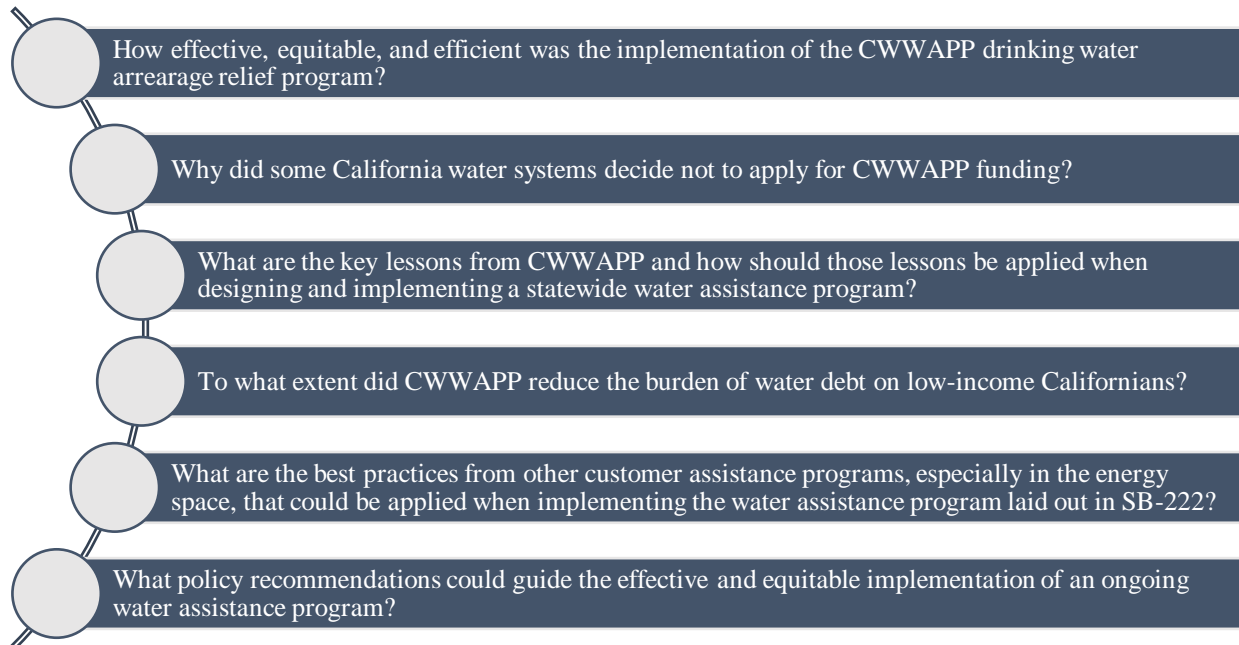
II. Project Overview and Methodology

A. Project Overview and Goals

This report offers a summative evaluation of the drinking water portion of CWWAPP with the goal of informing the effective and equitable design and implementation of a future statewide water payment assistance program. The report takes a comprehensive approach to identifying both the benefits and the shortcomings of CWWAPP and aims to apply lessons learned to upcoming policy conversations about the continuation of a statewide water assistance program, especially Senate Bill (SB) 222.

This report has been developed with the input and support of SPUR, a Bay Area nonprofit think tank dedicated to prosperity, sustainability, and equity. It is also the outcome of a semester-long research project at the University of California, Berkeley’s Goldman School of Public Policy.

Guiding research questions for this project included:



B. Methodology

This research employed a mixed methods approach to gather and synthesize evidence. All data-gathering efforts took place between December 2021 and April 2022.

Literature Review

This research was informed by a review of recent reports, surveys, and policy guidance published by advocacy organizations, utilities associations, and the State Water Board. The majority of the literature reviewed focused on drinking water policy in the state of California. Supplemental research included reading about other similar statewide customer assistance programs and best practices for program implementation.

Survey Data and Analysis

This analysis incorporated data from two survey efforts. The first survey was emailed to participants on December 17, 2021, in the form of a public records request. Participants included any system that, according to State Water Board data, had not applied for CWWAPP funding. Systems were asked to respond to the following questions via email.

1. How many of your customers have received a water shutoff notice on or after March 4, 2020?
2. How many notices sent on or after March 4, 2020 are still in effect?
3. Why did your system elect not to apply for funding through the California Water and Wastewater Arrearage Payment Program?

Due to the evolution of this research project over time, only information from question three was collected and incorporated into this analysis.

On March 21, 2022, a second survey was sent by email to a random sample of 600 CWSs in California. There were two versions of the survey, both of which were presented in a Google form: one version for systems that applied for funding through the CWWAPP program and another version for systems that did not apply for funding. The survey closed on April 1, 2022. A copy of both versions of the survey can be found in Appendices B and C.

The response rate for the second survey was 12 percent, or 73 systems. Additional information about the response rate can be found in Table 2. Systems reported their system name or their Public Water System Identification Number (PWSID). Data about system size and ownership type came from the EPA's Safe Drinking Water Information System (SDWIS) database.

Table 2: Summary of Survey Respondents

	Applied for Funding	Did Not Apply for Funding
Number of Systems	33	40
Number of Extremely Small Systems	9	26
Number of Very Small Systems	5	7

Number of Moderately Small Systems	6	5
Number of Moderately Large Systems	7	1
Number of Very Large Systems	4	0
Number of Privately Owned Systems	7	28
Number of Systems Owned by Local Government	24	11
Number of Anonymous Systems	2	1

Stakeholder Interviews

Fourteen semi-structured interviews were conducted with water policy advocates, state water policy experts, water utility association representatives, and energy utility analysts. Interviews provided a deeper understanding of the policy context, CWWAPP’s implementation processes, and stakeholder views on a future statewide water assistance program. Interviews were conducted via Zoom, and the average interview time was approximately 50 minutes. A sample interview protocol can be found in Appendix A. Data and discussions from both public and invite-only webinars about water payment assistance programs also informed this analysis.

III. The Water Affordability Landscape

This section describes the water affordability landscape. It explored how the sector is organized and explains the key pieces of legislation that have shaped the sector to date.

A. Drinking Water Governance in California

California’s drinking water system is made up of a patchwork of approximately 8,000 public water systems.³⁸ There are roughly 3,000 community water systems (CWSs) in California, which serve residential populations and are the focus of this analysis. Another 5,000 systems serve commercial customers, such as hospitals, restaurants, and nursing homes.³⁹ In addition, there are an unknown number of water systems that do not meet the service connection or population threshold for regulation under the EPA’s Safe Drinking Water Act.⁴⁰

There is considerable diversity in governance structures among CWSs. One 2022 analysis by University of California researchers Kristin Dobbin and Amanda Fencl created a taxonomy of the different CWS governance arrangements in California. The taxonomy included 26 distinct system types, which Dobbin and Fencl then aggregated into nine governance categories. These categories are bucketed into publicly owned or privately owned entities. A table summarizing this taxonomy, as well as a breakdown of how many systems fall into each governance category, is below.

³⁸ California Water Boards. “Safe Drinking Water Plan for California.”

³⁹ Dobbin and Fencl. “Who governs California’s drinking water systems?”

⁴⁰ Ibid.

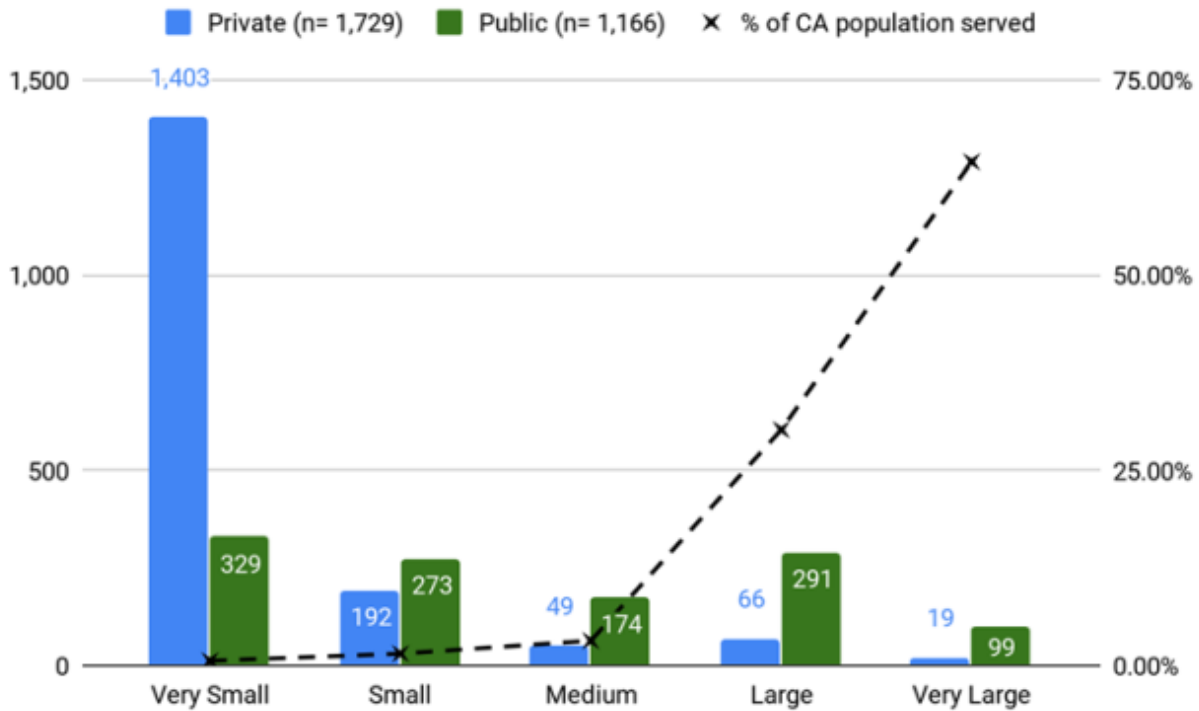
Table 3: CWS Governance Category and Type⁴¹

Governance Category	Number of CWSs	Median Population Served	Distinct Water System Types
All CWSs	2,895	287	
Publicly Owned CWSs	1,116	2,984	
<i>City</i>	317	22,795	City (315); Special Act District (2)
<i>County</i>	183	350	County Service Area (77); Maintenance District (46); County Waterworks District (27); County Sheriff (12); County Dept. (excluding sheriff) (11); Special Act District (8); Resort Improvement District (2)
<i>Joint Powers Authority</i>	12	109,254	
<i>Independent Special Districts</i>	566	1,885	Community Services District (185); County Water District (165); Public Utility District (53); Irrigation District (51); Special Act District (34); California Water District (32); Municipal Water District (31); Sanitary District (6); Municipal Utility District (3); Water Conservation District (3); Resort Improvement District (2); Resource Conservation District (1)
<i>State and Federal</i>	88	2,200	Federal (38); State (50)
Privately Owned CWSs	1,729	126	
<i>Investor Owned</i>	220	1,695	
<i>Mobile Home Parks</i>	375	108	
<i>User Owned Utilities</i>	652	124	Mutual Water Company (582); Property / Homeowners Associations (70)
<i>Other Private Systems</i>	482	79	

⁴¹ Ibid.

Dobbin and Fencel’s analysis also underscores the fragmented and decentralized nature of the CWS landscape. As the figure below shows, system ownership and size are inversely related. While roughly 95 percent of Californians get their water from 475 systems, 84 percent of California’s CWSs serve fewer than 10,000 people. Dobbin and Fencel’s graph below further illustrates this relationship.⁴²

Figure 1: Relationship of System Size and Quantity and Population Served



B. The Legislative Context

The number of CWSs and their diverse governing structures and operating practices present numerous challenges for policymakers. Several notable pieces of legislation have helped shaped the water affordability space and affect the future of statewide water affordability programs.

- Proposition (Prop) 218 (1996):** Enacted in 1996, Prop 218 is an adopted initiative constitutional amendment that constrains local governments’ ability to raise revenue through property-related taxes and fees.⁴³ According to the Legislative Analyst’s Office (LAO), the intent of Prop 218 was “to ensure that all taxes and most charges on property owners are subject to voter approval.”⁴⁴ In order to comply with the requirements laid out in Prop 218, public water agencies’ rates cannot exceed the cost of water service.⁴⁵ Since Prop 218’s passage, analyses have shown that the amendment has hampered systems’

⁴² Ibid.

⁴³ Legislative Analyst’s Office. 1996. “Understanding Proposition 218.” https://lao.ca.gov/1996/120196_prop_218/understanding_prop218_1296.html

⁴⁴ Ibid.

⁴⁵ Ellen Hanak et al. 2014. “Paying for Water in California: Technical Appendices.” Public Policy Institute of California. https://www.ppic.org/wp-content/uploads/content/pubs/other/314EHR_appendix.pdf

ability to raise funds for infrastructure updates, essential management services, and rate reduction programs for low-income customers.^{46,47}

- **AB-401 (2015):** AB-401 required that the State Water Board develop a plan for funding and implementing a low-income water rate assistance program by February 2018. In February 2020, the State Water Board published the AB-401 report, which examined several different options for funding and implementing a low-income water rate assistance program. The AB-401 report laid the groundwork for research and advocacy efforts throughout the COVID-19 pandemic period and also helped inform SB-222, which is addressed later in the report.
- **SB-998 (2018):** SB-998, also known as the Water Shutoff Protection Act, placed stricter requirements on water shutoffs. Systems with more than 200 service connections are required to adopt and publicly post their policies for water service shutoffs. Systems are also required to give customers at least 60 days' notice before discontinuing water service, and they must also offer customers alternative payment schedules or means of addressing financial hardship. Importantly, the legislature did not set up an enforcement mechanism in SB-998. This may be cause for further investigation into the effectiveness of the legislation. SB-998's compliance deadline for all applicable CWSs was April 1, 2020, a month after the onset of the COVID-19 pandemic in the United States.
- **SB-200 (2019):** SB-200 established the Safe and Affordable Drinking Water Fund to address water quality problems in the state. The \$130 million annual fund was designed to help build local technical and managerial capacity, promote system consolidation, and provide access to funding to upgrade water infrastructure.⁴⁸
- **Water Shutoff Moratorium (2020):** On April 2, 2020, Governor Newsom signed Executive Order N-42-20, which established a moratorium on water shutoffs due to customer nonpayment. In addition to the shutoff moratorium, the executive order required the State Water Board to issue best practices and guidelines on support for the state's CWSs.⁴⁹ The moratorium was eventually lifted on January 1, 2022.

⁴⁶ Caitrin Chappelle, Ellen Hanak, and Annabelle Rosser. 2021. "Paying for California's Water System." Public Policy Institute of California. May. <https://www.ppic.org/publication/paying-for-californias-water-system/>

⁴⁷ Legislative Analyst's Office. "Understanding Proposition 218."

⁴⁸ California Water Boards. 2019. "Fact Sheet: SB 200 Closes Funding Gap to Provide All Californians with Access to Safe and Affordable Drinking Water." July 24.

https://www.waterboards.ca.gov/publications_forms/publications/factsheets/docs/SADWF%20Fact%20Sheet%20updated%20dft%20fnl%207.24.19.pdf

⁴⁹ Office of Governor Gavin Newsom. 2020. "Governor Newsom Issues Executive Order Protecting Homes, Small Businesses from Water Shutoffs." April 2. <https://www.gov.ca.gov/2020/04/02/governor-newsom-issues-executive-order-protecting-homes-small-businesses-from-water-shutoffs/>

IV. Overview of the California Water and Wastewater Arrearage Payment Program

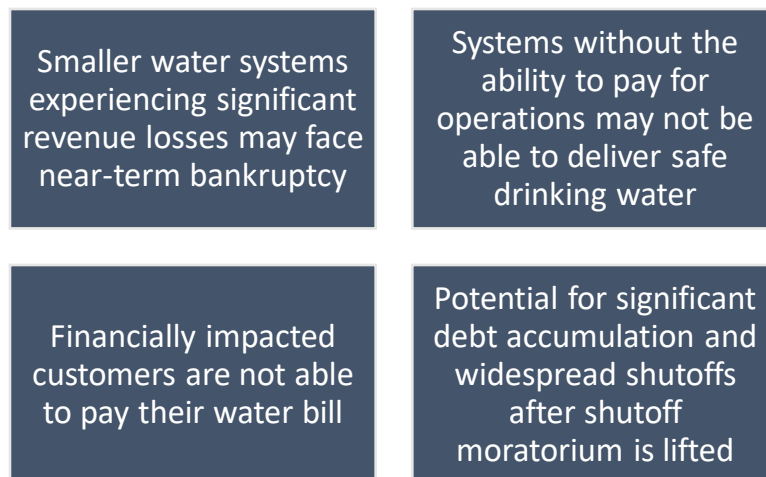
This section provides a brief overview of CWWAPP and describes how the program was designed and operated. Additionally, this section explains how the State Water Board estimated program need, as well as some known program outcomes. An outline of key dates and activities related to CWWAPP can be found in Appendix D.

A. Program Description

CWWAPP was a \$985 million customer assistance program that the California legislature established to relieve residential and commercial customer arrearages accrued during the COVID-19 pandemic period (March 4, 2020 – June 15, 2020). The program, which was administered by the Division of Drinking Water (DDW) at the State Water Board, operated in two phases. The first phase ran from October 2021 – January 2022 and prioritized drinking water arrearages. The second phase ran from January 2022 – May 2022 and prioritized wastewater arrearages. This report will only address the drinking water portion of the program.

Though neither the CWWAPP website nor the program guidelines state explicit goals for the program, an October 2020 State Water Board presentation identified the following “key concerns” for COVID-19’s impact on the water sector.⁵⁰ These key concerns would later be addressed in part by CWWAPP.

Figure 2: State Water Board Key Concerns, October 2020⁵¹



⁵⁰ Gomberg. “Response to COVID-19 Water Sector Impacts.”

⁵¹ Ibid.

Program Operations

Participating CWSs received a one-time payment between November 2021 and January 2022 to cover all drinking water arrearages accrued by their customers during the pandemic period. They were then required to credit their eligible customers' accounts within 60 days of receiving their check. If customers had outstanding water bill debt from the pandemic period after receiving the drinking water credit, systems were to offer customers payment plans for any outstanding debt from the pandemic period. Participating CWSs were also required to waive all late fees accrued during the pandemic period (an estimated \$16 million in total).⁵²

In addition to providing eligible CWSs with funding to relieve customer arrearages, the program also mandated that all CWSs, regardless of their participation in CWWAPP, administer payment plans for arrearages accrued during the pandemic period. This expands on a similar provision outlined in SB-998, which requires all systems with more than 200 service connections to offer payment plans to specified customers as needed to address nonpayment.⁵³ CWWAPP's recommended payment plan period was 12 or more months.⁵⁴ Customers were not required to accept payment plans. Since the governor's shutoff moratorium ended in January 2022, Californians who denied a payment plan or who defaulted on their payment plan could face the discontinuation of their water service.

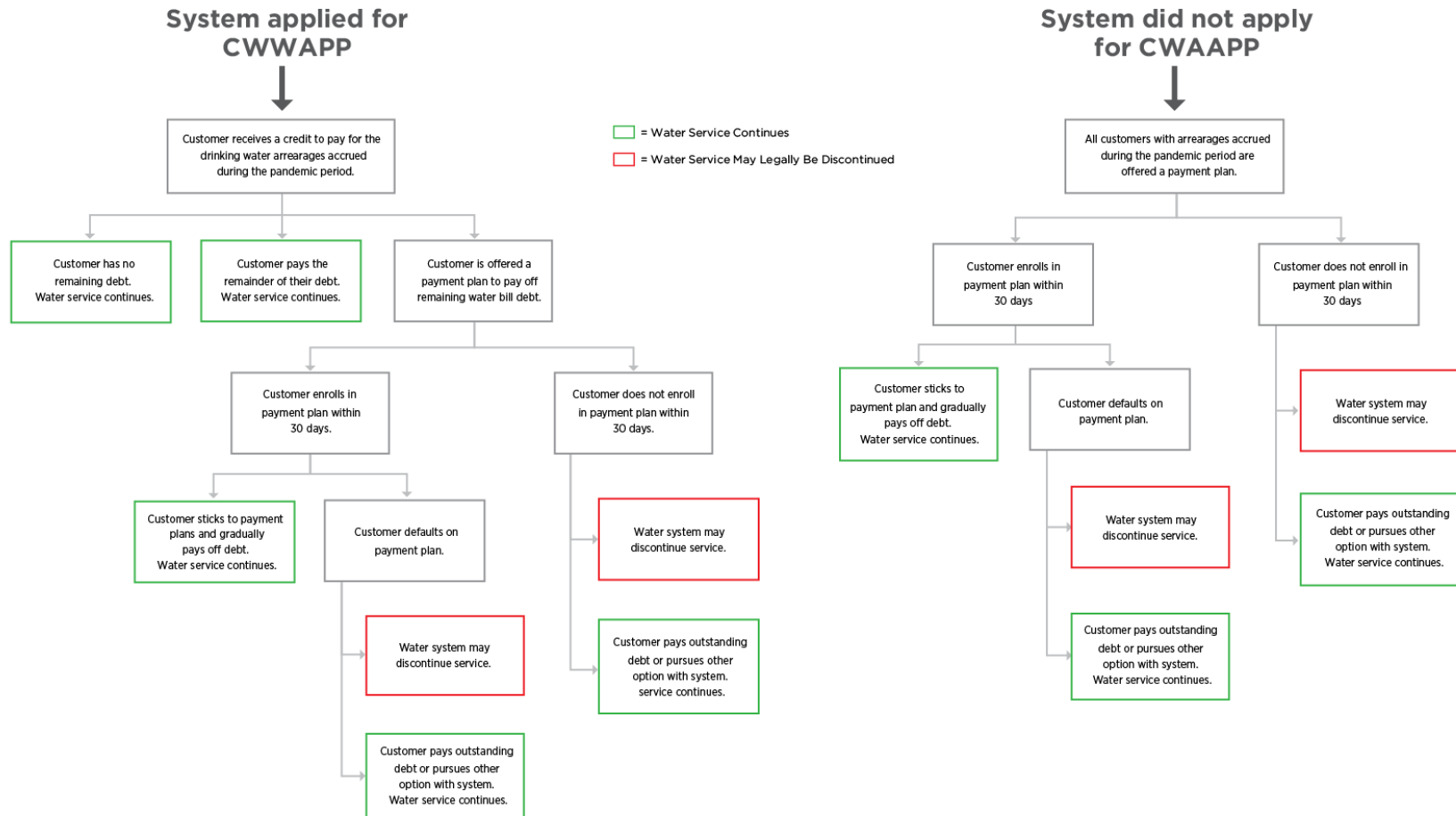
An implicit goal of CWWAPP was to provide financial relief to Californians facing water debt. To better illustrate how customers may have experienced the benefits of CWWAPP, Figure 2 offers a flowchart to track the customer journey described above.

⁵² California Water Boards. "COVID-19 Drinking Water Survey."

⁵³ Discontinuation of Residential Water Service: Urban and Community Water Systems. SB-998. 2017 – 2018 Regular Session. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB998

⁵⁴ California Water Boards. "California Water and Wastewater Arrearage Payment Program Guidelines."

Figure 3: CWWAPP Customer Journey



Key program features

Experts interviewed for this analysis often highlighted the following program features of the drinking water portion of CWWAPP as especially notable or unique.

- **CWS participation in the program was optional:** Eligible CWSs were not required to participate in CWWAPP. According to a water system manager interviewed for this analysis, the State Water Board also changed the choice architecture of the program so that eligible water systems opted into the program instead of opting out of the program, thereby potentially reducing system participation.⁵⁵
- **Only CWSs with arrearages were eligible to receive program funds:** Only CWSs with arrearages accrued during the pandemic period were eligible to receive program funds (an estimated 763 systems).⁵⁶ Systems with arrearages from before or after the pandemic period were not eligible for the program. Individual customers in arrears could not apply for assistance from the State Water Board, even if their CWS had not applied for CWWAPP.
- **Not all water bill debt was eligible for relief:** Water bills can often include charges for other services, such as wastewater, stormwater, energy, fines, fees, and taxes. CWWAPP did not relieve water bill debt, but a portion of water bill debt (first drinking water, then wastewater). This means that even after the implementation of the program, some Californians could still have outstanding water bill debt.
- **CWSs that transfer customer debt were eligible for the program:** All CWSs that accrued residential and commercial arrearages during the pandemic period were eligible to receive funding through CWWAPP. This includes:
 - Systems that transferred arrearage debt to a third-party, such as a county or a debt collection entity
 - Systems that collect customer revenue through property tax rolls
 - Systems that had already used a customer assistance program (such as an assistance program offered by the system itself) to relieve customer arrearages accrued during the pandemic period.
- **CWWAPP provided CWSs with funding to administer the program:** The State Water Board allocated 3 percent of program funds to help systems administer CWWAPP (an estimated \$8.3 million).⁵⁷
- **CWWAPP required separate applications for the drinking and wastewater portions of the program:** Though this analysis will focus on the drinking water portion of

⁵⁵ Extensive behavioral science research on defaults and choice architecture have shown that program participation is higher when the participation default is opt-in than when the participation default is opt-out. The Decision Lab. n.d. "Defaults." Accessed May 11, 2022. <https://thedeisionlab.com/reference-guide/psychology/defaults>

⁵⁶ California Water Boards. "Drinking Water Arrearages Lessons Learned."

⁵⁷ Division of Drinking Water Needs Analysis Unit, "Drinking Water Arrearage Survey Results." (PowerPoint Presentation, September 16, 2021). https://www.waterboards.ca.gov/arrearage_payment_program/docs/state-water-board-arrearages-survey-analysis09-16-2021.pdf

CWWAPP, interviewees and survey respondents frequently highlighted the multi-phase approach to CWWAPP’s administration. The State Water Board created two separate applications for drinking and wastewater arrearage assistance, which were available at two different points in time. Systems also received separate payments for drinking and wastewater arrearages. According to conversations with policy experts, the Board separated drinking and wastewater arrearages to ensure families had access to drinking water after the moratorium shutoff. The Board had assumed that \$985 million would be insufficient to cover both drinking and wastewater arrearages. One policy expert said, “For public health reasons, drinking water was always going to be the priority.”

- **Customer eligibility was based on arrearages, not income:** There were no income or citizenship requirements for customers to receive CWWAPP funds. Any residential or commercial customer that had outstanding water debt from the pandemic period and whose CWS had applied for CWWAPP funding could have their drinking water debt from the pandemic period relieved.
- **Systems must follow reporting requirements and return unused funds:** CWWAPP required CWSs to certify that funds were credited to customers’ bills to offset pandemic period arrearages. The program also required systems to report the number of accounts credited, the total amount credited, and the number of customers that did and did not enroll in payment plans by July 2022.⁵⁸ Any funds that were not used to credit customers or administer the program had to be returned to the State Water Board.

B. Estimating Program Need

The State Water Board published three separate estimates of outstanding drinking-water-related debt in California. The first estimate was based on a November 2020 survey (referred to as Survey 1), which was presented at a January 2021 State Water Board meeting. DDW helped administer the survey in order to understand both the financial impacts of the COVID-19 pandemic on drinking water systems and the state of household water bill debt in California, as well as to inform the development of assistance options.⁵⁹ This survey asked systems to report arrearages on water bills, which can include charges not just for drinking water but also for wastewater, stormwater, trash pickup, taxes, fines, and fees. Based on a sample of 579 CWSs, this survey estimated that Californians had accrued \$1 billion in water bill arrearages, of which \$600 - \$700 million was drinking water arrearages and some unknown amount of other arrearages that systems were unable to disaggregate.⁶⁰ The \$1 billion estimate informed the state’s allocation of \$985 million to fund CWWAPP.

The second estimate was based on a survey (referred to as a Survey 2) that ran from August 2021 – September 2021. Survey 2 was mandated in AB-148, the bill that established and funded CWWAPP. The legislation, which passed July 2021, required that the State Water Board survey CWSs to determine statewide arrearage needs to inform an allocation formula.⁶¹ Survey 2 was

⁵⁸ California Water Boards. “California Water and Wastewater Arrearage Payment Program Guidelines.”

⁵⁹ California Water Boards. “COVID-19 Drinking Water Survey.”

⁶⁰ Ibid.

⁶¹ Public Resources, AB-148, 2021- 2022 Regular Session.

https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB148

sent to all CWSs, and 1,845 of the 2,128 systems that charge for water (roughly 87 percent) responded to the survey. The analysis estimated that Californians had accrued \$324 million in drinking water arrearages and estimated that the total cost of the program, with administrative costs included, would amount to \$333 million.⁶²

The third estimate of need comes from available CWWAPP application data, which were presented by the State Water Board at a Water Foundation convening in March 2022. Water systems that applied for funding received a total of \$301 million for arrearage relief and administrative costs.⁶³ Of the 763 water systems eligible to receive program funding, 668 applied for CWWAPP (approximately 88 percent of eligible systems).⁶⁴

Table 4 summarizes the results of Surveys 1 and 2 and the CWWAPP application.

There were two key differences between the estimated need calculations in Survey 1 and Survey 2 and the application.

- **Survey 1 included non-drinking water debt in its estimation of need:** The Survey 1 water debt estimate included all of the debt from non-payment of water bills. Since some water bills include charges for other services, such as wastewater, stormwater, energy, fines, fees, and taxes, the final estimate of \$1 billion in water bill debt included non-drinking water debt. According to one water policy expert, the rationale for this approach was that a customer cannot simply allocate bill payments to drinking water in order to avoid a water shutoff; if the customer does not pay their bill in full, they risk a water shutoff.

Since Survey 2 and the program application results came after the decision to specifically relieve drinking water debt, these two estimates of need only included estimates of outstanding drinking water arrearages. If CWSs' billing systems did not disaggregate drinking water from other non-water charges, CWSs were asked to make an informed estimate of customer drinking water arrearages for the survey and the application.⁶⁵

- **Survey 1 included late fees in its estimate of need:** Since systems participating in CWWAPP were required to waive late fees, any late fees that may have been accrued during the pandemic period were not included in estimates of program need or water debt. However, because Survey 1 sought to capture total water bill debt, late fees were included in the total estimate of need.

⁶² Division of Drinking Water Needs Analysis Unit, "Drinking Water Arrearage Survey Results."

⁶³ California Water Boards. "Drinking Water Arrearages Lessons Learned."

⁶⁴ Ibid.

⁶⁵ California Water Boards. "California Water and Wastewater Arrearage Payment Program Guidelines."

Table 4: Comparing Surveys 1 and 2 and CWWAPP Applications

	Survey 1 (November 2020) ⁶⁶	Survey 2 (September 2021) ⁶⁷	Application (December 2021) ⁶⁸
Estimated Need	\$1 billion for water bill arrearages \$600 - \$700 million for drinking water arrearages and other unknown, non-specified water bill debt	\$315,400,661 for drinking water arrearages \$333,186,952 for drinking water arrearages and admin costs	\$291,970,000 for drinking water arrearages ⁶⁹ \$301,000,000 for drinking water arrearages and admin costs
Number of Accounts with Arrearages	1.6 million	693,878 (648,123 residential customers and 45,755 commercial accounts)	535,550
Average Arrearage Amount Per Customer	\$500	\$455	\$545 ⁷⁰
Number of CWSs with Accounts in Arrears	Not presented in Survey 1 results.	At least 921 ⁷¹	763

⁶⁶ California Water Boards. "COVID-19 Drinking Water Survey."

⁶⁷ Division of Drinking Water Needs Analysis Unit, "Drinking Water Arrearage Survey Results."

⁶⁸ California Water Boards. "Drinking Water Arrearages Lessons Learned."

⁶⁹ Estimated by subtracting 3 percent of 301 million from \$301 million.

⁷⁰ Calculated by dividing the estimated drinking water arrearages by the number of accounts in arrears.

⁷¹ Approximately 280 CWSs did not reply to Survey 2. More systems may have been in arrears.

C. Outcomes of CWWAPP

As of the writing of this report, the State Water Board has yet to publicly publish outcomes of the CWWAPP program. Much of the data collection is still in progress, as systems do not need to report how they used funds until July 2022. Using the data that were available in April 2022, this section highlights known outcomes of the CWWAPP program and also lists additional information that the State Water Board will receive from water systems in July 2022.

Collected evidence and known outcomes

The following evidence and outcomes are based on CWWAPP application data and available State Water Board resources.

- **Approximately 80 percent of California’s population was covered by CWWAPP:** The 668 systems that applied for funding serve about 33.3 million Californians, or approximately 80 percent of the state’s population.⁷²
- **More than 535,500 residential and commercial customers had their drinking water arrearages relieved:**⁷³ This represents over three quarters of the customers estimated to be in arrears in September 2021.⁷⁴
- **At least 36 percent of CWSs had accounts in arrears in January 2022:** The State Water Board reports that 2,128 CWSs in California charge for drinking water. The Board also reported that by January 2022, 763 systems were eligible for the program, meaning they had customers in arrears.⁷⁵ This represents approximately 36 percent of all systems that charge for drinking water.

However, it is likely that more than 36 percent of CWSs had accounts in arrears. Perhaps coincidentally, the number of CWSs the Water Board said were eligible for CWWAPP at the time of application was the same as the number of systems that indicated they intended to apply for funding in Survey 2 (763 CWSs).⁷⁶ Survey 2 estimated that at least 921 CWSs were in arrears in September 2021 (in other words, an additional 158 systems had arrears but indicated that they did not intend to apply for the program).⁷⁷ It is possible that the eligibility figures presented by the Water Board at the Water Foundation convening in March 2022 did not represent all systems with arrearages. If the number of systems in arrears in January 2022 in fact more closely resembled estimates from September 2021, the percentage of systems in arrears would be roughly 7 percentage points higher at 43 percent.

⁷² California Water Boards. “Drinking Water Arrearage Program Survey and Application Tracking Spreadsheet.”

⁷³ California Water Boards. “Drinking Water Arrearages Lessons Learned.”

⁷⁴ Division of Drinking Water Needs Analysis Unit, “Drinking Water Arrearage Survey Results.”

⁷⁵ California Water Boards. “Drinking Water Arrearages Lessons Learned.”

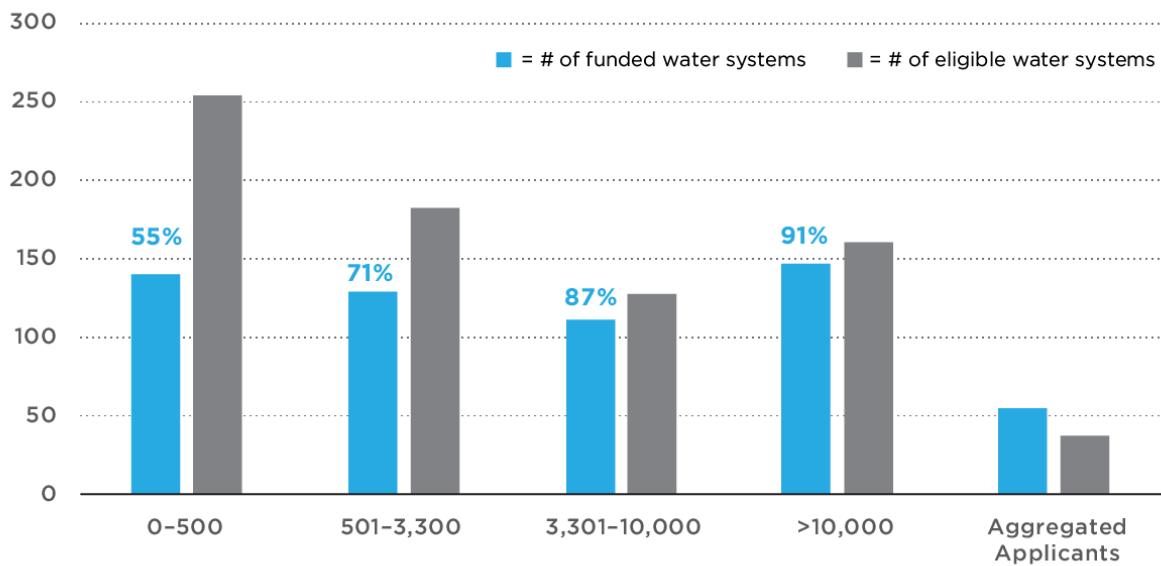
⁷⁶ Division of Drinking Water Needs Analysis Unit, “Drinking Water Arrearage Survey Results.”

⁷⁷ Ibid.

- **Less than a third of allotted program funding was used for the drinking water portion of the program:** Just \$301 million of the \$985 million allocated to CWWAPP was used for drinking water arrearages. Possible explanations for this outcome will be explored in the following section of this report.
- **Just 55 percent of eligible small systems applied for CWWAPP funds, whereas 91 percent of eligible large systems applied:** There was a correlation between a system’s number of service connections and whether or not an eligible system applied for CWWAPP funding. Figure 3 illustrates this trend.
- **In all but two counties, at least 50 percent of systems applied for CWWAPP:** Fifty-six of California’s 58 counties saw at least 50 percent of their eligible systems apply for CWWAPP, and 43 counties saw at least 75 percent of their eligible systems apply.⁷⁸ Just Modoc and Mono counties had no systems apply for CWWAPP. This suggests that program uptake among eligible systems was distributed fairly well across geographic regions. Additional analysis by county can be found in Appendix E.

Figure 4: Number of Eligible Systems Funded by System Size⁷⁹

Number of Eligible Systems Funded by System Size



⁷⁸ California Water Boards. “Drinking Water Arrearage Program Survey and Application Tracking Spreadsheet.”

⁷⁹ California Water Boards. “Drinking Water Arrearages Lessons Learned.”

Additional Outcomes to be Reported

As previously mentioned, more information needs to be collected and shared about CWWAPP outcomes. The following are metrics that every participating water system will be required to share with the State Water Board by July 2022.⁸⁰

- Number of accounts credited
- Amount credited to customer accounts
- Number of customers enrolled and not enrolled in a payment plan
- Amount used for the administration of the program
- Amount in unused funds

In addition to this information, Section VIII will recommend additional outcomes for the State Water Board to track and publish.

V. Program Successes

CWWAPP was a first-of-its kind program in the United States. Multiple research participants identified CWWAPP as a case study for a statewide water affordability program and pointed to the program’s successes as evidence of the need for a statewide water payment assistance program. This section highlights several of CWWAPP’s successes with a focus on program implementation and administration. By synthesizing these achievements, this analysis puts forth practices that could be applied to and considered for a future statewide water assistance program.

A. Program Served Many Californians and Systems in Need

Participants in this research project generally agreed that CWWAPP helped address several critical needs in the state. The program reached thousands of people in need while also helping water systems to continue providing safe and reliable drinking water.

Nearly 535,000 customers were served by CWWAPP

Nearly 535,000 customers were served by CWWAPP, meaning that hundreds of thousands of people benefitted from the program’s funds. Californians received over \$300 million in funding as a result of the program, preventing debt accrual, and ultimately, water shutoffs. In general, CWWAPP was widely praised by research participants for serving Californians in need. As one

representative from a moderately large water system said, CWWAPP “most importantly [kept] families’ and residents’ water on.”

“We are a small, disadvantaged community. The financial assistance to pay past due accounts was a huge blessing to many of our shareholders, and in turn allowed us to survive fiscally.”
-Survey Respondent

By relieving customer debt, CWWAPP also helped systems continue operations. As one survey respondent wrote, “We are a small, disadvantaged community. The financial assistance to pay past due accounts was a huge blessing to many of our shareholders, and in turn allowed us to survive fiscally.”

⁸⁰ Ibid.

There were no income or citizenship requirements for customers

Research participants praised CWWAPP for allowing customers to receive program benefits without proving their income level or documentation status. Many participants shared that this approach to customer eligibility may have permitted customers who unexpectedly found themselves in difficult financial situations as a result of COVID-19 to benefit from state support. Other participants praised CWWAPP for not requiring a customer application. This decision both sped up the check distribution process and also kept resource-scarce Californians from a potentially burdensome application process. One water affordability advocate said, “Income requirements can be really problematic because they can put a lot of work on customers. It does not make sense to add more punitive measures to low-income residents in need.”

“It was excellent that [CWAPP] wasn’t limited to certain income brackets, as customers across the economic spectrum had difficulties keeping up with their bills.”
-Survey Respondent

In addition to allowing more Californians in need to benefit from the program, the absence of income and citizenship requirements also made the program easier to implement. Many systems, especially systems that do not operate their own payment assistance programs, likely would have struggled to identify and verify customers’ income and citizenship status. One water affordability advocate said, “Not having a lot of eligibility requirements made the program easy to implement. We were glad water systems did not have to verify income or immigration status.” A moderately large system similarly wrote, “It was also appreciated that agencies did not need to verify or qualify customers to participate in the program... The process felt very efficient.”

Although the inclusive customer eligibility requirements were generally viewed as a success, some research respondents disapproved of the eligibility criteria. This tension will be discussed more thoroughly in Section VII, but it is worth noting that there was not universal praise for extending the program to everyone who had not paid their bill. One very small system questioned the legitimacy of some customers’ need for funding in their survey response:

“It was not possible to differentiate which customers had legitimate impacts from the pandemic from those who simply did not pay their bills. There are always a certain percentage of customers who do not pay their bills until they have their water shut off. Some customers benefitted from the program who are habitually delinquent in payment.”

B. CWWAPP was Implemented Quickly and Effectively

Interviewees generally praised the State Water Board for its quick and effective implementation of CWWAPP. In just six months (July 2021 – January 2022), the State Water Board constructed a new, high-touch program.

For a new program, CWWAPP was established quickly

In July 2021, the state legislature passed AB-148, which provided guidelines and funding for CWWAPP. Just three months later, in October 2021, the State Water Board opened the CWWAPP application to water systems. By November 2021, the Board was already sending checks to eligible CWSs. To public policy experts, this accelerated timeline was both impressive and effective. One water affordability advocate praised the State Water Board for “the

nimbleness and intentionality” it took to establish a new program when there was “no existing framework.” A policy expert from a water utilities association said, “The fact that the program was able to be brought up to speed and implemented so quickly was a great positive... It shows that if you dive in and dedicate enough resources, you can get something up and running pretty quickly.”

Though public policy professionals agree that CWWAPP was implemented quickly, this perspective was not shared by all water systems surveyed for this project. System perspectives on CWWAPP’s implementation timeline will be covered in greater detail in the following section of this report.

The State Water Board provided high-touch technical assistance to systems

The State Water Board effectively provided high-touch assistance to water systems. According to one water affordability advocate, the Board called every water system at least once to ensure all CWSs were aware of the program. One State Water Board expert interviewed for this report said of their experience, “Probably 98 percent of our time was spent calling water systems and emailing them just to make sure they knew about our program.”

In addition, the State Water Board provided technical assistance during the application process to approximately 120 systems.⁸¹ The technical assistance helped some systems successfully submit applications for CWWAPP funding. One water affordability advocate said, “I know a handful of systems that would not have been able to apply without technical assistance.”

The State Water Board also incorporated stakeholder feedback during the program design phase. One policy expert from a water utilities association said, “The State Water Board did a great job... [doing] tons of outreach and tons of meetings. And we had one-on-one meetings during the public input process too.”

VI. Program Shortcomings

Because it was a new, first-of-its-kind program, the implementation of CWWAPP was imperfect. As this section describes, many of these challenges are specific to CWWAPP. Since the program was designed to respond to a moment of crisis, some the program’s shortcomings would not necessarily apply to an ongoing, statewide program. Still, lawmakers should keep the following findings in mind as they consider possible statewide program options.

A. Program Scope was Too Narrow

Many interviewees and survey respondents noted CWWAPP’s limited scope as a major programmatic shortcoming. Research participants generally identified both the reach and definition of eligible debt to be too narrow.

⁸¹ Ibid.

CWWAPP did not reach all Californians in need of assistance

Because CWS participation in CWWAPP was voluntary, not all of California’s drinking water customers who could have benefitted from program funding received debt relief. At least 95 eligible water systems, with a total service population of at least 1.2 million Californians, did not apply for CWWAPP funding.⁸²

“I think [CWWAPP’s] biggest shortcoming was that it was not a universal program.”
-Water Affordability Advocate

Additionally, the sole eligibility criterion for customers to receive CWWAPP benefits was that they had drinking water debt from the pandemic period. In many ways, this decision expanded customer eligibility parameters since many CAPs have a low-income requirement. It also helped ensure that the State Water Board could efficiently distribute funds in a timely fashion. However, there is also evidence to suggest that low-income customers who could have benefitted from the program continued to pay their bills during the pandemic period. As a result, some low-income customers missed out on benefits they otherwise would have been entitled to. Many of these customers may have made difficult financial decisions in order to pay their water bill during the pandemic period. As one survey respondent wrote,

“My biggest complaint about this program [was that it] ... did not benefit those who were hurting financially, but [who] still managed to find a way to pay their water bills. I know that many of our customers had to sacrifice to continue to pay their bills despite changes to their income. They did not have an option to benefit from the program because they would have had to fall behind on [water] bills to benefit.”

CWWAPP did not relieve all water bill debt from the pandemic period, meaning many Californians still owe their water utility

Survey 1 estimated that Californians had accrued at least \$300 – \$400 million in debt from non-drinking water charges on their water bills (e.g., wastewater or stormwater charges). Though additional information is needed, this finding suggests that CWWAPP did not relieve all water bill debt accrued during the pandemic. This shortcoming is further supported by survey findings from this analysis. A third of survey respondents that applied for CWWAPP funding also reported that between 90 – 100 percent of their customers were offered a payment plan for arrearages accrued during the pandemic relief period, suggesting that customers had remaining water bill debt from the pandemic period, even after CWWAPP funds were distributed.

The defined pandemic period was too limited, thereby harming customers

Interviewees and survey respondents reported that the limited timeframe for eligible debt was a major shortcoming of the program. One water affordability advocate noted that many people continued to lose their jobs or struggle financially as a result of COVID-19 well after June 2021. However, if a customer did not have arrearages from the pandemic period at the time the

“The hardship customers have faced extended well beyond the eligibility period.”
-Survey Respondent

⁸² California Water Boards. “Drinking Water Arrearage Program Survey and Application Tracking Spreadsheet.”

system applied for funding, they could not benefit from the program. This prevented customers from receiving funds that they could have benefited from.

Nearly a quarter of survey respondents identified the limited eligibility period as one of the major challenges or failures of CWWAPP. Systems noted multiple ways in which the limited eligibility period affected their work. First, multiple survey respondents reported that customers paid off their qualifying debt, preventing people from receiving funding they would have been entitled to otherwise. One moderately small system respondent wrote,

“There was approximately \$23,000 that we had to send back [to the State Water Board] because those customers had already paid their past due balance. It would have been an increased benefit to apply these payments to other accounts that had fallen behind between June 15, 2021, and December 2021 when the funds were received.”

Additionally, since billing systems automatically apply payments to the oldest debt, some customers in need did not receive funding. One respondent from a very small system noted, “Customers who were trying diligently to keep up actually lost out on that funding because by the time we were able to apply [for CWWAPP], they'd [just] caught up [on their bills] into July.” This survey respondent suggests that customers were paying off their water bill debt but were still months behind on their water bill payments. Since this CWS applied payments to the oldest debt on the customers' accounts, customers who continued to accrue debt after the pandemic period in fact lost out on available money.

“Most accounts that received funds are still six-to-nine months overdue.”
-Survey Respondent

It is likely that many customers continued to accrue arrearages after the pandemic period. A moderately large system responded, “Most accounts that received funds are still six-to-nine months overdue.” One very small system wrote,

“The delay between June 15, 2021, and time of application and funding allowed more balances to build up, which caused customers whose [pandemic] period balances were paid in full by the program to still have a six-month balance left after [receiving] funding.”

Systems also shared that the delay between Survey 2, the application, and receiving funding increased their administrative workload. Systems expressed frustration about needing to regularly recalculate customer arrearages and the process to return funds. One respondent from a moderately large system wrote,

“One of the biggest failures of the program was the length of time it took to receive payment ... [after our] application was submitted with our delinquent data. As that data is ever changing, day to day and minute by minute, receiving confirmation and payment seven months later was largely problematic, as some accounts had paid in full, people had moved and sold homes, people became delinquent after our application was submitted and did not receive assistance.”

The timing of receiving the payment was also incredibly frustrating as it nearly coincided with the Governor allowing utility districts to discontinue services due to non-payment. We had been quite proactive in sending notifications to our customers regarding our upcoming shut-off date in January 2022 and had to push it back once we found out last-minute that we were receiving funding. Then the time it took to receive the funds created a secondary issue for us in trying to apply the funds accurately and appropriately before our February shutoffs and March billing. It was nothing less than a nightmare for our staff and for some of our customers.”

B. Program was Administratively Burdensome

Research participants regularly pointed to the administrative strain of the CWWAPP program. Many of the administrative challenges CWWAPP presented the State Water Board and water systems were due to the unique circumstances of the COVID-19 pandemic and COVID-related funding. At the same time, CWWAPP helped expose some of the systemic weaknesses that could also threaten future water assistance programs.

Systems reported that implementing the program was difficult and time consuming

Survey respondents of all sizes reported that implementing CWWAPP was difficult and time consuming. Factors that contributed to systems’ administrative burden included: isolating the drinking water portion of customer debt; aligning system billing cycles with the program implementation timeline; analyzing customer debt for the surveys, application, and reporting requirements; applying credits to customer bills; and notifying customers of the CWWAPP credit. In general, systems reported that the program’s administrative requirements obstructed the effective and efficient implementation of CWWAPP. These critiques were true not only for small systems, but also for larger systems. One manager from a very large water system said, “The guidelines in general were very prescriptive, and following those guidelines required most of our resources. Some of the guidelines made sense for tracking the money... but other things do not really affect or benefit our customers.”

Survey respondents regularly pointed to complications with their billing systems to explain why they found the program implementation process difficult. Multiple systems reported hiring consultants or vendors to help implement the program, to mixed results. Though one very small system reported that hiring a consultant was “well worth the work,” another moderately small system wrote, “The program occurred so suddenly and evolved so quickly that there was not sufficient opportunity for vendors to adjust, if they were even willing.”

“Our labor burden to implement the program would have exceeded the amount we lost through the arrearages, so we chose to offset the lost revenue through reserve funds.”
-Survey Respondent

At least 25 percent of survey respondents that did not apply for CWWAPP also reported that a lack of administrative capacity was among the reasons they did not apply for the program. Other respondents wrote that administering the program would have been more costly than the money they would have received from CWWAPP. One system wrote, “Being a small district, the follow up accounting versus the amount of arrearages we had on the books did not make administrative or economic sense.”

Despite technical assistance, systems still found the application process confusing

Though many interviewees praised the State Water Board for their extensive outreach and technical assistance efforts, some water systems still found CWWAPP's application process confusing. Indeed, seven survey respondents reported that their system did not apply for CWWAPP because their staff found the application to be too confusing or difficult. Other systems said the application was "cumbersome" and lacked "clear instructions" and clear deadlines.

One representative for the State Water Board interviewed for this project explained that the State Water Board was limited in the technical assistance it could offer during the application phase. "We were hearing that [technical assistance] was really helpful for the survey portion, but not so much in completing the application because the application required information that only [a water system's] accounting person could pull."

Survey respondents also noted that the application requirements were unnecessarily restrictive. For example, one very small system wrote, "It felt like the State wanted to give out as little money as possible. With the enormous amount of funding, it would have been better to be less restrictive. For example... simply [giving] agencies a 3 percent administrative [stipend]... [instead of] requiring supporting documentation [in order to receive the stipend]."

The multi-phase nature of the program delayed payments and increased system workload

Interviewees and survey respondents generally agreed that the two-phase nature of CWWAPP presented systems with unnecessary hurdles and further delayed debt relief for customers. Water policy advocates said that the Water Board should have administered relief for drinking water and wastewater at the same time to help ensure that customers in need received funding in a timely way. One very small system wrote, "This 'two-step' approach was inefficient and reduced the amount of assistance the State could have provided to our customers."

A handful of survey respondents also lamented that requiring multiple applications significantly increased their workload, with one respondent writing that requiring two applications was a "waste of time and resources."

The State Water Board had to divert resources to manage CWWAPP

In interview conversations for this research project, representatives of the State Water Board have generally spoken very highly of the Board's commitment to implementing CWWAPP. Overall, Board representatives have agreed that CWWAPP was a priority and that the program helped address key concerns facing water systems and customers. Still, it is important to note that overseeing CWWAPP was administratively taxing on the State Water Board. At a March 2022 convening, State Water Board representatives underscored that implementing CWWAPP presented opportunity costs for DDW. DDW pivoted quickly to concentrate staff efforts on high-touch communications with CWSs and estimated that DDW alone put in 8,500 hours to administer CWWAPP.⁸³ Other State Water Board offices, such as the Division of Financial Assistance, put in thousands more hours.⁸⁴ Though this high-touch approach likely contributed to the successes of the program, it would be unsustainable at DDW's current staffing levels.

⁸³ California Water Boards. "Drinking Water Arrearages Lessons Learned."

⁸⁴ Ibid.

C. Stakeholders Struggled to Effectively Communicate about CWWAPP

Stakeholders struggled to communicate effectively about the availability of CWWAPP funds and program requirements. Evidence collected for this analysis suggests that despite the State Water Board's high-touch outreach, many systems remained confused about program requirements. This analysis also finds that systems struggled to communicate with their customers about the availability of CWWAPP funds.

Systems reported a need for clearer guidance from the State Water Board

Many systems surveyed reported needing clearer application and implementation guidance from the State Water Board. Survey responses from systems that did not apply for funding seemed to show confusion about the program or about the availability of State Water Board resources. For example, some systems reported that they did not know when the application was due and other systems believed they were ineligible because they transferred debt to tax collection systems. Public records act request responses also showed that some systems did not apply because they thought they had to prove that customer arrearages were a direct result of the COVID-19 pandemic.

Some water systems that did not apply for program funding seemed to believe that the state government would either try to reclaim the funding or that there might be hidden costs associated with participating in the program. Indeed, at least five of the systems surveyed reported that they did not apply for CWWAPP funding because they were concerned that there may be financial costs associated with participating in the program.

Finally, multiple research participants reported wanting clearer guidance about the tax implications of participating in CWWAPP. Systems were concerned that CWWAPP funds would be taxed as income. According to a policy expert from a water utilities association, the State Water Board circulated a frequently asked questions document with tax information instead of issuing official tax guidance. This made systems nervous and possibly dissuaded some systems from applying to the program.

Systems struggled to communicate with customers about CWWAPP

Both advocates and policy experts from water utilities associations shared that many Californians may not have been aware that they would receive debt assistance for water debt accrued during the pandemic period. As a result, customers may have prioritized paying off their water bills over other expenses or bills, as indicated by the decline of drinking water arrearages from \$600 million in early 2021 to \$292 million by the end of the year (see Section IV above). One water affordability advocate said that systems did not widely communicate the forthcoming availability of CWWAPP funds and as a result, people did not know that there was potential state or federal funding available. He added that "a lot of water systems were communicating, 'you need to bring your account current... yeah, there is a moratorium [on water shutoffs], but it will be lifted, and then [your water] will be shutoff.'"

Policy experts from water utilities associations acknowledged that it was difficult for systems to communicate about the availability of CWWAPP funding. One policy expert said,

“I don’t think water systems could say, ‘stop paying your bill,’ but... you almost wish there were a way of mentioning these provisional credits so you can let customers know, ‘We know you are struggling right now. There is help for you in terms of your utility bill. So do not worry about it and focus on getting food on the table because there is going to be a plan and a program that is going to get you funding to offset your water bill.’”

Another policy expert from a water utilities association noted that there were also practical limitations to communicating about CWWAPP. One expert said, “It just takes a lot of manpower to get the message out to customers.” Additionally, since there was a delay between when CWSs applied for and received funding, systems may have been reticent to communicate a possible funding timeline to customers.

Spotlight on the Energy Sector

Throughout this research, experts regularly pointed to the energy sector’s California Alternate Rates for Energy (CARE) program and California Arrearage Payment Program (CAPP) as models of effective arrearage payment programs. Experts wanted to know: why are these programs so successful at addressing customer need?

CARE: A Straightforward Program

According to an energy utility business analyst interviewed for this report, there are three reasons the CARE program has achieved a penetration rate of over 80 percent.⁸⁵ First, the energy provision landscape is far less fragmented than the water provision landscape. Whereas there are nearly 3,000 CWSs, there are roughly 45 energy utilities in the state.⁸⁶ Second, the application process for customers is simple. Third, those who live in multifamily buildings are more likely to pay for their energy bill directly, whereas water bills are often paid by a landlord or homeowners association. This makes it easier for the CARE program to reach low-income customers, who often live in multifamily buildings.

CAPP: Meeting a Bigger Need

CAPP was the energy sector’s response to arrearages accrued during the COVID-19 pandemic. Administered by CSD, CAPP received \$1 billion to relieve energy debt accrued during the pandemic period. Like CWWAPP, CAPP completed a utility survey and credited customers by January 2022. Unlike CWWAPP, CAPP used the full \$1 billion by January 2022. Based on available data from CAPP, there seem to be two primary reasons that CAPP used all of its resources by January 2022. First, there were more energy customers in arrears. According to CSD’s utility survey, an estimated 2.8 million energy accounts were in arrears.⁸⁷ Second, energy customers had accrued more energy debt than water customers had accrued drinking water debt. CSD’s utility survey estimated that total arrears amounted to \$2 billion, whereas Survey 1 estimated water customers had accrued \$1 billion in water bill arrearages.⁸⁸

⁸⁵ State Water Resources Control Board. 2020. “Appendix D: Program Scenarios.” Recommendations for Implementation of a Statewide Low-Income Water Rate Assistance Program Appendices. February 25.

https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/assistance/docs/ab401_appendices.pdf

⁸⁶ California Department of Community Services & Development. “California Arrearage Payment Program Data Dashboard.” Accessed May 11, 2022. <https://www.csd.ca.gov/Pages/CAPP-Dashboard.aspx>

⁸⁷ Ibid.

⁸⁸ Ibid.

VII. The Future of Water Affordability Policy

CWWAPP spotlighted that water is unaffordable for too many Californian households. However, stakeholders do not agree about the long-term implications of CWWAPP’s success, nor are they in agreement about the future of water affordability policy in California.

This section projects some of the potential impacts of the CWWAPP program on future water affordability programs. It also discusses SB-222, a bill introduced in the state legislature in 2021 to establish a water rate assistance program in California.

A. CWWAPP’s Impact on the Future of Water Affordability

No U.S. state has established an ongoing, state-funded water payment assistance program.⁸⁹ Multiple experts interviewed for this project referred to CWWAPP as a pioneer program in the field of water affordability. Several research participants said that the policymaking community should evaluate CWWAPP as if it were a pilot program for a future statewide water affordability.

Though it does not appear as if the state will extend CWWAPP into the next fiscal year, it is clear that the program’s outcomes will impact a future statewide water affordability policy plan.

Most research participants agree that there is or may be a need for an ongoing statewide water affordability program

Evidence from this analysis suggests that there is widespread support for a statewide water payment assistance program among key stakeholders, including advocacy organizations and government officials. Survey results also showed that most water systems are open to supporting a statewide water affordability program. The table below summarizes survey responses to the following question: Do you see a need for a permanent, statewide water payment assistance program?

Table 5: Survey Results- Do you see a need for a permanent, statewide water payment assistance program?

	No	Maybe	Yes	Respondents that Replied Yes or Maybe
Applied for CWWAPP	6 (18%)	9 (27%)	18 (55%)	27 (82%)
Did Not Apply for CWWAPP	14 (35%)	17 (42%)	9 (23%)	26 (65%)
Total	20 (27%)	26 (36%)	27 (37%)	53 (73%)

Responses to why there was a need for an ongoing statewide water payment assistance program fell into three buckets. First, participants described an ethical responsibility to make water affordable. Multiple interviewees, for example, identified access to water as a basic human right. One survey respondent from an extremely small water system wrote, “Water is a necessity. We should do what we can to help people meet the necessities of life.”

⁸⁹ Walton. “California Designs First Statewide Water Affordability Program.”

Second, some participants suggested that allowing utilities to manage their own CAP is ineffective. In some cases, this is because a system's customer base is primarily low-income and therefore, the system may not be able to afford to operate their own CAP. One policy expert from a utilities association said,

"[CAP] programs do not work that well because they are based on singular utilities. There is one system where the majority of the people that live there are lower income, so you do not have any high-income people to offset the subsidy for low-income people. What ends up happening is you have low-income people subsidizing very low-income people... and it just creates a really awful situation."

In other cases, systems may not have the capacity to run an effective water payment assistance program. For example, one system wrote, "Since many water systems are small and financially challenged themselves, it would be best for a state run and backed program."

Finally, many participants suggested that a statewide water assistance program would make financial sense for CWSs and customers. Specifically, multiple interviewees and survey respondents said that a statewide payment assistance program would help systems both comply with regulatory requirements for safe drinking water and also offer more affordable water rates. One survey respondent wrote, "In the future, upgrades, utilities, and increased testing and monitoring costs will become prohibitive to residents on fixed incomes." Additionally, some public systems may find it difficult to build the political support required to raise water rates, and an assistance program may make increasing rates to respond to regulatory requirements more politically feasible.

There may be political implications for not using all the funds allotted to the program

Many stakeholders identified a need for an ongoing, state-funded water payment assistance program. However, policy experts and water affordability advocates expressed concerns that this need would be clouded by perceptions that CWWAPP's successes were limited. Survey 1's \$1 billion estimate of Californians' total water bill debt has been published in several news outlets with politically minded readers, including *The Hill*, *The Sacramento Bee*, and *CalMatters*.^{90,91,92} However, the drinking water portion of CWWAPP cost just \$300 million to administer. Without supplemental information about the methods used to estimate water bill debt in Survey 1, it may be easy for casual consumers of water policy news to assume that there is considerably less need for an ongoing water payment assistance program than experts had initially predicted. There may also be a perception that this program was useful during a period of crisis but that there is insufficient need for an ongoing statewide assistance program. With \$1 billion as a reference point, policymakers may assume that the \$300 million spent on the drinking water portion of CWWAPP was too small to demonstrate real need.

⁹⁰ Michael McAfee and Susana De Anda. "Priced out and shut off: Tackling water affordability." *The Hill*. August 30, 2021. <https://thehill.com/opinion/energy-environment/570056-priced-out-and-shut-off-tackling-water-affordability/>

⁹¹ Nydia Medina and Uriel Salivadar. "California Lawmakers Must Act to Stop Water Shutoffs." *The Sacramento Bee*. January 8, 2022. <https://www.sacbee.com/opinion/op-ed/article257068142.html>

⁹² Jackie Botts. "Unpaid utility bills? California will pay off \$2 billion to avoid shutoffs." *CalMatters*. July 19, 2021. <https://calmatters.org/economy/2021/07/california-utility-bills-payment-program/>

Some interviewees suggested that advocates and other stakeholders need to publicize the successes of the CWWAPP program to counteract the perception that there is not a need for an ongoing drinking water payment assistance program. One water policy expert said, “We need a bigger campaign to talk about... how much money went out the door and to hear from the customers that [CWWAPP] assisted.”

Many systems surveyed expressed concerns about who deserves assistance

CWSs will be an important stakeholder in any future water payment assistance program. Though many systems support some kind of ongoing water payment assistance program, this analysis also finds that many systems are concerned about which customers are deserving of assistance.

Many systems that applied and did not apply for CWWAPP expressed resentment that all customers who did not pay their bills qualified for CWWAPP and theoretically, any of these customers could qualify for a statewide assistance program. Below are responses from three water systems that received funding from CWWAPP.

“As a disadvantaged community, there is definitely need, but there are also customers who choose not to pay. A permanent program should depend upon some qualification criteria to be administered more fairly.”

“I see the benefit for the customers that are in real financial [hardship]. For the other customers that either forget to pay their bills or choose to not make a payment because there is no consequence, they should not be able to ask for assistance.”

“There are definitely customers who could use financial assistance. The problem is the cost to determine if they are truly in need (i.e., truly experiencing financial challenges rather than just poor budgeting and living beyond their means).”

It is unlikely that a future water assistance program would have the same customer eligibility criteria as CWWAPP. However, survey responses reveal that many system managers are concerned about how a program can be administered fairly. Perceptions of what is fair and beliefs about who deserves assistance will likely shape CWSs contribution to future discussions about a statewide water payment assistance program.

Additionally, it should be noted that some systems surveyed expressed dissatisfaction with the notion of the state government developing and administering a statewide payment assistance program altogether. Instead, respondents suggested that local entities should determine how to address water affordability issues. One survey respondent wrote, “Water districts vary greatly in governing structure. Having a broad-brush approach from a state entity mandating local requirements is an overreach of authority. Local districts can, and did, provide many avenues for payment assistance prior to and during the pandemic.”

B. The Next Step: Water Rate Assistance Program Legislation

On January 14, 2021, California State Senator Bill Dodd introduced SB-222, a bill to establish a water rate assistance program in California. The bill is the outcome of years of advocacy work

and research into options for a rate assistance program in the state. The legislation would establish a new program to “help provide water affordability assistance, for both drinking water and wastewater services, to low-income ratepayers and ratepayers experiencing economic hardship in California.”⁹³ The bill proposes that the Department of Community Services and Development (CSD) administer the program.

The proposed water rate assistance program would consist of three main components: direct bill assistance; water bill credits to renters and individuals or households that pay other amounts, fees, or charges related to residential water or wastewater service; and water crisis assistance.⁹⁴ Additionally, the program would allocate funds to reimburse public water systems for costs associated with program administration.

Overall, the introduced water rate assistance program legislation offers a skeletal sketch of the new water rate assistance program, with few details on how CSD would administer the program. This is due in part to disagreement among key stakeholders around three important concerns for successful program administration. Some interviewees posited that the legislature would not pass the bill until these concerns are better addressed.

Concern 1: The legislation does not identify a funding source

As of the writing of this report, the introduced water rate assistance program legislation does not identify a funding source. Without a clear funding source, it may be more difficult for the state legislature to pass the bill. Additionally, the bill does not state how much money is needed to fund a water rate assistance program (though the State Water Board’s AB-401 report estimates that a program with similar components to those laid out in the introduced water rate assistance program legislation would cost the state approximately \$600 million a year to operate).⁹⁵

Advocates and policy experts interviewed for this project identified three possible funding options. First, advocates suggested reappropriating the remaining funds from CWWAPP (an estimated \$300 - \$500 million) as a temporary stopgap to fund the introduced water rate assistance program legislation. Once program administrators design the program and reassess state need, the state could then determine an ongoing source of funding. One advantage of this strategy is that it would build political inertia around a water rate assistance program while also earmarking remaining CWWAPP funds for water payment assistance. This would both address advocates’ concerns about losing unused CWWAPP dollars while also building the necessary infrastructure for a robust statewide water rate assistance program.

Another option advocates put forth was adding a tax to bottled water sales. The AB-401 report estimated that a bottled water sales tax would raise approximately \$153 million annually.⁹⁶ A bottled water tax would also provide additional environmental benefits by discouraging the consumption of single-use plastics. However, some advocates did express concerns that a tax on bottled water could disproportionately harm low-income Californians and Californians with

⁹³ Water Rate Assistance Program, SB-222.

⁹⁴ Ibid.

⁹⁵ Pierce et al. “Recommendations for Implementation of a Statewide Low-Income Water Rate Assistance Program.”

⁹⁶ Ibid.

limited access to safe drinking water. Additionally, a bottled water sales tax alone would not raise enough revenue to fund the program laid out in the water rate assistance program legislation.

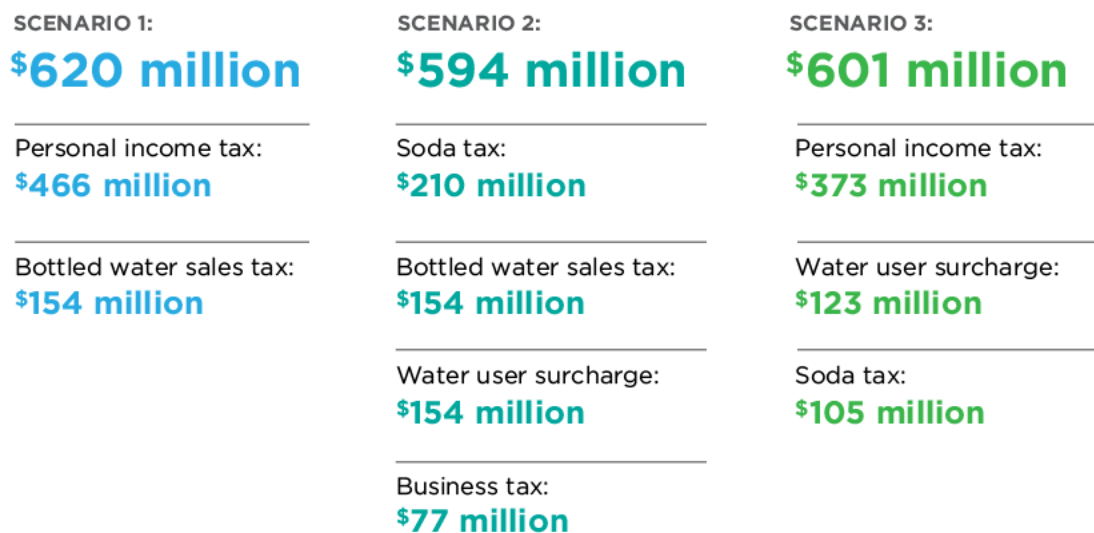
“Any program that is just written into the state’s general fund is going to be highly vulnerable.”
-Water Policy Expert

Finally, the legislature could use resources from the general fund to support the proposed rate assistance program. Multiple water affordability advocates identified the general fund as the most likely source of funding for the introduced water rate assistance program legislation. However, one water policy expert warned against relying on the general fund to finance a water rate assistance

program. The interviewee posited that a water rate assistance program would be more vulnerable to cuts during an economic downturn than if the program had its own clearly defined revenue stream. At the same time, the policy expert acknowledged that identifying a separate, stable funding source requires further advocacy, political will, and stakeholder collaboration. These political resources, they suggested, may be temporarily exhausted.

In addition to the aforementioned revenue sources, the AB-401 report identified other possible revenue streams to fund a \$600 million water rate assistance program. The report puts forth three funding scenarios, summarized in the figure below. As the water policy expert described, these scenarios would require significant political will. The State Water Board’s methodology to prepare the three funding scenarios can be found in Appendix G of the AB-401 report.⁹⁷

Figure 5: Water Rate Assistance Program Funding Scenarios



⁹⁷ State Water Resources Control Board. 2020. “Appendix G: Revenue Collection Options.” Recommendations for Implementation of a Statewide Low-Income Water Rate Assistance Program Appendices. February 25. https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/assistance/docs/ab401_appendices.pdf

Concern 2: There is an ongoing debate about which agency should administer the program and how funds should be disbursed

SB-222 (as amended August 27, 2021) recommends that CSD administer the state's water rate assistance program. CSD currently administers several programs for low-income Californians, including the Low Income Home Energy Assistance Program (LIHEAP), a federally funded program that provides energy payment assistance to low-income households. CSD was also tapped to implement the new federal Low Income Household Water Assistance Program (LIHWAP), an emergency program established in 2020 to help low-income families manage their residential water costs.

Because CSD has experience connecting low-income customers to assistance services, multiple interviewees, especially those representing water utilities associations, approved of housing a future water rate assistance program at CSD. One policy expert from a water utilities association said, "CSD is already working with the local service providers whose main job is connecting customers with resources... Having everything under one umbrella is going to make it a lot easier to communicate what [services] are available to customers."

However, multiple interviewees alluded to a sense that CSD might not be willing to take on the program at this time. Designing and implementing this new program would require additional staff and a stable source of funding. One policy expert said that CSD had originally been tapped to administer CWWAPP, but "the agency made it clear that they were not equipped... and didn't have the capacity to administer it." They added, "I think there is a broad understanding that unless CSD were given a tremendous number of new staff, they are just not going to be able to take on [a new water payment assistance program]."

Because it administered CWWAPP, some experts are pointing to the State Water Board as a potential implementing agency for all or part of the program outlined in the introduced water rate assistance program legislation. One water policy expert suggested that housing a water payment assistance program at the State Water Board would be more administratively efficient because the Board has the relevant data and policy infrastructure to implement and oversee such a program. Another water policy expert acknowledged that while the State Water Board would need additional funding and personnel to oversee an ongoing water payment assistance program, the Board has the necessary expertise to successfully implement the kind of program laid out in the introduced water rate assistance program legislation.

At the same time, some interviewees believed that since the State Water Board is a regulatory agency, a direct assistance program would be beyond the Board's scope and mission. One policy expert from a water utilities association said, "Given that the State Water Board is a regulatory entity, and their job is to advance regulations for water systems, they are not the right fit for a long-term [water payment assistance] program."

Finally, survey respondents made clear that water systems should not be the primary recipient of funds for a future customer assistance program. Several respondents said that it would be too difficult for small systems to help service a water payment assistance program. One survey respondent that applied for CWWAPP said, "The amount of administration this would require would sink small agencies and be much more of a problem to track and competently administer

for future state auditing.” Another system that did not apply for CWWAPP said, “The need is there for a payment assistance program but having a program that is direct to the customer is the answer for small agencies with limited administrative resources. We do not have capacity to assess who does and does not qualify for a program.”

Concern 3: It is unclear whether there is sufficient political will to pass a water rate assistance program

Interviewees agreed that CWWAPP helped highlight the unaffordability of drinking water for low-income Californians but questioned whether the pandemic built sufficient political momentum to pass the introduced water rate assistance program legislation. The bill, which the Senate Appropriations Committee passed in August 2021, was ordered inactive in September 2021.⁹⁸ According to multiple advocates, the bill was put on pause because the Newsom administration wanted the authors to identify a clear funding source and an interested implementation agency.

**“Unless you had a governor willing to put the full weight of the administration behind the bill, there aren’t enough votes.”
-Water Policy Expert**

However, one policy expert questioned whether the administration has sufficient political capital or interest for an ongoing program. The policy expert said, “It is still unclear whether there is political will for anything beyond this one-time COVID relief package... despite demonstrating the need for an ongoing program.” The policy expert attributed this lack of political will to the political capital expended to pass the 2019 Safe and Affordable Drinking Water Fund (SB-200):

“The political capital required to make that deal meant that the willingness of the administration, and some of the legislature too, to then take the next step and address affordability was significantly decreased.... We made this big deal to solve safe drinking water and coming back to the issue and putting significant dollars to an ongoing rate-assistance program is just not in the political cards.”

Still, many advocates remain optimistic that a version of the bill will be passed by the 2022-2023 fiscal year. One water affordability advocate said,

“We are trying to find a path forward with all stakeholders, including the administration, to get this across the finish line. I think it shows promise that so many folks agree with the fundamental goal... I am really hopeful, I think that the bill can get through.”

VIII. Recommendations

The following recommendations synthesize themes and findings that emerged from this research. Recommendations are not mutually exclusive, and policymakers should consider strategies for implementing several of the ideas described below.

In considering which recommendations to include, this analysis prioritized ideas that would effectively address the financial considerations of both customers and systems. This report also

⁹⁸ Water Rate Assistance Program, SB-222.

prioritized suggestions that would benefit disadvantaged stakeholders, such as low-income customers or small water systems.

A. Fund a Statewide Water Payment Assistance Program

The state legislature should fully fund a statewide water payment assistance program to ensure the human right to water. As multiple research participants shared, existing programs at the system level are not enough to meet the need in the state. Moreover, many systems do not have the resources to establish their own payment assistance programs. A fully funded statewide water payment assistance program is the best path forward for ensuring that water is affordable for every Californian.

Although California legally recognized the human right to water a decade ago, the state has not done enough to finance efforts to ensure all Californians have access to affordable drinking water. Research participants emphasized that establishing a robust, reliable source of funding for a statewide assistance program would be essential to following through on the state's promise of a human right to water.

“The state recognized the human right to water in 2012, but they're not willing to dedicate the resources that are needed to fulfill the affordability piece of that human right to water.”
-Policy Expert from a Water Utilities Association

In addition to the introduced water rate assistance program legislation, other water affordability policies emerged from this research. One policy advocate recommended the state explore arrearage management plans as an alternative to traditional payment plans. In an arrearage management plan, a portion of the past debt is forgiven with every on-time monthly payment. The advocate provided the following example:

“If a low-income household has \$1,200 in arrears, an arrearage management plan would not require you to pay back the full \$1,200. Instead, every time you made an on-time monthly payment, the plan would forgive a portion of your past due amount. For example, if the household is in a 12-month plan, you would forgive 1/12 of the past due amount with every on-time payment of the month.”

The advocate later added:

“Low-income households generally fall behind on their payments for a reason... They are struggling to afford that monthly payment. Adding additional amounts on top of the monthly payment just is not successful... Households fail out of payment plans really, really frequently. [An arrearage management plan] tries to get at that. Then there are benefits to the water system too because you incentivize on time payments.”

Another policy that emerged from survey analysis was to provide CWSs with financial relief and infrastructure grants to help meet statewide drinking water safety requirements. One survey respondent said that this kind of financial support “would reduce long-term costs to all customers versus only those meeting certain income requirements.” This approach, in concert with a water affordability plan, could help the state achieve multiple goals, including providing safe drinking

water to all Californians; stabilizing the customer cost of water; and helping systems maintain their own financial stability.

Finally, several survey respondents emphasized that a future water affordability program should have simple eligibility requirements and be easy to implement. Simple programs both reduce administrative burden on systems and reduce potential barriers to access for customers in need. Additional strategies for reducing administrative strain are described below.

B. Reduce the Administrative Strain of a Fragmented Water System

There are over 2,900 CWSs in California, serving diverse populations and geographies. The fragmented nature of the water provision landscape makes it challenging for policymakers to design and implement water affordability programs that align well with the needs of all CWSs. The fragmented nature of the water landscape is in itself a barrier to the creation and successful roll out of a statewide water payment assistance program.

This analysis identifies several approaches intended to reduce the administrative strain of a patchwork system with the goal of making it easier for policymakers to design and administer statewide water affordability programs in the future.

Fund updates to CWS billing systems

Research participants frequently pointed to CWS billing systems as a barrier to the implementation of CWWAPP. For example, when asked about the challenges of implementing CWWAPP, one survey respondent from a moderately large system wrote, “Our billing system is antiquated, so many of the difficulties were internal to our processes and involved gathering and updating data.”

To address this barrier, the state should fund necessary updates to CWS billing systems so that CWSs can more easily administer a statewide payment assistance program. By helping CWSs update their billing systems, the state would help reduce the administrative load and the start-up costs associated with a statewide water payment assistance program. This, in turn, could help increase support from CWSs for such a program. As one policy expert posited, “If the state makes enough money available to water systems to upgrade these billing systems, [CWSs] might be more willing to support a [payment assistance] program.”

The best available estimate of the amount needed for billing system updates comes from the AB-401 report. The report projects that it would take \$86 million over two years to ensure that all 2,900 CWS billing systems were capable of delivering a monthly water assistance credit; training personnel about a water payment assistance program; modifying CWS marketing, education, and outreach programs; and complying with “applicable requirements for reimbursement with state funding.”⁹⁹

⁹⁹ Pierce et al. “Recommendations for Implementation of a Statewide Low-Income Water Rate Assistance Program.”

Still, even with additional funding support, some CWSs may be reticent to update their billing system. For example, it can be a time-intensive endeavor to update a billing system. One policy expert from a water utilities association said,

“It really can take an entire year to update these billing systems... and systems cannot do it themselves. They have to bring in third-party vendors to do it, and it never works right. And then there are all kinds of unique situations where the new [billing] system would still need to be tweaked.”

CWSs also may not want to make updates to their billing systems or may not see the need. One water affordability advocate said, “Water systems are very protective of their billing systems,” suggesting that CWSs would be averse to change, regardless of the monetary support.

Promote data sharing with other payment programs

One reported challenge CWSs face when implementing water payment assistance programs is identifying who might be eligible for the program. As one policy expert from a water utilities association said, “We do not have the capacity to go out and figure out who is low income and who is not... That is just not what utilities are doing, nor is it what they should be doing. You want them focused on getting water to people.”

In order to help systems identify and support their low-income customers, the state could mandate data sharing between the CARE program, water systems, and the agency tapped to administer a statewide water payment assistance program. Data sharing would reduce the administrative burden on systems and the implementation agency by tying customer eligibility to the CARE program’s eligibility requirements.

There is some precedent in California for data sharing between energy and water utilities. Since 2012, the California Public Utilities Commission (CPUC) has required water and energy utilities under its purview to share information on low-income customers. Existing research suggests that data sharing between water and energy utilities improves the penetration of a water payment assistance program. For example, East Bay Municipal Utility District, a non-CPUC regulated utility, estimated that its payment assistance program reached just 10 – 21 percent of eligible customers in 2021.¹⁰⁰ In contrast, San Jose Water, a CPUC-regulated utility, has a payment assistance program that reaches approximately 50 – 60 percent of eligible customers.¹⁰¹

CARE reaches approximately 84 percent of eligible customers.¹⁰² Linking customers’ water payment assistance eligibility to CARE eligibility could therefore help a statewide program reach a majority of low-income Californians.

Consider the operational consolidation of systems

Californians get their water through a chaotic, patchwork system. Approximately 3,000 CWSs currently serve California, and over 80 percent of these systems have fewer than 10,000 service

¹⁰⁰ Feinstein. “Keeping the Water On.”

¹⁰¹ Ibid.

¹⁰² Pierce et al. “Recommendations for Implementation of a Statewide Low-Income Water Rate Assistance Program.”

connections.¹⁰³ The system is also very decentralized; one 2022 study identified 26 distinct types of government arrangements with systems.¹⁰⁴

The fragmented and decentralized nature of the water provision landscape presents several challenges. First, the fragmentation of the water provision landscape means that most water utilities have a small user base, making systems vulnerable to economic shocks.¹⁰⁵ Second, smaller systems have less administrative capacity to improve their operational and physical infrastructure. Third, the current landscape makes it more difficult for the state to design and implement a statewide water payment assistance program that would apply equitably to all systems. To help ensure that the design and implementation of such a program is effective and equitable for systems and customers, policymakers should consider ways to consolidate the water sector.

Consolidation in the water sector refers to collaborative efforts to merge aspects of two or more water systems.¹⁰⁶ While consolidation may refer to the merging or sharing of physical infrastructure, such as pipelines, this analysis focuses on the potential benefits of non-physical, or operational, consolidation. This could involve sharing financial, managerial, or technical capacity, such as billing systems or staff.¹⁰⁷

The state legislature and the State Water Board have both prioritized consolidations for drinking water safety and access. For example, in 2015, the legislature passed SB-88, thereby mandating physical and operational system consolidation in cases where systems are at risk of failure.¹⁰⁸ As a result, the State Water Board has also facilitated 178 consolidations since 2016, and as of November 2021, the Board had 175 additional consolidation projects underway.¹⁰⁹

However, in addition to physically consolidating CWSs to provide safe drinking water access, the state should seek to operationally consolidate smaller CWSs with larger CWSs. The State Water Board could help incentivize operational consolidation by providing grants to systems interested in merging and also offering technical assistance during the operational merge process. This could help provide smaller CWSs access existing affordability programs; keep water retail rates low for customers; and make it easier to implement a statewide program in the future.

¹⁰³ Dobbin and Fencl. “Who governs California’s drinking water systems?”

¹⁰⁴ Ibid.

¹⁰⁵ Environmental Policy Innovation Center. n.d. “Utility Consolidation to Achieve Health Equity.” Accessed May 11, 2022. <https://www.policyinnovation.org/water/consolidation>

¹⁰⁶ Green Nylen, Pannu, and Kiparsky. “Learning from California’s Experience with Small Water System Consolidations.”

¹⁰⁷ Ibid.

¹⁰⁸ Lesly Figueroa. “SB403 would authorize CA State Water Board to consolidate water systems at risk of failure.” Leadership Counsel for Justice & Accountability Blog. March 15, 2021. <https://leadershipcounsel.org/sb403-would-authorize-ca-state-water-board-to-consolidate-water-systems-at-risk-of-failure/>

¹⁰⁹ Sarah Bardeen. “Consolidating Small Water Systems Is a Springboard to Water Justice.” Public Policy Institute of California Blog. November 15, 2021. <https://www.ppic.org/blog/consolidating-small-water-systems-is-a-springboard-to-water-justice/>

Consider appointing a regional administrator for water programs

The state legislature should consider appointing a regional administrator, perhaps at the county or regional water board level, to oversee water rate assistance programs for systems that do not operate their own programs. Regional administrators could provide operational, technical, or managerial services to help administer customer rate assistance programs.

Currently, systems can be paired with a State Water Board water system administrator to help provide safe and affordable drinking water.¹¹⁰ A regional administrator would offer two additional benefits to strengthen existing efforts. First, this administrator would focus specifically on providing systems with the funding and operational support to administer a water payment assistance program. Second, the approach would emphasize regional self-reliance, potentially increasing the palatability of the program to system managers opposed to further government intervention.

C. Continue Research Efforts on Water Assistance Programs

Stakeholders, should continue research efforts on water assistance programs. Several areas of future research emerged as a result of this analysis.

Evaluate LIHWAP and compare results with CWWAPP

LIHWAP is a federally funded water payment assistance program for low-income Americans. The program emerged as part of the American Rescue Plan Act (ARPA) and offers households a one-time credit on their water bills. Although advocates hope that LIHWAP will continue beyond 2022, available information does not yet suggest that the program will be renewed. The standing up and implementation of both LIHWAP and CWWAPP present a natural experiment for researchers. Both programs were designed in a similar timeframe to address water affordability concerns, but the two programs were structured and administered differently. Table 6 summarizes some of the structural differences between LIHWAP and CWWAPP.

Table 6: Structural Differences of LIHWAP and CWWAPP

	LIHWAP ¹¹¹	CWWAPP
Program funds available	\$116 million	\$985 million
Level of government	Federal program	State program
Funding source	ARPA funds allocated by the U.S. Health and Human Services Agency	ARPA funds allocated by the California State Legislature
Implementing agency	CSD	State Water Board

¹¹⁰ California Water Boards. n.d. “Administrator Policy Frequently Asked

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

¹¹¹ California Department of Community Services & Development. 2022. “Final Program Guidelines: Low Income Household Water Assistance Program.” April 11. <https://csd.ca.gov/Shared%20Documents/FINAL-LIHWAP-Program-Guidelines.pdf>

Eligible customers	Customers must have debt owed to a water system AND be a citizen or qualified noncitizen AND must have a total household income at or below 60 percent of the state median income OR customer is a recipient of LIHEAP, CalFresh, or CalWORKs. Program works on a first-come-first-serve basis.	Any commercial and residential customers who accrued arrearages during the pandemic period AND whose CWS applied for funding.
Eligible debt	Water, wastewater, and/or stormwater charges, including arrearages, current charges, late fees, reconnection fees, taxes, or other charges.	All commercial and residential drinking and wastewater arrearages accrued during the pandemic period.
System administration benefit	5 percent	3 percent
Maximum customer benefit	\$2,000	None
Service delivery method	Customers apply for LIHWAP through one of CSD's Local Service Providers (LSPs). CWSs enter into direct-payment agreements with CSD's third-party funds disbursement provider. Program sends funds to CWSs with customers that applied for funding. CWSs apply credit to customer bills.	Program sent funds to CWSs that applied for funding. CWSs applied credit to customer bills.
Date first check was mailed	May 2022 (projected)	November 2021

Additionally, as of the writing of this report, neither LIHWAP nor CWWAPP have been fully implemented. Researchers in this space should evaluate both LIHWAP and CWWAPP once the programs end. A future evaluation of CWWAPP should include an evaluation of the implementation of the program's wastewater phase, as well as an evaluation of the effectiveness of the program's payment plan facet. An evaluation of LIHWAP should focus on California's implementation of the program but could also compare the administration of LIHWAP in California to its administration in other states.

Since LIHWAP and CWWAPP represent two very different approaches to a water payment assistance plan, an evaluation comparing the two programs would be useful to inform the design and implementation of a future statewide affordability plan. Such a research endeavor could

focus on how various program design elements affected the effectiveness, equity, and feasibility of their respective programs.

Future evaluations should consider ways to incorporate customer voices into research efforts. Due to the time constraints of this research, this analysis could not identify or contact customers that received CWWAPP credits. Including the customer perspective will be essential to a holistic understanding the impacts of CWWAPP and LIHWAP and will help evaluate the extent to which these programs met their intended objectives.

Research approaches to implementing the renter’s credit described in SB-222

As described in the previous section, the introduced water rate assistance program legislation would establish a fund to provide drinking water and wastewater payment assistance to Californians experiencing economic hardship. The bill specifies that money would be available for “water bill credits to renters and individuals or households that pay other amounts, fees, or charges related to residential water or wastewater service.”¹¹²

American Housing Survey data from 2015 show that roughly 44 percent of California households do not pay for their water bill directly.¹¹³ Among households with incomes at or below 200 percent of the federal poverty line, approximately 60 percent (or 2.6 million households) do not pay for their water bill directly.¹¹⁴ This suggests that in order to support a majority of low-income families with their water bill, the state would need to offer an alternative delivery method to a direct bill credit.

The AB-401 report explores three options to deliver benefits to low-income renters: share information on water usage between CWSs, landlords, and sub-metered households; CWSs pay landlords, who then pass on a benefit to a household through a rent deduction; or CWSs directly deliver benefits to tenants. Other delivery options that emerged from this analysis included a tax credit for renters or adding an estimated benefit to eligible CalFresh users’ CalFresh card.

Though there is some precedence for the delivery options described above, these service delivery options have not been tested at scale in California. Further research efforts could include pilot programs of one or multiple approaches to service delivery. Researchers could also compare the delivery service options using available data to evaluate their effectiveness and feasibility.

Evaluate the implementation and enforcement of SB-998

Signed into law in September 2018, SB-998 protects low-income households from water shutoff. Specifically, SB-998 requires that CWSs with more than 200 connections have a written water shutoff policy for cases of nonpayment. These policies are required to include a plan for deferred payments or alternative payment schedules. All qualifying water systems were mandated to comply with SB-998 by April 1, 2020.

¹¹² Water Rate Assistance Program, SB-222.

¹¹³ Pierce et al. “Recommendations for Implementation of a Statewide Low-Income Water Rate Assistance Program.”

¹¹⁴ Ibid.

Because SB-998's compliance schedule coincided with the COVID-19 pandemic, it is possible that CWSs may not have had the time or resources to establish and publish their shutoff policies. The shutoff moratorium may have also delayed CWSs in establishing their shutoff policies, as CWS managers knew they were not allowed to shut off customers' water due to nonpayment.

Now that the state has lifted its shutoff moratorium, researchers should analyze the extent to which CWSs have established, published, and adhered to their shutoff policies. For example, analysts could identify all available shutoff policies and determine whether they aligned with SB-998. This analysis could be useful to water affordability advocates as they help uphold the state's commitment to the human right to water. This analysis would also help water policy experts better understand existing holes in affordability policies and could help ensure that future legislation addresses those gaps.

Study the implementation of the CAPP program

Many research participants expressed an interest in learning more about the CAPP program. Research participants wanted to learn more about how energy arrearages changed over time and whether the program observed similar implementation barriers as CWWAPP. This research addressed some of the reasons the CAPP program may have successfully disbursed the full \$1 billion allocated to the program. However, more research could be done to evaluate the program in order to better understand how CAPP and CWWAPP compared to one another.

Conclusion: A Pivotal Moment for Water Systems

This is a pivotal moment for water affordability stakeholders. The twin economic and public health crises borne out of the COVID-19 pandemic spotlighted the importance of accessible, affordable water service. The current cost of water disproportionately impacts stakeholders already struggling financially and who may face several other structural injustices. The momentum catalyzed by programs like CWWAPP and LIHWAP presents an opportunity for stakeholders to transform the water affordability landscape and address some the structural problems that perpetuate cycles of poverty and injustice.

This report hopes to support stakeholders' efforts in building the political will necessary to capitalize on this pivotal moment for water affordability. By making water affordable for every Californian, stakeholders can help the state finally live up to its promise that every Californians has a human right water.

Appendices

Appendix A: Interview Question Bank

Below are questions that were used to form interview protocols with water affordability advocates, water policy experts, and managers from water systems. Questions asked depended on the interviewee's background and expertise. Given the semi-structured nature of the interview process, this list is not comprehensive of all the questions posed during conversations.

1. Can you describe what you do in your position as it relates to water payment assistance?
2. What do you view as some of the biggest successes of the California Water and Wastewater Arrearage Payment Program?
3. What were the lessons you took away from the implementation of the CWWAPP program?
4. What were some of the challenges of the CWWAPP program?
5. Did CWWAPP or the COVID-19 pandemic change the political landscape for water affordability issues?
6. Looking to the future, do you see a need for an ongoing state or federally funded water payment assistance program? Why or why not?
7. What would the best possible statewide water bill assistance program look like?
8. What should state policymakers keep in mind in designing the implementation of a water assistance program?
9. What kinds of tools or policy infrastructure does California need to successfully implement a water assistance program?
10. Did you receive any feedback from customers about the CWWAPP program?
11. As you may know, the California state legislature has put forth a bill (SB 222) to establish a water assistance program. If you are familiar with the bill, do you have any thoughts on what SB 222 does well?
12. What are some of your concerns about SB 222?
13. Do you have any additional concerns around the implementation of SB 222?
14. What barriers do you foresee as possible roadblocks to the passage of SB 222?
15. Is there anything else we should have asked about?

Appendix B: Survey for CWWAPP Applicants

This appendix includes screenshots of the survey sent to CWWAPP applicants as part of this research. Questions marked with a red asterisk were required in order to successfully submit the survey.


Survey on California Water & Wastewater Arrearage Payment Program

Thank you for supporting this research project on the California Water & Wastewater Arrearage Payment Program (CWWAPP). Your responses will be used by UC Berkeley graduate student Laila Heid and SPUR staff to evaluate the effectiveness of the CWWAPP program and to develop improvements to possible arrearage payment programs in the future.

The survey questions will ask about your system's experience with the CWWAPP program, which was administered by the State Water Board. The program provided participating water systems with funds to waive drinking water arrearages accrued during the COVID-19 pandemic relief period (March 4, 2020 and June 15, 2021).

This survey will take roughly 15 minutes to complete. If you have any questions, please email Laila Heid at laila_heid@berkeley.edu.

laila_heid@berkeley.edu [Switch account](#)

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*** Required**

Email *


Your email

What is the name of your water system? *

Your answer

Optional: What is your water system's PWSID?

Your answer



What do you see as some of the successes of the CWWAPP program (if any)? Please use the space below to write a few sentences or up to a paragraph. *

Your answer

What do you see as some of the challenges or failures of the CWWAPP program (if any)? Please use the space below to write a few sentences or up to a paragraph. *

Your answer

On a scale of 1 to 5, how easy or difficult was it to implement the CWWAPP program? *

Very Easy 1 2 3 4 5 Very Difficult

Optional: If you would like to elaborate on your answer to the previous question, please use the space below.

Your answer

In a few sentences, please describe what would have made it easier for you and your team to implement the CWWAPP program. *

Your answer



How many of your customers received a credit to their account as part of CWWAPP? *

Your answer

Did your water system already offer payment plans to residential customers before March 4, 2020? *

- Yes, to all customers who asked for one.
- Yes, but just to certain groups of customers.
- No
- Other:

If you would like to elaborate on your answer to the previous question, please use the space below.

Your answer

Using the ranges below, please estimate the percentage of your residential customers who were offered a payment plan for arrearages accrued during the COVID-19 pandemic relief period (between March 4, 2020 and June 15, 2021)? *

- 0 - 9 percent
- 10 - 19 percent
- 20 - 29 percent
- 30 - 39 percent
- 40 - 49 percent
- 50 - 59 percent
- 60 - 69 percent
- 70 - 79 percent
- 80 - 89 percent
- 90 - 100 percent

Of the customers who were offered a payment plan for arrearages accrued during the COVID-19 pandemic relief period, please estimate the percentage who entered into one. *

- 0 - 9 percent
- 10 - 19 percent
- 20 - 29 percent
- 30 - 39 percent
- 40 - 49 percent
- 50 - 59 percent
- 60 - 69 percent
- 70 - 79 percent
- 80 - 89 percent
- 90 - 100 percent

Optional: Of the residential customers who did NOT enter into a payment plan for arrearages accrued between March 4, 2020 and June 15, 2021, please estimate how many had their service disconnected due to nonpayment or past-due bills.

Your answer

Do you see a need for a permanent, statewide water payment assistance program? *

- Yes
- No
- Maybe

In a few sentences, please explain your answer to the previous question. *

Your answer

Would you be interested in speaking with us in a brief follow-up interview?

As part of this research, we plan to conduct brief interviews with water system representatives about their experiences applying for and administering the CWWAPP program.

Would you be interested in a follow-up interview so we can learn more about your experience? *

- Yes
- No

If YES, what is your name?

Your answer

If YES, what is your email address?

Your answer

Thank you!

Thank you again for sharing your experience in this survey. We are incredibly grateful for your insights and your time.

Send me a copy of my responses.

Submit

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Appendix C: Survey for CWWAPP Non-Applicants

This appendix includes screenshots of the survey sent to CWWAPP non-applicants as part of this research. Questions marked with a red asterisk were required in order to successfully submit the survey.


Survey on California Water & Wastewater Arrearage Payment Program

Thank you for supporting this research project on the California Water & Wastewater Arrearage Payment Program (CWWAPP). Your responses will be used by UC Berkeley graduate student Laila Heid and SPUR staff to evaluate the effectiveness of the CWWAPP program and to develop improvements to possible arrearage payment programs in the future.

The survey questions will ask about your system's experience with the CWWAPP program, which was administered by the State Water Board. The program provided participating water systems with funds to waive drinking water arrearages accrued during the COVID-19 pandemic relief period (March 4, 2020 and June 15, 2021).

This survey will take roughly 15 minutes to complete. If you have any questions, please email Laila Heid at laila_heid@berkeley.edu.

laila_heid@berkeley.edu [Switch account](#)

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* Required

Email *

Your email

What is the name of your water system? *

Your answer

Optional: What is your water system's PWSID?

Your answer



What do you see as some of the successes of the CWWAPP program (if any)?
Please use the space below to write a few sentences or up to a paragraph. *

Your answer

What do you see as some of the challenges or failures of the CWWAPP program
(if any)? Please use the space below to write a few sentences or up to a
paragraph. *

Your answer

Why did your system decide not to apply for the CWWAPP program? Please check all options that apply.

- Few or no customers were in arrears.
- The application process was too difficult or confusing.
- Our system did not have the administrative capacity to implement the program.
- We were concerned that there may be financial costs associated with participating in the program.
- Our system could not identify drinking water arrearages because our system collects eligible customer revenue through property tax rolls.
- Our system could not identify drinking water arrearages during this period because we transferred arrearage debt to a third party such as the county or a debt collection agency.
- It was not financially viable for our system to waive late fees.
- We did not believe our system was eligible for the program.
- We did not agree with the goals of the program.
- We did not agree with other aspects of the program (e.g., the customer qualification requirements).
- Our system DID apply for CWWAPP.
- Other:

On a scale of 1 to 5, how easy or difficult was it to implement payment plans, as mandated by SB 155? *

	1	2	3	4	5	
Very Easy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Difficult

Optional: If you would like to elaborate on your answer to the previous question, please use the space below.

Your answer

Did your water system already offer payment plans to residential customers before March 4, 2020? *

- Yes, to all customers who asked for one.
- Yes, but just to certain groups of customers.
- No
- Other:

If you would like to elaborate on your answer to the previous question, please use the space below.

Your answer

Using the ranges below, please estimate the percentage of your residential customers who were offered a payment plan for arrearages accrued during the COVID-19 pandemic relief period (between March 4, 2020 and June 15, 2021)? *

- 0 - 9 percent
- 10 - 19 percent
- 20 - 29 percent
- 30 - 39 percent
- 40 - 49 percent
- 50 - 59 percent
- 60 - 69 percent
- 70 - 79 percent
- 80 - 89 percent
- 90 - 100 percent

Of the customers who were offered a payment plan for arrearages accrued during the COVID-19 pandemic relief period, please estimate the percentage who entered into one. *

- 0 - 9 percent
- 10 - 19 percent
- 20 - 29 percent
- 30 - 39 percent
- 40 - 49 percent
- 50 - 59 percent
- 60 - 69 percent
- 70 - 79 percent
- 80 - 89 percent
- 90 - 100 percent

Optional: Of the residential customers who did NOT enter into a payment plan for arrearages accrued between March 4, 2020 and June 15, 2021, please estimate how many had their service disconnected due to nonpayment or past-due bills.

Your answer

Do you see a need for a permanent, statewide water payment assistance program? *

- Yes
- No
- Maybe

In a few sentences, please explain your answer to the previous question. *

Your answer

Would you be interested in speaking with us in a brief follow-up interview?

As part of this research, we plan to conduct brief interviews with water systems about their experiences applying for and administering the CWWAPP program.

Would you be interested in a follow-up interview so we can learn more about your experience? *

- Yes
- No

If YES, what is your name?

Your answer

If YES, what is your email address?

Your answer

Thank you!

Thank you again for sharing your experience in this survey. We are incredibly grateful for your insights and your time.

Send me a copy of my responses.

Submit

Clear form

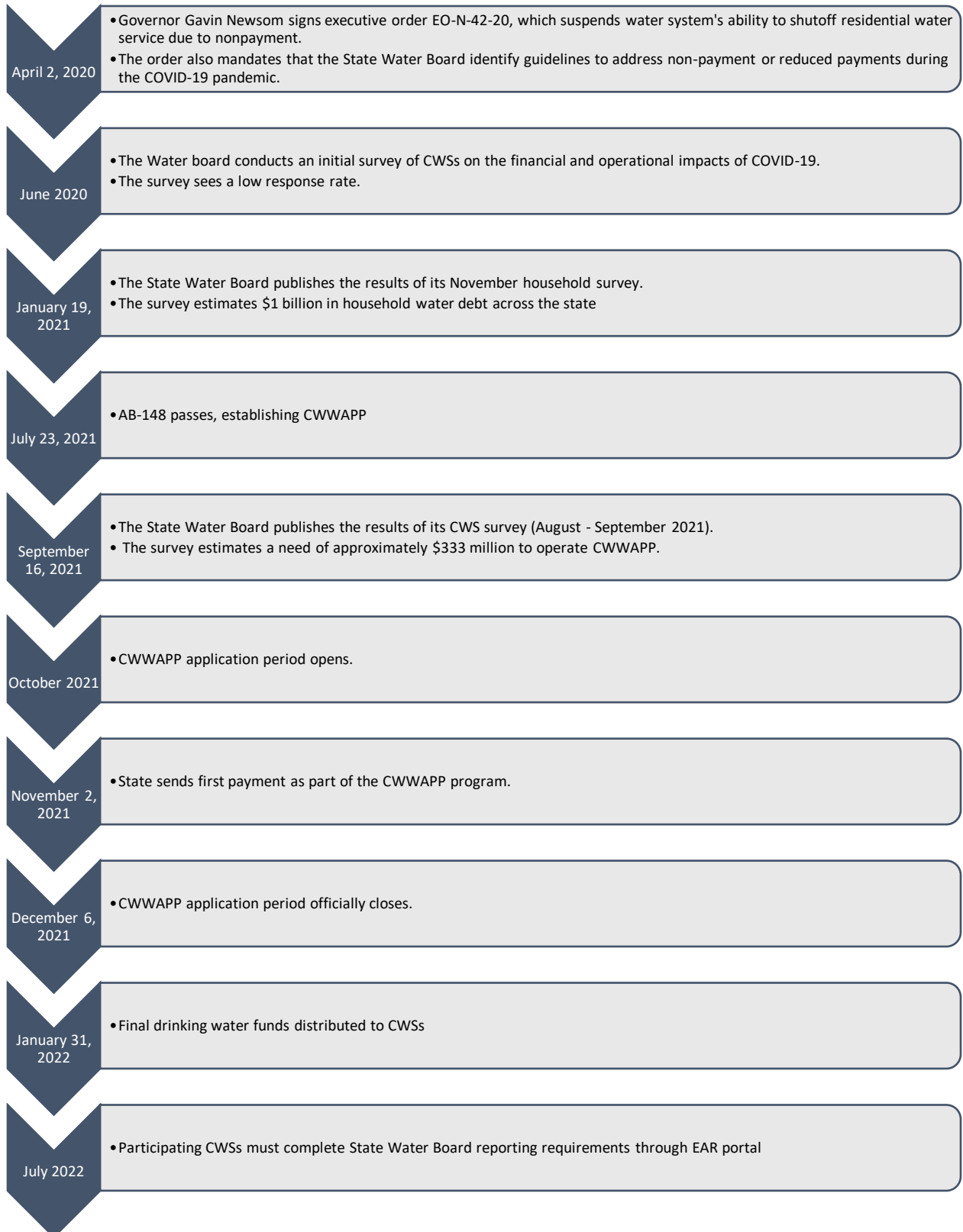
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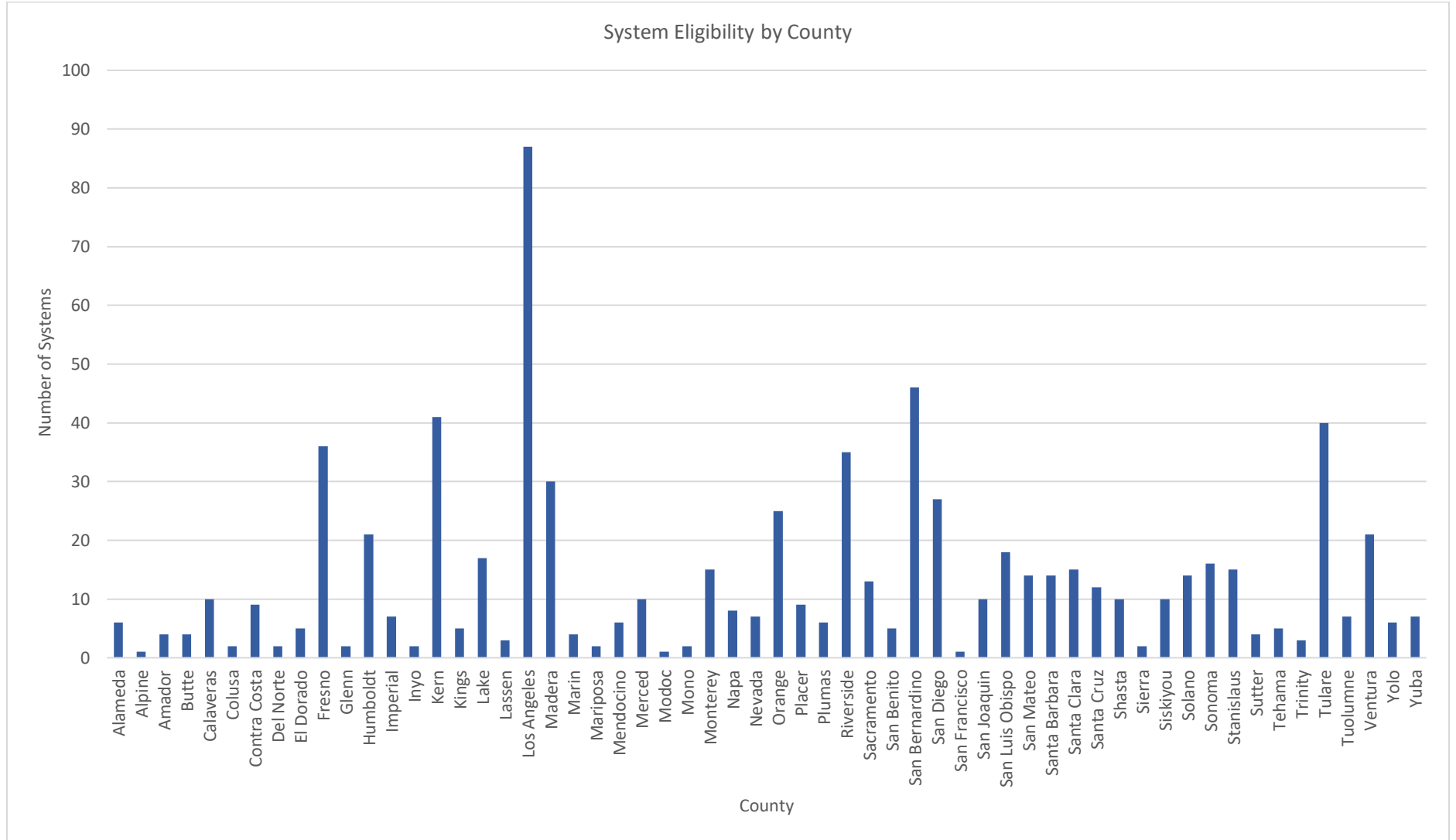
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Appendix D: CWWAPP Program Timeline and Key Dates



Appendix E: CWWAPP Participation by County



Percentage of Eligible Systems that Applied for CWWAPP Funding by County

