Book 2 – Rebuttal Testimony on Common Plant, CSS & RDOM

Common Plant, Customer Support Services, Rancho Dominguez

2024 General Rate Case

A.24-07-003 (For Test Year 2025)

California Water Service

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Table of Contents

Chapter 1. Common Plant Issues Rebuttal 4

Section 1. Introduction 5

Section 2. Asset Management Programs 7

Analyzers and Instrumentation Replacement Program 8

Cathodic Protection Systems Program 15

Control Valve Overhaul and Replacement Program 20

Customer Meter Replacement Program 30

Flowmeter Replacement Program 37

Generator Replacement Program 42

MCC/Panelboard Replacement Program 47

Main Replacement Program 51

Pressure Vessel Improvement Program 68

Pump and Motor Replacement Program 71

Service Line Replacement Program 83

Tank Improvements Program 91

Well Renewal Program 106

Section 3. Other Programs 114

Non-Specifics and Unscheduled Program 115

Contingency 141

Construction Management and Special Inspection 151

Routine Granular Activated Carbon Changeout Program 155

Water Quality Sample Stations Program 161

Physical Security Program 167

Vehicle Replacement Program 175

Advanced Metering Infrastructure Program 186
Chapter 2. General Rebuttals 192
Section 1. Introduction 193
Section 2. General Rebuttals 194
Nitrification (Tank and Mixing) Projects 195
Nitrification Remediation and System Flushing 198
Engineering & Planning Studies 201
Land Held for Future Use 240
Design and Permitting-Only Projects 246
Multi-GRC Projects 262
Chapter 3. CSS & RDOM 268
Section 1. Introduction 269
Section 2. CSS/RDOM Rebuttals 270
PID# 133646 AMI Initiative – IT INT/DEV 271
PID# 134646 CSS - Vehicles For New Complements 272
PID # 132210 Microsoft Projects Online 273
PID# 132575, 132576, 132577 PC & Device Replacement 2025, 2026, 2027 274
PID# 132815 Digital Twin Ops Optimization 279
PID# 133533 CSS Rooftop Solar 283
PID# 133661 30 Mobile Power Generators 286
PID# 135805 Salesforce CRM Project 288

Chapter 1.

Common Plant Issues Rebuttal

Section 1. Introduction

The upkeep, improvement and expansion of a major water utility requires a large portfolio of programs and projects to address a wide range of needs. There are projects that address a specific issue and there are projects that address issues common to an entire property group. The latter is referred to as Common Plant Issues.

"Common Plant Issues" are a collection of routine replacement programs, retrofits, and non-specific budgetary allocations whose justifications and scope do not vary greatly from project to project. The Common Plant Issues Justification Book is used to expand the justification for these programs on a global basis, and a summary of each entire program's total direct costs can be found in the Common Plant Issues Justification Book. In addition, the specific district projects that fit the Common Plant characteristics are included in each district's direct cost summary tables found at the beginning of each District Project Justification Book.

Chapter Overview

This chapter represents the rebuttal and supporting analysis for Plant in Service for Common Plant Issues and Physical Security Projects.

Asset Management

The U.S. Environmental Protection Agency (USEPA) emphasizes that structured asset management is critical for ensuring the long-term sustainability, reliability, and cost-effectiveness of aging water infrastructure. Without a proactive plan, utilities face frequent asset failures, costly emergency repairs, and unnecessary service disruptions. Other water utilities have demonstrated that asset management strategies reduce costs and improve customer satisfaction. This also approach aligns with the Commission's long-term infrastructure planning policies. In Decision (D.) 07-05-062, the Commission established minimum data requirements (MDRs) to streamline the GRC process, mandating that utilities develop comprehensive plans to address aging infrastructure.[1] The decision cites a US Government Accountability Office (GAO) report highlighting the importance of asset management in improving decision-making and investment strategies. The GAO also warns that a short-term focus on capital savings can hinder long-term planning, which is precisely the pitfall exemplified by Cal Advocates' recommendation. By advocating for significantly reduced capital investments, Cal Advocates ignores the long-term consequences, including increased asset failures and costly emergency repairs that will ultimately burden customers.

The 2025 Report Card for America's Infrastructure, published by the American Society of Civil Engineers (ASCE), assigns a grade of C- to the overall drinking water infrastructure.[2] This grade indicates general to significant deficiencies in conditions and functionalities, leading to increased vulnerability to risk. The report states, 'Aging infrastructure systems are increasingly vulnerable to natural disasters and extreme weather events, creating unexpected and often avoidable risks to public safety and the economy.' The report underscores the necessity for 'continued—and in some cases, increased—investment'.

[1] D.07-05-062, Appendix A, pg. A-28

[2] American Society of Civil Engineers. (2025). *Executive Summary: 2025 National Infrastructure Report Card*. Retrieved March 28, 2025, from https://infrastructurereportcard.org/wp-content/uploads/2025/03/Executive-Summary-2025-Natl-IRC-WEB.pdf.

Section 2.

Asset Management Programs

Analyzers and Instrumentation Replacement Program

Issue: (Common Plant Project Justification Report, pp. 331-352)

The Analyzers and Instrumentation Program aims to replace outdated and unreliable instrumentation used for monitoring and controlling the water system. This program includes replacing pressure transmitters, tank level transmitters, water quality analyzers, and power quality analyzers to ensure accurate and reliable data collection. By upgrading these instruments, the company can improve overall system performance and compliance with regulatory requirements. Customers benefit from improved water quality and system reliability. The program is necessary to address the aging instrumentation infrastructure and to ensure accurate data collection for water management and regulatory compliance.

Cal Advocates Position: (Sorensen Testimony, pp. 7-1 to 7-4)

Cal Advocates recommends the Commission should approve the following budget for Cal Water to replace analyzers and instrumentation: $23,011 for 2025, $21,198 for 2026, and $15,261 for 2027. Cal Water's historical performance, where it utilized only 10.475% of its requested analyzers and instrumentation replacement budget in 2022, suggesting an overestimation of the annual budget required for these replacements.

Cal Water Rebuttal:

Cal Water submitted several asset replacement programs in its GRC filing. These programs are meant for assets that are necessary for normal and emergency operations of a water distribution system. Routine replacements are required in order to maintain the reliability of each system. For reasons unexplained in Cal Advocates testimony, Cal Advocates chose different methods to analyze each of Cal Water's programs and propose its own recommendations for reductions to Cal Water's filing. The methodologies chosen by Cal Advocates are not consistent between programs in, what appears to be, an attempt to "cherry-pick" a result rather than evaluate the merits of the program or understand the needs of the water systems. Since Cal Water's asset replacement programs are consistent in scope, only vary by asset type, the evaluation methodology undertaken by Cal Advocates should be consistent and focus on the needs of the water system.

Cal Advocates' application of 10.475% to reduce the proposed budget for analyzer and instrumentation replacement is inaccurate for several reasons. It cherry-picks data from a single year (2022) to demonstrate Cal Water's capacity to perform work, which does not provide a comprehensive view. Additionally, it neglects the significant impact of the pandemic in 2022, which affected project timelines and capacities. This selective approach fails to present an accurate and fair assessment of the situation. Cal Advocates' recommendation is flawed because it assumes that the past rate of completion will meet the future needs of the water system.

Cal Advocates claims that Cal Water did not complete ten out of the eleven projects in 2022 and based on that Cal Water over-estimated the instrument replacement budget. This is not true. In the Cal Advocates testimony, they identified only ten projects, not eleven. And of those ten projects, six are complete, not just one, as indicated in Table 1 below. This is neither a reflection on the need for the program nor the completion rate of future projects. Cal Water strives to complete projects in a timely manner but can be subject to delays in completing the projects. 2022 happened to be one particular year where, due to the pandemic, material shortages lead to significant delays in project completion. The majority of these projects were completed in 2024 or about a year and half later than the forecasted completion date.

Table 1: List of completed Analyzer replacements projects

PID	Description	Completion Date
124979	BK 2022 Analyzer Replacement	2024
125026	DOM 2022 Analyzer Replacement	2024
125035	ELA 2022 Analyzer Replacement	2024
125048	KRV 2022 Analyzer Replacement	2023
125077	LIV 2022 Analyzer Replacement	2024
125110	WIL 2022 Analyzer Replacement	2024

Cal Advocates focused on a single year in its assessment of the completion rate of projects. By selecting an obviously challenging year in 2022 due to the supply chain delays caused by the

pandemic, it is not an accurate assessment on the rate at which projects are normally completed. In fact, 100% of Cal Water's 2024 analyzer replacement projects were also completed in 2024. A single sample point is generally not a good indicator of the average especially when choosing an outlier data point.

Analyzers and instrumentation not in working condition can necessitate more manual interventions, leading to inefficiency, substantial errors, and a higher risk of failing to meet regulatory requirements, thereby significantly impacting operational performance.

In summary, Cal Advocates uses a select data point on completion rate for projects to argue that the entire program budget should be cut to match that single data point and does not address any technical merits for the project. Because the single data point is not an accurate representation of the budget needs or completion rate for projects and there are no technical disputes on the merits of the projects, the commission should allow the analyzer replacement budgets as requested by Cal Water.

Table 2: Analyzers and Instrumentation Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	00132774	KRV UBOD 104 Instrument Replacement	27,500	2,618	27,500	(24,883)
2025	00132775	KRV LBOD 013 Instrument Replacement	55,000	5,238	55,000	(49,763)
2027	00132838	BK 2027 Instrumentation Replc.	21,126	884	21,126	(20,242)
2026	00132840	DOM 2026 Instrumentation Replc.	5,222	501	5,222	(4,721)
2027	00132841	DOM 2027 Instrumentation Replc.	24,425	2,366	24,425	(22,059)
2025	00132842	CH 2025 Instrumentation Replc.	49,602	4,746	49,602	(44,856)
2025	00132843	ELA 2025 Instrumentation Replc.	7,641	731	7,641	(6,910)
2026	00132844	ELA 2026 Instrumentation Replc.	7,833	751	7,833	(7,081)
2027	00132845	ELA 2027 Instrumentation Replc.	6,690	643	6,690	(6,047)
2026	00132847	KRV 2026 Instrumentation Replc.	47,956	4,599	47,956	(43,357)
2027	00132848	KRV 2027 Instrumentation Replc.	33,511	3,221	33,511	(30,290)
2025	00132849	MRL 2025 Instrumentation Replc.	11,906	1,139	11,906	(10,767)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00132850	ORO 2026 Instrumentation Replc.	4,015	385	4,015	(3,630)
2026	00132851	LIV 2026 Instrumentation Replc.	28,282	2,712	28,282	(25,569)
2025	00132852	WIL 2025 Instrumentation Replc.	15,026	1,438	15,026	(13,588)
2025	00132853	STK 2025 Instrumentation Replc.	26,181	2,505	26,181	(23,676)
2025	00132857	HR 2025 Instrumentation Replc.	7,641	731	7,641	(6,910)
2026	00132858	HR 2026 Instrumentation Replc.	6,527	626	6,527	(5,901)
2025	00133790	BAY 2025 Instrumentation Replc.	8,446	808	8,446	(7,638)
2026	00134007	MRL 2026 Instrumentation Replc.	13,578	1,302	13,578	(12,275)
2026	00134008	BK 2026 Instrumentation Replc.	73,879	7,085	73,879	(66,793)
2025	00134012	BG 2025 Instrumentation Replc.	1,407	135	1,407	(1,273)
2026	00134014	DIX 2026 Instrumentation Replc.	1,380	132	1,380	(1,248)
2026	00134020	STK 2026 Instrumentation Replc.	15,007	1,439	15,007	(13,568)
2027	00134022	STK 2027 Instrumentation Replc.	15,382	1,479	15,382	(13,904)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	00134025	LIV 2025 Instrumentation Replc.	20,147	1,928	20,147	(18,219)
2027	00134026	LIV 2027 Instrumentation Replc.	32,102	1,367	32,102	(30,736)
2026	00134029	WIL 2026 Instrumentation Replc.	10,829	1,039	10,829	(9,791)
2027	00134030	WIL 2027 Instrumentation Replc.	12,047	1,158	12,047	(10,889)
2025	00134031	ORO 2025 Instrumentation Replc.	4,022	385	4,022	(3,637)
2027	00134032	ORO 2027 Instrumentation Replc.	1,408	135	1,408	(1,273)
2025	00134033	WLK 2025 Instrumentation Replc.	6,368	609	6,368	(5,759)
2026	00134034	WLK 2026 Instrumentation Replc.	6,527	626	6,527	(5,901)
2027	00134035	WLK 2027 Instrumentation Replc.	19,545	1,879	19,545	(17,667)
2027	00134036	MRL 2027 Instrumentation Replc.	22,146	2,129	22,146	(20,018)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	-	-	-
	2025	240,888	23,011	240,888
	2026	221,035	21,198	221,035
	2027	188,384	15,261	188,384
	Total Direct Cost	650,307	59,470	650,307

1

Cathodic Protection Systems Program

Issue: (Common Plant Project Justification Report, pp. 289-303)

The Cathodic Protection Systems Improvement Program is a critical component of Cal Water's strategy to combat corrosion and maintain water system reliability. Cathodic protection (CP) systems are designed to suppress unwanted anodic corrosion by applying an opposing current to interrupt the formation of a corrosion cell. These systems are primarily installed on tank and pipeline infrastructure to extend the lifecycle of major infrastructure, thereby reducing service interruptions and lowering lifecycle costs for customers. Maintaining, updating, and replacing CP systems regularly is emphasized to prevent infrastructure failure. Advancements in CP technology have led to the replacement of expensive and hazardous elements with sophisticated electronics. The evaluation criteria for CP systems include age and performance monitoring, with systems recommended for replacement or improvement if they are observed to be failing. The low cost and rapid technological improvements of CP systems make whole or major component replacement more conducive than repair. The project summary includes a breakdown of costs and projects by district, with specific details on the direct costs and years for each project.

Cal Advocates Position: (Do Testimony, pp. 7-1 to 7-3)

Cal Advocates recommends a reduced cathodic protection budget of $193,191 in 2025, $198,021 in 2026, and $202,972 in 2027 citing Cal Water's historical performance with an added 2.5% inflation factor provided by Cal Water.

Cal Water Rebuttal:

Cal Advocates' report rejects Cal Water's proposal because they base their recommendation on Cal Water's historical replacement rate. Cal Advocates' recommendation is flawed because it assumes that the past rate of completion will meet the future needs of the water system. The proposed cathodic protection improvement program is based on systems approaching the end of their service lives and inspections, accurately reflecting the true needs of the water system. The replacement program proactively manages potential issues before they escalate to unnecessary and high-cost repairs.

Cal Advocates states that Cal Water completed $183,882 worth of cathodic protection related projects. Cal Water is forecasting a modest increase to an average of approximately $244,000 per year based on forecasted costs and the needs of the water system. To meet the small, incremental increase in work, and to mitigate supply chain delays, Cal Water now contracts with four Cathodic Protection firms to deliver these projects, where historically Cal Water relied on only two. Additionally, Cal Water is reallocating internal resources to complete these projects. By doubling its external resources, Cal Water is confident in its ability to deliver. Without proactive measures to protect large and essential infrastructure from corrosion-related failures, Cal Water will have to resort to costly and unplanned repairs, which are not beneficial to customers. Therefore, any reduction to the program is short-sighted and will lead to significant costs in the future.

Conclusion

Cal Water's recommendation to invest in infrastructure in the amount of $734,268 in 2025-2027 is not a significant increase over historical recommendations. With two additional Cathodic Protection contractors and dedicated internal resources, Cal Water is equipped to accomplish the proposed and essential Cathodic Protection systems replacement program. Cal Advocates recommended reduction is not in the best interest of the customers. Without a proactive replacement program, the assets they protect from corrosion are at risk of failing, reducing Cal Water's ability to meet demands during emergency events, ultimately exposing the customers to an excessive amount of risk and consequence. Please refer to Rebuttal Book #1 Project Delivery Optimizations for further information.

Table 1: Cathodic Protection Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00132974	LAN 001-T2 Cathodic Protection	16,599	16,599	16,599	-
2025	00132980	LHUG 003-T1 Cathodic Protection	13,273	13,273	13,273	(0)
2026	00133024	BG 002 Cathodic Protection	12,212	12,212	12,212	-
2026	00133025	BG 021 Cathodic Protection	23,322	21,202	23,322	(2,120)
2025	00133035	CH 066-T2 Cathodic Protection	18,733	18,733	18,733	-
2025	00133036	CH 074-T1 Cathodic Protection	19,221	19,221	19,221	(0)
2026	00133055	DOM 203-T3 Cathodic Protection	39,171	39,171	39,171	-
2025	00133056	DOM 215-T1 Cathodic Protection	15,716	15,716	15,716	-
2025	00133057	DOM 277-T1 Cathodic Protection	15,376	15,376	15,376	(0)
2026	00133058	DOM 279-T1 Cathodic Protection	14,086	14,086	14,086	-
2026	00133059	DOM 279-T2 Cathodic Protection	14,086	14,086	14,086	-
2026	00133060	DOM 297-T1 Cathodic Protection	14,086	14,086	14,086	-
2025	00133061	DOM 298-T1 Cathodic Protection	14,901	14,901	14,901	-
2025	00133070	ELA 023-T1 Cathodic Protection	9,453	9,453	9,453	-
2025	00133071	ELA 040-T3 Cathodic Protection	16,715	16,715	16,715	-
2027	00133075	HR 005-T1 Cathodic Protection	41,396	41,396	41,396	(0)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00133076	HR 009-T3 Cathodic Protection	16,842	16,842	16,842	-
2027	00133077	HR 026-T2 Cathodic Protection	16,037	16,037	16,037	-
2025	00133079	HR 026-T3 Cathodic Protection	15,153	15,153	15,153	-
2026	00133108	LIV 029-T2 Cathodic Protection	27,833	27,833	27,833	-
2026	00133120	ORO 016-T1 Cathodic Protection	32,363	32,363	32,363	(0)
2025	00133139	VIS 012-T2 Cathodic Protection	16,462	16,462	16,462	-
2026	00133168	BK 087-T8 Cathodic Protection	19,045	19,045	19,045	-
2026	00133169	BK 100-T1 Cathodic Protection	14,848	14,848	14,848	-
2026	00133170	BK 116-T4 Cathodic Protection	18,668	18,668	18,668	(0)
2026	00133171	BK 188-T1 Cathodic Protection	14,776	14,776	14,776	(0)
2026	00133172	BK 213-T2 Cathodic Protection	14,612	14,612	14,612	-
2026	00133173	BK 216-T1 Cathodic Protection	36,920	36,920	36,920	-
2025	00133202	STK 069-T1 Cathodic Protection	29,872	29,872	29,872	-
2026	00133252	SEL 021-T1 Cathodic Protection	23,121	23,121	23,121	-
2026	00133257	LUC 003-T1 Cathodic Protection	16,442	16,442	16,442	-
2025	00133258	LUC 005-T1 Cathodic Protection	17,837	17,837	17,837	(0)
2027	00133259	COS 007-T4 Cathodic Protection	17,520	17,520	17,520	-
2027	00133458	KERV 001-T3 Cathodic Protection	18,295	18,295	18,295	-
2026	00133459	SOLA 001-T1 Cathodic Protection	16,436	16,436	16,436	-

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00133462	ONYX 003-T2 Cathodic Protection	15,685	15,685	15,685	-
2027	00133463	ONYX 003-T3 Cathodic Protection	15,685	15,685	15,685	-
2027	00133466	SQRL 013-T1 Cathodic Protection	10,737	10,737	10,737	-
2027	00133467	ARD 014-T1 Cathodic Protection	10,737	10,737	10,737	-
2025	00133495	TAB STA 002-T2 Cathodic Protection	28,531	28,531	28,531	-

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	-	-	-
	2025	231,240	231,240	231,240
	2026	368,625	366,505	368,625
	2027	162,934	162,934	162,934
	Total Direct Cost	762,800	760,679	762,800

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Control Valve Overhaul and Replacement Program

Issue: (Common Plant Project Justification Report, pp. 304-330)

The Control Valve Overhaul and Replacement Program is designed to overhaul or replace control valves before they fail catastrophically, ensuring they function as intended and extending their lifespan without increasing risk. Control valves regulate and control operations within the water system, such as pressure, flow, and tank levels. Regular overhauls and replacements improve water system operation and reliability, preventing property loss, exposure to contaminants, and damage to customer plumbing.

Cal Water uses a risk-based asset management approach to assess control valve conditions, inspecting them routinely to determine if overhaul or replacement is necessary. Valves in good condition can be overhauled by replacing tubing and internal parts, upgrading to stainless steel fittings and tubing. Routine overhauls are performed every five years. Cal Water considers alternatives, such as overhauling valves instead of replacing them, if the valve body is in good condition and meets certain requirements. Specific replacement projects are determined by the criticality of valves in the distribution system and their risk of failure.

Cal Advocates Position: (Do Testimony, pp. 9-5 to 9-7)

While Cal Advocates do not disagree with the merit of these projects, Cal Advocates recommend a reduced control valve overhaul proposed budget by Cal Water which is less than 54% of the proposed budget, citing the historical performance as well as excluding the contingency proposed.

Cal Water Rebuttal:

Cal Water submitted several asset replacement programs in its GRC filing. These programs are meant for assets that are necessary for normal and emergency operations of a water distribution system. Routine replacements are required in order to maintain the reliability of each system. For reasons unexplained in Cal Advocates' report, Cal Advocates chose different methods to analyze each of Cal Water's programs and propose its own recommendations for reductions to Cal Water's filing. The methodologies chosen by Cal Advocates are not consistent between

programs in, what appears to be, an attempt to "cherry-pick" a result rather than evaluate the merits of the program or understand the needs of the water systems. Since Cal Water's asset replacement programs are consistent in scope, only vary by asset type, the evaluation methodology undertaken by Cal Advocates should be consistent and focus on the needs of the water system.

Cal Water plans control valve rebuilds and replacements around the total control valve inventory counts, the scheduled inspection rates, and the condition and age of the valve bodies. From this rate case onwards, as stated in Cal Water's filing, 20% of our total inventory is planned to be rebuilt annually, following a 5-year inspection cycle per the Control valve Asset Plan. This approach ensures a steady flow of work that Cal Water staff and contractors can accomplish on a continual basis while managing the risk of asset failure. Based on the present valve counts, this amounts to approximately 360 total rebuilds plus replacements per year. This is the basis for Cal Water's program request.

Cal Advocates' report states that the previous rate for control valve overhauls should be the rate for the future for both control valve overhauls and control valve replacements. In their analysis they take the number of overhauls completed between 2019 and mid-2024, when provided a data request response. Then they arbitrarily divided that by the number of overhauls proposed in Cal Water's 2024 GRC filing and applied that percentage as a reduction to the total number of overhauls and replacements proposed in Cal Water's filing.

Cal Water is proposing more control valve overhauls and replacements in this filing than in previous GRCs. Therefore, it is incorrect to compare the number of overhauls completed in the past to justify reducing the scope of the larger program. This approach constitutes an inappropriate comparison, as it does not equate to a like-for-like evaluation.

Furthermore, this approach ignores the actual needs of the water systems and essentially argues that Cal Water should only do the same number of projects it proposed in previous rate cases. There are many reasons why Cal Water proposed a different rate of overhaul in the past than it proposes for the future. The needs of the systems will change, and Cal Water may need to improve its programs to account for changes in risks to the customers, public, environment, and company. Cal Water needs to adapt its projects to manage the water system as the needs change.

Cal Water has been building up to a 20% rebuild and replacement rate over the past 3 rate cases. Prior to 2021, the control valve rebuilds were expensed, and not capitalized or counted, by the RDOM district, which contains around 40% of Cal Water's total number of control valves. Cal Water did not propose any control valve overhauls in its capital program for those years. Using the number of control valves that were capitalized in the past to determine the number of valves that should be overhauled and replaced in the future is flawed in that it ignores the districts with the largest number of control valves.

The valve rebuild counts in 2024 provided in Cal Advocates testimony were reported mid-year and do not reflect the total completion at years' end. When looking at 2023 data from the testimony, the work completion rate of 239 valve overhauls and 70 valve replacements is closer to the normal completion range but still does not meet 2024 GRC planned targets[3]. A 54% reduction in an already undercounted scope based on incomplete data will not reduce risk or improve service.

Using the past number of overhauls completed to arbitrarily reduce a future proposal for control valve replacements is flawed. The criteria to determine when a valve needs to be replaced is not the same criteria as when a valve needs to be overhauled. Cal Water described its assessment process clearly in the control valve common plant justification and in its control valve asset plan.

Conclusion

The 54% reduction being recommended by Cal Advocates is based on the flawed premise that past proposals are an upper limit of our future needs. Because Cal Advocates uses data that does not include Cal Water's largest inventory of control valvess, the historical completion rates are undercounted. Additionally, planned targets have to be able to be raised to meet the needs of the water systems. Practically, the proposed reduction will limit the number of valves rebuilds Cal Water will be able to complete and push out routine overhauls for years, elevating the risk level for this asset class. A single control valve failure can result in a main overpressure event causing damages up to millions of dollars. The reduction Cal Advocates proposes represents scores of critical valves that would be neglected. Because Cal Advocates offers no technical reason for reducing the scope of the control valve program and only uses the past number of capitalized valve

[3] Katherine Do Testimony, Attachment 6-1, Cal Water Response to DR KN3-011

overhauls as an arbitrary limit on future needs, Cal Water requests the commission approve the funding as requested in its GRC filing.

Table 1: Control Valve Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	00131977	BG 2025 Control Valve Overhauls	467,565	196,469	467,565	(271,096)
2026	00131984	BG 2026 Control Valve Overhauls	479,254	201,846	479,254	(277,408)
2027	00131985	BG 2027 Control Valve Overhauls	491,224	207,353	491,224	(283,872)
2025	00131986	BAY 2025 ACV Replacements	418,675	382,448	418,675	(36,227)
2026	00131987	BAY 2026 ACV Replacements	429,142	392,915	429,142	(36,227)
2027	00131988	BAY 2027 ACV Replacements	439,860	403,633	439,860	(36,227)
2025	00131991	MPS 2025 Control Valve Overhauls	467,565	196,469	467,565	(271,096)
2026	00131992	MPS 2026 Control Valve Overhauls	498,424	209,920	498,424	(288,504)
2027	00131993	MPS 2027 Control Valve Overhauls	491,224	207,353	491,224	(283,872)
2025	00131994	SSF 2025 Control Valve Overhauls	112,216	47,153	112,216	(65,063)
2026	00131995	SSF 2026 Control Valve Overhauls	95,851	40,369	95,851	(55,482)
2027	00131996	SSF 2027 Control Valve Overhauls	98,245	41,470	98,245	(56,774)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	00131997	BK 2025 ACV Replacements	319,389	291,753	319,389	(27,636)
2025	00131998	LAS 2025 Control Valve Overhauls	299,242	125,741	299,242	(173,501)
2027	00132000	LAS 2027 Control Valve Overhauls	314,383	132,706	314,383	(181,678)
2025	00132007	SLN 2025 Control Valve Overhauls	249,368	104,784	249,368	(144,585)
2026	00132008	SLN 2026 Control Valve Overhauls	255,602	107,651	255,602	(147,951)
2027	00132010	SLN 2027 Control Valve Overhauls	261,986	110,588	261,986	(151,398)
2026	00132011	2026 KC - 1 CV Replacement2026 KC -	81,741	81,741	81,741	-
2026	00132023	WLK 2026 Control Valve Overhauls	173,444	73,049	173,444	(100,395)
2026	00132025	BK 2026 ACV Replacements	327,374	299,738	327,374	(27,636)
2026	00132026	BK 2026 Control Valve Overhauls	438,176	184,545	438,176	(253,630)
2027	00132027	BK 2027 ACV Replacements	335,550	307,914	335,550	(27,636)
2027	00132028	BK 2027 Control Valve Overhauls	449,119	189,579	449,119	(259,540)
2025	00132031	PV 2025 ACV Replacements	1,256,025	1,147,343	1,256,025	(108,682)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00132032	PV 2026 ACV Replacements	1,236,800	1,132,392	1,236,800	(104,408)
2027	00132033	PV 2027 ACV Replacements	1,319,580	1,210,898	1,319,580	(108,682)
2026	00132038	STK 2026 ACV Replacement	81,741	74,841	81,741	(6,900)
2026	00132042	RDV 2026 ACV Replacement	85,828	78,583	85,828	(7,245)
2025	00132045	PV 2025 Control Valve Overhauls	2,030,569	853,239	2,030,569	(1,177,330)
2026	00132046	PV 2026 Control Valve Overhauls	2,063,989	869,285	2,063,989	(1,194,704)
2027	00132047	PV 2027 Control Valve Overhauls	2,115,538	892,998	2,115,538	(1,222,540)
2026	00132051	MRL 2026 ACV Replacement	81,843	74,934	81,843	(6,909)
2025	00132054	ORO 2025 ACV Replacements	100,545	91,845	100,545	(8,700)
2027	00132055	ORO 2027 ACV Replacements	56,502	51,849	56,502	(4,654)
2025	00132057	HR 2025 ACV Replacement	75,764	69,201	75,764	(6,564)
2025	00132058	HR 2025 Control Valve Overhauls	219,978	92,434	219,978	(127,544)
2026	00132059	HR 2026 ACV Replacements	155,503	142,375	155,503	(13,127)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00132060	HR 2026 Control Valve Overhauls	208,133	87,659	208,133	(120,474)
2027	00132061	HR 2027 Control Valve Overhaul	213,332	90,050	213,332	(123,281)
2025	00132067	CH 2025 ACV Replacement	79,747	72,847	79,747	(6,900)
2025	00132068	CH 2025 Control Valve Overhauls	124,684	52,392	124,684	(72,292)
2026	00132069	CH 2026 ACV Replacement	81,741	74,841	81,741	(6,900)
2026	00132070	CH 2026 Control valve Overhauls	109,544	46,136	109,544	(63,408)
2027	00132072	CH 2027 ACV Replacement	83,782	76,882	83,782	(6,900)
2027	00132073	CH 2027 Control Valve Overhauls	112,280	47,395	112,280	(64,885)
2025	00132078	ELA 2025 ACV Replacement	75,855	69,291	50,000	19,291
2025	00132079	ELA 2025 Control Valve Overhauls	101,528	42,662	50,000	(7,338)
2026	00132080	ELA 2026 ACV Replacement	77,751	71,188	50,000	21,188
2026	00132081	ELA 2026 Control Valve Overhauls	104,067	43,830	50,000	(6,170)
2027	00132082	ELA 2027 ACV Replacement	79,693	73,130	50,000	23,130

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00132083	ELA 2027 Control Valve Overhauls	106,666	45,025	50,000	(4,975)
2025	00132091	KRV 2025 Control Valve Overhauls	249,368	104,784	249,368	(144,585)
2026	00132093	KRV 2026 Control Valve Overhauls	237,345	Vb2 99,962	237,345	(137,383)
2026	00132296	2026 KRV - ACV Replacements	245,531	224,803	245,531	(20,727)
2025	00132298	KRV 2025 Control Valve Overhauls	249,368	104,784	249,368	(144,585)
2025	00133803	ORO 2025 Control Valve Overhauls	142,496	59,876	142,496	(82,620)
2026	00133804	ORO 2026 Control Valve Overhauls	146,059	61,515	146,059	(84,543)
2027	00133805	ORO 2027 Control Valve Overhauls	130,993	55,294	130,993	(75,699)
2025	00133824	LIV 2025 Control Valve Overhauls	106,872	44,907	106,872	(61,965)
2026	00133825	LIV 2026 Control Valve Overhauls	109,544	46,136	109,544	(63,408)
2027	00133826	LIV 2027 Control Valve Overhauls	93,566	39,496	93,566	(54,071)
2025	00133828	DOM 2025 Control Valve Overhauls	84,607	35,552	84,607	(49,055)
2026	00133829	DOM 2026 Control Valve Overhauls	86,722	36,525	86,722	(50,198)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00133830	DOM 2027 Control Valve Overhauls	88,888	37,521	88,888	(51,367)
2026	00133840	KC 2026 Control Valve Overhauls	54,772	23,068	54,772	(31,704)
2026	00133841	STK 2026 Control Valve Overhauls	73,029	30,758	73,029	(42,272)
2026	00133914	LAS 2026 Control Valve Overhauls	306,723	129,182	306,723	(177,541)
2025	00133916	BK 2025 Control Valve Overhaul	374,052	157,176	374,052	(216,877)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	-	-	-
	2025	7,605,480	4,343,148	7,528,097
	2026	8,325,673	4,939,788	8,243,855
	2027	7,282,413	4,221,133	7,196,054
	Total Direct Cost	23,213,566	13,504,069	22,968,006

1

Customer Meter Replacement Program

Issue: (Common Plant Project Justification Report, pp. 353-369)

Cal Water's proposal will programmatically replace customer meters in a sustainable manner to ensure accurate billing and fair distribution of water service costs. The program involves replacing both small and large meters based primarily on their age, with specific criteria for different sizes. Alternative options like running meters to failure or repairing them were considered but are not cost-effective compared to replacement. The replacement program aims to provide customers with modern meters that offer advanced features such as water pressure and temperature monitoring, flow rate measurement, and leak detection.

Cal Advocates Position: (Sorensen Testimony, pp. 37-39)

Cal Advocates recommends the Commission should authorize $5,429,814 in 2025, $5,467,158 in 2026, and $3,740,018 in 2027 for Cal Water's Meter Replacement Program. Their recommendation excludes funding for 78 large meters that do not require replacement based on Cal Water's replacement cycle.

Cal Water Rebuttal:

The data used by Cal Water to generate the proposed meter replacement count was mistakenly taken from a data set when Cal Water was replacing more obsolescent meters than are presently in use. Cal Water agrees with Cal Advocates' position on this item and accepts the budget proposed by Cal Advocates.

Table 1: Customer Meter Replacement Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	AVD0900_25	Meter Replacement Program	9,813	13,863	13,863	-
2026	AVD0900_26	Meter Replacement Program	10,058	10,058	10,058	0
2025	BGD0900_25	Meter Replacement Program	300,718	300,718	300,718	(0)
2026	BGD0900_26	Meter Replacement Program	308,236	308,236	308,236	0
2025	BKD0900_25	Meter Replacement Program	558,054	558,054	558,054	(0)
2026	BKD0900_26	Meter Replacement Program	572,006	572,006	572,006	-
2027	BKD0900_27	Meter Replacement Program	586,306	586,306	586,306	(0)
2025	CHD0900_25	Meter Replacement Program	251,733	251,733	251,733	(0)
2026	CHD0900_26	Meter Replacement Program	258,026	258,026	258,026	(0)
2027	CHD0900_27	Meter Replacement Program	264,477	264,477	264,477	(0)
2025	DIX0900_25	Meter Replacement Program	19,316	19,316	19,316	0
2026	DIX0900_26	Meter Replacement Program	19,799	19,799	19,799	(0)
2027	DIX0900_27	Meter Replacement Program	20,294	20,294	20,294	0

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	DOM0900_25	Meter Replacement Program	875,883	839,696	839,696	-
2026	DOM0900_26	Meter Replacement Program	897,780	761,778	761,778	-
2027	DOM0900_27	Meter Replacement Program	920,225	780,823	780,823	-
2025	ELA0900_25	Meter Replacement Program	246,161	246,161	246,161	-
2026	ELA0900_26	Meter Replacement Program	252,315	252,315	252,315	0
2027	ELA0900_27	Meter Replacement Program	258,623	233,189	233,189	-
2025	HRD0900_25	Meter Replacement Program	498,409	377,787	377,787	-
2026	HRD0900_26	Meter Replacement Program	510,870	387,231	387,231	-
2027	HRD0900_27	Meter Replacement Program	523,641	422,258	422,258	-
2025	KCD0900_25	Meter Replacement Program	19,181	30,705	30,705	-
2026	KCD0900_26	Meter Replacement Program	19,660	31,473	31,473	-
2027	KCD0900_27	Meter Replacement Program	20,152	32,260	32,260	-
2025	KRV0900_25	Meter Replacement Program	13,925	13,925	13,925	(0)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	KRV0900_26	Meter Replacement Program	14,273	14,273	14,273	(0)
2027	KRV0900_27	Meter Replacement Program	14,630	14,630	14,630	0
2025	LAS0900_25	Meter Replacement Program	274,002	274,002	274,002	0
2026	LAS0900_26	Meter Replacement Program	280,852	280,852	280,852	(0)
2025	LIV0900_25	Meter Replacement Program	197,155	197,155	197,155	0
2026	LIV0900_26	Meter Replacement Program	202,084	202,084	202,084	0
2027	LIV0900_27	Meter Replacement Program	207,136	207,136	207,136	0
2025	MRL0900_25	Meter Replacement Program	23,628	27,884	27,884	-
2026	MRL0900_26	Meter Replacement Program	24,219	28,581	28,581	-
2027	MRL0900_27	Meter Replacement Program	24,824	29,296	29,296	-
2025	ORO0900_25	Meter Replacement Program	46,756	46,756	46,756	0
2026	ORO0900_26	Meter Replacement Program	47,925	47,925	47,925	(0)
2027	ORO0900_27	Meter Replacement Program	49,123	36,406	36,406	-

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	PVD0900_25	Meter Replacement Program	463,624	403,313	403,313	-
2026	PVD0900_26	Meter Replacement Program	475,215	438,123	438,123	-
2025	SEL0900_25	Meter Replacement Program	55,690	43,586	43,586	-
2026	SEL0900_26	Meter Replacement Program	57,082	44,675	44,675	-
2027	SEL0900_27	Meter Replacement Program	58,509	45,792	45,792	-
2025	SLN0900_25	Meter Replacement Program	273,679	273,679	273,679	(0)
2026	SLN0900_26	Meter Replacement Program	280,521	280,521	280,521	0
2027	SLN0900_27	Meter Replacement Program	287,534	274,818	274,818	-
2025	SMD0900_25	Meter Replacement Program	427,348	427,348	427,348	(0)
2026	SMD0900_26	Meter Replacement Program	438,032	438,032	438,032	(0)
2025	SSF0900_25	Meter Replacement Program	212,066	212,066	212,066	(0)
2026	SSF0900_26	Meter Replacement Program	217,368	217,368	217,368	(0)
2025	STK0900_25	Meter Replacement Program	325,999	325,999	325,999	0

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	STK0900_26	Meter Replacement Program	334,149	334,149	334,149	0
2027	STK0900_27	Meter Replacement Program	342,503	342,503	342,503	(0)
2025	VIS0900_25	Meter Replacement Program	409,239	409,239	409,239	0
2026	VIS0900_26	Meter Replacement Program	419,470	419,470	419,470	0
2027	VIS0900_27	Meter Replacement Program	429,957	429,957	429,957	0
2025	WIL0900_25	Meter Replacement Program	26,390	26,390	26,390	0
2026	WIL0900_26	Meter Replacement Program	27,050	19,389	19,389	-
2027	WIL0900_27	Meter Replacement Program	27,726	19,874	19,874	-
2025	WLK0900_25	Meter Replacement Program	110,437	110,437	110,437	(0)
2026	WLK0900_26	Meter Replacement Program	113,198	100,791	100,791	-

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
	Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal	
		2024	-	-	-	
		2025	5,639,208	5,429,814	5,429,814	
		2026	5,780,189	5,467,158	5,467,158	
		2027	4,035,660	3,740,018	3,740,018	
		Total Direct Cost	15,455,057	14,636,990	14,636,990	

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Flowmeter Replacement Program

Issue: (Common Plant Project Justification Report, pp. 149-166)

The flowmeter replacement program at Cal Water aims to upgrade and standardize the flowmeters used across all districts. This initiative is crucial for accurately monitoring water flow, ensuring sufficient water pressure for customer consumption and emergency situations, and maintaining precise production reports. These reports are essential for water quality management, accounting, engineering, planning, and emergency response. The program involves annual calibration of flowmeters, with replacements scheduled based on accuracy, compliance, and reliability. The current standard for new installations is the "Mag-Meter" type, which is highly accurate and compliant with regulatory requirements. The program also addresses the risks of running flowmeters to failure, which can lead to inefficiencies and operational issues. The project summary includes evaluations based on obsolescence, capacity, technology, and physical condition, with considerations for environmental factors that may affect the equipment

Cal Advocates Position: (Menda Testimony, pp. 6-1 to 6-6)

Cal Advocates recommends the Commission should authorize $199,008 in 2025, $754,487 in 2026, and $896,542 in 2027 for Cal Water's Flowmeter Replacement Program. This recommendation reflects the removal of 46 flowmeters that do not warrant replacement at this time and the exclusion of project contingency. Cal Advocates recommendation identifies some of the proposed flowmeters as still functional.

Cal Water Rebuttal:

Cal Advocates position is that flowmeters that do not show demonstrated calibration problems should not be planned for replacement. This position essentially states that until a flowmeter has failed, the utility should not plan to replace it in a future year. However, assets will fail in the future and Cal Water has to anticipate a reasonable replacement of these assets prior to failure so that it can continue to operate the water system. Cal Water needs to proactively replace flowmeters that are critical to operations, such as ones that control treatment processes or chemical dosing, before they fail in order to maintain the operations of those facilities. Flowmeters are essential to monitoring and controlling the water system. They are a fundamental part of

controlling water loss within a system. Without accurate functioning flowmeters, Cal Water is not able to perform its water loss assessments. Cal Water provided a list of flowmeters that are planned to be replaced not only because of the calibration history of the meter, but because we plan to replace obsolete older flowmeters, as identified in Cal Water's common plant justification as Data Industrial impeller style meters, with electromagnetic flowmeters that are more reliable and accurate. Plus, it is essential to anticipate a reasonable replacement rate in the future. Cal Water anticipates a 20-year lifespan for flow meters and must plan for the replacement of assets that are integral to operations before they fail.

The reductions in the flowmeter replacement plan proposed by Cal Advocates run counter to the State Water Resources Control Board water loss requirements for urban water retail suppliers to accurately report water production vs consumption, leak detection, and cost-effective supply mix management. Obsolete flowmeters that are no longer serviceable must be replaced prior to failure. Cal Water requests the full value of the programmatic flowmeter replacement plan to ensure reliable supply, treatment and distribution, and compliance reporting.

Table 1: Flowmeter Replacement Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00131990	2026 BAY - 6 Flowmeter Replacements	622,139	-	622,139	(622,139)
2025	00132001	LIV 2025 Flowmeter Replacements	278,349	126,522	278,349	(151,826)
2026	00132002	LIV 2026 Flowmeter Replacements	281,612	128,006	281,612	(153,607)
2026	00132029	BK 2026 Flowmeter Replacements	972,844	160,801	972,844	(812,043)
2027	00132039	STK 2025 Flowmeter Replacements	245,144	74,286	245,144	(170,858)
2026	00132040	STK 2026 Flowmeter Replacements	256,749	-	256,749	(256,749)
2027	00132041	STK 2027 Flowmeter Replacements	256,520	77,733	256,520	(178,786)
2026	00132043	RDV 2026 Flowmeter Replacement	223,069	202,790	223,069	(20,279)
2027	00132044	RDV 2027 Flowmeter Replacement	107,120	-	107,120	(107,120)
2026	00132048	PV 2026 Flowmeter Replacement	121,222	-	121,222	(121,222)
2027	00132049	PV 2027 Flowmeter Replacement	206,972	-	206,972	(206,972)
2026	00132052	MRL 2026 Flowmeter Replacement	210,075	190,977	210,075	(19,098)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00132062	HR 2026 Flowmeter Replacements	273,679	124,400	273,679	(149,279)
2027	00132063	HR 2027 Flowmeter Replacements	281,005	127,730	281,005	(153,276)
2025	00132074	CH 2025 Flowmeter Replacements	239,205	72,486	239,205	(166,719)
2026	00132075	CH 2026 Flowmeter Replacements	316,417	71,913	-	71,913
2027	00132076	CH 2027 Flowmeter Replacements	327,501	148,864	327,501	(178,637)
2027	00132077	DOM 2027 Flowmeter Replacement	206,946	-	206,946	(206,946)
2027	00132084	ELA 2025 Flowmeter Replacement	207,576	-	207,576	(207,576)
2026	00132085	ELA 2026 Flowmeter Replacement	201,903	-	201,903	(201,903)
2027	00132087	ELA 2027 Flowmeter Replacement	206,956	-	206,956	(206,956)
2025	00132096	KRV 2025 Flowmeter Replacements	281,473	-	281,473	(281,473)
2026	00132097	KRV 2026 Flowmeter Replacements	288,607	-	288,607	(288,607)
2027	00132098	KRV 2027 Flowmeter Replacements	295,743	-	295,743	(295,743)
2027	00132746	VIS 2025 Flowmeter Replacements	503,844	343,530	503,844	(160,314)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
	Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal	
		2024	-	-	-	
		2025	799,026	199,008	799,026	
		2026	3,494,639	754,487	3,178,221	
		2027	3,119,005	896,542	3,119,005	
		Total Direct Cost	7,412,670	1,850,038	7,096,253	

1

Generator Replacement Program

Issue: (Common Plant Project Justification Report, pp. 446-472)

Cal Water's Generator Replacement Program is essential for maintaining the reliability of water pumping and treatment facilities, especially during power outages caused by storms, wildfires, or other unexpected events. The program ensures continuous water service by replacing generators based on their condition, performance, and compliance with current standards. Generators are evaluated annually through preventive maintenance, including fluid analysis and load testing. The program prioritizes replacing generators that are obsolete, non-compliant, or have significant defects, with new units that meet the specific needs of each facility. This approach minimizes the risk of power interruptions, ensuring safe and reliable water delivery to communities.

Cal Advocates Position: (Do Testimony, pp. 11-1 to 11-3)

Cal Advocates recommends the Commission should deny Cal Water's funding request for fixed generator replacements claiming that new fixed generators are not cost-effective.

Cal Water Rebuttal:

Cal Advocates' recommendations compromise Cal Water's ability to meet regulatory requirements of supply and pressure during power outages as well as threaten the communities served by restricting the water systems' effort to better be properly equipped for emergencies.

In the most recent wildfire events in Los Angeles County, high wind gusts delayed aerial firefighting efforts. In those cases, firefighting is often dependent on the domestic water system as the most accessible firefighting solution. An example is the Eaton fire, the highly destructive wildfire that took place in Los Angeles County in January 2025. The Eaton Fire spread so quickly that residents had to evacuate by foot.[4] Bringing a portable generator into a rapidly growing wildfire puts firefighters, the public, and Cal Water employees in danger. It could also hamper any efforts to secure an area and evacuate the public from the wildfire danger zone as heavy equipment is being towed into an area with roads already impacted by thousands of drivers fleeing an area.

[4] NBC Los Angeles. (2025, March 14). Timeline of Eaton and Palisades Fires in LA County. NBC Los Angeles. Retrieved from [https://www.nbclosangeles.com/news/california-wildfires/timeline-eaton-palisades-fires-la-county/3614940/]

Making a blanket statement that portable generators are more cost effective than permanent generators assumes that there is no value on the safety of the public, firefighters, or Cal Water employees.

Even a short-term power outage can lead to a water quality problem. Once power is out, Cal Water is reliant on pressure stored within small pressure tanks in some key locations. When this happens, there are only minutes before a complete loss of system pressure. Having a permanent fixed backup generator that starts automatically and is ready to go would eliminate the likelihood that the system would lose pressure and have a severe water quality problem. This is part of the reason for needing a permanent and fixed generator.

Cal Water's Generator Replacement Program and new generator installation projects are proposed only at essential facilities aiming to maintain continuity of water service that may be interrupted due to power outages and may not be able to be mitigated in time with portable generators or water system operational changes. While PSPS planning and preparation has been a recent focus of Cal Water's efforts, these proposed projects are not intended to only support the continuity of water service during such planned events but, more importantly, unplanned and urgent emergencies that cause a disruption of power without notice including winter storms and wildfires.

Cal Advocates' recommendation fails to recognize the limitations of portable generators

Portable generators, whether owned by Cal Water or the Electric IOUs, require staff resources and time to deploy and need to be transported to remote sites that would potentially require traversing hazardous unsafe areas. If an emergency event begins during off hours, Cal Water estimates it could take four to six hours to deploy a single generator. This time would be increased if multiple generators are required especially in situations where a larger service area is threatened by an emergency event and several Cal Water facilities are impacted. Furthermore, the compatibility of portable generators is not universal; their size must match the capacity of the assets they support. For larger station facilities, multiple portable generators may need to be connected in parallel to provide adequate power. This is not a trivial matter and requires the necessary electrical infrastructure in order to run multiple generators in parallel.

Towing larger generators requires specialized equipment and a towing license. Their connectivity may not be possible without specific components, including a transfer switch and portable generator connector, or a specialized installation by a qualified electrician. This limits the rate at which portable generators can be deployed. Portable generators cannot be set up like permanent generators because of their mobility and the limitations due to permit regulations. Sites without permanent generators are not equipped with automatic transfer switches since there isn't always a generator onsite and per the Statewide Portable Equipment Registration Program, portable generators may not remain at a given site for longer than twelve consecutive months. These requirements exacerbate emergency situations and delay the timely activation of critical facilities.

Cal Water's approach aligns with CPUC Resolution ESRB-8

Cal Advocates' testimony references CPUC's Resolution ESRB-8, stating that IOUs (investor-owned utilities) must help critical facility customers evaluate their backup power needs and determine if additional equipment, like mobile generators, is necessary.[5] However, Cal Advocates fails to recognize that the same resolution removed the requirement to provide generators by the IOUs in its final version. The resolution states that, "The requirement to provide generators and/or batteries to critical facilities was removed since most critical facilities are required to have their own back-up power resources." It also states, "IOUs may provide generators to critical facilities that are not well prepared for a power shut off."[6]

Cal Water's goal is to ensure preparedness and water supply during emergency events. We have identified essential facilities in our system and proposed generators for those locations. Therefore, the program proposed by Cal Water to replace generators aligns with CPUC's ESRB resolution. In fact, it fulfills the resolution's intent by ensuring critical facilities are equipped with necessary backup power. Cal Advocates' selective quoting of the resolution is incomplete and misleading. Our proposal is a proactive measure to ensure public safety and reliability during emergencies. To better serve the state of California, the resources provided by larger electric IOUs should be strategically utilized to support smaller utilities that lack the necessary resources.

5 California Public Utilities Commission Resolution ESRB - 8
6 California Public Utilities Commission Resolution ESRB - 8

Conclusion

In the event of power outages that affect various sites or the community at large, Cal Water would be unable to maintain a reliable water service by relying solely on portable generators. Cal Water's approach aligns with Cal Advocates' assertion that having portable generators is beneficial due to their mobility and cost. Notably, Cal Water has provisions for portable generators at many of our sites and has recommended the purchase of 30 additional portable generators for the same reason, which ironically Cal Advocates has also rejected. Cal Water is not proposing to install fixed generators at all sites. However, portable generators do not afford us the ability to maintain continuous water service throughout the water systems in all emergencies. Consequently, it is necessary to implement permanent, auto-start generators at our strategic and essential locations, as proposed. Therefore, Cal Water strongly believes and urges that the Commission approve the replacement of all generator projects and new generator installations as originally proposed.

Table 1: Generator Replacement Program Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00132561	BK 2026 - Genset Replacements	2,307,427	-	2,307,427	(2,307,427)
2027	00132564	CH 2026 - Genset Replacement	1,413,512	-	1,413,512	(1,413,512)
2027	00132565	DOM 2026 - Genset Replacement	1,438,676	-	1,438,676	(1,438,676)
2027	00132573	SLN 2026 - Genset Replacement	2,155,255	-	2,155,255	(2,155,255)
2027	00132574	WLK 2026 - Genset Replacement	932,584	-	932,584	(932,584)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	-	-	-
	2025	-	-	-
	2026	-	-	-
	2027	8,247,455	-	8,247,455
	Total Direct Cost	8,247,455	-	8,247,455

MCC/Panelboard Replacement Program

Issue: (Common Plant Project Justification Report, pp. 407-445)

Cal Water's Motor Control Centers (MCCs) and Panelboard Replacement Program is designed to systematically upgrade and replace electrical systems, including MCCs, panelboards, control equipment, and other power distribution components. The primary goal is to prevent catastrophic failures that could lead to water system outages or fires. The program evaluates electrical equipment based on a detailed condition assessment scale, ranging from excellent to failed, to determine the necessity and urgency of replacements.

The evaluation process involves Cal Water's Electrical Mechanical Technicians, with additional reviews from management and engineering teams. The program considers alternative approaches, such as running equipment to failure or rehabilitating existing systems, but these are often less effective due to the potential for significant downtime, safety risks, and the challenges of fitting new components into old systems.

The replacement program prioritizes safety and reliability, ensuring that new installations meet current standards and are designed to last. Rehabilitation projects vary in scope, from simple component replacements to comprehensive overhauls, depending on the condition and criticality of the equipment. The program also includes detailed planning and coordination to minimize disruptions during construction, especially for facilities that need to remain operational.

Overall, the MCC and Panelboard Replacement Program is a proactive approach to maintaining the integrity and reliability of Cal Water's electrical systems, ensuring continuous and safe water service to its customers.

Cal Advocates Position: (Do Testimony, pp. 10-1 to 10-2)

While Cal Advocates agree with the merit of these projects, Cal Advocates recommends the Commission should approve Cal Water’s MCC and Panelboard replacement budget without the contingency amount.

Cal Water Rebuttal:

The Commission should adopt Cal Water's proposed budget. As demonstrated in the associated Common Plant section in Book 2, contingency is an industry standard, reasonable and necessary component of capital budgeting that is required to accurately forecast the true cost of work. In that section, Cal Water goes into great detail demonstrating theoretically and mathematically, with concrete examples, why its approach is reasonable.

Table 1: MCC Replacement Program Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00132499	BAY 2025 - MCC Replacements	2,083,329	1,550,723	2,083,329	(532,606)
2027	00132508	BG 2025 - MCC Replacements	2,361,928	1,758,098	2,361,928	(603,830)
2027	00132513	CH 2025 - MCC Replacements	4,059,230	3,021,482	4,059,230	(1,037,748)
2027	00132523	DOM 2027 - MCC Replacement	1,383,701	1,038,508	1,383,701	(345,193)
2027	00132529	KRV 2025 - MCC Replacements	2,198,188	1,592,890	2,198,188	(605,298)
2027	00132534	LAS 2025 - MCC Replacements	5,737,409	4,270,633	5,737,409	(1,466,777)
2027	00132537	LIV MCC Replacements	1,577,200	1,173,986	1,577,200	(403,213)
2027	00132539	MRL 2025 - MCC Replacement	862,210	641,785	862,210	(220,425)
2027	00132546	SLN 2025 - MCC Replacement	2,675,806	1,991,733	2,675,806	(684,074)
2027	00132548	STK 2026 - MCC Replacements	2,394,767	1,789,974	2,394,767	(604,792)
2027	00132553	WLK 2025 - MCC Replacement	2,242,944	1,669,532	2,242,944	(573,412)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	-	-	-
	2025	-	-	-
	2026	-	-	-
	2027	27,576,713	20,499,344	27,576,713
	Total Direct Cost	27,576,713	20,499,344	27,576,713

1

Main Replacement Program

Issue: (Common Plant Project Justification Report, pp. 13-138)

The Main Replacement Program (MRP) is Cal Water's largest asset management initiative, systematically targeting aging and high-risk pipelines to ensure a safe, reliable water supply and fire protection for customers. As pipelines deteriorate with age, the risk of failure increases exponentially; ranging from catastrophic main breaks that disrupt service and pose public health and environmental risks, to smaller, undetected leaks that increase water loss and operational costs. To address this vulnerability, Cal Water has developed a comprehensive asset management and risk analysis framework that identifies the pipelines most prone to failure and those whose rupture would cause the greatest impact on customers. This data-driven strategy allows the company to prioritize pipeline replacements effectively, balancing immediate needs with long-term replacement rate to prevent widespread water main failures. Before the MRP introduction in the 2015 General Rate Case (GRC), Cal Water was replacing pipelines at a rate of just 0.3% per year, translating to a 333-year replacement cycle – far beyond industry's recommended target of 1% per year, representing a 100-year replacement cycle.[7] This lower replacement rate exposed Cal Water customers to increasing risks of water main breaks and failures given that pipeline break rates increase exponentially as pipeline infrastructure ages.[8] Recognizing this, Cal Water has worked to ramp up its replacement rate toward the industry standard 1% per year, aiming for a more manageable 100-year cycle that aligns with best practices. While scaling up the MRP has presented challenges, occasionally resulting in lower-than-expected replacement rates, the company remains steadfast in its commitment to its long-term goal. As part of the 2024 GRC, Cal Water has proposed robust program budgets to support this effort: $157.8 million in 2025, $169.8 million in 2026, and $170.6 million in 2027, resulting in an overall companywide replacement rate of approximately 0.7% (142-year replacement cycle) over that period.

Cal Advocates Position: (Menda Testimony, pp. 8-1 to 8-8)

Cal Advocates recommends that the Commission adopt a significantly reduced main replacement budget in the 2024 GRC, citing past discrepancies between Cal Water's proposed

[7] Utah State University, *Water Main Break Rates in the USA and Canada: A Comprehensive Study* (March 2023), pg. 45

[8] A.24-07-003. *Cal Water Common Plant Justification Book*, PJ-14 & 15

replacement rates and the actual footage completed during the 2018 and 2021 GRC cycles. In both periods, Cal Advocates highlights that Cal Water has fallen short of its adopted replacement targets.[9] Cal Advocates argues that it is unreasonable for customers to bear the cost of projects that fail to be completed and notes that between 2021 and 2023 Cal Water achieved replacement rates of 0.45%, 0.40%, and 0.51%, compared to the adopted rates of 0.78%, 0.68%, and 0.71% for the same period.[10] In addition Cal Advocates recommends the removal of all contingencies from the main replacement project budget and, ultimately, recommends the Commission to adopt a direct program budget of $93,646,922 for 2025, $96,037,006 for 2026, and $97,891,376 for 2027 for Cal Water's MRP program.[11] This budget representing a replacement rate closer to 0.43% across those years or a replacement cycle of 232-years.

Cal Water Rebuttal:

Cal Advocates' push to cut the Main Replacement Program budget in the 2024 GRC stems from a fundamental misunderstanding of Cal Water's proactive asset management strategy and its efforts to stay within authorized budgets, rather than strictly adhering to replacement rate targets. Cal Advocates not only mischaracterizes Cal Water's ability to do the work, but by slashing the budget by over 50%, it assumes that pipelines can last over 240 years without failure. Cal Advocates' judgment, based on their perception of Cal Water's capability, puts the reliability of the distribution system at major risk.

During the 2018 and 2021 GRC periods, Cal Water deliberately scaled back completed footage – not due to an inability to meet proposed replacement rates, but to align with approved budgets and shield customers from rate increases amid unexpectedly high costs for main replacements. Far from reflecting a failure, this decision underscores Cal Water's commitment to financial prudence, as laid out in the 2018 GRC Settlement Agreement, which directed the Cal Water to "exercise reasonable efforts to maintain the replacement rate and total replacement costs for each district."[12] Cal Water remains dedicated to replacing aging pipelines at a sustainable pace, guided by its advanced asset management framework to prioritize high-risk infrastructure

[9] A.24-07-003. *Cal Advocates Report on Plant for Bayshore, Bear Gulch, Los Altos, Redwood Valley District & Multiple Common Plant Issues*, pg. 8-6
[10] *Ibid.*
[11] *Id.,* pg. 8-8
[12] D.20-12-007, Exhibit A (2018 GRC Settlement Agreement), pg. 108

and target an industry-standard 1% annual replacement rate. In contrast, Cal Advocates' proposal jeopardizes this goal by slashing budgets, postponing critical replacements, and allowing vulnerable pipelines to proliferate. This shortsighted approach risks undermining reliable drinking water and fire protection while driving up long-term operational costs from leaks and repairs.

While Cal Advocates identifies the differences between Cal Water's proposed and actual replacement rates in prior GRC cycle periods, they mischaracterize these differences as evidence of failure, incorrectly implying that customers funded uncompleted projects. In reality, unforeseen costs escalations beyond Cal Water's control, necessitated these adjustments to the replacement rate. Rather than proceeding at significantly higher costs, Cal Water responsibly deferred some projects to a future rate case, balancing fiscal accountability with customer affordability. Cal Advocates' recommendation, however, ignores these dynamics, prioritizing short-term savings over the long-term customer benefits from consistent replacement of old, at-risk main lines.

Cal Advocates' Focus on Replacement Rates Distorts Cal Water's Main Replacement Program

Cal Advocates' emphasis on replacement rates paints a misleading and overly simplistic picture of Cal Water's Main Replacement Program. Cal Water acknowledges that the actual footage in past GRC cycles fell short of initial proposals, however Cal Advocates' claim that customers funded incomplete projects is wholly unfounded. Over the last 3 GRC periods Cal Water has continuously met and exceeded its expected investment targets, as presented in Table 1 below, and customers have reaped the full benefit of all the projects completed with those funds.

Table 1: Comparison of Proposed and Actual Budgets and Rates from Past GRCs

Description	2015 GRC	2018 GRC	2021 GRC	Summary
Proposed Main Replacement Footage	511,519 ft	618,581 ft	663,503 ft	**1,793,603 ft**
Authorized MRP Budget	$ 138,931,389	$ 277,358,707	$ 342,321,831	**$ 758,611,927**
Actual MRP Completed Footage	415,418 ft	412,837 ft	478,102 ft	**1,306,357 ft**
Actual MRP Completed Costs	$ 169,211,785	$ 243,518,795	$ 377,066,776	**$ 789,797,357**
Difference between Authorized and Completed Costs				**4.11%**

Cal Advocates' claim that Cal Water's failure to meet its adopted replacement rates stems from an inability to complete projects overlooks a critical factor: Cal Water also has a responsibility to assess the financial impact of exceeding the authorized capital budget to meet those rates. Throughout the GRC period, factors often beyond Cal Water's control, such as material pricing fluctuations, permitting requirements, and scope changes, can significantly affect capital spending. Over the last 3 GRC periods, Cal Water continuously monitored and evaluated the Main Replacement Program to ensure that the most critical and prudent main replacements were prioritized while managing overall capital expenditures. Historically, Cal Water's leadership has prioritized adhering to the projected capital budget for the prior GRC decisions rather than rigidly meeting replacement footage targets. We did this to balance the impact of the actual main replacements with the affordability of customer rates. In some years, this has even required pausing construction to remain reasonably within budget.

Thus, the reduction in replacement footage is not a sign of Cal Water's inability to complete projects but rather proof of its diligent financial oversight and responsible administration of customer funds. Cal Advocates' claim that Cal Water has under-replaced pipelines – implying that customers have paid for projects that did not materialize – is flawed. In reality, Cal Water has fully utilized the authorized budget for pipeline replacements from prior GRCs. Customers have not funded incomplete projects, but a well-managed program designed to deliver long-term benefits over the lifespan of pipeline assets.

Factors Explaining the Difference Between Proposed and Actual Footage in Cal Water's Main Replacement Program

Cal Advocates' critique of the differences between Cal Water's adopted and actual footage grossly oversimplifies one of the company's most complex and expansive capital programs. In practice, numerous factors – **many of which are entirely outside of Cal Water's control** – can significantly impact the final footage completed within the capital budget in the prior GRC decisions. These key influences, the most prominent detailed below, demonstrate that such differences reflect adaptive management, not a failure to deliver.

i. **Prioritization of Projects:** The total footage submitted in a GRC application reflects projects identified up to four years in advance of their construction. Over the GRC period, however, new data, such as heightened failure risks, recent pipeline breaks, or operational changes in the district, can elevate other projects to higher priority that were not originally included. Each year, Cal Water's Engineering Department collaborates with district staff to reassess the planned projects, ensuring those slated for replacement remain the most critical and practical choices. Shifting priority is not a decision taken lightly; when changes are necessary, they can affect both the capital budget and completed footage, particularly if the new projects involve larger-diameter pipes or trickier construction zones like major roads or highway crossings. Consequently, this adaptability often leads to less overall footage completed within the GRC's decision's capital budget, reflecting a focus on addressing urgent needs over rigid adherence to initial plans.

ii. **Design Development:** Projects proposed in a GRC application begin with preliminary designs. As these plans mature, adjustments (e.g., extending, shortening, or resizing pipeline diameters) may be required based on updated data, operational improvements, or unforeseen permitting demands. These refinements can alter total footage but optimize the budget's impact, ensuring replacements meet current system needs effectively.

iii. **Coordination Challenges:** Project execution often depends on external factors such as municipal planning and coordination with other utilities. Cities and counties frequently adjust their street repaving schedules, sometimes imposing moratoriums that prevent pipeline construction in certain areas for up to five years. When this occurs, Cal Water must shift its focus from the originally proposed project to other high priority sites that remain feasible within the timeframe of the GRC period. Coordination with other utilities also presents challenges, as some agencies lack

accurate records of their underground infrastructure. If conflicts arise during construction, adjustments must be made, which may require rerouting or redesigning the project in real-time. Both of these unforeseen coordination issues can increase costs and reduce the total footage replaced while ensuring that the most critical pipeline sections are addressed.

iv. **Permitting Challenges:** Despite Cal Water's expertise in securing permits, regulatory agencies can impose unexpected conditions, such as additional paving, environmental monitoring, soil remediation, or imported fill, which increase costs and extend timelines. Replacing century-old mains in dense urban settings or sensitive ecosystems amplifies these challenges. Aging adjacent infrastructure may force deeper digs or alternate routes, driving up per-foot expenses and affecting total footage, even as the budget is fully utilized.

v. **Unpredictable Field Conditions:** Even with meticulous planning, construction often reveals surprises. Unstable or rocky soils may demand extra excavation and reinforcement, slowing progress and raising costs. Misaligned maps from other utilities can trigger last-minute redesigns or delays. Broader market forces (e.g., inflation, material shortages, or labor constraints) can also push expenses beyond initial projections. These realities create variances between planned and actual footage, not because of poor execution, but due to the need to adapt responsibly to on-the-ground conditions while staying within budget.

vi. **Project Contingencies Removed:** Contingencies are a critical safeguard on construction projects, where unforeseen conditions frequently lead to additional costs.[13] In the 2021 GRC *Main Replacement Program*, a 10% contingency factor was included in Cal Water's proposed budget, but was ultimately removed from the approved program budget.[14] Consequently, as unforeseen costs arose, as previously discussed in sections i. – v. above, program funds intended for subsequent pipeline projects had to be reallocated to cover the costs of these unforeseen issues. Over a three-year period and across entire Districts, these unforeseen costs contributed significantly to the gap between the proposed and actual pipeline footage completed within the rate case cycle and exemplifies the risks of omitting reasonable contingencies from construction projects and programs.

[13] This concept is explored in greater detail in Chapter 1, Section 3 under Contingency.
[14] D.24-03-042, pg. 129

Cal Advocates' Claims Are Inconsistent with the Commission's Past Decisions

In its testimony, Cal Advocates repeatedly asserts that Cal Water has consistently failed to meet the GRC decision replacement rates, comparing Cal Water's "adopted rates" with the actual recorded replacement rates from the 2018 and 2021 GRC periods.[15] However, this characterization is inaccurate and misleading. Contrary to Cal Advocates' claims, the Commission did not adopt specific replacement rates in the 2021 GRC Decision. Instead, it approved annual capital budgets for main replacements, prioritizing financial prudence over strict adherence to replacement targets.[16] This distinction is significant, especially considering Cal Advocates' prior stance. In the litigated 2021 GRC, Cal Advocates recommended slashing Cal Water's Main Replacement Program budget by nearly 50%, citing the company's alleged failure to meet Commission-adopted replacement rates.[17] The Commission rejected this proposal, stating, "Cal Advocates' rationale for drastically limiting the budget for pipe replacements in this GRC cycle is not supported by the record. None of Cal Advocates' proposed budgets will be adopted."[18] During that proceeding, Cal Water provided rebuttal testimony, emphasizing the importance of adhering to the authorized budget rather than focusing solely on replacement rates, highlighting how unforeseen events had disrupted the original replacement rate projects, necessitating flexibility.

In contrast, the 2018 GRC settlement between Cal Advocates and Cal Water, and approved by the Commission, did establish agreed-upon replacement rates, but with the explicit understanding that Cal Water would exercise prudent oversight, balancing replacement footage with costs in each district. The settlement stipulated:

> *"Projects will be completed at the current market cost per foot and as proposed in Cal Water's Application. Cal Water will exercise reasonable efforts to maintain the replacement rate and total replacement cost for each district as agreed upon in this Agreement. Given that market conditions, including material costs and labor rates, can change quickly, Cal*

[15] A.24-07-003. *Cal Advocates Report on Plant for Bayshore, Bear Gulch, Los Altos, Redwood Valley District & Multiple Common Plant Issues*, pg. 8-4 & 8-5
[16] D.24-03-042, pg. 129
[17] A.21-07-002, *Cal Advocates Report on Allocations and Plant for CSS & RDOM District, Pipeline Replacement, and Physical Security,* pg. 4-3
[18] D.24-03-042, pg. 125

Water will prudently manage these costs, while considering customer impact and the need to complete main replacement projects."[19]

This framework underscores that Cal Water's obligation – consistent with the Commission's expectations in the 2021 GRC – was not to rigidly meet a specific replacement rate at the expense of significant rate increases for customers. Rather, Cal Water was tasked with managing the Main Replacement Program responsibly, balancing customer cost impacts with the allocated capital budget. Cal Advocates' narrow focus on replacement rates alone, therefore, misaligns with the Commission's broader understanding and directives for Cal Water.

Cal Advocates' Budget Cuts Jeopardize Customer Benefits and Infrastructure Reliability

Cal Advocates' recommendation to drastically reduce the proposed budgets for the Main Replacement Program runs counter to the best interests of Cal Water's customers. Leading authorities like the U.S. Environmental Protection Agency (USEPA), the American Society of Civil Engineers (ASCE), and the American Water Works Association (AWWA) have all emphasized the pressing need for robust investment in infrastructure renewal to safeguard water service reliability and curb escalating emergency repair costs.[20] Cal Water has proactively responded to these critical infrastructure renewal needs by increasing its replacement rate from a pre-2016 low of 0.3% per year (330 years) to a proposed average of 0.7% (142 years) for the 2024 GRC period – a proactive step towards meeting long-term renewal demands. Industry standards suggest a 1% annual (100 years) replacement rate to sustain water service dependability, a target Cal Water is working toward to safeguard safety, reliability, and fire protection. In contrast, Cal Advocates' drastic cuts are a step backward, threatening the stability of a distribution system critical for delivering safe reliable service to customers and providing fire protection. Cal Water's statistical analysis, based on over 30 years of main break data across its districts, projects future break rates under various replacement scenarios, as presented in Figure 1. Targeting a service level aligned with the AWWA-surveyed industry median of 13 breaks per year, the data reveals that a 1.0% replacement rate is essential to stay below this benchmark, allowing only a modest increase over time.[21] Cal Water's proposed 0.7% rate, though below this ideal, represents a practical step forward. By contrast, a 0.5% rate triggers a steep, unrelenting rise in breaks, inflating costs and

[19] D.20-12-007, Exhibit A (2018 GRC Settlement Agreement), pg. 108
[20] A.24-07-003. *Cal Water Common Plant Justification Book*, pg. PJ-13
[21] AWWA, *Utility Benchmarking Survey* (2022)

eroding service quality. Cal Advocates recommended 0.43% rate goes further still, risking a dramatic future spike in failures with no discernible benefit.

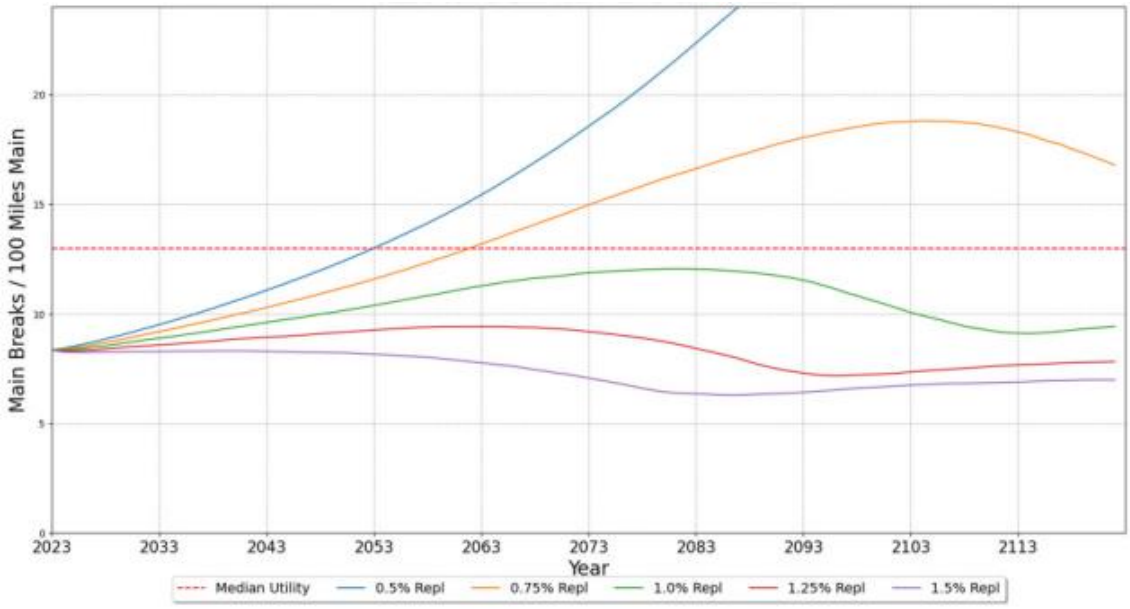


Figure 1. Main Break Rate Forecasted Across Cal Water over next 100 Years

Far from delivering savings, Cal Advocates' steep reduction would also saddle customers with higher expenses by triggering avoidable, escalating repair costs due to frequent emergency repairs. Instead of providing any cost savings, such a drastic reduction would likely impose a financial burden on customers by increasing avoidable and excessive repair costs due to frequent emergency maintenance. Beyond immediate repair expenses, the long-term financial efficiency of water main replacements must be considered. As a water main ages, the initial capital investment is amortized over its years of service, but maintenance costs increase exponentially over time. New mains experience minimal failures early in their lifecycle, but as they deteriorate, the frequency of breaks escalates, leading to sharply rising repair costs. Eventually, the cost of maintaining aging mains exceeds the cost of preemptive replacement. The most cost-effective approach is to replace mains before reactive maintenance costs become unsustainable. This principle is demonstrated in Figure 2, which illustrates the relationship between infrastructure age, repair costs, and total cost of ownership. Deferring main replacements results in an inefficient and costly cycle of repeated breaks, emergency repairs, and ultimately, forced replacements at even greater expense. This not

only increases costs for customers but also poses risks to public health, environmental safety, and overall service reliability.

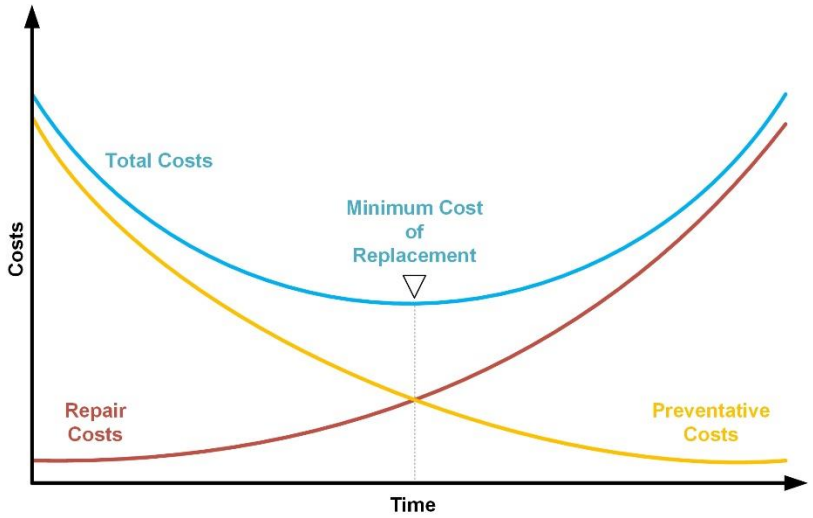


Figure 2. Relationship between Time and Cost ($)

Cal Advocates Did <u>Not</u> Contest the Need for Cal Water's Main Replacement Program or Its Projects

As part of Cal Water's 2024 GRC application, a detailed list of planned main replacement projects for each district known as of July 2024 was submitted for review under the Common Plant program justification.[22] These projects were identified through Cal Water's advanced asset management program as having the highest near-term failure risk and the most severe potential consequence if left unaddressed. Significantly, Cal Advocates neither challenged the overall necessity of the Main Replacement Program nor objected to the validity of any specific project proposed. While they voiced concerns about replacement rates and budget amounts, Cal Advocates did not dispute the program's essential role or the suitability of the individual projects selected for replacement.

Tax Benefit Loss of Reducing the MRP Program

Both federal and state tax laws allow for certain main replacement projects to be partially deducted for tax purposes in the year they are completed, providing a financial benefit that Cal

[22] Cal Water, *Capital Project Justification Common Plant Issues*, PJ-30 to PJ-39

Water passes directly to customers. The benefits are passed to customers by reduced state income tax expense and increased federal deferred tax liabilities. Cal Water estimates that 80% of the MRP projects in this proceeding will qualify for this tax treatment and the savings used to reduce the revenue requirement.

However, if the Commission adopts Cal Advocates' recommendation to reduce the Main Replacement Program budget, the amount of tax benefits passed on to customers will also decrease proportionally. This would result in a higher overall revenue requirement, offsetting a portion of the projected cost reductions that Cal Advocates seeks to achieve.

For further discussion of these tax impacts, refer to the Rates Testimony, Book 1, Chapter 6 (pages 112-114).

Cal Water's Main Replacement Program Improvements Going Forward

While Cal Water acknowledges that discrepancies exist in replacement projections and recognizes the challenges inherent in ratemaking, the company remains committed to refining its processes to provide the most accurate budgets and project scopes possible. For the 2024 GRC period, the following improvements are being introduced to strengthen the MRP and ensure a more reliable, efficient infrastructure renewal process.

i. **Refined Cost Estimate:** Historically, Cal Water relied on a district-wide average cost per foot from prior years to forecast program budgets. This approach, while simple to implement, often struggled to produce accurate budget forecasts due to the wide cost variance associated with differing pipe materials, sizes, and location conditions. For example, a hypothetical district-wide average cost per foot largely based on installing 6-inch diameter plastic pipes along quiet residential streets, would significantly underestimate the cost of installing a 12-inch main ductile iron pipe along a major thoroughfare. To remedy this, Cal Water developed a detailed cost database and shifted to estimating each MRP project individually before aggregating costs into an overall program budget. This granular method accounts for specifics like material type, pipe diameter, and location, yielding more precise projections. Following a successful 2022 pilot, this refined cost estimation process was fully rolled out in the 2024 GRC application.

ii. **Advanced Design:** In earlier GRCs, resource constraints and the MRP's team development limited Cal Water to preliminary project scoping. Since then, the company has bolstered its in-

house design team, enabling earlier and more thorough planning. For the 2024 GRC, project designs now reach 10–30% completion at the application stage, allowing Cal Water to spot design challenges upfront and enhance coordination with the Division of Drinking Water (DDW). This deeper design maturity tackles potential permitting, engineering, and operational hurdles early on, streamlining execution and minimizing unexpected setbacks.

Through these enhancements, Cal Water is sharpening its ability to forecast costs, prioritize high-need projects, and boost program efficiency. These upgrades promise more accurate estimates, smarter planning, and tighter coordination in future GRCs, paving the way for a more dependable and cost-effective infrastructure renewal effort that benefits all stakeholders.

Conclusion:

Cal Advocates' recommendation to drastically cut Cal Water's Main Replacement Program is misguided, overlooks key factors, and would ultimately work against customers' interests. As a practical matter, their suggestion of a 248-year replacement rate is unrealistic. What capital asset will last 248 years? Their recommendation is kicking the can down the road for future generations. Further, their critique reflects a misunderstanding of the program's importance and discounts complexities of long-term infrastructure planning, regulatory requirements, and industry best practices. The assertion that customers are funding incomplete projects is demonstrably false – Cal Water has fully invested all authorized funding into necessary pipeline replacements while adapting to real-world conditions that impact project execution. Cal Advocates' position is not only inconsistent with the conclusions of past Commission decisions, but it also contradicts industry standards set by organizations such as the USEPA, AWWA, and ASCE, all of which emphasize the urgency of proactive pipeline replacement. If Cal Advocates' budget cuts are adopted, customers could face higher costs from increased main breaks, emergency repairs, and service issues, alongside reduced tax benefits tied to the program. Therefore, the Commission should decline Cal Advocates proposal and support Cal Water's MRP as submitted: $157.8 million in 2025, $169.8 million in 2026, and $170.6 million in 2027, resulting in an overall companywide replacement rate of approximately 0.7% (142-year replacement cycle) over that period. This decision would ensure continued access to safe, reliable water, promote sensible infrastructure investment, and help manage risks and costs effectively over time, benefiting the communities Cal Water serves.

Table 2: Main Replacement Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	101MRP25	BK 2025 Main Replacement Program	17,652,263	8,316,568	17,652,263	(9,335,695)
2026	101MRP26	BK 2026 Main Replacement Program	18,093,570	8,524,482	18,093,570	(9,569,087)
2027	101MRP27	BK 2027 Main Replacement Program	18,545,467	8,737,386	18,545,467	(9,808,081)
2025	102MRP25	BG 2025 Main Replacement Program	14,567,401	9,899,252	14,567,401	(4,668,149)
2026	102MRP26	BG 2026 Main Replacement Program	14,931,586	10,146,733	14,931,586	(4,784,853)
2027	102MRP27	BG 2027 Main Replacement Program	14,931,231	10,400,402	14,931,231	(4,530,830)
2025	104MRP25	CH 2025 Main Replacement Program	8,355,485	5,169,830	8,355,485	(3,185,655)
2026	104MRP26	CH 2026 Main Replacement Program	8,564,372	5,299,075	8,564,372	(3,265,297)
2027	104MRP27	CH 2027 Main Replacement Program	8,778,272	5,431,423	8,778,272	(3,346,849)
2025	105MRP25	DIX 2025 Main Replacement Program	1,012,923	528,919	1,012,923	(484,004)
2026	105MRP26	DIX 2026 Main Replacement Program	1,038,246	542,142	1,038,246	(496,104)
2027	105MRP27	DIX 2027 Main Replacement Program	1,064,177	555,682	1,064,177	(508,495)
2025	106MRP25	ELA 2025 Main Replacement Program	6,681,004	4,386,758	6,681,004	(2,294,246)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	106MRP26	ELA 2026 Main Replacement Program	6,848,029	4,496,427	6,848,029	(2,351,603)
2027	106MRP27	ELA 2027 Main Replacement Program	7,019,063	4,608,728	7,019,063	(2,410,335)
2025	108MRP25	HR 2025 Main Replacement Program	6,507,330	4,146,077	6,507,330	(2,361,253)
2026	108MRP26	HR 2026 Main Replacement Program	6,670,013	4,249,729	6,670,013	(2,420,285)
2027	108MRP27	HR 2027 Main Replacement Program	6,836,601	4,355,868	6,836,601	(2,480,733)
2025	109MRP25	KC 2025 Main Replacement Program	987,351	722,482	987,351	(264,869)
2026	109MRP26	KC 2026 Main Replacement Program	1,012,035	740,544	1,012,035	(271,491)
2027	109MRP27	KC 2027 Main Replacement Program	1,037,312	759,040	1,037,312	(278,272)
2025	110MRP25	LIV 2025 Main Replacement Program	6,173,332	4,689,507	6,173,332	(1,483,825)
2026	110MRP26	LIV 2026 Main Replacement Program	6,327,666	4,806,745	6,327,666	(1,520,920)
2027	110MRP27	LIV 2027 Main Replacement Program	6,485,703	4,926,797	6,485,703	(1,558,906)
2025	111MRP25	LAS 2025 Main Replacement Program	7,595,458	5,102,735	7,595,458	(2,492,723)
2026	111MRP26	LAS 2026 Main Replacement Program	11,024,424	5,230,304	11,024,424	(5,794,120)
2027	111MRP27	LAS 2027 Main Replacement Program	11,299,766	5,360,934	11,299,766	(5,938,832)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	112MRP25	MRL 2025 Main Replacement Program	993,520	471,515	993,520	(522,005)
2026	112MRP26	MRL 2026 Main Replacement Program	1,018,358	531,633	1,018,358	(486,725)
2025	113MRP25	ORO 2025 Main Replacement Program	1,090,862	648,068	1,090,862	(442,794)
2026	113MRP26	ORO 2026 Main Replacement Program	1,118,134	664,270	1,118,134	(453,864)
2027	113MRP27	ORO 2027 Main Replacement Program	1,146,060	680,860	1,146,060	(465,200)
2025	114MRP25	SLN 2025 Main Replacement Program	6,463,991	5,051,389	6,463,991	(1,412,601)
2026	114MRP26	SLN 2026 Main Replacement Program	6,625,590	5,178,254	6,625,590	(1,447,336)
2027	114MRP27	SLN 2027 Main Replacement Program	6,791,068	5,307,584	6,791,068	(1,483,484)
2025	117MRP25	SEL 2025 Main Replacement Program	1,262,150	1,280,624	1,262,150	18,473
2026	117MRP26	SEL 2026 Main Replacement Program	1,293,704	1,312,639	1,293,704	18,935
2027	117MRP27	SEL 2027 Main Replacement Program	1,326,015	1,345,423	1,326,015	19,408
2025	119MRP25	STK 2025 Main Replacement Program	20,405,790	17,993,088	20,405,790	(2,412,702)
2026	119MRP26	STK 2026 Main Replacement Program	20,915,935	18,442,915	20,915,935	(2,473,019)
2025	120MRP25	VIS 2025 Main Replacement Program	9,400,337	2,624,388	9,400,337	(6,775,949)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	120MRP26	VIS 2026 Main Replacement Program	9,635,345	2,689,998	9,635,345	(6,945,347)
2027	120MRP27	VIS 2027 Main Replacement Program	9,875,994	2,757,182	9,875,994	(7,118,812)
2025	121MRP25	WIL 2025 Main Replacement Program	840,009	720,651	840,009	(119,357)
2026	121MRP26	WIL 2026 Main Replacement Program	861,009	738,668	861,009	(122,341)
2027	121MRP27	WIL 2027 Main Replacement Program	882,513	757,116	882,513	(125,397)
2025	122MRP25	PV 2025 Main Replacement Program	7,843,042	4,597,367	7,843,042	(3,245,675)
2026	122MRP26	PV 2026 Main Replacement Program	12,863,320	4,712,302	12,863,320	(8,151,018)
2027	122MRP27	PV 2027 Main Replacement Program	13,184,589	4,829,994	13,184,589	(8,354,595)
2025	123MRP25	WLK 2025 Main Replacement Program	2,047,719	479,903	2,047,719	(1,567,816)
2026	123MRP26	WLK 2026 Main Replacement Program	2,098,912	491,900	2,098,912	(1,607,012)
2027	123MRP27	WLK 2027 Main Replacement Program	2,151,334	504,186	2,151,334	(1,647,148)
2025	128MRP25	DOM 2025 Main Replacement Program	9,730,723	3,999,381	9,730,723	(5,731,342)
2026	128MRP26	DOM 2026 Main Replacement Program	9,973,992	4,099,366	9,973,992	(5,874,626)
2027	128MRP27	DOM 2027 Main Replacement Program	10,223,098	4,201,750	10,223,098	(6,021,348)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	129MRP25	AV 2025 Main Replacement Program	585,543	155,402	585,543	(430,141)
2026	129MRP26	AV 2026 Main Replacement Program	600,182	159,287	600,182	(440,894)
2027	129MRP27	AV 2027 Main Replacement Program	615,172	163,266	615,172	(451,906)
2025	146MRP25	RDV 2025 Main Replacement Program	1,101,072	154,362	1,101,072	(946,710)
2026	146MRP26	RDV 2026 Main Replacement Program	1,128,599	158,221	1,128,599	(970,378)
2027	146MRP27	RDV 2027 Main Replacement Program	1,156,787	162,173	1,156,787	(994,613)
2025	152MRP25	BAY 2025 Main Replacement Program	26,530,319	12,508,655	26,530,319	(14,021,664)
2026	152MRP26	BAY 2026 Main Replacement Program	27,193,577	12,821,371	27,193,577	(14,372,205)
2027	152MRP27	BAY 2027 Main Replacement Program	27,872,753	13,141,593	27,872,753	(14,731,160)
2027	119MRP27	STK 2027 Main Replacement Program	19,422,525	18,903,988	19,422,525	(518,536)

Summary	Year	CWS Application	Public Advocates	CWS Rebuttal
	2024	-	-	-
	2025	157,827,625	93,646,922	157,827,625
	2026	169,836,597	96,037,006	169,836,597
	2027	170,645,498	97,891,376	170,645,498
	Total Direct Cost	498,309,719	287,575,304	498,309,719

Pressure Vessel Improvement Program

Issue: (Common Plant Project Justification Report, pp. 382-397)

Cal Water's Pressure Vessel Improvement Program is designed to enhance the reliability and safety of the water system by systematically upgrading and replacing pressure vessels. These vessels are crucial for maintaining steady system pressure and preventing catastrophic failures that could result in significant damage and safety hazards. The program involves a thorough evaluation process, including annual visual inspections by trained technicians and more detailed engineering assessments. Based on these evaluations, pressure vessels are either improved through coating applications, metal work, and appurtenance replacements, or replaced entirely if they are found to be outdated or structurally compromised. The program also addresses safety improvements, such as enhancing access hatches and adding scaffolding or fixed ladders to improve worker safety. By implementing these measures, Cal Water aims to ensure the consistent and reliable operation of its water system, ultimately benefiting its customers through improved service and reduced risk of infrastructure failures.

Cal Advocates Position: (Sorensen Testimony, pp. 5-1 to 5-3)

Cal Advocates recommends the Commission should deny ratepayer funding for three pressure vessel replacement projects that will not be used and useful during the period for which rates are being established along with the contingency.

Cal Water Rebuttal:

Adding the three pressure vessel projects as MULTI-GRC projects in the project justification book was an inadvertent mistake. However, it was correctly inputted in the respective Districts RO Book and is part of the 2024 GRC proposed budget[23,24]. Therefore, Cal Water requests that these projects be approved as they are necessary to ensure the consistent and reliable operation of its water system.

[23] 2024 GRC Common Plant Project Justification Report, pp. 382-397
[24] *REPORT ON THE RESULTS OF OPERATION VISALIA DISTRICT*

Cal Water's proposes to construct the following three pressure vessel projects. The assets will be operational, used, and useful to the customer by the scheduled completion dates below. The projects and costs were proposed in the RO Model for these reasons and should be considered.

Table1: Pressure Tank Replacements Updated to District RO Book

Project #	Description	Scheduled Completion Date	Direct Costs
132742	VIS 060 Pressure Tank Replacement	7/23/2027	$480,552
132743	VIS 069 Pressure Tank Replacement	7/23/2027	$480,552
132660	BK 176 Pressure Tank Replacement	10/8/2027	$480,552

Project contingency is a critical aspect of financial planning and risk management. Unforeseeable project challenges can emerge during construction, and these need to be addressed to ensure the successful installation of the pressure vessel. For example, during installation unidentified underground infrastructure such as storm drain lines, electrical conduit, or piping, may impede the original design. Modifications must be made to accommodate these unforeseen challenges to complete the project. The Commission should approve the industry standard contingencies proposed by Cal Water to ensure project integrity. See Project Contingencies Rebuttal in Book 2 for further details and discussion.

Table 2: Pressure Vessel Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus CWS)
			CWS Application	Public Advocates Office Report	CWS Rebuttal	
2027	00132660	BK 176 Pressure Tank Replacement	480,522	-	480,522	(480,522)
2027	00132661	SLN 061 Pressure Vessel Replacement	480,522	317,183	480,522	(163,340)
2025	00132662	VIS 052-PT1 - Pressure Vessel Rehab	45,179	41,072	45,179	(4,107)
2027	00132742	VIS-060 Pressure Tank Replacement	480,522	-	480,522	(480,522)
2027	00132743	VIS-069 Pressure Tank replacement	480,522	-	480,522	(480,522)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	-	-	-
	2025	45,179	41,072	45,179
	2026	-	-	-
	2027	1,922,088	317,183	1,922,088
	Total Direct Cost	1,967,267	358,254	1,967,267

Pump and Motor Replacement Program

Issue: (Common Plant Project Justification Report, pp. 199-424)

Cal Water's Pump and Motor Replacement Program is a critical initiative aimed at maintaining the efficiency and reliability of its water system by systematically evaluating and replacing over 1,100 pumping equipment. The program focuses on two main types of pumps: booster pumps, which help maintain system pressure and move water through the system, and groundwater well pumps, which draw water from aquifers and lift it to the surface. The condition of these pumps is assessed based on various factors, including their age, performance, and environmental conditions. The program involves routine efficiency testing and detailed evaluations to identify pumps that need replacement due to declining performance, obsolescence, or physical failure. By replacing outdated or failing pumps, Cal Water aims to prevent unpredicted failures, reduce energy costs, and ensure continuous and reliable water service to its customers. The program also includes a proactive approach to managing the pumping system assets, allowing for advanced planning, optimal material selection, and coordinated scheduling of replacements to minimize disruptions and maintain system reliability

Cal Advocates Position: (Do Testimony, 6-1 to 6-3)

While Cal Advocates does not disagree with the merit of these projects, Cal Advocates recommends the Commission consider reducing the budget based on Cal Water's historical performance. Cal Advocates recommends the Commission should approve an adjusted pump and motor budget of $1,321,982 in 2025, $1,773,284 in 2026, and $1,416,810 in 2027. The adjusted budget also excludes contingency. Cal Advocates also includes a statement that ratepayers should receive a refund on any expenditure not used for specific pump and motor replacement projects.

Cal Water Rebuttal:

Cal Water submitted several asset replacement programs in its GRC filing. These programs are meant for assets that are necessary for normal and emergency operations of a water distribution system. Routine replacements are required in order to maintain the reliability of each system. For reasons unexplained, Cal Advocates chose different methods to analyze each of Cal

Water's programs and propose its own recommendations for reductions to Cal Water's filing. The methodologies chosen by Cal Advocates are not consistent between programs in what appears to be an attempt to "cherry-pick" a result rather than evaluate the merits of the program or understand the needs of the water systems. Since Cal Water's asset replacement programs are consistent in scope, only vary by asset type, the evaluation methodology undertaken by Cal Advocates should be consistent and focus on the needs of the water system.

Cal Advocates' recommendation is flawed because it assumes that the past rate of completion will meet the future needs of the water system. Cal Water provided five main reasons for its requested pump and motor replacement: low energy efficiency, environmental concerns, reliability concerns, operational concerns, and functionality concerns. Cal Water reaffirms their need as essential projects to maintain the reliability of Cal Water's distributions systems and ensure customers continue to receive high-quality service and fire protection.

Cal Advocates Calculation of Historical Replacement Rate is Misleading:

Cal Advocates are recommending scaling down this program not based on its reasonableness, but rather on Cal Water's capacity to complete it, as determined by their calculation of our historical replacement rate. Cal Water disagrees with this approach. Furthermore, the calculation used to determine the historical rate and demonstrate Cal Water's capacity is not comprehensive. Cal Water has significantly greater capabilities to deliver pump replacement projects. This is evident when reviewing the past performance of Cal Water's pump replacements (Fig.1, Common Plant PJ-202).

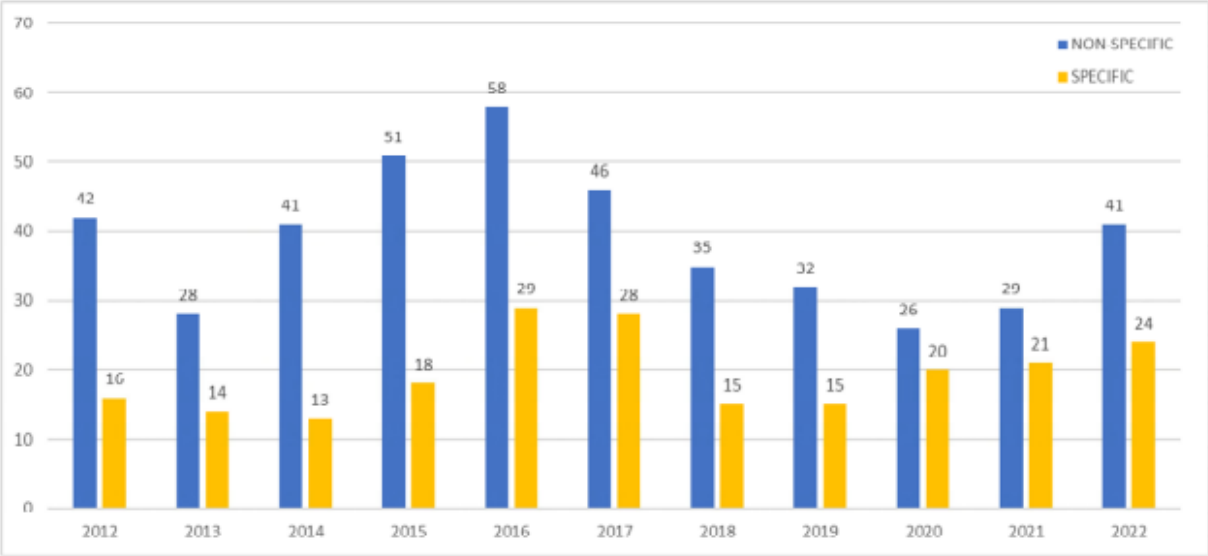


Figure 1. Historical pump replacement rate for planned and unplanned replacement

The total quantity of pump projects completed each year between 2012 and 2022, ranges from a low of 42 pumps in 2013 to a high of 87 in 2016. This demonstrates Cal Water's ability to adapt resources to changing priorities and needs, ensuring the best service for customers.

To calculate this historical replacement rate, Cal Advocates considers only the quantity of specific projects completed from 2015 through 2024, resulting in an average historical replacement rate of 19 projects per year. Cal Advocates' methodology for determining Cal Water's capabilities to deliver pump replacement projects is too limited and misleading, as it omits in their analysis the non-specific pump replacement projects that have a similar scope and needs just as much level of effort as specific pump replacements. When considering all pump projects, both specific and non-specific (Fig.1, Common Plant PJ-202), Cal Water has completed an average of 58 pump and motor projects per year between 2012 and 2022 which is nearly three times Cal Advocates' erroneous calculation, thus underestimating Cal Water's true capability. Cal Water is proposing a total of 88 replacement projects from 2025 through 2027 (Table 3, Common Plant PJ-208), which equates to an average of 29 projects per year—well within Cal Water's historical capabilities.

Cal Water Implements Strategic and Enhanced Project Delivery

To further bolster Cal Water's capabilities in delivering pump and motor replacements, Cal Water conducted a competitive procurement process in 2024 to retain the services of additional pump and well contractors. Fifteen (15) contractors were awarded Master Service Agreements to deliver pump and well-related projects at competitive costs. This effectively doubles the number of contractors, as Cal Water historically relied on 7 contractors across the entire state for this work. Additionally, Cal Water is dedicating internal resources to implement critical, proposed pump projects.

Cal Advocates' Recommendation Increases Risks to Customers from Delayed Pump Replacements

Reducing planned pump replacements based Cal Water's standard criteria (low energy efficiency, environmental, reliability, operational, and functionality concerns) is irresponsible as it can result in more unplanned failure of pumps and motors reaching its end of service life, leading to reduced system reliability. This proactive approach ensures better reliability and efficiency, ultimately benefiting the entire system. Planned, proactive pump replacement is most beneficial to customers as it supports reliable water system operations. The lead time for pumping equipment can range from 12 to 24 weeks. A proactive replacement program allows for materials to be ordered in advance, with construction scheduled during the winter months when customer demand is relatively low. This reduces the risk of not meeting customer demands.

Cal Water proposes replacing pumps because they are in degraded condition and nearing failure. Cal Advocates' recommendation to disallow the replacement of pumps that are nearing failure increases the risk of a water supply shortage, as their recommendation could result in pumps failing during high-demand seasons. Without advanced, proactive ordering of materials, the source of supply will be inoperable while awaiting material delivery. This also enables Cal Water to manage its resources effectively and efficiently. This reduction in service and reliability can and should be avoided by adopting Cal Water's proactive replacement program.

Cal Advocates Conclusion includes an Unsupported Statement

The final sentence in the Pump and Motor Replacement Conclusion, Cal Advocates inserts a sentence that asserts that customers should receive a refund on any expenditure not used for specific pump and motor replacement projects. However, this is not substantiated with either

evidence or argument anywhere else in the chapter. Furthermore, this is an ambiguous statement - what would constitute an "expenditure not used for specific pump and motor replacement projects"[25] has not been discussed in any other context in this or any other plant witnesses' testimony. This ambiguous and unsubstantiated statement should be disregarded.

Cal Water's recommendation for contingency is supported by industry practices and its vast experience

Project contingency is a critical aspect of financial planning and risk management. Unforeseeable project challenges can emerge when the pump is removed from service, and these need to be addressed to ensure the successful installation of a new pump. For example, when well pumps are pulled from the well, a visual inspection is performed to ensure the well environment is free of any conditions that may harm the new pump. Occasionally, excessive sediment accumulates at the bottom of the well, posing a risk of being pumped into the distribution system. This sediment accelerates pump wear and causes water discoloration, leading to potential customer complaints. Therefore, it must be removed before installing a new pump. The Commission should approve the industry-standard contingencies proposed by Cal Water to ensure project integrity. For further details, please refer to the Contingency section in Book 2.

Conclusion

Cal Water recommends that the Commission find the Pump Replacement Program warranted and appropriate, given that reliable pumping equipment is critical to maintaining water pressure for firefighting and customer service. The pumps recommended for replacement have been tested by certified third-party technicians and are in need of replacement. Their recommendation will result in increased reactive, emergency replacements due to pump failures, which may occur during high-demand seasons and/or fail to meet supply demands during emergency events, exposing customers to excessive risk and consequences. Cal Water's recommendation to replace an average of 29 pumps per year is well within its proven historic replacement rate of 58 pumps per year. Additionally, Cal Water has taken steps to further expand

[25] One could misinterpret this to mean an expenditure made by Cal Water on any operating expense or capital project or program that isn't a pump and motor replacement project.

its capabilities by retaining additional pump and well contractors to support the completion of these projects.

Thus, Cal Advocates' recommended reduction is not in the best interest of customers.

Table 1: Pump and Motor Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00132105	SSF 002-C Pump Replacement	83,494	56,439	83,494	(27,055)
2026	00132106	SSF 005-A Pump Replacement	85,581	57,984	85,581	(27,597)
2026	00132108	SM 006-D Pump Replacement	83,494	56,439	83,494	(27,055)
2027	00132111	MPS 012-E Pump Replacement	74,330	50,474	74,330	(23,856)
2027	00132112	MPS 114-B Pump Replacement	33,768	22,930	33,768	(10,838)
2026	00132115	SSF 101-A Pump Replacement	83,494	56,439	83,494	(27,055)
2025	00132116	SC 118-A Pump Replacement	111,639	75,464	111,639	(36,175)
2027	00132117	MPS-120-B Pump Replacement	74,330	50,474	74,330	(23,856)
2025	00132132	BK 073-E Pump Replacement	79,518	53,751	79,518	(25,766)
2026	00132135	CH-65-1 Pump Replacement	144,345	97,798	144,345	(46,547)
2026	00132136	DIX 010-A Pump Replacement	69,065	46,794	69,065	(22,271)
2026	00132137	DIX 010-B Pump Replacement	69,065	46,794	69,065	(22,271)
2026	00132139	DOM-277-01 Pump Replacement	202,702	137,337	202,702	(65,365)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00132140	DOM-277-A Pump Replacement	103,532	70,146	103,532	(33,386)
2027	00132142	ELA-10-03 Pump Replacement	140,553	95,443	140,553	(45,110)
2027	00132143	ELA 12-C Pump Replacement	79,364	53,893	79,364	(25,472)
2025	00132145	ELA 023-B Booster Replacement	101,007	92,267	101,007	(8,740)
2025	00132147	ELA 030-C Pump Replacement	75,542	51,064	75,542	(24,478)
2027	00132148	ELA 032-C Booster Replacement	115,585	106,065	115,585	(9,520)
2026	00132149	ELA 040-A Pump Replacement	65,612	44,454	65,612	(21,158)
2027	00132151	ELA 055-A Pump Replacement	106,118	72,059	106,118	(34,058)
2027	00132152	ELA-59-A Pump Replacement	79,364	53,893	79,364	(25,472)
2026	00132155	KC 010-A Pump Replacement	140,935	95,488	140,935	(45,447)
2027	00132156	KC 013-01 Pump Replacement	136,942	92,991	136,942	(43,951)
2025	00132157	KC 015-A Pump Replacement	67,381	45,547	67,381	(21,833)
2025	00132158	KRV ONYX-1-1 Pump Replacement	79,656	53,845	79,656	(25,811)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00132159	KRV ONYX-2-1 Pump Replacement	83,687	56,828	83,687	(26,859)
2027	00132160	KRV SMTN-2-15 Pump Replacement	83,687	56,828	83,687	(26,859)
2026	00132161	KRV ONYX-3-A Pump Replacement	69,065	46,794	69,065	(22,271)
2027	00132167	KRV MSHA-6-B Pump Replacement	83,541	56,729	83,541	(26,812)
2025	00132171	KRV SMTN-15-A Pump Replacement	90,800	61,378	90,800	(29,422)
2025	00132172	KRV SMTN-15-B Pump Replacement	82,545	61,083	82,545	(21,462)
2026	00132173	KRV UBOD-104-2 Pump Replacement	81,648	55,319	81,648	(26,329)
2026	00132213	LAS-7-E Pump Replacement	114,430	77,530	114,430	(36,900)
2025	00132214	LAS-27-1 Pump Replacement	121,599	82,197	121,599	(39,402)
2026	00132215	LAS-33-B Pump Replacement	85,581	57,984	85,581	(27,597)
2027	00132216	LAS-34-B Pump Replacement	151,678	102,997	151,678	(48,681)
2026	00132218	LAS-113-B Pump Replacement	72,519	49,134	72,519	(23,385)
2027	00132219	LAS-119-D Pump Replacement	87,718	59,565	87,718	(28,153)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	00132221	LAS-121-2 Pump Replacement	44,426	30,031	44,426	(14,395)
2026	00132222	LAS-123-1 Pump Replacement	74,315	50,350	74,315	(23,964)
2025	00132223	LIV 015-1 Replace Well Pump	130,346	88,110	130,346	(42,236)
2026	00132224	LIV-019-1 Well Pump Replacement	108,588	73,571	108,588	(35,016)
2026	00132225	LIV 020-1 Replace Well Pump	41,497	28,115	41,497	(13,381)
2025	00132226	LIV 025-B Pump Replacement	79,656	53,845	79,656	(25,811)
2026	00132227	LIV-29-A Pump Replacement	69,065	46,794	69,065	(22,271)
2026	00132228	LIV-29-B Pump Replacement	69,065	46,794	69,065	(22,271)
2026	00132230	LIV-32-A Pump Replacement	69,065	46,794	69,065	(22,271)
2026	00132231	LIV-32-B Pump Replacement	69,065	46,794	69,065	(22,271)
2025	00132232	LIV 032-C Pump Replacement	67,381	45,547	67,381	(21,833)
2027	00132233	LIV-034 Pump Replacements (B,C,D)	250,624	170,187	250,624	(80,437)
2027	00132235	MRL-15-1 Pump Replacement	133,605	90,521	133,605	(43,083)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00132236	ORO 015-E Pump Replacement	69,065	46,794	69,065	(22,271)
2026	00132238	SLN 021-01 Pump Replacement	142,752	96,719	142,752	(46,033)
2027	00132239	SLN-27-1 Pump Replacement	136,942	92,991	136,942	(43,951)
2025	00132240	SLN-32-1 Pump Replacement	130,346	88,110	130,346	(42,236)
2027	00132241	SLN-57-A Pump Replacement	83,541	56,729	83,541	(26,812)
2025	00132242	SLN-58-B Pump Replacement	67,381	45,547	67,381	(21,833)
2026	00132243	SLN-67-1 Pump Replacement	161,140	109,177	161,140	(51,963)
2025	00132244	SLN-71-1 Pump Replacement	105,939	71,611	105,939	(34,328)
2026	00132245	SLN-73-A Pump Replacement	39,728	26,917	39,728	(12,811)
2026	00132246	SLN-73-B Pump Replacement	39,728	26,917	39,728	(12,811)
2026	00132247	SLN-73-E Pump Replacement	43,368	29,383	43,368	(13,985)
2025	00132248	SLN-304-A Pump Replacement	67,381	45,547	67,381	(21,833)
2025	00132249	STK-59-1 Pump Replacement	140,825	95,193	140,825	(45,632)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	00132250	STK-60-1 Pump Replacement	140,825	95,193	140,825	(45,632)
2027	00132251	VIS-15-1 Pump Replacement	111,300	75,578	111,300	(35,721)
2027	00132252	VIS 023-1 Pump Replacement	136,942	92,991	136,942	(43,951)
2026	00132253	VIS-32-1 Pump Replacement	133,605	90,521	133,605	(43,083)
2025	00132254	VIS-57-2 Pump Replacement	79,656	53,845	79,656	(25,811)
2025	00132255	VIS 201-1 Pump Replacement	40,484	27,366	40,484	(13,118)
2026	00132256	WIL-4-1 Pump Replacement	70,776	33,567	70,776	(37,209)
2027	00133256	NOH 201-A Pump Replacement	47,002	31,619	47,002	(15,382)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	-	-	-
	2025	1,904,330	1,414,248	1,904,331
	2026	2,755,383	1,773,284	2,755,384
	2027	2,230,620	1,522,875	2,230,620
	Total Direct Cost	6,890,334	4,710,407	6,890,335

Service Line Replacement Program

Issue (Common Plant Project Justification Report, pp. 370-381):

Building on the success of the *Poly Services Replacement* pilot program in Cal Water's Bakersfield District during the 2021 General Rate Case (GRC), Cal Water is now proposing to expand this effort with the *Service Line Replacement Program* as part of its 2024 GRC application. This initiative aims to proactively replace aging plastic service lines in the Bakersfield District, where failure rates have been significantly higher than copper services, particularly in rocky soil conditions.[26] Plastic service line failures have resulted in an increasing number of leaks, service disruptions, and costly emergency replacements, highlighting the urgent need for a systematic and sustainable replacement strategy. The proposed program follows the latest research and best practices recommended by the U.S. Environmental Protection Agency (USEPA) for asset management in water utilities. By implementing this program, Cal Water seeks to prevent expensive emergency repairs, mitigate water loss, and reduce service interruptions—ultimately enhancing both customer experience and system reliability. To support this effort, Cal Water is proposing a budget of $6,988,593 in 2025, $7,119,322 in 2026, and $7,266,066 in 2027, enabling the proactive replacement of 1,154 plastic service lines. While the 2024 GRC application focuses exclusively on the Bakersfield District due to its immediate need, this initiative is intended to serve as a model for future GRCs, potentially expanding to other districts facing similar infrastructure challenges.

Cal Advocates Position (Do Testimony, pp. 8-1 to 8-4):

Cal Advocates recommends that the Commission approve the *Service Line Replacement Program* but at a significantly reduced scale – less than 11% of Cal Water's original proposal. The proposed replacement rate, which they claim is more than 15 times the replacement rate from the 2021 pilot program, is unreasonable.[27] Instead, Cal Advocates suggests capping the program at the prior pilot replacement rate of 25 service line annually, resulting in an adjusted budget of $700,592 in 2025, $736,060 in 2026, and $773,322 in 2027. Cal Advocates contends that Cal Water should

[26] A.24-07-003. *California Water Services Common Plant Justification Book*, pg. PJ-375
[27] A.24-07-003. *Cal Advocates Report on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Multiple Common Plant Issues*, pg. 8-2

adhere to a more "realistic" replacement schedule. Additionally, if Cal Water successfully completes the 1,154 service replacements as originally presented in their application, it may seek recovery of any remaining costs in a subsequent GRC.[28]

Cal Water Rebuttal:

Cal Advocates' recommendation to significantly scale back the *Service Line Replacement Program* reflects a fundamental misunderstanding of its purpose and long-term benefits. Their argument, that Cal Water's proposed replacement rate is excessive compared to the 2021 pilot program, fails to acknowledge the necessity of a structured, proactive approach to asset management and the long-term benefits to customers. The justification for this program is grounded in industry best practices and regulatory requirements aimed at mitigating infrastructure failures and reducing costly emergency repairs. Notably, Cal Advocates does not dispute the need for proactive utility management, nor do they challenge the long-term cost savings and customer benefits associated with this approach. Instead, they mischaracterize Cal Water's ability to execute the program and fail to provide any clear definition of what constitutes a "realistic replacement schedule."

Cal Advocates' Recommendation Undermines Sound Utility Management

Limiting the *Service Line Replacement Program* to the small-scale pilot rate contradicts the principles of sound water utility management and the Commission's own directives on infrastructure planning. The U.S. Environmental Protection Agency (USEPA) emphasizes that structured asset management is critical for ensuring the long-term sustainability, reliability, and cost-effectiveness of aging water infrastructure. Without a proactive plan, utilities face frequent service failures, costly emergency repairs, and unnecessary service disruptions. Other water utilities have demonstrated that asset management strategies, including systematic service line replacements, reduce costs and improve customer satisfaction. The 2021 GRC pilot program in Bakersfield District confirmed this, showing that proactive replacements were more cost-effective than emergency reactive replacements. This also approach aligns with the Commission's long-term infrastructure planning policies. In Decision (D.) 07-05-062, the Commission established minimum data requirements (MDRs) to streamline the GRC process, mandating that utilities

[28] *Ibid*.

develop comprehensive plans to address aging infrastructure.[29] The decision cites a US Government Accountability Office (GAO) report highlighting the importance of asset management in improving decision-making and investment strategies. The GAO also warns that a short-term focus on capital savings can hinder long-term planning, which is precisely the pitfall exemplified by Cal Advocates' recommendation. By advocating for significantly reduced capital investments, Cal Advocates ignores the long-term consequences, including increased service line failures and costly emergency repairs that will ultimately burden customers. For the 2024 GRC, Cal Water has developed a survivor curve model for service lines, based on the latest research presented in the Journal of American Water Works Association (AWWA), and the results are presented in Figure 1. This methodology allows Cal Water to more accurately predict the remaining life of any pipeline given its current age, and thereby more accurately determine when future service lines will likely need to be replaced. Based on install dates and projected remaining lifespan, a significant wave of service line replacements is anticipated starting in 2035, as seen in Figure 2.

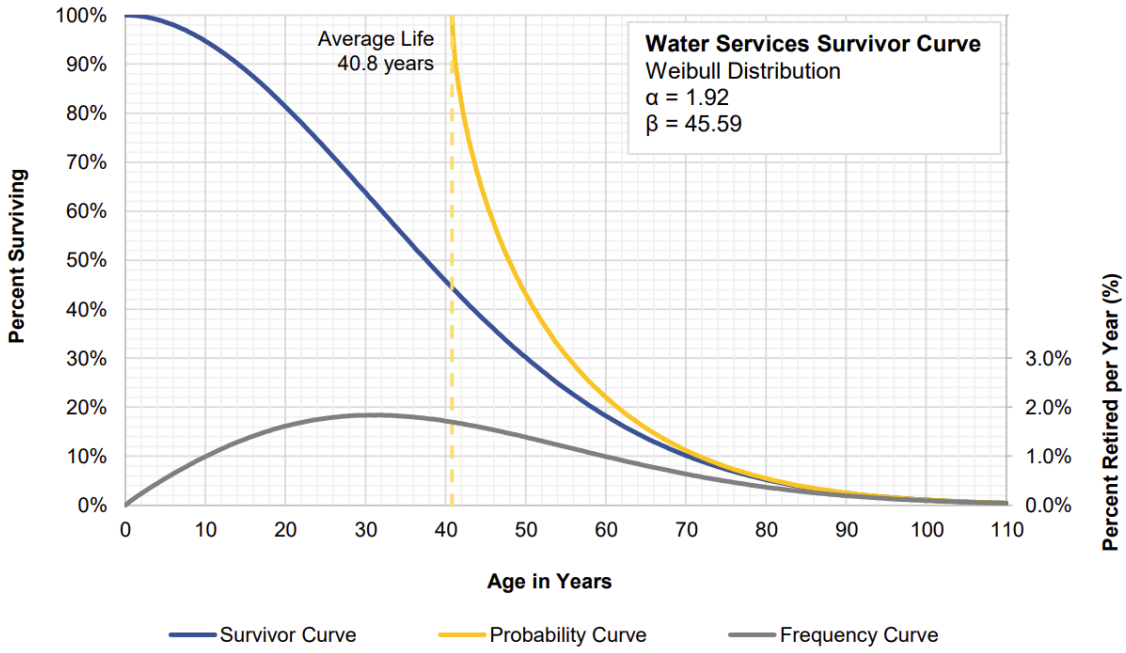


Figure 1. Survivor Curve for Service lines (Lee & Meehan, 2017)[30]

[29] D.07-05-062, Appendix A, pg. A-28

[30] A.24-07-003. *California Water Services Common Plant Justification Book*, pg. PJ-376

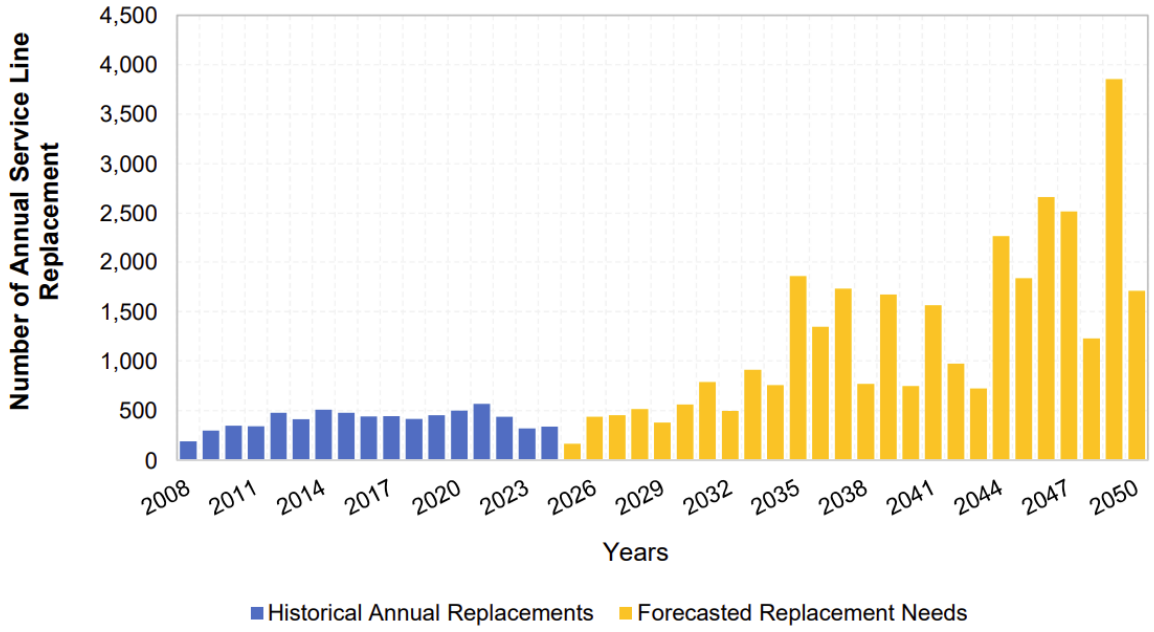


Figure 2. Bakersfield District Historical and Forecasted Service Line Replacement Needs[31]

Data from the Bakersfield District indicates that most service leaks originate from plastic pipes, particularly in the northern areas with rocky soil. Polyethylene (PE) and polyvinyl chloride (PVC) lines are especially prone to failure, meaning the expected wave of replacements could arrive even sooner than projected. Given this reality, delaying a programmatic replacement program would be a failure of sound utility management. Proactive replacements are significantly less expensive than emergency replacements. Cal Water's original pilot project justification demonstrated that this service line replacement program is expected to save customers over $28.3 million over the next 25 years.[32] By contrast, Cal Advocates' proposal prioritizes short-term capital savings at the expense of higher long-term costs and reduced service reliability. Their recommendation directly contradicts the guidance of the USEPA, AWWA, and CPUC policies, all of which emphasize the importance of proactive infrastructure management.

[31] *Id.,* pg. PJ-377
[32] *Id.,* pg. PJ-380

Cal Advocates Mischaracterizes Cal Water's Capabilities and Track Record

Cal Advocates' claim that Cal Water cannot meet the proposed replacement rate is entirely unfounded. During discovery, Cal Advocates did not inquire about Cal Water's capacity to execute the program or its approach to completing the proposed 1,154 service replacements during the 2024 GRC period. Instead, they assumed, without any justification, that ramping up replacements from the 2021 GRC pilot project was "unrealistic." Moreover, they fail to explain how they determined that Cal Water's proposed replacement plan was unrealistic or why 25 service replacements per year is a more realistic rate. Additionally, Cal Advocates' assertion that Cal Water replaced only 25 plastic pipes during the entire 2021 GRC period is incorrect. The pilot program replaced 25 services per year, but this was in addition to the emergency service line replacements that district staff routinely perform throughout that same period. In total, over 600 additional service lines were replaced throughout the 2021 GRC period. Therefore, Cal Advocates' claim that the proposed replacement rate in the 2024 GRC is only about 1.7 times greater than what Cal Water executed in the 2021 GRC, not the 15 times that Cal Advocates claims. Furthermore, as of February 28, 2025, more than 30 plastic service lines have already been replaced, and district staff are in the process of securing permits for an additional 40 more. At this pace, the district is on track to meet its target replacement rate for the program by year-end. District staff are also actively coordinating with its prime contractor to add an additional crew to the effort which will further accelerate efforts. Given these facts, Cal Advocates' argument that Cal Water cannot complete the project or that Cal Water's proposed schedule is unrealistic is completely unfounded and inaccurate.

Cal Advocates' Recommendation Relies on Historical Ratemaking, Contrary to Commission Policy

Cal Advocates' suggestion that Cal Water should complete replacements first and seek cost recovery in future GRCs contradicts California's forward-looking ratemaking framework. The CPUC's Interim Rate Case Plan Decision (D.04-06-018) establishes that water utilities should use forecasted test years to project costs and set rates accordingly. The decision states:

"*The Commission's current practice for water utilities is to use tow forecasted test years. Using a forecast allows the utility to project expected costs and determine the revenue*

required to recover those costs, and the Commission to tailor the rate changes to match anticipated cost changes."[33]

By advocating for retroactive cost recovery, Cal Advocates undermines the purpose of the GRC process, which is intended to enable proactive infrastructure investment before service disruptions and cost escalations occur. This also disregards Commission's methodologies emphasizing long-term capital planning to ensure system resilience as discussed in D.07-05-062. Adopting a historical ratemaking model would expose customers to higher long-term costs due to increased emergency repairs, unplanned outages, and inefficient project execution.

Cal Advocates Did <u>Not</u> Dispute the Program's Necessity

While Cal Advocates recommended scaling down the program, they do not dispute its necessity or the impending wave of replacements facing the Bakersfield District. In fact, their recommendation to continue supporting the program implicitly acknowledges its importance. Bakersfield District has the highest per-capita service leak rate among all Cal Water districts, with failure rates more than twice the national average. Studies by the American Water Works Association (AWWA) confirm that service lines, especially plastic ones, are among the most vulnerable components in water distribution systems. Factors such as rocky soil conditions, tree root intrusion, and chlorine-induced degradation all can accelerate their failure. To ensure reliable service and minimize costly emergency repairs, replacing these plastic lines with durable copper alternatives is essential. Delaying action will only lead to more frequent failures and higher long-term costs for both Cal Water and its customers.

Conclusion:

Cal Advocates' recommendation to limit the *Service Line Replacement Program* is based on flawed assumptions about Cal Water's construction capabilities and a misunderstanding of the 2021 pilot's purpose. Their position disregards the critical role of proactive asset management in maintaining reliable water service and controlling long-term costs, contradicting the Commission's directives and industry best practices. The 2021 GRC pilot results and Cal Water's *Service Line Replacement Program* justification both provide compelling evidence supporting an expanded

[33] D.04-06-18, pg. 6

replacement effort in Bakersfield. Cal Advocates does not dispute the program's merits, including cost savings, increased system reliability, and improved service levels. Instead, their primary objection that a 15-fold increase in the replacement rate is unrealistic, completely mischaracterizes Cal Water's actual capabilities and is factually incorrect. Given the clear benefits to customers, denying the full scope of this program would be like developing a cure for a disease but restricting its availability to only a small fraction of those in need despite having the resources to help many more. Cal Water's customers deserve better. Therefore, Cal Water strongly urges the Commission to approve the Service Line Replacement Program in its entirety, with a budget of $6,988,593 in 2025, $7,119,322 in 2026, and $7,266,066 in 2027, to safeguard the reliability and sustainability of Bakersfield's water infrastructure for years to come.

Table 1: Service Line Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	00133164	BK 2025 Service Line Replacements	6,988,593	700,592	6,988,593	(6,288,000)
2026	00133165	BK 2026 Service Line Replacements	7,119,322	736,060	7,119,322	(6,383,262)
2027	00133166	BK 2027 Service Line Replacements	7,266,066	773,322	7,266,066	(6,492,743)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	-	-	-
	2025	6,988,593	700,592	6,988,593
	2026	7,119,322	736,060	7,119,322
	2027	7,266,066	773,322	7,266,066
	Total Direct Cost	21,373,980	2,209,975	21,373,980

Tank Improvements Program

Issue: (Common Plant Project Justification Report, pp. 243-288)

Cal Water's Tank Improvement Program is a comprehensive initiative aimed at maintaining and enhancing the reliability of its tank infrastructure, which is crucial for water storage and distribution. The program involves regular inspections and evaluations of tanks to assess their structural integrity, compliance with regulations, and effectiveness of corrosion control systems. Based on these assessments, tanks may undergo various improvements, including the application of engineered coating systems to prevent corrosion, installation of safety appurtenances like manways and ladders, and seismic retrofits to protect against earthquakes.

The program also addresses the need for overflow airgaps to prevent backflow, flush cleanouts for efficient maintenance, and improved ventilation to reduce corrosion. Additionally, the program includes the installation of roof drains to prevent water pooling and the maintenance of berms and swales to manage runoff and ensure worker safety. The support structures of the tanks, such as roof rafters and columns, are also evaluated and replaced if necessary to ensure the continued reliability of the tank infrastructure.

The Tank Improvement Program is designed to proactively address potential issues before they lead to catastrophic failures, ensuring the safety and reliability of Cal Water's water storage and distribution system. By implementing these measures, Cal Water aims to provide its customers with a consistent and reliable water supply while minimizing the risk of infrastructure failures.

Cal Advocates Position: (Sorensen Testimony, pp. 4-1 to 4-2)

While Cal Advocates do not disagree with the merit of these projects, Cal Advocates recommends the Commission consider reducing the budget based on Cal Water’s historical performance. Cal Advocates recommends the Commission should approve the following budget for tank improvements: $364,305 for 2025, $675,694 for 2026, and $265,125 for 2027.

Cal Water Rebuttal:

Cal Water submitted several asset replacement programs in its GRC filing. These programs are meant for assets that are necessary for normal and emergency operations of a water distribution system. Routine replacements are required in order to maintain the reliability of each system. For reasons unexplained in Cal Advocates report, they chose different methods to analyze each of Cal Water's programs and propose its own recommendations for reductions to Cal Water's filing. The methodologies chosen by Cal Advocates are not consistent between programs in, what appears to be, an attempt to "cherry-pick" a result rather than evaluate the merits of the program or understand the needs of the water systems. Since Cal Water's asset replacement programs are consistent in scope, and only vary by asset type, the evaluation methodology undertaken by Cal Advocates should be consistent and focus on the needs of the water system.

Additionally, Cal Advocates' recommendation to reduce the program based on historical performance is flawed because it assumes that the past rate of completion will meet the future needs of the water system.

Cal Advocates Calculation of Historical Replacement Rate is Misleading:

Although Cal Advocates recommended scaling down the program, it did not question the program's merit. Cal Advocates asserts that Cal Water is only able to deliver 9.83% ($340,328/year) of the 2022 tank projects. This calculation is artificially low and does not represent Cal Water's actual performance. The year 2022 was marked by ongoing challenges stemming from the pandemic, such as supply chain disruptions. Consequently, this period does not provide a typical or accurate representation of performance metrics.

To accurately understand Cal Water's capabilities in delivering tank-related improvements, it is essential to consider the costs from 2022 through 2024 for both planned and unplanned tank improvements. On average, when considering a comprehensive tank project portfolio, Cal Water completed $9.57 million per year of improvements ($6.89 million in 2022, $10.06 million in 2023, and $11.76 million in 2024). This comprehensive completion rate of $9.57 million per year is significantly higher than the erroneous completion rate of 9.83% ($340,328/year) calculated by Cal Advocates.

Cal Water Implements Strategic and Enhanced Project Delivery

Cal Advocates uses an erroneous completion rate to imply that Cal Water cannot deliver beyond its historical performance. This conclusion is illogical, as Cal Advocates' methodology ignores changing conditions, and the improvements Cal Water is making to its project delivery process to maximize output. Recently, Cal Water conducted a competitive process to retain the services of tank improvement contractors. Currently, 2 suppliers are in the process of being awarded Master Service Agreements to deliver tank-related projects at a competitive cost. This effectively doubles the number of contractors, as Cal Water historically relied on a single contractor for this work.

Cal Advocates' Recommendation Increases Risks to Customers from Delayed proactive Tank Improvements

Due to the ongoing climate change and increasing year-round fire risk, performing tank improvements in a manner that minimizes tank downtime, as proposed by Cal Water, is critical to support firefighting activities. Cal Advocates' recommendation to reduce the proposed budget by 90% will result in greater corrosion to the water tanks, necessitating more unplanned repairs that could take tank offline during high wildfire risk period. As the scope of repairs continues to grow due to metal loss, the construction time required to replace these components also increases. Several weeks would typically need to be added to the construction schedule to replace additional tank components such as floors, columns, and roofs, during which time the tank cannot be in operation. The proposed tank improvement program proactively manages potential issues, before escalating to unnecessary and high-cost repairs. Tanks being out of service increases the risk to customers and communities, as they cannot support firefighting efforts.

Cal Advocates' recommendation does not bring Cost Savings to the Customer

The past rate of completion does not determine the future needs of the water system. The tank improvement projects proposed by Cal Water are evidence-based, sourced from recent direct inspections conducted by Cal Water engineers. The purpose of these projects is to replace components that have experienced severe corrosion, bring appurtenances such as ladders, railings, and entryways up to safety codes, and replace corrosion control elements to protect the tank from further degradation. These projects maintain the physical integrity of the tank, ensure the

potable water remains sanitary and safe for customers, and protect employees from harm with enhanced safety features.

The schedule and budgets for these improvements are designed to serve as "just in time" interventions, addressing issues before the tank experiences significant and costly corrosion or failures. For example, if the roof of a tank suffers extreme corrosion, replacement can cost upwards of $1 million and result in the tank being out of service for several months. Since corrosion activity is constant, extreme deferrals of work, as recommended by Cal Advocates, will only increase costs for customers. The scope of work proposed by Cal Water will continue to grow as corrosion-induced metal loss affects greater portions of the tank, such as the floors, columns, and roof, necessitating replacement.

Cal Water's recommendation for contingency is supported by industry practices and its vast experience

Project contingency is a critical aspect of financial planning and risk management. Unforeseeable project challenges can emerge when the tank is removed from service, and these need to be addressed to ensure reliable and safe operations. For example, unforeseen corrosion on portions of the tank that are difficult to inspect, such as roof rafters or the underside of the floor may need to be addressed during construction. Components such as roof rafters, roof vents, and screens experience a high rate of corrosion due to the moist environment of the roof. These components need to be replaced to maintain the sanitary features and structural integrity of the tank. The Commission should approve the industry-standard contingencies proposed by Cal Water to ensure project integrity. For further details, please refer to the Contingency section in Book 2.

Conclusion

Cal Water recommends that the Commission find the Tank Improvement Program warranted and appropriate given that consistent and reliable water supply is critical to fight fires and meeting the needs of customers. Furthermore, Cal Water's recommendation to invest $4,063,014 in 2025, $8,236,887 in 2026, and $3,278,603 in 2027 into its tank infrastructure is clearly achievable based on the actual average completion rate of $9.75M per year (2022-2024),

along with increasing the number of contractors ready to deliver the tank improvement projects.[34] The Commission should reject Cal Advocates' recommended reduction as it is not in the best interest of the customers. Their calculations fall severely short of Cal Water's actual performance and their recommendations will reduce service, negatively impact emergency response, and increase costs, with no benefit. Without a proactive tank improvement program, the distribution system may fail to meet supply demands, exposing the customers to an excessive amount of risk and consequences.

[34] Please see Attachment 1: List of completed Tank Improvements from 2022 to 2024

1 ***Tank Improvements Program Attachment 1: List of completed Tank Improvements from 2022 to 2024***

WO Number	Description	District	In Service Year		Total Cost
00135799	HR 023-T3 Tank Retrofits	Hermosa Redondo	2024	$	81,739.50
00123828	MPS 027-T1 - Tank Retrofits	Mid Peninsula	2024	$	14,891.40
00123626	BK 188-T1 - Seismic Retrofit	Bakersfield	2024	$	111,556.84
00123628	BK 188-T2 - Seismic Retrofit	Bakersfield	2024	$	89,294.75
00115124	PV 045-T1: Tank Removal	Palos Verdes	2024	$	195,908.89
00135960	LAS 111-T1 Retrofits	Los Altos Suburban	2024	$	40,892.27
00123371	BK 116-T3 - Tank Retrofits	Bakersfield	2024	$	43,894.63
00123483	BK 116-T3 - Interior Coating	Bakersfield	2024	$	464,598.33
00123397	LAS Tank Exterior Ladder Lifelines	Los Altos Suburban	2024	$	206,349.73
00123141	BG Tank Exterior Ladder Lifelines	Bear Gulch	2024	$	131,544.84
00124959	PV 015-PT1 - Saddle Retrofit	Palos Verdes	2024	$	14,050.31
00123413	MPS Tank Exterior Ladder Lifelines	Mid Peninsula	2024	$	161,352.87
00123851	SLN 016-T1 - Tank Retrofits	Salinas	2024	$	86,865.95
00134271	HAW 008-T1 Structure Restoration	Hawthorne	2024	$	60,833.94
00134274	HAW 008-T2 Structure Restoration	Hawthorne	2024	$	61,881.19
00124796	PV 049-T2 - Int. & Ext. Coating	Palos Verdes	2024	$	1,336,291.87
00132022	PV 049-T2 Roof Replacement	Palos Verdes	2024	$	2,647,144.25
00123549	BG 022-T1 - Exterior Coating	Bear Gulch	2024	$	36,435.83
00123568	MPS 106-T2 - Int. & Ext. Coating	Mid Peninsula	2024	$	315,310.33
00116139	SSF 011-T1: Seismic Retrofit	So. San Francisco	2024	$	125,706.82
00114688	BG 005-T9 - Comp. Interior Coating	Bear Gulch	2024	$	483,417.54
00123541	CH 064-PT1 - Pressure Vessel Rehab	Chico	2024	$	60,329.30
00123551	BG 041-T2 - Interior Coating	Bear Gulch	2024	$	169,284.11
00134832	MPS 017-T1 Retrofits	Mid Peninsula	2024	$	-
00134270	LIV 023-T2 Retrofits	Livermore	2024	$	629,931.35
00115464	MPS 031-T1 - Comp Ext & Int Coating	Mid Peninsula	2024	$	316,444.16
00123582	MPS 017-T3 - Exterior Coating	Mid Peninsula	2024	$	46,199.60
00134789	MPS 017-T2 Retrofits	Mid Peninsula	2024	$	-
00134960	MPS 106-T2 Retrofits	Mid Peninsula	2024	$	-

WO Number	Description	District	In Service Year		Total Cost
00115970	BG 005-T9 - New 30" Manway	Bear Gulch	2024	$	49,726.05
00115716	MPS 031-T1 - Tank Struct Retrofit	Mid Peninsula	2024	$	153,488.50
00130599	SSF 008-T1 Roof Replacement	So. San Francisco	2024	$	401,522.61
00124795	LAS 119-T2 - Interior Coating	Los Altos Suburban	2024	$	268,139.85
00123400	LIV Tank Exterior Ladder Lifelines	Livermore	2024	$	70,924.11
00098254	ARMV 002-T1 - Complete Ext. Coating	Armstrong Valley	2024	$	65,156.48
00098466	ARMV 002-T1-Overflow Airgap Retrof.	Armstrong Valley	2024	$	21,530.86
00123592	SLN 072-T1 - Interior Coating	Salinas	2024	$	101,812.49
00123452	LAS 113-T1 - Tank Retrofits	Los Altos Suburban	2024	$	96,849.47
00123579	LIV 009-T4 - Int. & Ext. Coating	Livermore	2024	$	362,967.68
00123857	LIV 009-T4 - Tank Retrofits	Livermore	2024	$	108,986.61
00123290	LAS 042-T2 - Tank Retrofits	Los Altos Suburban	2024	$	27,589.94
00123286	LAS 121-T3 - Tank Retrofits	Los Altos Suburban	2024	$	15,142.35
00115989	ARM_STA_02_T1_Seismic_Upgrad	Armstrong Valley	2024	$	62,093.55
00123663	LIV 025-T3 - Tank Retrofit	Livermore	2024	$	21,585.80
00134358	LAS 119-T2 Retrofit	Los Altos Suburban	2024	$	5,580.00
00116062	ARMV 002-T1 - Complete Int. Coating	Armstrong Valley	2024	$	179,845.77
00123555	BK 216-T1 - Exterior Coating	Bakersfield	2024	$	315,797.69
00124636	VIS Elev Tanks Seismic/Geotech Stud	Visalia	2024	$	164,712.77
00133427	BK 216-T1: Cupola Vent & Halo	Bakersfield	2024	$	101,808.28
00123424	SLN Tank Exterior Ladder Lifelines	Salinas	2024	$	103,704.28
00116006	LIV 023-T1 - Tank Retrofits	Livermore	2024	$	80,645.87
00123426	SSF Tank Exterior Ladder Lifelines	So. San Francisco	2024	$	65,489.75
00123338	BG 030-T1 - Tank Retrofits	Bear Gulch	2024	$	39,238.57
00123573	BG 019-T1 - Interior Coating	Bear Gulch	2024	$	360,232.89
00123461	BG 019-T1 - Tank Retrofits	Bear Gulch	2024	$	66,521.39
00123245	KC Tank Exterior Ladder Lifelines	King City	2024	$	30,517.60
00123467	LIV 022-T2 - Tank Retrofits	Livermore	2024	$	34,361.32
00117287	MPS 125-T1 - Tank Demolition	Mid Peninsula	2024	$	77,354.54
00123554	BK 164-T1 - Int. & Ext. Coating	Bakersfield	2024	$	370,115.39
00123468	LIV 022-T1 - Tank Retrofits	Livermore	2023	$	48,374.96

WO Number	Description	District	In Service Year		Total Cost
00123514	DOM Tank Exterior Ladder Lifelines	Dominguez	2023	$	31,130.04
00123518	ELA Tank Exterior Ladder Lifelines	East Los Angeles	2023	$	96,429.55
00123522	HR Tank Exterior Ladder Lifelines	Hermosa Redondo	2023	$	77,205.21
00126039	TAB 1525 (T2) - Tank Retrofits	Travis Airforce Base	2023	$	186,866.61
00115844	MPS 118- T1- Tank Struct Retrofit	Mid Peninsula	2023	$	96,610.69
00123251	LUC 002-T1 - Tank Retrofits	Lucerne	2023	$	32,931.46
00123558	HR 027-T1 - Interior Coating	Hermosa Redondo	2023	$	413,179.98
00123330	LIV 018-T2 - Tank Retrofits	Livermore	2023	$	23,170.57
00123567	MPS 030-T1 - Int. & Ext. Coating	Mid Peninsula	2023	$	423,891.97
00123423	RDV Tank Exterior Ladder Lifelines	Redwood Valley	2023	$	49,914.53
00123530	PV Tank Exterior Ladder Lifelines	Palos Verdes	2023	$	82,547.30
00123204	LIV 013-T2 - Tank Retrofits	Livermore	2023	$	10,592.63
00115992	MPS 118-T2 - Tank Struct Retrofits	Mid Peninsula	2023	$	46,749.60
00123572	SSF 014-T1 - Int. & Ext. Coating	So. San Francisco	2023	$	618,798.48
00115635	SSF 014-T1: Repl Interior Ladder	So. San Francisco	2023	$	1,645.19
00123571	SSF 001-T2 - Interior Coating	So. San Francisco	2023	$	32,744.58
00123321	MPS 030-T1 - Tank Retrofits	Mid Peninsula	2023	$	26,088.59
00123219	WIL 011-T1 - Ext Ladder Lifeline	Willows	2023	$	10,747.78
00123570	SSF 001-T1 - Exterior Coating	So. San Francisco	2023	$	102,349.56
00123316	SSF 001-T1 - Tank Retrofits	So. San Francisco	2023	$	40,964.65
00115636	PV 050-T1 - Install Exterior Ladder	Palos Verdes	2023	$	25,221.22
00116007	PV 051-T1 - Install Ext. Ladder	Palos Verdes	2023	$	25,737.59
00123531	WLK Tank Exterior Ladder Lifelines	Westlake	2023	$	16,344.15
00129994	HR 029-T2: Int Coating Retirement	Hermosa Redondo	2023	$	-
00129995	HR 005-T1 Coating Retirement	Hermosa Redondo	2023	$	-
00123318	SSF 001-T2 - Tank Retrofits	So. San Francisco	2023	$	4,093.80
00123638	MRL Tank Exterior Ladder Lifelines	Marysville	2023	$	29,282.65
00123358	SSF 014-T1 - Tank Retrofits	So. San Francisco	2023	$	88,209.52
00115595	PV 051-T1 - Interior Coating	Palos Verdes	2023	$	137,443.85
00123353	HR 005-T2 - Tank Retrofits	Hermosa Redondo	2023	$	35,929.11
00123557	HR 005-T2 - Int. & Ext. Coating	Hermosa Redondo	2023	$	984,476.58

WO Number	Description	District	In Service Year		Total Cost
00123577	HR 005-T1 - Exterior Coating	Hermosa Redondo	2023	$	186,789.19
00131201	PV 046-T1 Roof Hatch	Palos Verdes	2023	$	10,796.56
00131276	HR 026-T3 New Manway	Hermosa Redondo	2023	$	16,981.33
00123566	MPS 025-T2 - Interior Coating	Mid Peninsula	2023	$	287,623.57
00131407	MPS 025-T2 Retrofits	Mid Peninsula	2023	$	15,864.35
00123484	BK 188-T1 - Exterior Coating	Bakersfield	2023	$	83,650.33
00123217	DIX 010-T1 - Ext Ladder Lifeline	Dixon	2023	$	12,523.04
00123485	BK 188-T2 - Exterior Coating	Bakersfield	2023	$	134,568.67
00124634	MRL 010-T2 - Seismic/Geotech Study	Marysville	2023	$	78,003.85
00131560	WIL 002-T1 Retrofits	Willows	2023	$	16,963.54
00123248	ORO Tank Exterior Ladder Lifelines	Oroville	2023	$	14,934.59
00116579	COS 007 - Replace Filter Vessels	Coast Springs	2023	$	295,242.55
00123562	LAS 019-T1 - Ext. Coating	Los Altos Suburban	2023	$	55,004.60
00123842	LAS 019-T1 - Tank Retrofits	Los Altos Suburban	2023	$	83,904.50
00124798	BK 023-T2 Int & Ext Coating	Bakersfield	2023	$	747,342.34
00124599	WIL 002-T1 - Seismic/Geotech Study	Willows	2023	$	68,400.49
00114896	STK 001-T2: Tank Structure Retro	Stockton	2023	$	247,709.94
00123563	LAS 114-T1 - Ext. Coating	Los Altos Suburban	2023	$	186,816.05
00130001	PV 050-T1 Coating Retirement	Palos Verdes	2023	$	-
00130002	DOM 203-T3 Coating Retirement	Dominguez	2023	$	-
00123565	LAS 123-T1 - Interior Coating	Los Altos Suburban	2023	$	209,355.76
00129953	ELA 042-T1 Int Coating Retirement	East Los Angeles	2023	$	-
00123556	DOM 232-T1 - Exterior Coating	Dominguez	2023	$	314,277.43
00123300	SSF 011-T2 - Tank Retrofits	So. San Francisco	2023	$	23,435.57
00123674	LUC 004-T1 - Tank Retrofit	Lucerne	2023	$	51,104.46
00126037	TAB 1525 (T2) - Interior Coating	Travis Airforce Base	2023	$	744,665.11
00124632	DIX 001-T1 - Seismic/Geotech Study	Dixon	2023	$	94,760.50
00123428	STK Tank Exterior Ladder Lifelines	Stockton	2023	$	40,646.12
00129968	HR 029-T2 Ext Coating Retirement	Hermosa Redondo	2023	$	-
00129996	MRL 010-T2 Coating Retire	Marysville	2023	$	-
00129998	SSF 004-T3 Coating Retirement	So. San Francisco	2023	$	-

WO Number	Description	District	In Service Year		Total Cost
00130003	COS 008-T1 Coating Retirement	Coast Springs	2023	$	-
00123559	KC 010-T1 - Int. & Ext. Coating	King City	2023	$	181,107.72
00123379	LAS 007-T1 - Tank Retrofits	Los Altos Suburban	2023	$	49,185.17
00123470	LAS 123-T1 - Tank Retrofits	Los Altos Suburban	2023	$	38,633.49
00123560	LAS 007-T1 - Ext. Coating	Los Altos Suburban	2023	$	41,825.48
00130365	LAS 013-PT1 Removal	Los Altos Suburban	2023	$	33,386.16
00123474	BK 073-T5 - Exterior Coating	Bakersfield	2023	$	145,198.96
00123546	PV 049-T1 - Interior Coating	Palos Verdes	2023	$	454,350.91
00123344	LAS 114-T1 - Tank Retrofits	Los Altos Suburban	2023	$	21,270.61
00123408	MPS 033-T2 - Tank Retrofits	Mid Peninsula	2023	$	45,211.42
00123536	MPS 033-T2 - Interior Coating	Mid Peninsula	2023	$	289,726.99
00130353	MPS 033-T2 Roof Retrofits	Mid Peninsula	2023	$	94,797.52
00129961	ELA 040-T1 Coating Retirement	East Los Angeles	2023	$	-
00123550	BG 037-T1 Int. & Ext. Coating	Bear Gulch	2023	$	84,409.69
00123650	BG 037-T1 - Tank Retrofits	Bear Gulch	2023	$	95,831.59
00130195	PV 041-T1 Roof Hatch Replace	Palos Verdes	2023	$	19,069.16
00130367	PV 049-T1 Tank Retrofits	Palos Verdes	2023	$	17,219.32
00123304	KC 010-T1 - Tank Retrofits	King City	2023	$	10,216.83
00116182	ARMV 202-T1 - Replace Int. Ladder	Armstrong Valley	2023	$	8,422.52
00123438	LAS 114-T2 - Tank Retrofits	Los Altos Suburban	2023	$	57,056.38
00123131	BG 002-T2 - Tank Retrofits	Bear Gulch	2023	$	10,541.31
00129792	MPS 120-T1 Interior Coating	Mid Peninsula	2023	$	282,064.45
00123363	BG 028-T1 - Tank Retrofits	Bear Gulch	2023	$	48,481.73
00123388	BG 028-T1 - Interior Coating	Bear Gulch	2023	$	206,145.16
00123387	HR 026-T2 - Tank Retrofits	Hermosa Redondo	2022	$	114,577.02
00123491	HR 026-T2 - Int. & Ext. Coating	Hermosa Redondo	2022	$	523,769.43
00116009	BK 129-T1 - Tank Retrofits	Bakersfield	2022	$	6,466.29
00116032	BK 192-T1 - Overflow Airgap Retro	Bakersfield	2022	$	4,521.13
00123202	CH Tank Exterior Ladder Lifelines	Chico	2022	$	26,331.82
00123234	BG 002-T1 - Tank Retrofits	Bear Gulch	2022	$	21,115.57
00123385	DOM 277-T1 - Tank Retrofits	Dominguez	2022	$	31,172.78

WO Number	Description	District	In Service Year		Total Cost
00129777	MPS 120-T1 Retrofits	Mid Peninsula	2022	$	48,362.10
00115667	MPS 120-T1 - Tank Struc Retrofits	Mid Peninsula	2022	$	24,449.79
00123535	MPS 033-T1 - Interior Coating	Mid Peninsula	2022	$	261,828.41
00129405	MPS 033-T1 Retrofits	Mid Peninsula	2022	$	43,007.03
00115570	KERV 001-T3 - Partial Int. Coating	Kernville	2022	$	123,877.08
00116350	KERV 001-T3: Tank Retrofit	Kern River Valley	2022	$	5,398.44
00123237	DOM 203-T3 - Tank Retrofits	Dominguez	2022	$	18,140.87
00129488	ELA 061-T1 Ext Coating	East Los Angeles	2022	$	53,000.00
00116242	PV 023-T1: Appur Upgrades	Palos Verdes	2022	$	177,697.31
00123539	MPS 112-T1 - Exterior Coating	Mid Peninsula	2022	$	156,721.95
00123542	MPS 112-T2 - Exterior Coating	Mid Peninsula	2022	$	201,537.71
00123544	MPS 112-T3 - Exterior Coating	Mid Peninsula	2022	$	229,835.18
00123639	VIS Tank Exterior Ladder Lifelines	Visalia	2022	$	16,275.05
00123228	SEL Tank Exterior Ladder Lifelines	Selma	2022	$	9,520.18
00123325	LAS 121-T2 - Tank Retrofits	Los Altos Suburban	2022	$	20,117.96
00123384	LAS 121-T1 - Tank Retrofits	Los Altos Suburban	2022	$	69,271.47
00123280	ELA 004-T1 - Tank Retrofits	East Los Angeles	2022	$	59,126.32
00123488	ELA 004-T1 - Int. & Ext. Coating	East Los Angeles	2022	$	600,646.55
00123487	DOM 203-T3 - Interior Coating	Dominguez	2022	$	805,609.01
00123547	SLN 047-T1 - Exterior Coating	Salinas	2022	$	155,713.14
00125062	CSS Tank Inspection Tools ROV	Engr Asset Management	2022	$	43,276.77
00129341	BG-015 Retire Assets	Bear Gulch	2022	$	-
00123383	LAS 119-T1 - Tank Retrofits	Los Altos Suburban	2022	$	42,569.11
00124794	MRL 010-T2 - Exterior Coating	Marysville	2022	$	103,413.65
00123545	ORO 015-T1 - Exterior Coating	Oroville	2022	$	117,082.93
00111378	CH 003 T4 - Tank Demolition	Chico	2022	$	187,383.77
00123525	KC 008-PT1 - Exterior Coating	King City	2022	$	5,197.84
00124782	SLN 061-PT1 - Exterior Coating	Salinas	2022	$	5,204.21
00124687	LAS 010-T2 - Tank Retrofits	Los Altos Suburban	2022	$	32,369.63
00123538	MPS 106-T3 - Exterior Coating	Mid Peninsula	2022	$	60,029.78
00119312	HAW 001-T3 Tank Replacement	Hawthorne	2022	$	276,673.29

WO Number	Description	District	In Service Year		Total Cost
00114737	SLN 052-T2 - Comp. Ext. Coating	Salinas	2022	$	109,408.95
00115664	SLN 052-T3 - Replace Cupola Vent	Salinas	2022	$	44,505.12
00123497	LAS 104-T1 - Exterior Coating	Los Altos Suburban	2022	$	78,467.59
00128728	SLN 052-T3 Exterior Coating	Salinas	2022	$	39,773.01
00123493	LAS 010-T2 - Interior Coating	Los Altos Suburban	2022	$	154,032.72
00128057	KRV (4) Poly Tanks Purchase	Kern River Valley	2022	$	39,268.68
00115665	SLN 052-T2 - Tank Structur Retrofit	Salinas	2022	$	84,579.19
00128308	AV (2) Poly Tanks Purchase	Antelope Valley	2022	$	23,493.84
00123670	LIV 014-TP1 - Exterior Coating	Livermore	2022	$	9,339.34
00123671	LIV 014-TP2 - Exterior Coating	Livermore	2022	$	8,448.31
00115591	PV 023-T1 - Partial Int. Coating	Palos Verdes	2022	$	357,955.02
00127259	LIV 010-T2 & 011-T3 Railing Retro	Livermore	2022	$	10,837.87
00127647	DOM 298-T1 Tank Retrofits	Dominguez	2022	$	46,322.47
00115459	SLN 204-T1 - Partial Int. Coating	Salinas	2022	$	325,696.02
00115645	SLN 204-T1 - Replace Cupola Vent	Salinas	2022	$	20,413.74
00115542	CH 066-T1 - Complete Int Coating	Chico	2022	$	279,586.72
00115680	MPS 119-T1 - Tank Struct Retrofit	Mid Peninsula	2022	$	60,187.38
00127604	CH 066-T1 Retrofits	Chico	2022	$	35,978.92
00127775	BK 116 Overflow Modifications	Bakersfield	2022	$	20,642.16
00128282	LAS 015-T1 Column Replacement	Los Altos Suburban	2022	$	7,233.55
00116160	MPS 017-T3 - Tank Retrofits	Mid Peninsula	2022	$	51,358.86
00115710	MPS 106-T3 - Tank Struct Retrofit	Mid Peninsula	2022	$	37,833.44
00127362	WIL 011-T1 Retrofits	Willows	2022	$	6,636.43
00116143	KC 013-T1 - Cupola Vent Install	King City	2022	$	17,921.66
00115709	SSF 004-T3 & T4 - Ext & Int Coating	So. San Francisco	2022	$	338,552.99

1

Table 1: Tank Improvements Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00132982	AV 2026 Tank Improvements	6,621	405	6,621	(6,217)
2026	00132999	MPS 2025 Tank Improvements	1,585,920	118,821	1,585,920	(1,467,099)
2026	00133000	SSF 2025 Tank Improvements	613,682	55,152	613,682	(558,530)
2026	00133001	MPS 2026 Tank Improvements	1,021,270	91,341	1,021,270	(929,928)
2026	00133002	SSF 2026 Tank Improvements	663,877	59,800	663,877	(604,076)
2027	00133003	SSF 2027 Tank Improvements	284,400	4,936	284,400	(279,464)
2027	00133004	MPS 2027 Tank Improvements	948,073	84,795	948,073	(863,278)
2026	00133026	BG 2025 Tank Improvements	1,104,721	99,281	1,104,721	(1,005,439)
2027	00133028	BG 2027 Tank Improvements	305,921	27,619	305,921	(278,303)
2025	00133037	CH 2025 Tank Improvements	818,955	73,600	818,955	(745,356)
2025	00133072	ELA 2025 Tank Improvements	34,544	3,104	34,544	(31,440)
2026	00133073	ELA 2026 Tank Improvements	178,262	16,057	178,262	(162,204)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00133074	ELA 2027 Tank Improvements	1,162,385	95,910	1,162,385	(1,066,475)
2026	00133089	KC 2026 Tank Improvements	250,888	20,658	250,888	(230,230)
2027	00133090	KC 2027 Tank Improvements	24,931	2,053	24,931	(22,879)
2025	00133103	LAS 2025 Tank Improvements	1,620,985	145,678	1,620,985	(1,475,307)
2025	00133106	LIV 2025 Tank Improvements	49,224	4,424	49,224	(44,800)
2026	00133107	LIV 2026 Tank Improvements	1,319,796	108,449	1,319,796	(1,211,348)
2025	00133137	WIL 2025 Tank Improvements	316,221	28,419	316,221	(287,803)
2025	00133200	STK 2025 Tank Improvements	559,853	50,314	559,853	(509,539)
2025	00133218	SLN 2025 Tank Improvements	105,878	9,515	105,878	(96,362)
2026	00133219	SLN 2026 Tank Improvements	641,976	57,828	641,976	(584,148)
2027	00133220	SLN 2027 Tank Improvements	306,319	27,654	306,319	(278,666)
2025	00133251	SEL 2025 Tank Improvements	597,508	49,251	597,508	(548,257)
2026	00133487	RDV 2025 Tank Improvements	476,111	42,788	476,111	(433,323)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00133488	RDV 2026 Tank Improvements	333,610	5,113	333,610	(328,497)
2027	00133489	RDV 2027 Tank Improvements	246,573	22,159	246,573	(224,413)
2025	00133496	TAB 2025 Tank Improvements	1,089,281	97,662	1,089,281	(991,619)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	-	-	-
	2025	5,192,450	461,967	5,192,450
	2026	8,196,733	675,694	8,196,733
	2027	3,278,603	265,125	3,278,603
	Total Direct Cost	16,667,786	1,402,786	16,667,786

1

Well Renewal Program

Issue: (Common Plant Project Justification Report, pp. 473-532)

Cal Water's Well Renewal Program ensures a reliable water supply by renewing and enhancing well inventories before issues arise. The program identifies candidates for renewal and implements improvements like installing structural liners and redeveloping wells to extend their service life.

Wells are evaluated on a scale from 1 (excellent) to 5 (failed), using desktop evaluations, performance analysis, and visual inspections. Factors include age, performance, sand production, work history, and water quality.

Cal Water recommends continuing the renewal of wells to enhance system reliability until a comprehensive well replacement and augmentation program is in place. Well Renewals projects are beneficial to the customers as they extend the life of existing wells approximately 15 years at a reasonable cost, maximizing the value of the well and supporting infrastructure at the station (e.g. building, electrical cabinet, piping, etc.). The program also includes summaries of well conditions in selected districts and proposes projects to address degrading infrastructure. Changes may be made as new data prioritizes higher-need areas.

Cal Advocates Position: (Sorensen Testimony, pp. 6-4 to 6-5)

While Cal Advocates do not disagree with the merit of these projects, Cal Advocates recommends the Commission consider reducing the budget based on Cal Water's historical performance. Cal Advocates recommends the Commission should approve the following budget for Cal Water's Well Infrastructure Renewal Program: $40,588 for 2025, $123,987 for 2026, and $127,392 for 2027.

Cal Water Rebuttal:

Cal Water submitted several asset replacement programs in its GRC filing. These programs are meant for assets that are necessary for normal and emergency operations of a water distribution system. Routine replacements are required in order to maintain the reliability of each system. For reasons unexplained in Cal Advocates report, Cal Advocates chose different methods

to analyze each of Cal Water's programs and propose its own recommendations for reductions to Cal Water's filing. The methodologies chosen by Cal Advocates are not consistent between programs in, what appears to be, an attempt to "cherry-pick" a result rather than evaluate the merits of the program or understand the needs of the water systems. Since Cal Water's asset replacement programs are consistent in scope, only vary by asset type, the evaluation methodology undertaken by Cal Advocates should be consistent and focus on the needs of the water system.

Additionally, Cal Advocates' recommendation to reduce the program based on historical performance is flawed because it assumes that the past rate of completion will meet the future needs of the water system.

Cal Advocates Calculation of Historical Replacement Rate is Misleading:

Although Cal Advocates recommended scaling down the program, it did not question the program's merit. Cal Advocates' recommendation to reduce the program based on Cal Water's historical performance is misleading. Cal Advocates calculates Cal Water's historical replacement rate by using data from only one year, 2022, where 1 of 7 proposed well renewals was completed. The remaining projects were rescheduled to address higher priority water renewal projects, see Table 1 below.

Firstly, the year 2022 was marked by ongoing challenges stemming from the pandemic, such as supply chain disruptions. Consequently, this period does not provide a typical or accurate representation of performance metrics.

Secondly, regarding the well renewal program, Cal Water requests a programmatic budget for a three-year period rather than an annual budget. We anticipate completing seven well renewal projects within this three-year timeframe, with the proposed start year as indicated in the filing. Given system priorities, Cal Water seeks flexibility in executing these projects, with the understanding that all proposed projects will be completed within the rate case period. Therefore, the annual completion rate, as suggested by Cal Advocates, is not a reliable indicator of Cal Water's capacity.

When considering projects from 2022, 2023, and 2024, Cal Water has accomplished much more than what Cal Advocates presents. Since 2022, 6 well renewals have been completed, and 6 projects are currently scheduled to be completed this year, 2025. With the completion of these projects, 12 well renewals over 4 four years will be completed, which equates to an average completion rate of 3 projects per year. Cal Water is proposing 7 projects from 2025 through 2027, which is equivalent to 2.33 projects per year and thus is within Cal Water's capabilities to deliver.

Table 1: List of completed Well Renewals from 2022 to 2024

WO Number	Description	District	In Service Date
124262	BK 047-02 Well Liner Installation	Bakersfield	2023
124283	LAS 039-01: Well Renewal	Los Altos Suburban	2023
124296	SEL 011-01 Well Renewal	Selma	2024
131443	SLN 44-01 Swage Liner Installation	Salinas	2024
133780	LBOD 013-01: Well Renewal	Kern River Valley	2024
134716	VIS 047-01 Casing Path Well Liner	Visalia	2024

Additionally, Cal Advocates considered costs incurred rather than whole projects completed. It is the completed project that provides value and service to the customers, not a partial implementation as the well renewal would not function properly if incomplete. Cal Advocates' recommendation of $40,588 for 2025, $123,987 for 2026, and $127,392 for 2027 is impractical, as the cost to renew a single well range from $281,935.92 to $297,548. This implies that we will only be able to complete approximately 13%, 42%, and 43% of a single well renewal in 2025, 2026, and 2027, respectively. Their recommendation is not applicable, and would result in an incomplete and non-functional product, which serves no benefit to the customer.

Program Improvements Cal Water Implements Strategic and Enhanced Project Delivery

To further bolster Cal Water capabilities to deliver Well Renewal Projects, Cal Water conducted a competitive process to retain the services of Pump and Well contractors in 2024. 15 contractors were awarded Master Service Agreements to deliver pump and well related projects at a competitive cost. This effectively doubles the number of contractors as Cal Water historically relied on compared to the seven contractors across historically relied on for the entire state for this work. An increase in the number of contractors mitigates the risk of scheduling challenges due to construction crew availability. If a local supplier is not immediately available, Cal Water now has additional alternative suppliers to meet scheduling demands. Additionally, Cal Water is dedicating internal resources to implement the critical, proposed renewal projects.

Cal Advocates' recommendation is not in the best interest of customers.

Ground water wells are a major source of supply in Cal Water districts. The well renewals are estimated to extend the service life of wells by at least 10 to 15 years. Given the aging infrastructure within our water system, this program is a crucial and cost-effective measure to prolong the life of wells until Cal Water can complete more well replacements, which can take up to nine years. Without this essential program, Cal Water would face significant risks in meeting its supply needs, as aging wells would be at a higher risk of failure. The Well Renewals extend the life and reliability of the supply wells which support meeting customer demands and emergency operations such as fighting fires. Reducing the program based on unsound logic as noted above prevents the customers from receiving any benefits the improved infrastructure can deliver.

Cal Water's recommendation for contingency is supported by industry practices and its vast experience

Project contingency is a critical aspect of financial planning and risk management. Unforeseeable project challenges can emerge during well renewal, and these need to be addressed to ensure the successful improvement of the well. For instance, additional well development is often necessary during the final stages of renewal projects to ensure sand and turbidity levels are acceptable. Similarly, modifications to liners and the addition of stabilizing materials may be required during installation. The need for a longer liner may arise, contingent upon the success of stabilizing the well during the installation process. Additionally, environmental findings, such as contamination and discharge water exceedances, must be addressed to meet

regulatory requirements. For BK 047-02 well renewal, during bailing of fill material from the well to prepare for the well liner, test results found mercury that required additional work. The bottom portion of the well needed to be sealed and additional well testing was completed to validate the work was successful. Surface clean-up was performed to remove soil contamination. These are known risks that are difficult to predict and can happen during the execution and should be included as contingency.

For example, after construction, the well must be redeveloped to ensure the water produced is free from sediment. The redevelopment time can vary from well to well. Incomplete development and the resulting sediment can harm pumps and cause issues within the distribution system. Therefore, The Commission should approve the industry-standard contingencies proposed by Cal Water to ensure project integrity. For further justification on Contingency benefits, please refer to Book 2. Contingency Section.

Cal Advocates identified an increase in budgets for the six well renewal projects not yet completed, described on page 6-6 of the Advocates Report[35] . The overall budget increase for all six projects mentioned in the testimony is a modest increase of less than 5% compared to the initial proposal. In administering the program, Cal Water puts its best efforts to manage funding up to the forecasted amounts, while maintaining flexibility to reallocate funds among the various projects within the program. Therefore, scrutinizing the cost of each individual project within the program is unfair.

Conclusion

Cal Water recommends that the Commission find the Well Renewal Program warranted and appropriate, given that reliable water supply wells are critical for maintaining water supply to fight fires and serve customers. Cal Advocates' recommended reduction, based on costs, is not in the best interest of customers because their calculations fall severely short of Cal Water's actual performance and are too low to complete a single project, thus yielding no value to the customers. Cal Water has demonstrated its ability to deliver more than two well renewals per year, which closely aligns with the proposed seven projects from 2025 through 2027. Without a proactive

[35] Pg. 6-6, "REPORT AND RECOMMENDATIONS ON EAST LOS ANGELES DISTRICT, LOS ANGELES COUNTY REGION, SOUTH BAY REGION, COMMON PLANT, SPECIAL REQUEST 11 AND WATER QUALITY"

renewal program, the water supply is at risk of failing to meet its demands, exposing customers to excessive risk and consequences.

Well Renewal Program Attachment 1 – Project Completion

#	WO Number	Description	Year	Status as of January 2025
1	00125130	BG 2022 Sample Sites	2022	in service
2	00124934	BK 2022 Sample Sites	2022	posted to CPR
3	00125173	SLN- SLNH 2022 Sample Site	2022	posted to CPR
4	00125139	CH 2022 Sample Site	2022	posted to CPR
5	00125157	SLN 2022 Sample Site	2022	posted to CPR
6	00125140	KC 2022 Sample Sites	2022	posted to CPR
7	00125137	ORO 2022 Sample Site	2022	posted to CPR
8	00125177	KRV-LBOD 2022 Sample Sites	2022	posted to CPR
9	00125176	KRV-SOLA 2022 Sample Sites	2022	posted to CPR
10	00125152	SSF 2022 Sample Sites	2022	posted to CPR
11	00125175	KRV-KERV 2022 Sample Sites	2022	posted to CPR

Projects Completed	11
Total Projects Proposed	17
Percent Completion	**65%**

Table 2: Well Renewal Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00132272	BK-125-01 Well Renewal	288,984	41,699	288,984	(247,285)
2027	00132277	LAS-027-01 Well Renewal	297,548	42,857	297,548	(254,691)
2026	00132278	LIV-009-01 Well Renewal	288,984	41,699	288,984	(247,285)
2027	00132279	LIV-014-01 Well Renewal	296,202	42,837	296,202	(253,365)
2026	00132281	STK-060-01 Well Renewal	281,936	40,588	281,936	(241,348)
2027	00132282	VIS 045-01 Well Renewal	288,984	41,699	288,984	(247,285)
2025	00132283	VIS 046-01 Well Renewal	281,936	40,588	281,936	(241,348)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	-	-	-
	2025	281,936	40,588	281,936
	2026	859,904	123,987	859,904
	2027	882,734	127,392	882,734
	Total Direct Cost	2,024,574	291,967	2,024,574

Section 3.

Other Programs

Non-Specifics and Unscheduled Program

Issue: (Common Plant Project Justification Book, pp. 646-655)

Cal Water's capital budgeting strategy includes two distinct categories: non-specific and unscheduled budgets. Non-specific budgets are allocated for reactive projects that arise unexpectedly during the year, such as facility or equipment failures that require immediate attention to maintain business operations. These projects cannot wait for the next capital budget or General Rate Case (GRC) cycle. On the other hand, unscheduled budgets are reserved for a small subset of asset replacement projects that occur with some frequency but cannot be predicted in advance. Examples include small main breaks, hit fire hydrants, or premature service line failures.

Historically, Cal Water proposed these budgets together as one non-specific budget. However, in the 2021 GRC, the company separated them to provide better transparency on the difference between controllable costs and the growing costs of Cal Water's uncontrollable work. Both budgets are developed based on historical trends and adjusted for inflation. The non-specific budget for the 2024 GRC is based on a five-year historical average from 2018 to 2022, with a 2.5% escalation rate. The unscheduled budget includes costs for mains, meters, services, and hydrants, also based on a five-year historical average.

Cal Advocates Position: (Ibrahim Testimony, pp. 3-2 to 3-5)

Cal Advocates recommends that the Commission consider denying Cal Water's request for $200 million in non-specific and unscheduled budgets for the years 2025, 2026, and 2027. This recommendation is based on several key factors asserted by Cal Advocates. Firstly, they point out that Cal Water's non-specific budget includes $184,707 in land-associated capital in 2024 and $4,160,400 in forecasted land costs, which they argue are not justifiable as emergency events. Additionally, Cal Advocates notes that Cal Water has a multitude of programmatic asset management and repair budgets totaling $864 million, separate from its budget for specific asset replacements or new assets. With such substantial funding already allocated for replacements and repairs, Cal Advocates deems the proposal for an additional $200 million in unexpected repairs and capital projects over three years as unreasonable.

Cal Water Rebuttal:

Cal Advocates' position on Non-Specific and Unscheduled Budgets (together, the Non-Specifics program) demonstrates a fundamental misconception regarding the purpose and intent of these unplanned costs, as well as the performance of this program relative to other water utilities. While Cal Water acknowledges that the cost of the Non-Specifics program has increased over time, Cal Advocates' recommendation assumes that the program lacks any control or oversight. However, when taken in context with what other utilities are experiencing across the country, and in light of what Cal Water's total capital budget is, these costs are actually more than reasonable. Cal Advocates' recommendation to reject all of the Unscheduled Budgets, on the assumption that these projects could be planned in advance, again demonstrates a clear misunderstanding of what constitutes an unplanned emergency or sudden infrastructure failure. The following sections provide more clarity on each of these topics, demonstrating the reasonableness of the unplanned budgets, both Non-Specific and Unscheduled, and provide clarity on the benefits to Cal Advocates and the Commission (and ultimately to customers) on the new Unscheduled program.

The LAND budget Category is a Reasonable Non-Specific Category.

Cal Advocates references sections of the forecasted 2024, 2025, 2026 and 2027 Non-Specific budgets that are associated with the property group "LAND", citing a sum of $184,707 in 2024 and over $4M in the remaining years. Cal Water investigated this claim and determined that for the forecasted budgets in 2025, 2026 and 2027, the company included one land purchase in Los Altos that should have been omitted from the trend. The forecasted Non-Specific budget in that district has been revised in this rebuttal. The subsequent updated sum of "LAND" allocations in the four company wide non-specific budgets are:

Table 1: Updated Non-Specific Land Allocations

Year	Filing	Rebuttal
2024	$185,707	$185,707
2025	$1,357,100	$42,400
2026	$1,384,300	$36,700
2027	$1,419,000	$37,700

These sums are spread across ALL 24 districts and are actually quite small per district. Per Cal Water's units of Property Policy, "Land" (utility account 103061 and 103062) can include the purchase of land, surveying, curbs, gutters, sidewalks and driveway approaches in the public right of way, easements and diversion rights. Damaged gutters, curbs and sidewalks in the public right of way are a safety hazard and need immediate replacement.

Cal Advocates narrowly and unfairly labels non-specifics as only "emergency" but Cal Water characterizes them as unable to wait until the next filing. From this lens, it is easier to see why property purchases and easements are also reasonable costs for this category of budgets. Land is an ephemeral resource that becomes available unpredictably and unavailable suddenly and rapidly and Cal Water needs a mechanism to make such purchases. Similarly, easements may need to be negotiated unexpectedly for planned or unplanned capital work, since Cal Water does not always own all the land needed to fully access all of its facilities.

Cal Water's use of Non-Specific and Unscheduled Budgets are Consistent with Prior Commission Decisions

Cal Advocates' concern regarding Cal Water's Non-Specific budgets are inconsistent with its position with regard to other regulated Investor Owned Utilities (IOU) that provide water service. For example, in a recent GRC Cal AM also proposed a similar budget structure for unplanned projects, referring to these as "recurring projects." Recurring project (RP) capital expenditures are primarily for smaller unforeseen operational capital investment tasks and routine every year-type of projects. Cal-Am divides its RPs into seventeen areas. Cal- Am budgets the RPs by taking into consideration the inflation-adjusted five-year historical average of the specific RP, as well as the results from the 2013 GRC to determine consistency. Since the 2010 GRC, the Commission has authorized Cal-Am to manage its various district RP budgets to an overall budget number, with flexibility to reallocate funds among individual RP line items as necessary over the course of the year, and Cal-Am proposes to continue this approach in the current GRC period[36]

Cal Water's approach has been historically supported as well. In the recent decision on the 2021 GRC, the Commission determined that this litigated issue was prudent, remarking that "there is no evidence in the record [...] that Cal Water has misused or, in the future, will intentionally misuse it's Non-Specific budget to circumvent the Commission's review of Cal Water's capital expenditures. To the contrary, the record contains evidence that Cal Water's

[36] D.18-12-021, 147

historic record with respect to Non-Specific capital spending puts it in the top-performing (lowest expenditure) quartile of the nation's water utilities.[37]" The decision went on to support the prudency of the Unscheduled budgets as well noting that it will "help the Commission more easily focus on Cal Water's responses to the totally unexpected damage to Cal Water's system."

Cal Water's Unplanned Budgets are Reasonable Compared to Industry Standards

Cal Advocates asserts that Cal Water's proposed budget based on "inflation adjusted average of historical expenditures" does not allow for increases in efficiency. Cal Advocates presumes that all of these costs are completely in Cal Water's control and implies that Cal Water is being irresponsible in managing the program based solely on the increasing aggregate Non-Specific spend over the last 10 years. However, in the interest of full transparency for both Cal Advocates and the Commission to review, Cal Water provided individual project justifications in Chapter 13 of each ratemaking area's Results of Operations books for all Non-Specific projects over $200,000, and where the Non-Specific budget was overrun. Cal Advocates did not dispute the merits of any of these Non-Specific project justifications, but merely assumes that since the aggregate program costs are trending upwards they must be unreasonable. Cal Water submits that it would be more appropriate to ascertain whether the individual project costs presented within the program are reasonable, rather than jumping to conclusions based on an aggregate cost.

During the time period, 2010 – 2020, Cal Water installed over $2.18 billion dollars of capital improvements,[38] the actual total unplanned costs is approximately $483 million. Comparing the total unplanned costs to the total capital of the Company amounts to 22.1%. While Cal Water believes the most appropriate course of action is to review each project for on its merits, Cal Water also looks quite good following Cal Advocates simplified total dollars spent approach. In comparison to other water utilities across the nation, an AWWA benchmarking survey found that water utilities with an unplanned spend of less than 29% compared with their total spend were in the top performing quartile of water utilities.[38] While Cal Advocates suggest that Cal Water's proposed non-specific program based on unplanned historical spend is unreasonable, in actuality this cost is much more in line with some of the top utilities in the country. Therefore, in addition to Cal Advocates not disputing any of the individual project costs associated with past Non-Specific

[37] D.24-03-042 pp 35-36
[38] A.21-07-002. *Book - General Plant Rebuttal*, p. 44.

spend, their concern over aggregated Non-Specific spend over the last decade misrepresents Cal Water performance, when in actuality it is operating in a manner that is in line with current best practices.

Reasons for non-specific projects

Cal Advocates recommended rejecting the entire requested amount for the non-specific and unscheduled budgets, claiming "misuse of resources, inadequate asset management, or imprudent business decisions typically result in a loss in profit." [31] This presumption that the unscheduled and unplanned work covered by this program is under Cal Water's control is entirely unfounded. In reality, numerous non-specific projects have been necessitated in recent years due to external factors beyond Cal Water's control. Typical instances include the unanticipated relocation of Cal Water pipelines to resolve conflicts with municipal street improvement projects in the public right of way, replacing assets that have prematurely failed, and addressing incidents where vehicles crash into hydrants.

- PID 122623 - In Los Altos, water main was relocated out of the County ROW due to the County of Santa Clara widening Foothill Expressway and lowering the roadway grade
- PID 130599 - In South San Francisco, a tank roof had to be replaced as it failed during a recent storm to ensure the tank's interior is secure and capable of providing reliable fire service to customers.
- PID 134270 - In Livermore, a large eucalyptus tree fell and damaged a tank shell at Station 23, which needed to be immediately repaired.
- In ELA, on a private property, a 16" butterfly valve failure caused water to seep through the concrete and asphalt, necessitating over-depth excavation with deep trench shoring. Repairs had to be conducted during late hours due to the extensive damage caused by the leakage, which necessitated over-depth excavation and main replacement.

Another example of unanticipated projects that do not fall under the purview of Asset Management program is the unprecedented land movement in Palos Verdes causing damage to our water system and customers' service lines. Cal Water promptly took action by swiftly detecting and addressing the leaks.

Rise in Costs Associated with Unplanned Budgets (Unscheduled) are out of Cal Water's Control

The bulk of the historical Non-Specific budgets can be directly attributed to the "Unscheduled" portion of the budget (i.e. unplanned replacement of hydrants, mains, meters, and services), which also generally account for the steady increase in overall spend. Many of the rising costs associated with the Unscheduled budgets are unavoidable and outside of Cal Water control. There are increasingly stringent permitting agency requirements for paving restoration associated with trenching and pipeline replacement and increasing cost of materials and labor in California (especially in an emergency situation that requires overtime and night work), all of which are outside of Cal Water's control.

Cal Advocates contends that because Cal Water has preventative asset replacement programs that this area of spending should immediately go down. While it is important to note that Cal Advocates is proposing to reduce the same asset management programs they say should replace the unscheduled budgets, these budgets are to replace assets that have prematurely failed and must be replaced in order to keep customers in service or maintain fire protection. In contrast, asset management program budgets are intended to replace assets that have reached the end of their useful life.

There are many factors that can influence unexpected failures expected even with a robust asset management program. For example, pipelines can have early failure due to tree root intrusion, soil conditions, corrosion, soil settlement or instability such as landslides excavation or construction activities, or excessive pressures caused by water hammer. Another example is fire hydrants, which can be struck by vehicles. There is no defensible correlation between hit hydrant failures and a hydrant replacement/maintenance program. Such corrections cannot be deferred to a later GRC because the public utilities code requires Cal Water to immediately repair such deficiencies.[39]

Cal Water's Non-Specific Budgets Have Been Under-Funded

In the last GRC, Cal Water demonstrated that its shareholders have been carrying the cost of the majority of these recorded non-specific expenditures for many rate case cycles, making the company's request extremely reasonable. (see Figure 1). While it is true that these

[39] Public Utilities Code 768.6 and 8386

costs can be submitted for recovery in a subsequent GRC, a portion of the incurred costs cannot ever be recovered[40]. Given that Cal Advocates did not dispute the merits of the individual completed Non-Specific projects, it is clear that Cal Water's Non-Specific budgets have historically been significantly underfunded. Therefore, Cal Advocates' approach to simply cut the Non-Specific budgets by 20%, and remove the Unscheduled budget entirely, without any additional analysis or support (beyond Cal Advocates dislike of numbers trending upwards), exposes Cal Water to significant costs being carried by shareholders until the next rate case application.

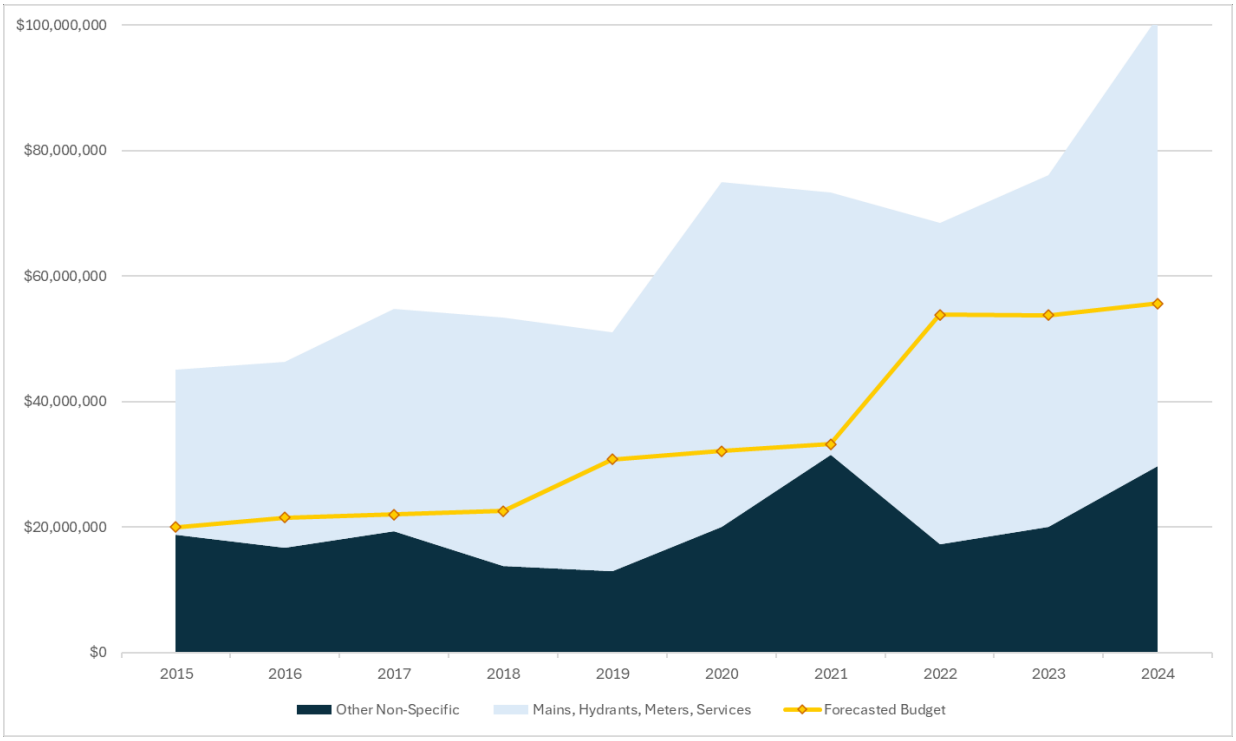


Figure 1. 10 year Recorded Non-Specific Budget Expenditures- All Districts

Conclusion

Cal Advocates' assertion that the non-specific program is unnecessary due to Cal Water's robust asset management program demonstrates a fundamental misunderstanding of the purpose of non-specific and unscheduled budgets. These budgets are essential for addressing

[40] "The depreciation expense and return on investment for Cal Water's capital assets will not be recovered from its customers during this period. However, its customers will benefit from these capital assets without incurring any costs.

operational reliability risks arising from asset failures beyond Cal Water's control. By denying this budget, Cal Advocates are effectively claiming that there will be no future incidents of vehicles hitting hydrants, no municipal requests for pipeline relocations, and no premature asset failures due to external factors. Such assumptions are not only unrealistic but also conflict with the Commission's past decisions. The Commission supported Cal Water's non-specific program request in the 2021 GRC, rejecting similar claims from Cal Advocates aimed at denying the budget. Therefore, Cal Water recommends the Commission reject Cal Advocates' position and approve the full amount of the Non-Specific and Unscheduled budgets as proposed in the 2024 GRC application.

Table 2: Non-Specific Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	129-NON-SP	129- Antelope Valley Non-specific	43,400	-	43,400	(43,400)
2025	101-NON-SP	101- Bakersfield Non-specific	2,460,000	-	2,460,000	(2,460,000)
2025	152-NON-SP	152- Bayshore Non-specific	126,000	-	126,000	(126,000)
2025	102-NON-SP	102- Bear Gulch Non-specific	1,517,800	-	1,517,800	(1,517,800)
2025	104-NON-SP	104- Chico Non-specific	703,600	-	703,600	(703,600)
2025	105-NON-SP	105- Dixon Non-specific	46,600	-	46,600	(46,600)
2025	128-NON-SP	128- Dominguez Non-specific	567,600	-	567,600	(567,600)
2025	106-NON-SP	106- East Los Angeles Non-specific	658,100	-	658,100	(658,100)
2025	330-NON-SP	330- General Office Non-specific	1,200,700	-	1,200,700	(1,200,700)
2025	108-NON-SP	108- Hermosa Redondo Non-specific	758,600	-	758,600	(758,600)
2025	134-NON-SP	134- Kern River Valley Non-specific	269,900	-	269,900	(269,900)
2025	109-NON-SP	109- King City Non-specific	65,400	-	65,400	(65,400)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	110-NON-SP	110- Livermore Non-specific	228,900	-	228,900	(228,900)
2025	111-NON-SP	111- Los Altos Suburban Non-specific	2,148,800	-	834,100	(834,100)
2025	112-NON-SP	112- Marysville Non-specific	172,800	-	172,800	(172,800)
2025	116-NON-SP	116- Mid Peninsula Non-specific	803,600	-	803,600	(803,600)
2025	113-NON-SP	113- Oroville Non-specific	262,300	-	262,300	(262,300)
2025	122-NON-SP	122- Palos Verdes Non-specific	903,900	-	903,900	(903,900)
2025	151-NON-SP	151- Rancho Dom Reg Non-specific	269,800	-	269,800	(269,800)
2025	146-NON-SP	146- Redwood Valley Non-specific	337,000	-	337,000	(337,000)
2025	114-NON-SP	114- Salinas Non-specific	1,141,300	-	1,141,300	(1,141,300)
2025	117-NON-SP	117- Selma Non-specific	135,900	-	135,900	(135,900)
2025	118-NON-SP	118- So. San Francisco Non-specific	171,900	-	171,900	(171,900)
2025	119-NON-SP	119- Stockton Non-specific	1,124,000	-	1,124,000	(1,124,000)
2025	157-NON-SP	157- Travis Non-Specific	568,500	-	568,500	(568,500)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	120-NON-SP	120- Visalia Non-specific	1,329,000	-	1,329,000	(1,329,000)
2025	123-NON-SP	123- Westlake Non-specific	558,700	-	558,700	(558,700)
2025	121-NON-SP	121- Willows Non-specific	93,600	-	93,600	(93,600)
2026	129-NON-SP	129- Antelope Valley Non-specific	44,400	-	44,400	(44,400)
2026	101-NON-SP	101- Bakersfield Non-specific	2,514,900	-	2,514,900	(2,514,900)
2026	152-NON-SP	152- Bayshore Non-specific	129,100	-	129,100	(129,100)
2026	102-NON-SP	102- Bear Gulch Non-specific	1,555,800	-	1,555,800	(1,555,800)
2026	104-NON-SP	104- Chico Non-specific	721,400	-	721,400	(721,400)
2026	105-NON-SP	105- Dixon Non-specific	47,600	-	47,600	(47,600)
2026	128-NON-SP	128- Dominguez Non-specific	581,700	-	581,700	(581,700)
2026	106-NON-SP	106- East Los Angeles Non-specific	674,600	-	674,600	(674,600)
2026	330-NON-SP	330- General Office Non-specific	1,230,800	-	1,230,800	(1,230,800)
2026	108-NON-SP	108- Hermosa Redondo Non-specific	777,700	-	777,700	(777,700)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	134-NON-SP	134- Kern River Valley Non-specific	276,600	-	276,600	(276,600)
2026	109-NON-SP	109- King City Non-specific	66,900	-	66,900	(66,900)
2026	110-NON-SP	110- Livermore Non-specific	234,500	-	234,500	(234,500)
2026	111-NON-SP	111- Los Altos Suburban Non-specifi	2,202,500	-	854,900	(854,900)
2026	112-NON-SP	112- Marysville Non-specific	177,100	-	177,100	(177,100)
2026	116-NON-SP	116- Mid Peninsula Non-specific	823,700	-	823,700	(823,700)
2026	113-NON-SP	113- Oroville Non-specific	268,500	-	268,500	(268,500)
2026	122-NON-SP	122- Palos Verdes Non-specific	926,500	-	926,500	(926,500)
2026	151-NON-SP	151- Rancho Dom Reg Non-specific	276,600	-	276,600	(276,600)
2026	146-NON-SP	146- Redwood Valley Non-specific	345,500	-	345,500	(345,500)
2026	114-NON-SP	114- Salinas Non-specific	1,170,200	-	1,170,200	(1,170,200)
2026	117-NON-SP	117- Selma Non-specific	139,300	-	139,300	(139,300)
2026	118-NON-SP	118- So. San Francisco Non-specific	176,200	-	176,200	(176,200)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	119-NON-SP	119- Stockton Non-specific	1,152,000	-	1,152,000	(1,152,000)
2026	157-NON-SP	157- Travis Non-Specific	582,700	-	582,700	(582,700)
2026	120-NON-SP	120- Visalia Non-specific	1,362,200	-	1,362,200	(1,362,200)
2026	123-NON-SP	123- Westlake Non-specific	572,600	-	572,600	(572,600)
2026	121-NON-SP	121- Willows Non-specific	96,100	-	96,100	(96,100)
2027	129-NON-SP	129- Antelope Valley Non-specific	45,600	-	45,600	(45,600)
2027	101-NON-SP	101- Bakersfield Non-specific	2,577,900	-	2,577,900	(2,577,900)
2027	152-NON-SP	152- Bayshore Non-specific	132,300	-	132,300	(132,300)
2027	102-NON-SP	102- Bear Gulch Non-specific	1,594,900	-	1,594,900	(1,594,900)
2027	104-NON-SP	104- Chico Non-specific	739,200	-	739,200	(739,200)
2027	105-NON-SP	105- Dixon Non-specific	48,800	-	48,800	(48,800)
2027	128-NON-SP	128- Dominguez Non-specific	596,200	-	596,200	(596,200)
2027	106-NON-SP	106- East Los Angeles Non-specific	691,300	-	691,300	(691,300)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	330-NON-SP	330- General Office Non-specific	1,261,500	-	1,261,500	(1,261,500)
2027	108-NON-SP	108- Hermosa Redondo Non-specific	797,200	-	797,200	(797,200)
2027	134-NON-SP	134- Kern River Valley Non-specific	283,600	-	283,600	(283,600)
2027	109-NON-SP	109- King City Non-specific	68,800	-	68,800	(68,800)
2027	110-NON-SP	110- Livermore Non-specific	240,500	-	240,500	(240,500)
2027	111-NON-SP	111- Los Altos Suburban Non-specifi	2,257,600	-	876,300	(876,300)
2027	112-NON-SP	112- Marysville Non-specific	181,500	-	181,500	(181,500)
2027	116-NON-SP	116- Mid Peninsula Non-specific	844,400	-	844,400	(844,400)
2027	113-NON-SP	113- Oroville Non-specific	275,400	-	275,400	(275,400)
2027	122-NON-SP	122- Palos Verdes Non-specific	949,700	-	949,700	(949,700)
2027	151-NON-SP	151- Rancho Dom Reg Non-specific	283,500	-	283,500	(283,500)
2027	146-NON-SP	146- Redwood Valley Non-specific	353,900	-	353,900	(353,900)
2027	114-NON-SP	114- Salinas Non-specific	1,199,100	-	1,199,100	(1,199,100)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	117-NON-SP	117- Selma Non-specific	142,700	-	142,700	(142,700)
2027	118-NON-SP	118- So. San Francisco Non-specific	180,400	-	180,400	(180,400)
2027	119-NON-SP	119- Stockton Non-specific	1,180,900	-	1,180,900	(1,180,900)
2027	157-NON-SP	157- Travis Non-Specific	597,300	-	597,300	(597,300)
2027	120-NON-SP	120- Visalia Non-specific	1,396,100	-	1,396,100	(1,396,100)
2027	123-NON-SP	123- Westlake Non-specific	587,100	-	587,100	(587,100)
2027	121-NON-SP	121- Willows Non-specific	98,300	-	98,300	(98,300)
2024	101-NON-SP	101- Bakersfield Non-specific	2,143,450	-	2,143,450	(2,143,450)
2024	330-NON-SP	330- General Office Non-specific	1,915,087	-	1,915,087	(1,915,087)
2024	111-NON-SP	111- Los Altos Suburban Non-specifi	1,407,750	-	1,407,750	(1,407,750)
2024	114-NON-SP	114- Salinas Non-specific	1,068,139	-	1,068,139	(1,068,139)
2024	116-NON-SP	116- Mid Peninsula Non-specific	990,225	-	990,225	(990,225)
2024	102-NON-SP	102- Bear Gulch Non-specific	888,269	-	888,269	(888,269)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2024	119-NON-SP	119- Stockton Non-specific	797,722	-	797,722	(797,722)
2024	106-NON-SP	106- East Los Angeles Non-specific	839,532	-	839,532	(839,532)
2024	104-NON-SP	104- Chico Non-specific	731,137	-	731,137	(731,137)
2024	128-NON-SP	128- Dominguez Non-specific	712,799	-	712,799	(712,799)
2024	120-NON-SP	120- Visalia Non-specific	586,800	-	586,800	(586,800)
2024	108-NON-SP	108- Hermosa Redondo Non-specific	623,351	-	623,351	(623,351)
2024	122-NON-SP	122- Palos Verdes Non-specific	429,556	-	429,556	(429,556)
2024	110-NON-SP	110- Livermore Non-specific	309,914	-	309,914	(309,914)
2024	157-NON-SP	157- Travis Non-Specific	364,296	-	364,296	(364,296)
2024	134-NON-SP	134- Kern River Valley Non-specific	225,182	-	225,182	(225,182)
2024	117-NON-SP	117- Selma Non-specific	159,632	-	159,632	(159,632)
2024	118-NON-SP	118- So. San Francisco Non-specific	139,072	-	139,072	(139,072)
2024	123-NON-SP	123- Westlake Non-specific	163,713	-	163,713	(163,713)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2024	146-NON-SP	146- Redwood Valley Non-specific	194,899	-	194,899	(194,899)
2024	151-NON-SP	151- Rancho Dom Reg Non-specific	154,738	-	154,738	(154,738)
2024	121-NON-SP	121- Willows Non-specific	92,177	-	92,177	(92,177)
2024	105-NON-SP	105- Dixon Non-specific	168,776	-	168,776	(168,776)
2024	113-NON-SP	113- Oroville Non-specific	123,359	-	123,359	(123,359)
2024	112-NON-SP	112- Marysville Non-specific	83,665	-	83,665	(83,665)
2024	109-NON-SP	109- King City Non-specific	52,218	-	52,218	(52,218)
2024	152-NON-SP	152- Bayshore Non-specific	37,084	-	37,084	(37,084)
2024	129-NON-SP	129- Antelope Valley Non-specific	38,397	-	38,397	(38,397)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	15,440,938	1,572	15,440,938
	2025	18,667,700	-	17,353,000
	2026	19,127,700	-	17,780,100
	2027	19,605,700	-	18,224,400
	Total Direct Cost	72,842,038	1,572	68,798,438

Table 3: Unscheduled Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	129UNSCH	AVD Unscheduled Replacements	79	-	79	(79)
2025	101UNSCH	BKD Unscheduled Replacements	8,187,318	-	8,187,318	(8,187,318)
2025	102UNSCH	BGD Unscheduled Replacements	3,318,304	-	3,318,304	(3,318,304)
2025	104UNSCH	CHD Unscheduled Replacement	2,653,751	2,653,751	2,653,751	0
2025	105UNSCH	DIX Unscheduled Replacements	291,868	-	291,868	(291,868)
2025	128UNSCH	DOM Unscheduled Replacements	1,871,309	-	1,871,309	(1,871,309)
2025	106UNSCH	ELA Unscheduled Replacements	2,012,917	-	2,012,917	(2,012,917)
2025	108UNSCH	HRD Unscheduled Replacements	1,630,815	-	1,630,815	(1,630,815)
2025	134UNSCH	KRV Unscheduled Replacements	94,722	-	94,722	(94,722)
2025	109UNSCH	KCD Unscheduled Replacements	371,774	-	371,774	(371,774)
2025	110UNSCH	LIV Unscheduled Replacements	1,239,170	-	1,239,170	(1,239,170)
2025	111UNSCH	LAS Unscheduled Replacements	2,723,649	-	2,723,649	(2,723,649)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	147UNSCH	LUC Unscheduled Replacements	97,040	-	97,040	(97,040)
2025	112UNSCH	MRL Unscheduled Replacements	274,795	-	274,795	(274,795)
2025	116UNSCH	MPS Unscheduled Replacements	2,811,397	-	2,811,397	(2,811,397)
2025	113UNSCH	ORO Unscheduled Replacements	795,806	-	795,806	(795,806)
2025	122UNSCH	PVD Unscheduled Replacements	1,296,837	-	1,296,837	(1,296,837)
2025	146UNSCH	RDV Unscheduled Replacements	220,428	-	220,428	(220,428)
2025	114UNSCH	SLN Unscheduled Replacements	3,994,437	-	3,994,437	(3,994,437)
2025	117UNSCH	SEL Unscheduled Replacements	791,083	-	791,083	(791,083)
2025	118UNSCH	SSF Unscheduled Replacements	659,583	-	659,583	(659,583)
2025	119UNSCH	STK Unscheduled Replacements	3,474,404	-	3,474,404	(3,474,404)
2025	157UNSCH	TAB Unscheduled Replacements	81,012	-	81,012	(81,012)
2025	120UNSCH	VIS Unscheduled Replacements	4,807,143	-	4,807,143	(4,807,143)
2025	123UNSCH	WLK Unscheduled Replacements	1,517,183	-	1,517,183	(1,517,183)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	121UNSCH	WIL Unscheduled Replacements	287,233	-	287,233	(287,233)
2026	129UNSCH	AVD Unscheduled Replacements	81	-	81	(81)
2026	101UNSCH	BKD Unscheduled Replacements	8,392,001	-	8,392,001	(8,392,001)
2026	102UNSCH	BGD Unscheduled Replacements	3,401,261	-	3,401,261	(3,401,261)
2026	104UNSCH	CHD Unsheduled Replacement	2,720,095	2,720,095	2,720,095	0
2026	105UNSCH	DIX Unscheduled Replacements	299,164	-	299,164	(299,164)
2026	128UNSCH	DOM Unscheduled Replacements	1,918,092	-	1,918,092	(1,918,092)
2026	106UNSCH	ELA Unscheduled Replacements	2,063,240	-	2,063,240	(2,063,240)
2026	108UNSCH	HRD Unscheduled Replacements	1,671,585	-	1,671,585	(1,671,585)
2026	134UNSCH	KRV Unscheduled Replacements	97,090	-	97,090	(97,090)
2026	109UNSCH	KCD Unscheduled Replacements	381,069	-	381,069	(381,069)
2026	110UNSCH	LIV Unscheduled Replacements	1,270,149	-	1,270,149	(1,270,149)
2026	111UNSCH	LAS Unscheduled Replacements	2,791,740	-	2,791,740	(2,791,740)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	147UNSCH	LUC Unscheduled Replacements	99,466	-	99,466	(99,466)
2026	112UNSCH	MRL Unscheduled Replacements	281,665	-	281,665	(281,665)
2026	116UNSCH	MPS Unscheduled Replacements	2,881,682	-	2,881,682	(2,881,682)
2026	113UNSCH	ORO Unscheduled Replacements	815,701	-	815,701	(815,701)
2026	122UNSCH	PVD Unscheduled Replacements	1,329,257	-	1,329,257	(1,329,257)
2026	146UNSCH	RDV Unscheduled Replacements	225,939	-	225,939	(225,939)
2026	114UNSCH	SLN Unscheduled Replacements	4,094,298	-	4,094,298	(4,094,298)
2026	117UNSCH	SEL Unscheduled Replacements	810,860	-	810,860	(810,860)
2026	118UNSCH	SSF Unscheduled Replacements	676,073	-	676,073	(676,073)
2026	119UNSCH	STK Unscheduled Replacements	3,561,264	-	3,561,264	(3,561,264)
2026	157UNSCH	TAB Unscheduled Replacements	83,038	-	83,038	(83,038)
2026	120UNSCH	VIS Unscheduled Replacements	4,927,321	-	4,927,321	(4,927,321)
2026	123UNSCH	WLK Unscheduled Replacements	1,555,113	-	1,555,113	(1,555,113)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	121UNSCH	WIL Unscheduled Replacements	294,414	-	294,414	(294,414)
2027	129UNSCH	AVD Unscheduled Replacements	84	-	84	(84)
2027	101UNSCH	BKD Unscheduled Replacements	8,601,801	-	8,601,801	(8,601,801)
2027	102UNSCH	BGD Unscheduled Replacements	3,486,293	-	3,486,293	(3,486,293)
2027	104UNSCH	CHD Unsheduled Replacement	2,788,097	2,788,097	2,788,097	-
2027	105UNSCH	DIX Unscheduled Replacements	306,643	-	306,643	(306,643)
2027	128UNSCH	DOM Unscheduled Replacements	1,966,044	-	1,966,044	(1,966,044)
2027	106UNSCH	ELA Unscheduled Replacements	2,114,821	-	2,114,821	(2,114,821)
2027	108UNSCH	HRD Unscheduled Replacements	1,713,375	-	1,713,375	(1,713,375)
2027	134UNSCH	KRV Unscheduled Replacements	99,518	-	99,518	(99,518)
2027	109UNSCH	KCD Unscheduled Replacements	390,596	-	390,596	(390,596)
2027	110UNSCH	LIV Unscheduled Replacements	1,301,903	-	1,301,903	(1,301,903)
2027	111UNSCH	LAS Unscheduled Replacements	2,861,533	-	2,861,533	(2,861,533)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	147UNSCH	LUC Unscheduled Replacements	101,953	-	101,953	(101,953)
2027	112UNSCH	MRL Unscheduled Replacements	288,706	-	288,706	(288,706)
2027	116UNSCH	MPS Unscheduled Replacements	2,953,724	-	2,953,724	(2,953,724)
2027	113UNSCH	ORO Unscheduled Replacements	836,094	-	836,094	(836,094)
2027	122UNSCH	PVD Unscheduled Replacements	1,362,489	-	1,362,489	(1,362,489)
2027	146UNSCH	RDV Unscheduled Replacements	231,587	-	231,587	(231,587)
2027	114UNSCH	SLN Unscheduled Replacements	4,196,656	-	4,196,656	(4,196,656)
2027	117UNSCH	SEL Unscheduled Replacements	831,131	-	831,131	(831,131)
2027	118UNSCH	SSF Unscheduled Replacements	692,975	-	692,975	(692,975)
2027	119UNSCH	STK Unscheduled Replacements	3,650,296	-	3,650,296	(3,650,296)
2027	157UNSCH	TAB Unscheduled Replacements	85,113	-	85,113	(85,113)
2027	120UNSCH	VIS Unscheduled Replacements	5,050,504	-	5,050,504	(5,050,504)
2027	123UNSCH	WLK Unscheduled Replacements	1,593,991	-	1,593,991	(1,593,991)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	121UNSCH	WIL Unscheduled Replacements	301,774	-	301,774	(301,774)
2024	101UNSCH	BKD Unscheduled Replacements	5,566,798	-	5,566,798	(5,566,798)
2024	102UNSCH	BGD Unscheduled Replacements	2,610,949	-	2,610,949	(2,610,949)
2024	104UNSCH	CHD Unsheduled Replacement	1,738,584	-	1,738,584	(1,738,584)
2024	105UNSCH	DIX Unscheduled Replacements	182,863	-	182,863	(182,863)
2024	106UNSCH	ELA Unscheduled Replacements	1,480,975	-	1,480,975	(1,480,975)
2024	108UNSCH	HRD Unscheduled Replacements	1,425,471	-	1,425,471	(1,425,471)
2024	109UNSCH	KCD Unscheduled Replacements	310,451	-	310,451	(310,451)
2024	110UNSCH	LIV Unscheduled Replacements	990,220	-	990,220	(990,220)
2024	111UNSCH	LAS Unscheduled Replacements	1,608,720	-	1,608,720	(1,608,720)
2024	112UNSCH	MRL Unscheduled Replacements	217,818	-	217,818	(217,818)
2024	113UNSCH	ORO Unscheduled Replacements	497,566	-	497,566	(497,566)
2024	114UNSCH	SLN Unscheduled Replacements	2,671,645	-	2,671,645	(2,671,645)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2024	116UNSCH	MPS Unscheduled Replacements	2,416,401	-	2,416,401	(2,416,401)
2024	117UNSCH	SEL Unscheduled Replacements	541,903	-	541,903	(541,903)
2024	118UNSCH	SSF Unscheduled Replacements	680,006	-	680,006	(680,006)
2024	119UNSCH	STK Unscheduled Replacements	2,172,329	-	2,172,329	(2,172,329)
2024	120UNSCH	VIS Unscheduled Replacements	2,494,114	-	2,494,114	(2,494,114)
2024	121UNSCH	WIL Unscheduled Replacements	101,934	-	101,934	(101,934)
2024	122UNSCH	PVD Unscheduled Replacements	1,196,089	-	1,196,089	(1,196,089)
2024	123UNSCH	WLK Unscheduled Replacements	733,715	-	733,715	(733,715)
2024	128UNSCH	DOM Unscheduled Replacements	1,102,621	-	1,102,621	(1,102,621)
2024	129UNSCH	AVD Unscheduled Replacements	1,292	-	1,292	(1,292)
2024	134UNSCH	KRV Unscheduled Replacements	54,458	-	54,458	(54,458)
2024	146UNSCH	RDV Unscheduled Replacements	174,329	-	174,329	(174,329)
2024	147UNSCH	LUC Unscheduled Replacements	51,029	-	51,029	(51,029)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2024	157UNSCH	TAB Unscheduled Replacements	64,281	-	64,281	(64,281)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	31,086,560	-	31,086,560
	2025	45,504,057	2,653,751	45,504,057
	2026	46,641,659	2,720,095	46,641,659
	2027	47,807,700	2,788,097	47,807,700
	Total Direct Cost	171,039,976	8,161,942	171,039,976

1

Contingency

Issue: (Common Plant Project Justification Report, pp. 547-645)

Cal Water's approach to contingency planning in capital improvement projects is a critical aspect of financial planning and risk management. Contingency serves as a safeguard against the unpredictable nature of construction projects, where unforeseen events can lead to additional costs. By including a contingency allowance in estimates, project managers can ensure financial flexibility to address these challenges without compromising project integrity. Cal Water's methodology, based on recommendations from Blair, Church & Flynn Consulting Engineers (BCF), involves classifying cost estimates and identifying location factors. Routine replacements and equipment purchase projects are considered Class 4 estimates with a 10% contingency, while all other projects are deemed Class 5 with a 20% contingency. This approach aligns with industry standards and is designed to manage the unpredictability of capital improvement projects effectively.

Cal Advocates Position: (Ibrahim Testimony, pp. 1-2)

Cal Advocates recommends rejecting Cal Water's proposal to include a 7% to 35% contingency factor in rates for most forecast capital projects. They believe that Cal Water has not provided sufficient justification for this budget, given its experience with similar projects. Cal Advocates also argues that contingency factors for planning and estimating errors or changes in scope may not be appropriate for increasing customer rates for unknown events. They assert that Cal Water's historical project costs already account for unforeseen events, which should be reflected in the unit costs being used. Additionally, Cal Advocates suggests that blanket contingencies for routine projects may discourage prudent forecasting. Specifically, they argue that a 10% contingency for the main replacement program would unnecessarily add $42.4 million in ratepayer costs without a clear purpose for these funds.

Cal Water Rebuttal:

Cal Water has included contingency in its proposed capital budgets for many rate case cycles and believed, until D.24-03-042, that it had adequately demonstrated its reasonableness as a conceptual cost element in capital budget estimating. Cal Water's delayed receipt of its 2021 rate

case decision did not allow adequate time for Cal Water to address the Commission's concerns; we take this opportunity to supplement the record with an expansion of the methodology and reasoning Cal Water applies to its capital budgeting process. Generally, Cal Water asserts that:

- For both utilities and competitive companies, contingency is an integral part of the cost estimating process, as supported by virtually every major professional cost estimating organization.
- The Commission has previously recognized in various prior decisions that under the right conditions, contingency is reasonable
- The Commission adopting a reasonable contingency proposal in this application is consistent with its past practices
- Cal Water can demonstrate its contingency proposal is reasonable in this rebuttal, and therefore the Commission should adopt Cal Water's original position on the matter

Before addressing the need for contingency, Cal Water notes that Cal Advocates frequently supports its recommendations as being an appropriate "substitute for competition." Cal Water addresses this fallacy in greater depth in Chapter 1 of Rebuttal Book #1, but points out that Cal Advocates falls back on its competition argument here, but with no acknowledgement that contingencies are an integral part of normal construction activities by competitive companies, as well as utilities. Cal Water's original testimony fully discusses how contingencies are widely used in the business world.[41]

Contingency is a Fundamental Cost Element That Extends Beyond Simple Addition.

Cal Advocates attempts in their testimony to diminish the importance of contingency by characterizing it as a mere "adder". However, the use of contingency factors is a standard, integral practice in financial planning and risk management, ensuring that projects are adequately funded to handle unexpected circumstances. The three most widely regarded cost estimating organizations in the United States are the Association for Advancement of Cost Engineering (AACE)[42], the American Society of Professional Estimators (ASPE)[43] and the International Cost Estimating and Analysis Association (ICEAA)[44]. Each has its own target industries, standards and approaches, but they all converge on the same two basic principles: (1) all projects contain an

[41] Please refer to 2024 Common Plant Project Justification Book pp. 547-645
[42] Recommended Practice 40R-08: Contingency Estimating – General Principles
[43] Standard Estimating Practice Vol I: Principles of Estimating General Principles of Estimating
[44] Cost Engineering Body of Knowledge, https://wikidev.iceaaonline.com/wiki/

element of risk that absolutely must be accounted for, and (2) uncertainty is very high in the initial planning phase and decreases as the project progresses towards completion.

The name for the aspect of risk planning in a cost estimate is called ‘contingency’. There is a similar concept in the cost industry called ‘management reserve’ that is often mistaken for contingency:

> **Contingency** is a planned amount of money or time added to an estimate to address specific, identified risks. It is used to manage known risks that have been identified during the project planning phase. Project managers have control over the contingency reserve and can use it when these known risks occur
>
> **Management reserve**, on the other hand, is a planned amount of money or time added to an estimate to address unforeseeable situations. It is used to manage unknown risks or "unknown unknowns" that could arise during the project. The management reserve is controlled by higher-level management and is not included in the project's cost baseline

Cal Water should be able to put contingency in the revenue requirement and should carry the cost of the management reserve for recovery in a later GRC. However, Cal Advocates mistakes contingency for being a generic factor to cover all hypothetical events Cal Water can’t even imagine or articulate, unfairly allocating all risks in the management reserve. As will be shown later, the confusion likely lies in what information is available at various stages of design and how contingency can be quantified in these early stages.

The Commission Has a History of Supporting Reasonable Contingency In Forecasted Budgets

As a principle, both Cal Advocates and the Commission agree that contingency can be a valid concept. In its order denying Cal Water a rehearing on D.24-03-042, the Commission expounds upon its interpretation of Public Utilities Code §§ 451, which requires Cal Water to demonstrate reasonableness of the entire revenue requirement. The commissioners generally cite many example decisions and specifically discuss two examples, one from Golden State Water, and the other from Southern California Gas company, as the level of sophistication the commission expects to see as a properly substantiated cost basis for contingency estimates. These factors are:

- “several factors that contribute to the uncertainty of cost”,
- are “project specific”, and
- “take into account specific circumstances regarding each project”

Following this reasoning, contingency itself does not appear to be a question. Instead, Cal Water's methodology for arriving at its proposed contingency is the issue. Therefore, if Cal Water can explain its methods in a way that satisfies the spirit of the above criteria, it should be considered reasonable enough to be included in its revenues.

Cal Water Can Demonstrate its Contingency Proposal is Reasonable.

The gap between parties on the methods Cal Water employs to estimate contingency can be bridged by understanding that Cal Water's proposal actually already reflects its vast experience. The key to this understanding lies in the sequencing and timing of events in project management. Figure 1 shows a table that relates project scope definition (Class 1 – Class 5) to project phase. The way engineers and project managers reduce uncertainty (risk) and therefore contingency is to increase the definition of the project. To increase the definition of the project, more information needs to be collected. This can be done by working through design formulas and layouts, contracting subject matter experts for studies, or collaborating with various agencies and communities to establish the final requirements.

In all of its applications, Cal Water has proposed various studies, including:

- Site topographical studies
- Geotechnical studies
- Noise studies
- Hydrogeological assessments
- Sub-utility research

These studies appear in the estimate because Cal Water knows there is key information needed to correctly design its infrastructure, and it needs to determine that information every time. It is a known known. What Cal Water does not know definitively is what the study will conclude. The table in attachment 1 shows for some of these studies possible outcomes that could alter the approach, feasibility, or design of a project. It is highly unlikely all of these issues will arise in any one singular project, but it is extremely likely at least one of these issues will arise in most of the projects Cal Water pursues. To put in estimates for all such work knowing that, practically, there is no chance of all of these risks coming to fruition would result in the exact excessive bloating of Cal Water's budget that Cal Advocates is accusing Cal Water of proposing. However, entirely omitting

allowances for such events places Cal Water in position to unfairly carry these costs for several years.

Unfortunately, obtaining this information, and similar information in the calculation and staging of project facilities, is very time consuming and expensive. Generally, most cost estimators agree that AACE Class 3 is minimum level that risks can be specifically identified and quantitatively calculated.

The industry compromise is generally to fund projects at what is known as the P50 level—that is the budget that has a 50% probability of being either over or under budget on that amount. The theory is that over a large class of similar projects, some estimates will have too much contingency and in other cases, not enough contingency to cover the true final cost of any given project in the portfolio. However, net, there will be roughly the correct amount needed to finance the entire endeavor. In Figure 1, Cal Water presents several examples of the types of risks we are including in 'contingency' and a demonstration of how the costs can vary as over or under the contingency amount. This pattern can be extrapolated over Cal Water's entire 2021 Application forecasted budgets and final costs to show how overruns and underruns scale on the whole. It can be seen that since Cal Water recorded to plant approximately what it forecasted, the company actually does not engage in the gold plating practices suggested in Cal Advocates report but runs under budget almost as frequently as it goes over the proposed budget[45].This means that Cal Water is actually reasonably managing its authorized budget, forecasting for a wide range of difficult to quantify costs and risks, and appropriately adjusting its portfolio of work to stay within the prescribed budgets the Commission has deemed appropriate for its customers rates.

Cal Water has Sought Ways to Decrease Its Contingency Request

Although Cal Water has had support in past decisions on the subject of contingency, it has nevertheless also pursued program improvements to lower these forecasted costs. The first set of innovations were in the 2021 GRC when Cal Water proposed mechanisms to submit more projects as class AACE 3 estimates or higher through two step and multi-GRC projects. The second effort

[45] Regardless of the estimated cost used in setting rates, when each project is completed, it is added to permanent property records at the actual cost of construction, whether over or under the authorized cost. As such, any unused contingency is eliminated from subsequent years rates.

presented was to control and limit risks through its construction management program. Cal Advocates attacks all three efforts (contingency, phased estimating, and dedicated risk management) in this application. Instead, the commission should support all three of these practices which are mutually reinforcing.

Contingency in Estimating Promotes Prudent Forecasting and Cost Control

Contingency factors play a crucial role in incentivizing accurate forecasting and budgeting. By encouraging Cal Water to account for potential risks and uncertainties during project planning, these factors promote a proactive approach to cost management. This proactive stance helps reduce the likelihood of cost overruns and ensures that projects are completed within budget.

Moreover, contingency factors strike a balance between risk and reward. They allow Cal Water to manage potential cost increases while maintaining financial stability. By including these factors, Cal Water can allocate resources more effectively, ensuring that projects are adequately funded and minimizing the impact of unforeseen events on our customers.

Additionally, contingency factors contribute to the timely completion of projects, reducing the risk of delays and disruptions that could affect service reliability. By incorporating these factors, Cal Water can address challenges and maintain the quality and reliability of its services, ultimately benefiting customers.

Contingency is Necessary in Everyday Life Events Rooted in Deep Experience

Cal Advocates attempts to assert that the degree of contingency needed in estimates should be directly and inversely correlated to experience and competency. However, a simple examination of ordinary life instantly deflates this thesis. Consider someone who lives in the East Bay and wants to attend a concert in San Francisco. This person has been a model motorist for decades and a frequent Bay Area commuter. A month before the concert, they estimate the drive will take 1.5 hours in normal Friday traffic.

- Based on years of driving the route, they do not initially think contingency plans are needed, but nevertheless plan to keep that Friday afternoon free of meetings (essentially a broad contingency plan).

- They initially plan to leave at 5:00 pm on the day of the concert as a precaution, even though the concert doesn't start until 7:30pm.

- A week before the concert, they learn that road construction requires a different, less familiar route, so they change their planned departure to 4:30pm.

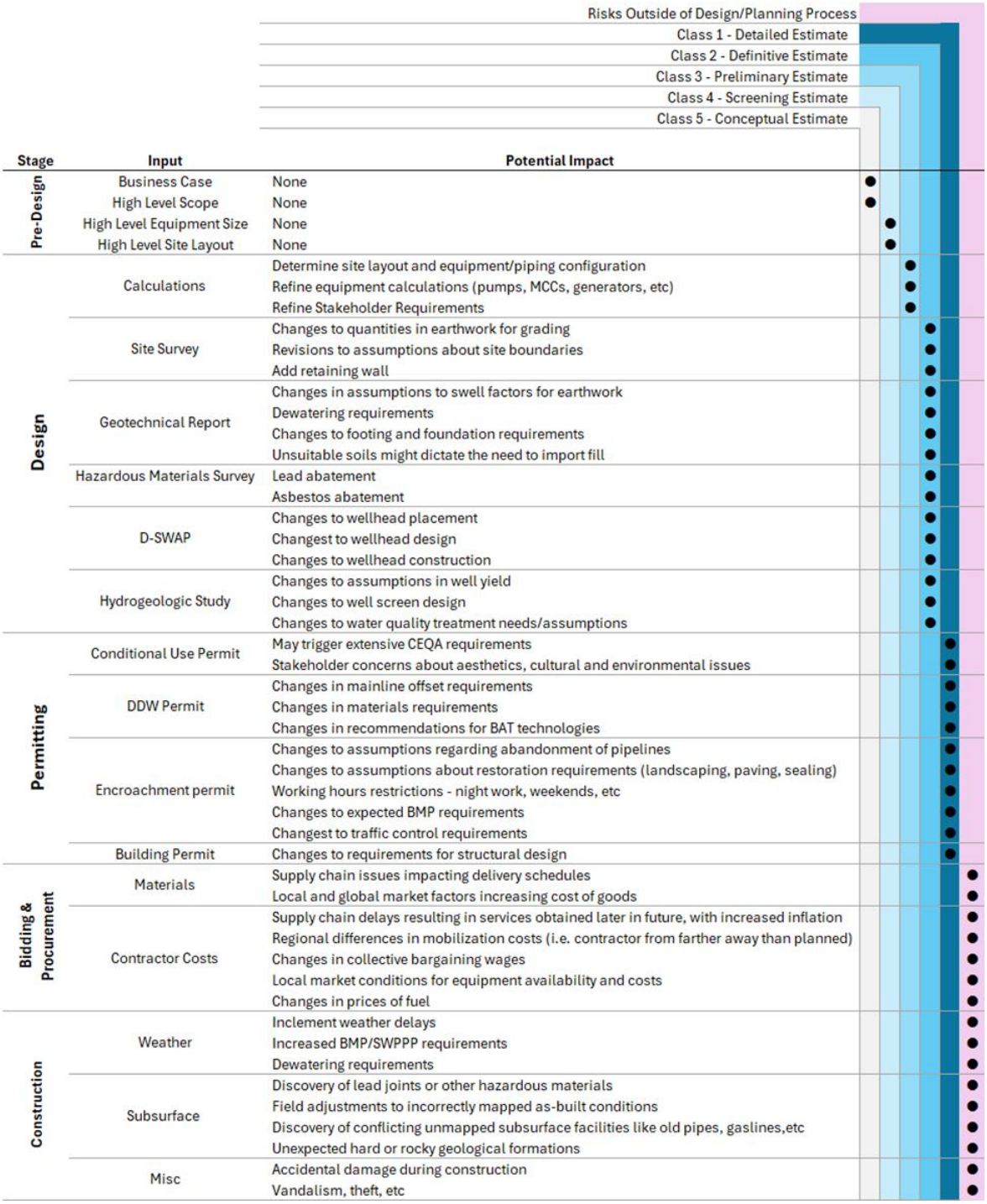
- A few days before the concert, the weather forecast predicts rain throughout the area on the day of the concert, so they move their departure up again to 3:30pm.

- On the afternoon of the concert, they encounter a car accident on the alternate route, causing unexpected delays.

Because their broad contingency plan a month earlier included leaving their Friday afternoon free, they were able to adjust their plans as more details became available, and even made it to the concert on-time despite a last-minute challenge. No reasonable person would challenge this person's ability to operate a motor vehicle, plan a travel route, or deny them the ability to purchase a concert ticket, yet this is effectively what Cal Advocates suggests is a fair and reasonable treatment for Cal Water's proposed contingency.

Conclusion

The Commission should adopt Cal Water's full request for contingency on the basis of sound methodology and the numerous benefits to both Cal Water and its customers.



Stage	Input	Potential Impact
Pre-Design	Business Case	None
	High Level Scope	None
	High Level Equipment Size	None
	High Level Site Layout	None
Design	Calculations	Determine site layout and equipment/piping configuration
		Refine equipment calculations (pumps, MCCs, generators, etc)
		Refine Stakeholder Requirements
	Site Survey	Changes to quantities in earthwork for grading
		Revisions to assumptions about site boundaries
		Add retaining wall
	Geotechnical Report	Changes in assumptions to swell factors for earthwork
		Dewatering requirements
		Changes to footing and foundation requirements
		Unsuitable soils might dictate the need to import fill
	Hazardous Materials Survey	Lead abatement
		Asbestos abatement
	D-SWAP	Changes to wellhead placement
		Changest to wellhead design
		Changes to wellhead construction
	Hydrogeologic Study	Changes to assumptions in well yield
		Changes to well screen design
		Changes to water quality treatment needs/assumptions
Permitting	Conditional Use Permit	May trigger extensive CEQA requirements
		Stakeholder concerns about aesthetics, cultural and environmental issues
	DDW Permit	Changes in mainline offset requirements
		Changes in materials requirements
		Changes in recommendations for BAT technologies
	Encroachment permit	Changes to assumptions regarding abandonment of pipelines
		Changes to assumptions about restoration requirements (landscaping, paving, sealing)
		Working hours restrictions - night work, weekends, etc
		Changes to expected BMP requirements
		Changest to traffic control requirements
	Building Permit	Changes to requirements for structural design
Bidding & Procurement	Materials	Supply chain issues impacting delivery schedules
		Local and global market factors increasing cost of goods
	Contractor Costs	Supply chain delays resulting in services obtained later in future, with increased inflation
		Regional differences in mobilization costs (i.e. contractor from farther away than planned)
		Changes in collective bargaining wages
		Local market conditions for equipment availability and costs
		Changes in prices of fuel
Construction	Weather	Inclement weather delays
		Increased BMP/SWPPP requirements
		Dewatering requirements
	Subsurface	Discovery of lead joints or other hazardous materials
		Field adjustments to incorrectly mapped as-built conditions
		Discovery of conflicting unmapped subsurface facilities like old pipes, gaslines,etc
		Unexpected hard or rocky geological formations
	Misc	Accidental damage during construction
		Vandalism, theft, etc

Figure 1. Potential Project Risk by Scope Definition and Phase

Table 1: Examples of Actual Risk Drawing from Contingency Budget

PID	Project	Contingency	Change Amt.	Details
00098326	BG Station 4 Yard Piping Updates	$161,829	$21,626	Wet weather delays, scope addition of crushed rock and steel plates to allow vac truck to enter yard under wet soil conditions
			$86,134	Broken valves discovered during shut down for tie-in. Valve repairs required to complete project
			$34,226	Schedule delays from valve repair (1 month) resulted in extended rental of excavation shoring.
			$56,191	A section of 24" cast iron pipe had to be replaced when it was discovered to be deformed (oval) upon excavation.
			$5,133	Existing sections of Tie-in C had multiple failures when attempting to perform the tie in. Tie-in was extended to a new location at an MJ valve which also had failed and needed replacement.
		TOTAL	$203,310	

00121245	BG-007 PSPS Genset	$53,728	$10,069	Design drawing called for tie-in to existing PG&E conduit, but PG&E as-built had wrong size. Correct size had to be run all the way to the transformer
			$24,000	Proposed generator pad had to be relocated 8ft to avoid a discharge pipe discovered in the field that was on the existing as-built plans.
		TOTAL	$34,069	
00124068	CH Wildfire 475 Zone Bruce Main	$36,700	$12,900	Increased spoils hauling costs to landfill instead of stockpile in yard in response to wet weather.
			$47,638	Increased contractor costs due to hard rock formation excavation and modifications to storm drain crossings, tie-ins and main alignment due to multiple utility conflicts discovered during construction
			$19,800	Tie-in had to be re-aligned due to differences between field conditions and as-built documentation of existing 12" main. Original design would not meet distance requirements with existing 6" gas main.
		TOTAL	$80,338	

1

Construction Management and Special Inspection

Issue: (Common Plant Project Justification Report, pp. 681-691)

Cal Water's construction management approach has evolved from individual project managers handling all aspects of a project to a more specialized approach (role specialization as further described in Rebuttal Response Book #1, Optimizing Project Completion section) as it adapts to its increasing volume and complexity of projects. Previously, engineers and project managers were responsible for everything from business case development to final closeout, including construction oversight. Engineers reporting to various regional managers often performed construction services outside their specific area of focus and expertise keeping them away from their other growing work (design and project management) and resulting in inconsistent contractor expectations and variable construction quality. To address this and seeing the volume and complexity of projects grow, Cal Water hired a Construction Program Quality Manager (CPQM) in 2019 to develop and manage the specialized construction discipline state-wide. The hired CPQM developed CM/SI standards to be adopted statewide and engaged outside consulting firms, including Jacobs Engineering, to perform construction management and special inspection services to support its growing volume of work. Adopting a centralized construction management program will provide consistent management of and increased confidence in the quality of finished assets, maximizing asset life and lowering life cycle costs. Cal Water proposes a 5% to 15% cost addition to cover the cost of CM/SI (tiered based on the project value) which represents the actual running average cost of CM/SI for projects since the program was established in 2020.

Cal Advocates Position: (Ibrahim Testimony, pp. 4-7)

Cal Advocates recommends the Commission should reject CWS's proposal to include in rates a 5% to 15% CMSI adder on capital projects claiming it is a blanket adder that is simply inflating project budgets and claiming such budgets to be unjustified and unnecessary. It further rejects the proposal because it believes that CWS should have the capacity to manage water infrastructure projects with internal staff criticizing Cal Water for not having the staff to do the work given our size and years in business. They further criticize Cal Water for inflating the project cost by adding up to 15% for CM/SI above and beyond the other internal labor directly added with no

"discernable added value". For these reasons Cal Advocates recommends the Commission should reject CWS's request to add CMSI factors to its project budgets.

Cal Water Rebuttal:

Construction management and special inspection (CMSI) is a critical, industry best practice which improves schedule, cost and quality during construction, the Special Inspections component being required by California code. As discussed below, Cal Water has optimized its approach to CMSI, integrating specialized staff to conduct the work in response to a marked increase in project volume and complexity and has adopted a percentage factor approach to account for the cost, an approach that provides best visibility and ability to benchmark to industry. It has targeted and achieved CMSI costs below industry standard as further described below.

Cal Advocates claims that CMSI is an unjustified "cost adder" that is being included in projects to simply inflate project costs and increase revenues. Its blanketed approach to attack CMSI as an "adder" made simply to increase revenues is completely without basis and an easy target to maximize the cut it proposes to Cal Water's filing. Managing the construction phase of projects and conducting special inspections is critically important and requires labor that results in actual costs being charged to projects.

The expansion of our capital program unequivocally necessitates an increase in resources. Cal Water has made a strategic decision to implement role specialization to effectively manage these resource needs. The construction management role in delivering projects is indispensable and can be filled by either internal or external resources, thereby allowing for necessary flexibility through a percentage-based approach which is also an industry standard. Denying this role and devaluing it as an adder fails to recognize the increased capital program and the essential resources required for its successful execution and delivery. By denying the CMSI, Cal advocates fail to recognize the resource needs of the proposed capital program. If a percentage approach is not acceptable, then an equivalent labor cost needs to be approved to address the resource needs of the capital program.

In the 2021 rate case decision, the commission recognized the construction management services as an industry practice and approved the amount. The Commission's approval of CMSI

costs in the 2021 GRC supports the legitimacy of this cost as being justified project costs to include. The commission should approve the cost for CMSI, just like the cost of design and project management that have always been accepted as necessary and prudent costs associated with executing project work.

Cal Advocates asserts that a blanket cost adder (CMSI) should not be allowed because Cal Water should have the internal capacity to conduct CMSI given its size and years in business. As noted above, regardless of whether CMSI is conducted with internal existing capacity or utilizing consultants, there is a cost to do this work, and that cost should be recoverable via the capital project. If Cal Water applies internal capacity to complete CMSI it will apply additional hours and cost to the project equivalent to the amount proposed via the CMSI factor. A cost factor approach was adopted when introduced in the 2021 GRC to provide visibility on the marked change in who does the work (engineers to roles specialists) and to indicate the cost in a way (% of construction) that can be validated against industry as reasonable. In the 2021 GRC, we provided expert testimony supporting the typical industry standard percentage of 20%. We aim for a slightly lower percentage to apply a lean CMSI approach tailored to our projects. Our actual CMSI costs have averaged between 10% and 15%, below industry standards and aligned with prior rate case targets. Special inspections in particular make-up 3%-5% of the total CM/SI cost. These inspections ensure proper material and installation that support longevity of the facility and are required by Building code (CBC, Ch. 17 latest version). By outright denying CMSI, Cal Advocates is effectively refusing to ensure the rate of recovery for tasks essential to ensure projects are adequately managed while meeting regulatory compliance regarding special inspection requirements.

Cal Advocates incorrectly interpreted from our justification that the addition of CMSI factor is the result of the decision to outsource construction management services. What was described in the justification was the strategic decision to begin conducting CMSI services with specialized roles versus general engineering staff to more effectively address their higher volume and complexity of work (shifting to role specialization). Role specialization adds positions with specific training and expertise in construction, inspections, and claims management to ensure high-quality facilities, focused project management, improved cost, claims and change management that supports reduced overall lifecycle costs while also improving lessons learned feedback integration from construction to design. Over the last several GRCs, Cal Water has thoughtfully integrated this new approach into its work and organization, starting with a core internal construction team

supported by consultants. The goal is to ultimately to transition more of the work to internal construction specialists but only after we understand baseload work levels and regional fluctuations of the work to ensure we do not overstaff and cause undue costs to customers.

Cal Advocates also points out an example of how the proposed cost factors inflate project budget sitting a project with total internal labor costs and CMSI cost of $110,000 and $115,354 respectively. In total, $225,354 is proposed to complete overall design, project management, construction management and special inspections and is roughly 22% of the overall cost which is well within industry standard of 10 to 30% (design costs typically range for 5 to 15% and CMSI costs range from 5 to 15%).

Cal Water has been utilizing CM role specialists since 2020. The program has been performing at a rate of between 10% and 15% (of construction costs) for CMSI. This rate is below the industry average of between 15% and 22% cited in A California Multi- Agency CIP Benchmarking Study – 2020 Update (see reference below). Additionally, Cal Trans (in 2020) recommends local agencies use 15% as a guide for estimating CM costs. Cal Water has proven that it can manage CM costs below these industry guidelines. Additionally, project execution at Cal Water has seen improved construction schedule durations, quality of the projects completed, cost savings of up to 10% of Contractor change orders via enhanced negotiating ability of specialist staff and a robust Lessons Learned rollback program where construction lessons are integrated into our overall project execution. Specialization has also contributed towards Cal Waters Capital Delivery team ability to complete more projects annually, year over year since 2019 and most recently doubling its capital improvements from 2023 to 2024, hitting an all-time high of $100M invested in water system improvements for 2024 and supporting achievement of the company's highest investment year on record ($386M).

Routine Granular Activated Carbon Changeout Program

Issue: (Common Plant Project Justification Report, pp. 533-534)

The Routine Granular Activated Carbon (GAC) Changeout Program is designed to maintain the effectiveness of GAC treatment units used by Cal Water. These units are essential for removing organic contaminants from water to meet the maximum contaminant level (MCL) requirements set by the State Water Resources Control Board Division of Drinking Water (DDW). The GAC media must be replaced when contaminants are detected in the treated water or at certain points in the treatment process above the limits set in the permit.

GAC filtration is recognized as the best available technology for controlling 55 of the 60 regulated organic contaminants. It works through adsorption, where organic contaminants attach to the surface of the GAC, which has a large surface area due to its high porosity. However, over time, the adsorption sites become filled, and the GAC must be replaced to maintain its effectiveness.

Overall, the Routine Granular Activated Carbon Changeout Program is crucial for ensuring the continued compliance with water quality standards and the effective removal of organic contaminants from the water supply.

Cal Advocates Position: (Sorensen Testimony, pp. 9-1 to 9-5)

Cal Advocates recommends the Commission consider reducing Cal Water's forecasted budget for granular activated carbon changeouts in the Bakersfield and Chico districts to account for Cal Water's higher unit cost estimate for the granular activated carbon in these districts. Additionally, Cal Advocates recommends removal of 10% contingency Cal Water included in the carbon changeout cost estimates for the Kern River Valley, Livermore, Marysville, Oroville, Redwood Valley, and Visalia districts.

Cal Water Rebuttal:

Cal Water would like to address and clarify some errors identified in the DR CSN-001 response concerning the Bakersfield and Chico districts.[46] The initial response indicated a price

[46] Cal Water's Response to CSN-001 is included in the Sorensen testimony as Attachment 6-1.

per media of $3.50 for both districts, which was incorrect due to miscalculations in the amount of media required at each site.

Bakersfield Clarification

As noted by Cal Advocates, the price per pound of media for the Granular Activated Carbon (GAC) changeout in Bakersfield was stated as $3.50. The error arose from an incorrect calculation of the total pounds needed at each site. The number of vessels mentioned in DR CSN-001 Q.1-vi represents the number of stations proposed, with each station containing two vessels.[47] The initial calculation used six stations instead of the total number of vessels, leading to an incorrect total of 120,000 lbs of media per project. The correct total should be 240,000 lbs of media per project, reducing the average cost per pound to $1.75. Cal Water has corrected this error, as shown in the updated table below:

Table 1: Bakersfield GAC Clarification

	Original DR CSN-001			Updated DR CSN-001		
PID	**132663**	**132664**	**132665**	**132663**	**132664**	**132665**
District	**Bakerfield**	**Bakerfield**	**Bakerfield**	**Bakerfield**	**Bakerfield**	**Bakerfield**
Year	**2025**	**2026**	**2027**	**2025**	**2026**	**2027**
Granular Activated Carbon Changeout	$420,000	$420,000	$420,000	$420,000	$420,000	$420,000
Number of (proposed) vessels in the treatment plant.	6	6	6	**12**	**12**	**12**
Pounds of carbon in each vessel. (approximate)	20,000	20,000	20,000	20,000	20,000	20,000
Cost per pound of carbon for each change out. (approximate)	$3.50	$3.50	$3.50	**$1.75**	**$1.75**	**$1.75**
Total pounds of carbon for each carbon change out project. (approximate)	120,000	120,000	120,000	**240,000**	**240,000**	**240,000**

Chico Clarification

[47] Cal Water's Response to CSN-001 is included in the Sorensen testimony as Attachment 6-1.

In Chico, the amount of media noted in the DR-CSN-001 response is correct. Chico has four vessels, requiring a total of 80,000 lbs of media (20,000 lbs per vessel). However, Cal Water's original estimate incorrectly doubled the amount of media to 160,000 lbs, assuming there were four sites with two vessels at each site. Cal Water has corrected this estimate and is proposing new cost estimates for PIDs 132669, 132670, and 132671 to reflect the correct amount of media needed. As shown in Figure 2, Updated Cost Estimates. [48]

Table 2. Updated Cost Estimates

PID	Project	Application Direct Cost	New Proposed Direct Cost
132669	CH 2025 Carbon Changeouts	$376,985.24	$229,897.76
132670	CH 2026 Carbon Changeouts	$386,409.81	$235,645.21
132671	CH 2027 Carbon Changeouts	$396,060.68	$241,536.34

Conclusion

Cal Water acknowledges the minor mistakes in the DR CSN-001 response for the Bakersfield and Chico districts, which reflected a higher media cost of $3.50. The corrected response notes that in Bakersfield, the amount of media is doubled from 120,000 to 240,000 lbs, reducing the cost per media to $1.75, but total cost remains unchanged. In Chico, the cost estimate has been corrected to reflect the accurate amount of media, reducing the budget for the Chico district. This change is reflected in the ROM provided with the rebuttal.

Regarding the removal of contingency for these projects, it is important to note that project contingency is a critical aspect of financial planning and risk management. The Commission should approve the industry-standard contingencies proposed by Cal Water to ensure project integrity. Please refer to Book 2. Contingency section for further details.

[48] Attachment 1 – New Pricing

Table 3: GAC Changeout Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00132663	BK 2025 Carbon Changeouts	551,686	341,686	551,686	(210,000)
2027	00132664	BK 2026 Carbon Changeouts	579,615	369,615	579,615	(210,000)
2027	00132665	BK 2027 Carbon Changeouts	594,091	384,091	594,091	(210,000)
2025	00132669	CH 2025 Carbon Changeouts	376,985	236,985	229,897	7,088
2026	00132670	CH 2026 Carbon Changeouts	386,410	246,410	235,645	10,765
2027	00132671	CH 2027 Carbon Changeouts	396,061	256,061	241,536	14,524
2025	00132675	VIS 2025 Carbon Changeouts	758,663	693,017	758,663	(65,647)
2026	00132676	VIS 2026 Carbon Changeouts	777,629	711,983	777,629	(65,646)
2027	00132677	VIS 2027 Carbon Changeouts	797,051	731,405	797,051	(65,646)
2027	00132678	RDV 2025 Carbon Changeout	78,051	70,955	78,051	(7,096)
2027	00132679	RDV 2027 Carbon Changeouts	78,051	70,955	78,051	(7,096)
2025	00132683	ORO-010 Carbon Changeout	126,444	115,503	126,444	(10,941)
2027	00132684	ORO-010 Carbon Changeout	132,842	121,901	132,842	(10,941)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00132685	MRL 010 Carbon Changeout	129,605	118,664	129,605	(10,941)
2025	00132686	MRL 015 Carbon Changeout	126,444	115,503	126,444	(10,941)
2026	00132687	MRL 015 Carbon Changeout	129,605	118,664	129,605	(10,941)
2027	00132688	MRL 015 Carbon Changeout	132,842	121,901	132,842	(10,941)
2025	00132699	KRV-KERV 001 Carbon Changeout	126,444	115,503	126,444	(10,941)
2027	00132700	LIV-010 Carbon Changeout	132,842	121,901	132,842	(10,941)
2026	00132701	LIV-014 Carbon Changeout	129,605	118,664	129,605	(10,941)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	-	-	-
	2025	1,514,980	1,276,510	1,367,892
	2026	2,104,539	1,656,070	1,953,775
	2027	2,921,444	2,248,784	2,766,919
	Total Direct Cost	6,540,963	5,181,364	6,088,586

1

Routine GAC Changeouts Attachment 1 – New Pricing

Capital Project Cost Estimate

Project No. : 132669
Description CH 2025 Carbon Changeouts
District / Department: Chico
Project Start Date: 01/01/2025
Project Completion Date: 12/31/2025
Prepared By: dblanusa
Date Initiated: 10/30/2023
Base Year: 2023
Sub-Total: $218,820
Direct Cost: $229,898

Cost Table:

Item	Description [units]	Qty	Unit Cost	Total	Cost Basis
4 20,000 LB CARBON CHANGE OUT	Granular Activated Carbon [LB]	80000	$1.75	$140,000.00	Cost Catalog No. A.XX
4 FILTER BEDS	Sacrificial Bed [EA]	4	$6,050.00	$24,200.00	Cost Catalog No. A.XX
4 VESSELS CHANGE OUT	Single Vessel Changeout [EA]	4	$13,655.00	$54,620.00	Cost Catalog No. A.XX

Sub-total = $218,820.00
Direct Cost = $229,897.76

Notes:
1. Sub-Total is defined as the summation of all project estimated materials, labor, and markups costs
2. Direct Cost is the escalate Sub-Total from the base year of 2023 to the project completion year assuming a 2.5% inflation rate
3. See Common Plant Book for additional details on cost estimating methodology and justification

Water Quality Sample Stations Program

Issue: (Common Plant Project Justification Report, pp. 398-406)

Cal Water's Water Quality Sample Stations Program for 2025-2027 aims to ensure high-quality water delivery by maintaining and upgrading dedicated sample stations across its districts. These stations are strategically located to provide representative water samples, reducing the risk of cross-contamination and ensuring compliance with state regulatory requirements. The program addresses aging infrastructure by proactively replacing sample stations based on their condition and expected service life, as recommended by the Division of Drinking Water (DDW). Alternatives such as doing nothing or collecting samples at unprotected sites were deemed impractical due to the increased risk of false positives and regulatory non-compliance. The preferred solution involves installing and replacing dedicated sample stations, which offer more accurate and consistent water quality monitoring. The program includes funding for new locations required to meet regulatory changes and system supply updates, ensuring reliable testing and monitoring of water quality delivered to customers.

Cal Advocates Position: (Sorensen Testimony, pp. 8-1 to 8-2)

While Cal Advocates agree with the merit of these projects, Cal Advocates recommends the Commission consider reducing the budget based on Cal Water's historical performance in 2022, where it utilized 33.067% of its requested water quality sample station replacements budget for that year.

Cal Water Rebuttal:

Cal Water submitted several asset replacement programs in its GRC filing. These programs are meant for assets that are necessary for normal and emergency operations of a water distribution system. Routine replacements are required in order to maintain the reliability of each system. For reasons unexplained in Cal Advocates report, Cal Advocates chose different methods to analyze each of Cal Water's programs and propose its own recommendations for reductions to Cal Water's filing. The methodologies chosen by Cal Advocates are not consistent between programs in, what appears to be, an attempt to "cherry-pick" a result rather than evaluate the merits of the program or understand the needs of the water systems. Since Cal Water's asset replacement programs are consistent in scope, only vary by asset type, the evaluation

methodology undertaken by Cal Advocates should be consistent and focus on the needs of the water system.

The installation of dedicated water quality sample stations is a critical investment to ensure compliance with state regulatory requirements, protect public health, and maintain the integrity of our water distribution system by ensuring there is no cross contamination when sampling. Cal Advocates recommendation to reduce the budget requested is based on an assessment that only 33.067% of previously requested budget was utilized in 2022. It cherry-picks data from a single year to demonstrate Cal Water's capacity to perform work, which does not provide a comprehensive view. Additionally, it neglects the significant impact of the pandemic in 2022, which affected project timelines and capacities. Furthermore, it overlooks the essential need for replacements to maintain and improve infrastructure. This selective approach fails to present an accurate and fair assessment of the situation.

The installation of dedicated water quality sample stations is a critical investment to ensure compliance with state regulatory requirements, protect public health, and maintain the integrity of our water distribution system by ensuring there is no cross contamination when sampling.

Cal Advocates Calculation of Historical Replacement Rate is Misleading:

Cal Advocates recommendation to reduce the budget requested is based on an assessment that only 33.067% of previously requested budget was utilized in 2022. However, this calculation does not fully reflect the actual investment made. In prior years, funding for sample station installations was allocated under a different budget category, meaning that historical expenditures do not accurately capture the full scope of the completed work.

Cal Advocates asserts that Cal Water is only able to deliver 33.067% of the 2022 sample station projects. This calculation is artificially low and does not represent Cal Water's actual performance. Cal Advocates calculations are not accurate because they only compare dollar amounts, which does not provide a complete picture of project completion. Simply comparing the dollar value of the 17 projects approved for 2022 in the 2021 GRC with the dollars approved for the 9 projects in progress does not account for the actual progress or completion rate of the projects. It is important to consider the number of projects completed rather than just the financial aspect. In

reality, the actual projects completed from the 2021 GRC proposed amount is 65%, which gives a more accurate representation of the progress made[49].

The proposed budget is based on a thorough assessment of the system's needs and the cost of ensuring compliance with regulatory requirements. Reducing the budget would have a significant impact on our ability to ensure regulatory compliance, prevent cross contamination risks, address growing infrastructure needs, and efficiently utilize resources for multi-year projects.

To address the concerns about spending efficiency, we are taking clear, proactive steps to ensure these projects are completed on time and within the proposed budget by improving our planning and scheduling, streamlining the procurement process, and enhancing our tracking and reporting. Reducing our proposed budget to this program would jeopardize compliance with water quality standards and expose customers to potential health risks. The proposed funding levels are based on actual system's needs and will allow us to efficiently and effectively implement sample station installations to protect public health and regulatory compliance.

Accordingly, we request the Commission to approve the proposed budget for Water Quality Sample Stations to ensure Water Quality compliance requirements.

[49] See Attachment ___ for calculation of completed projects

Water Quality Sample Stations Attachment 1

#	WO Number	Description	Year	Status as of January 2025
1	00125130	BG 2022 Sample Sites	2022	Completed
2	00124934	BK 2022 Sample Sites	2022	Completed
3	00125173	SLN- SLNH 2022 Sample Site	2022	Completed
4	00125139	CH 2022 Sample Site	2022	Completed
5	00125157	SLN 2022 Sample Site	2022	Completed
6	00125140	KC 2022 Sample Sites	2022	Completed
7	00125137	ORO 2022 Sample Site	2022	Completed
8	00125177	KRV-LBOD 2022 Sample Sites	2022	Completed
9	00125176	KRV-SOLA 2022 Sample Sites	2022	Completed
10	00125152	SSF 2022 Sample Sites	2022	Completed
11	00125175	KRV-KERV 2022 Sample Sites	2022	Completed

Projects Completed	11
Total Projects Proposed	17
Percent Completion	**65%**

Table 1: Sample Station Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	00132596	HR 2025 Sample Stations	14,273	4,311	14,273	(9,962)
2025	00132599	KC 2025 Sample Stations	30,048	9,076	30,048	(20,972)
2026	00132601	KC 2026 Sample Stations	30,799	9,325	30,799	(21,475)
2025	00132609	LIV 2025 Sample Stations	90,144	27,229	90,144	(62,915)
2026	00132610	LIV 2026 Sample Station	92,397	27,974	92,397	(64,423)
2027	00132611	LIV 2027 Sample Stations	63,137	19,158	63,137	(43,979)
2025	00132612	PV 2025 Sample Stations	42,818	14,159	42,818	(28,659)
2025	00132615	SLN 2025 Sample Stations	105,168	31,767	105,168	(73,401)
2026	00132616	SLN 2026 Sample Stations	107,797	32,636	107,797	(75,161)
2027	00132617	SLN 2027 Sample Stations	94,705	28,737	94,705	(65,968)
2025	00134437	DOM 2025 Sample Stations	51,901	17,162	51,901	(34,739)
2025	00134440	ELA 2025 Sample Stations	12,975	4,291	12,975	(8,685)
2025	00134444	RDV 2025 Sample Stations	14,341	4,742	14,341	(9,599)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	00134446	VIS 2025 Sample Stations	12,975	4,291	12,975	(8,685)
2025	00134469	KRV 2025 Sample Stations	232,188	76,778	232,188	(155,410)
2027	00134472	KC 2027 Sample Stations	30,133	9,964	30,133	(20,169)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	-	-	-
	2025	606,830	193,804	606,830
	2026	230,993	69,934	230,993
	2027	187,975	57,859	187,975
	Total Direct Cost	1,025,798	321,597	1,025,798

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Physical Security Program

Issue: (Common Plant Project Justification Report, pp. 538-546)

Cal Water's Physical Security Program is a proactive initiative aimed at safeguarding its water and wastewater facilities against potential threats, including terrorism and other criminal activities. The program was established in response to the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 and involves continuous efforts to identify and mitigate security vulnerabilities across our infrastructure. Vice President of Emergency Preparedness Safety & Security leads this program that collaborates closely with District Operations to assess the risk criticality of facilities and implement appropriate security measures. These measures include high-security perimeter fencing, facility illumination, intrusion detection systems, surveillance systems, and high-security locks. The program follows best practices outlined by the American Water Works Association (AWWA) and the American Society of Civil Engineers (ASCE) and is designed to enhance the protection of Cal Water's infrastructure, employees, and the public.

Cal Advocates Position: (Ibrahim Testimony, pp. 3-1)

Cal Advocates is not denying the importance of Cal Water's physical security program or merit of individual projects in this program. They recommend the Commission should adopt a total budget of $10,025,459 for the years 2025, 2026, and 2027 instead of $15.6 million for physical security upgrades.

Cal Water Rebuttal:

Cal Advocates and Cal Water agree on the importance of this program and the direct impact of that on protection of Cal Water's infrastructure, employees, and the public, as this program will protect Cal Water facilities and support the delivery of safe water to the community.

The main disagreement between Cal Advocates and Cal Water is based on completion rate of Physical Security projects. Cal Advocates argue that Cal Water was not able to complete all authorized projects. This claim is misleading and is based on outdated information. Although Cal Water has completed all of the authorized projects in this program, it also strongly argues that the past rate of completed projects shall not determine the future needs of this critical program.

Cal Advocates asserts that these projects were funded by customers and should not continue to be included in rates until they are complete, and in use and useful. This argument is a

misleading dispute put forth by Cal Advocate. For further discussion on this issue, please refer to Cal Water's rebuttal on Projects in Progress in Rebuttal Book #1.

Cal Water experienced some challenges in delivering projects approved in GRC 2018 due to various reasons, some of which were beyond Company control, mainly the COVID-19 pandemic. Due to importance of prompt delivery of Physical Security projects, Cal Water evaluated the program structure comprehensively and developed and executed multiple aggressive measures to improve its capabilities within its Physical Security (PS) Program to ensure competition of all projects. Some of these initiatives include:

1- Hired a full-time Physical Security Manager to oversee and complete all PS projects. This individual carries extensive project delivery experience, including consulting reputable CW Security Group (CWSG).
2- Developed a strategy to enhance the Company's capabilities to deliver the physical security projects on time. This rigorous strategy was fully implemented starting 2022, as the Company began to address the uncontested 2021 GRC physical security projects.
3- Implemented the following updated and approved Company Physical Security Standards.
    3-1- Facility Risk Criticality Criteria Standard
    3-2- Fencing Standard
    3-3- Lighting Standard
    3-4- Incident Response Standard
    3-5- Vegetation Management Standard
    3-6- CCTV/Access Control Standard
4- Added staffing to the PS department to foster in competition of in progress projects and positioning for the upcoming projects, included:
    4-1- CWSG employee assigned to Project Management
    4-2- Project Management Consultant who has an extensive law enforcement/security background
5- launched a novel tool to actively collect the analyze Physical Security Incidents across the Company in January 2021. This tool significantly enhanced the Company's ability to document, analyze and share critical information used to protect its facilities. The incident reporting tool was progressively modified to serve the needs of the Company based on the maturation of its physical Security program and the ever-changing threat environment which has proven to be a "moving target."
6- Initiated the development of a comprehensive project management program that was implemented during the 2021 GRC to ensure that all approved PS Capital Management projects are initiated and completed on time and within budget. Also implemented was an internal program/requirement which imposes accountable for completion of Capital Projects from the Officer level through the operational staff in District, to the Physical Security Department.

Further as mentioned above in March 2020, the COVID-19 pandemic struck the USA. The sickness and preventative measures put in place significantly impacted the Company's ability to continue efforts to complete PS projects throughout the remainder of the rate case timeframe (March 2020 through December 31, 2021, or approximately 22-months). The following were specific challenges that were encountered by the Company attributable to the pandemic, and they were all conditions beyond Cal Water's control.

1. Lockdowns and preventative measures put in place to protect Cal Water employees, and the public prevented non-employees from accessing facilities.
2. Working conditions related to preventative measures contribute to longer project timelines.
3. Initial lockdowns created a contractor shortage and unavailability.
4. Contractors struggled with a shortage of labor which also contributed to longer lead times to getting work done.
5. Material shortages, particularly with steel products, created significant lead times which affected the timeline of projects.

As business began to open and contractors renegotiated, demand was high and it created a competitive environment which led to higher prices and longer lead times to getting work done. This situation also contributed to difficulty in obtaining bids which were acceptable to the level of funding allocated for the project. This drove the need to obtain additional estimates, which was time consuming and challenging to coordinate. Furthermore, Increased material costs also contributed to higher project estimates and the need for additional bids.

Based on the aggressive implementation of the Cal Water Physical Security Program improvements, and the passing of the adverse conditions created by the Covid-19 pandemic, a more efficient and effective process was designed and implemented to address the 2021 GRC physical security projects. At this point, Cal Water strongly believed in its capability in defining and competition of all required physical security projects.

While awaiting the final approval of the 2021 GRC, Cal Water continued to address the uncontested physical security projects utilizing a prioritized approach for projects requested for CY 2022 and then CY 2023. With final approval, or moreover the 2021 GRC Decision (D.24-03-042) not being issued until March 2024, Cal Water demonstrated that it had made the necessary program

adjustments/improvements to effectively complete approved physical security projects “on-time,” by completing all 2021 GRC approved physical security projects by December 31, 2024, despite the challenging schedule resulting from the delayed decision. It is worth noting that the enhanced physical security project delivery system takes into account changes in risks and consequently updates the priority of the projects. In addition, this system actively monitors all infrastructure to ensure we are working on the most critical projects to ensure the delivery of safe water to the community. Furthermore, Cal Water actively looks for new solutions to optimize the project’s scope and cost to better serve all our customers. This means that due to various business needs we modify list and scope of projects defined for different facilities across our districts. This continuous monitoring of physical security needs will support our customers as we will focus on only those projects that are deemed to be critical. All in all, Cal Water argues that we have completed the overall authorized physical security budget by the end of 2024, excluding those projects that Cal Water decided to cancel due to various reasons, including changing risks in our facilities or revising the proposed solutions to safeguard the water infrastructure. Accordingly, Cal Water request PUC to approve the full list of projects proposed in this GRC. We believe that not completing these projects will significantly impact on the safety and security of water infrastructure and our people, and this will impact the customers' access to safe drinking water.

Table 1: Physical Security Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	00132447	BG 2025 Physical Security Upgrades	143,717	91,897	143,717	(51,820)
2025	00132455	LIV 2025 Physical Security Upgrades	331,634	212,057	331,634	(119,577)
2026	00132707	BG 2026 Physical Security Upgrades	189,776	121,629	189,776	(68,147)
2027	00132728	BG 2027 Physical Security Upgrades	246,363	158,250	246,363	(88,113)
2025	00132731	CH 2025 Physical Security Upgrades	86,619	55,387	86,619	(31,232)
2026	00132732	CH 2026 Physical Security Upgrades	265,856	170,389	265,856	(95,467)
2027	00132735	CH 2027 Physical Security Upgrades	673,829	432,832	673,829	(240,997)
2026	00132736	DIX 2025 Physical Security Upgrades	86,072	55,037	86,072	(31,035)
2026	00132737	DIX 2026 Physical Security Upgrades	131,356	84,187	131,356	(47,169)
2027	00132738	2027 DIX Physical Security Upgrades	44,774	28,760	44,774	(16,014)
2025	00132739	ELA 2025 Physical Security Upgrades	275,844	176,383	275,844	(99,461)
2027	00132740	ELA 2026 Physical Security Upgrades	246,065	157,705	246,065	(88,360)
2027	00132741	ELA 2027 Physical Security Upgrades	364,500	234,136	364,500	(130,364)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	00132761	KC 2025 Physical Security Upgrades	158,504	101,352	158,504	(57,152)
2026	00132764	KC 2026 Physical Security Upgrades	101,550	65,084	101,550	(36,466)
2027	00132768	KC 2027 Physical Security Upgrades	49,266	31,646	49,266	(17,620)
2025	00132770	KRV 2025 Physical Security Update	148,800	95,147	148,800	(53,653)
2026	00132771	KRV 2026 Physical Security Upgrades	405,734	260,038	405,734	(145,696)
2027	00132776	KRV 2027 Physical Security Upgrades	376,140	241,612	376,140	(134,528)
2025	00132782	LAS 2025 Physical Security Upgrades	376,997	241,063	376,997	(135,934)
2026	00132784	LAS 2026 Physical Security Upgrades	267,392	171,374	267,392	(96,018)
2026	00132814	LIV 2026 Physical Security Upgrade	128,108	82,105	128,108	(46,003)
2026	00132816	ORO 2026 Physical Security Upgrades	156,913	100,567	156,913	(56,346)
2027	00132817	PV 2026 Physical Security Upgrades	462,391	296,350	462,391	(166,041)
2027	00132818	PV 2027 Physical Security Upgrades	503,462	323,397	503,462	(180,065)
2026	00132819	SEL 2025 Physcial Security Upgrades	100,228	64,089	100,228	(36,139)
2027	00132820	SEL 2026 Physical Security Upgrades	94,803	60,760	94,803	(34,043)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00132821	STK 2026 Physical Security Upgrades	568,933	364,633	568,933	(204,300)
2026	00132822	SLN 2026 Physical Security Upgrades	709,486	454,715	709,486	(254,771)
2027	00132823	AV 2026 Physical Security Upgrades	123,087	78,887	123,087	(44,200)
2025	00132824	SSF 2025 Physical Security Upgrades	439,017	280,720	439,017	(158,297)
2025	00132829	HR 2025 Physical Security Upgrades	351,896	225,013	351,896	(126,883)
2026	00132830	HR 2026 Physical Security Upgrades	78,298	52,617	78,298	(25,681)
2027	00132831	HR 2027 Physical Security Upgrades	149,461	96,006	149,461	(53,455)
2025	00132874	DOM 2025 Physical Security Upgrades	520,227	332,648	520,227	(187,579)
2026	00132875	DOM 2026 Physical Security Upgrades	470,892	301,798	470,892	(169,094)
2027	00132880	DOM 2027 Physical Security Upgrades	538,268	345,755	538,268	(192,513)
2026	00132881	WLK 2025 Physical Security Upgrades	75,188	47,050	75,188	(28,138)
2026	00132882	WLK 2026 Physical Security Upgrades	81,947	52,520	81,947	(29,427)
2025	00132885	MPS 2025 Physical Security Upgrades	470,035	300,554	470,035	(169,481)
2026	00132928	MPS 2026 Physical Security Upgrades	388,928	249,267	388,928	(139,661)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00132933	MPS 2027 Physical Security Upgrades	284,050	182,459	284,050	(101,591)
2026	00132935	SSF 2026 Physical Security Upgrades	488,577	313,133	488,577	(175,444)
2027	00132937	SSF 2027 Physical Security Upgrades	422,125	271,151	422,125	(150,974)
2025	00132949	VIS 2025 Physical Security Upgrades	282,041	180,345	282,041	(101,696)
2026	00132950	VIS 2026 Physical Security Upgrades	411,373	263,652	411,373	(147,721)
2027	00132951	VIS 2027 Physical Security Upgrades	442,015	283,927	442,015	(158,088)
2027	00132952	WLK 2027 Physical Security Upgrades	75,640	48,587	75,640	(27,053)
2027	00133313	BK 2026 Physical Secuity Upgrades	1,018,793	652,952	1,018,793	(365,841)
2027	00133314	BK 2027 Physical Security Upgrades	831,067	533,837	831,067	(297,230)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	-	-	-
	2025	3,585,331	2,292,566	3,585,331
	2026	5,106,607	3,273,884	5,106,607
	2027	6,946,098	4,459,009	6,946,098
	Total Direct Cost	15,638,035	10,025,459	15,638,035

Vehicle Replacement Program

Issue: (Common Plant Project Justification Report, pp. 167-189)

Cal Water's Vehicle Replacement Program for the 2025 to 2027 rate cycle involves the upfitting and replacement of 206 vehicles. The program was developed using an Optimal Replacement Cycle Analysis (ORCA), which evaluates life cycle costs and determines the optimal year and mileage for vehicle replacement. This analysis uses historical asset usage, maintenance, and repair cost data to develop regression equations that estimate annual maintenance costs and end-of-year fair market values. The goal is to identify the replacement cycle that results in the lowest equivalent annual cost (EAC).

The replacement cycle for Cal Water is in line with the guidelines established by the California Department of General Services (DGS). The program also aligns with California Governor's Executive Order N-79-20, which mandates that all vehicles sold after 2035 be zero-emission. Starting in 2025, Cal Water plans to purchase zero-emission vehicles and light trucks where feasible to reduce its carbon footprint and increase sustainability.

The program benefits customers by increasing the safety and reliability of company vehicles, reducing major maintenance and repair costs, and minimizing productivity downtime. Alternative approaches, such as running vehicles to failure, were found to be less effective due to lower resale values, increased maintenance costs, and decreased customer satisfaction. The ORCA analysis supports the transition from internal combustion vehicles to electric vehicles, ensuring compliance with regulatory requirements and optimizing the replacement cycle for cost efficiency.

Cal Advocates Position: (Ibrahim Testimony, pp. 3-5 to 3-8)

Cal Advocates recommends that the Commission should approve $12,505,736 for the Vehicle Replacement Program for the 2025 to 2027 rate cycle. This amount considers denying sixty seven of 206 vehicles replacement proposed by Cal Water. Cal Advocates also recommends that the Commission should adopt the replacement criteria of 120,000 miles.

Cal Water Rebuttal:

Cal Water does not agree with Cal Advocate's conclusion and urges the Commission to see the benefits of the recommendations found in the ORCA which is an independent analysis conducted by third party vendor, Mercury Associates, Inc.[50] The subsequent sections will outline the inaccuracies in Cal Advocate's claims and demonstrate why the ORCA offers a more effective and efficient solution for fleet management.

DGS criteria no longer mandate vehicle replacement after reaching a 120,000-mile threshold. In fact, Cal Water's proposed replacement strategy is closely aligned with the revised replacement schedule set forth by the DGS as shown in Table 1 below.[51]

Following this update, Cal Water proactively utilized the services of Mercury to evaluate Cal Water's fleet management program. Mercury recommended a vehicle replacement criterion that encompasses a comprehensive and data-driven approach, ensuring optimal fleet management. Mercury's replacement plan is designed to replace vehicles before the total cost of ownership (TCO) exceeds their resale value and before they become unreliable and unsafe to operate. This method considers various classes of vehicles and their specific operational needs, providing a tailored replacement cycle that maximizes efficiency and safety.

For the majority of vehicle types, Cal Water's criteria is more conservative than the state's. In other words, Cal Water is recommending that vehicles be replaced later than the DGS's guidelines suggest. Therefore, Cal Advocates' argument is fundamentally flawed.

Table 1: ORCA vs DGS updated Criteria

Vehicle Type	Cal Water Proposed Criteria (ORCA)		DGS Updated Criteria	
	Years	Miles	Years	Miles
Sedan/SUV	11	105,000	6	65,000

[50] Ibrahim Testimony, pp. 3-5: Cal Advocates notes that DGS retained Mercury Associates, Inc. to analyze and update their criteria.
[51] California Department of General Services. (n.d.). State Administrative Manual (SAM) Section 4126. Retrieved from https://www.dgs.ca.gov/Resources/SAM/TOC/4100/4126

Half Ton Pickups	7	69,000	5	65,000
Three Quarter Ton Pickups	7	71,000	6	70,000
Trucks with Utility Beds	8	74,000	6	70,000

Cal Advocates' proposed methodology does not yield cost benefits to customers

Cal Advocates argues that the ORCA does not fully account for all costs associated with the proposed vehicle replacement strategy. It is important to note that Cal Advocates questions the cost-effectiveness of Cal Water's proposal while simultaneously recommending the outdated replacement criteria from the very agency upon which Cal Water's criteria are based. This contradiction highlights that Cal Water's strategy is grounded in what is widely regarded as a sound industry baseline that even Cal Advocates recommends. Furthermore, Cal Water has tailored the program to effectively meet specific business needs.

As vehicles age, annual maintenance costs and downtime will inevitably increase. The optimal time to replace a vehicle is just before its life-to-date operating cost surpasses its resale value. For vehicles maintained up to 120,000 miles, it is highly probable that the operating costs will exceed their resale value. The proposed criteria by Cal Advocates, which solely relies on mileage, is excessively rigid.

Cal Water proposes a more Adaptive, Safe, and Reliable Vehicle Replacement program

Cal Advocates' recommendation fails to account for the inherent unreliability of older vehicles. In some cases, vehicles may not reach the mileage criteria for 15 to 30 years. Suggesting that vehicles should not be replaced even after 30 years if they have not exceeded 120,000 miles is unreasonable. Older vehicles are generally less reliable and are in the shop for longer periods of time. This can put a strain on Cal Water operations as older vehicles require frequent repairs and may not be immediately available for use.

Older vehicles are prone to pose safety risks to Cal Water employees. For example, long-term exposure to elements can lead to rust on the body, undercarriage, and components, which can compromise structural integrity. If a component failure occurs while the vehicle is being driven, the

failure could heighten the risk of an accident. Cal Water prioritizes a safe working environment for our employees to ensure that we provide safe drinking water to our customers.

Cal Water administers its Vehicle replacement program, ensuring compliance with approved criteria

Cal Advocates states that 67 vehicles that were previously identified for replacement in the 2021 GRC also appear in the 2024 GRC listing and should be removed from the current list. Cal Water would like to address the inaccuracy of Cal Advocate's statement that these vehicles were previously funded. As a forward-looking rate case, Cal Water proposed several vehicles to be purchased based on forecasted mileage. However, once Cal Water re-analyzes the fleet in the proposed year, some vehicles may be deemed not to need replacement. Therefore, it is entirely possible that the list proposed in 2024 GRC filing contains vehicles that were presented in 2021 GRC. However, during program delivery Cal Water may find that other vehicles, that were not part of the forecasted list, do meet the criteria and need replacement. Cal Water is not duplicating vehicle replacements or requesting double funding. Cal Water did not replace the originally proposed vehicles but substituted them with those that required it. In the context of forward-looking rate case, it is important to recognize that forecasting vehicle replacements is inherently challenging and can be subject to change. Vehicle replacement program is flexible to adjust priorities based on the actual needs of the fleet to ensure replaced vehicles meet the approved criteria. Cal Water's proposed number of vehicles should not be lowered based on historical figures, as this reason does not reflect the forecasted needs of the program.

Also, there are multiple reasons why Cal Water forecasted vehicles were different from what was replaced. Reasons include the vehicle not meeting the necessary mileage criteria, being totaled or requiring high repair costs. Due to the pandemic, some vehicles were driven much less than anticipated, and their mileage did not reach the forecasted levels. In addition, Cal Water encountered delays in purchasing in the first couple of years of the previous rate case due to issues stemming from the pandemic, supply chain/microchip shortages, and overall vehicle manufacturer slowdown. Vehicle manufacturers have increased production and, for the most part, have worked on smoothing out issues that have plagued them after the pandemic. Cal Water has been working diligently to catch up and stay current with ordering.

Also, Cal Water budgets one project per district per year for all vehicle replacements in that year. Cal Water will purchase a variety of vehicles, many requiring specialized outfitting, often from different manufacturers at different times during the year. However, Cal Water does not close its project until the final charges for all vehicles that it purchases in that project are incurred. That means a given project may appear to be delayed past it's forecasted completion date when many if not all of the vehicles are already being used by our employees, but we are still waiting to be invoiced by a vendor.

Cal Advocates' limited perspective on price variation overlooks the complexities of the program

Cal Advocates analyses that the average cost of Cal Water vehicles in the amount of 94K per vehicle is too high, fails to capture that the cost of a vehicle varies based on the type of vehicle and overlooks this variation by using a single average calculation. Cal Water's fleet is made up of sedans, SUV, half ton pickups, ¾ ton pickups and trucks with utilities. Suggesting that the average cost that Cal Water presents is too high fails to take into consideration the amount of large vehicles that need to be replaced and also the associated cost with fitting a vehicle. Cal Advocates' narrow view of the price variation and only considering the cost of the individual vehicle does not illustrate the intricacies of Vehicle replacement program.

Conclusion

In conclusion, Cal Water has demonstrated that Cal Water's approach is more conservative than the new DGS criteria, and Cal Advocates suggesting adherence to an outdated criterion that the sponsoring agency no longer follows is unreasonable. The proposed replacement plan, based on optimal replacement cycles, offers significant benefits over the outdated DGS's 120,000-mile threshold criteria and is more conservative than that of the DGS new criteria. By following the ORCA, Cal Water can maintain a younger, more reliable fleet, reduce maintenance costs, and avoid the pitfalls of an aging fleet. Accurate data and optimal replacement cycles are essential for making informed decisions that ensure the efficiency, safety, and cost-effectiveness of the fleet. Therefore, Cal Water requests the commission to approve the vehicle replacement

1 program as requested minus the cost of PID 132442[52], which Cal Water has removed from the RO
2 model.

[52] See 2024 Rebuttal Response Book 3 Chapter 7

Table 1:Vehicle Replacement Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	00132088	AV 2025 Vehicle Replacement Program	183,974	188,266	183,974	4,292
2026	00132262	BK 2025 VEHICLE REPLACEMENT PROGRAM	292,258	299,076	292,258	6,818
2027	00132263	BK 2026 VEHICLE REPLACEMENT PROGRAM	506,147	333,622	506,147	(172,526)
2027	00132264	BK 2027 VEHICLE REPLACEMENT PROGRAM	1,698,022	768,313	1,698,022	(929,709)
2025	00132265	BAY 2025 VEHICLE REPLACEMENT PROGRA	85,825	87,827	85,825	2,002
2026	00132266	BAY 2026 VEHICLE REPLACEMENT PROGRA	161,378	106,370	161,378	(55,007)
2027	00132267	BAY 2027 VEHICLE REPLACEMENT PROGRA	726,767	328,844	726,767	(397,923)
2025	00132268	BG 2025 VEHICLE REPLACEMENT PROGRAM	392,233	401,383	392,233	9,150
2026	00132269	BG 2026 VEHICLE REPLACEMENT PROGRAM	87,970	57,985	87,970	(29,986)
2027	00132270	BG 2027 VEHICLE REPLACEMENT PROGRAM	438,116	198,237	438,116	(239,879)
2027	00132293	WIL 2027 Vehicle Replacement Progra	45,760	20,705	45,760	(25,055)
2027	00132308	WLK 2027 Vehicle Replacement Progra	180,335	81,597	180,335	(98,738)
2025	00132309	CH 2025 VEHICLE REPLACEMENT PROGRAM	333,575	341,357	333,575	7,782

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00132310	CH 2026 VEHICLE REPLACEMENT PROGRAM	351,882	231,939	351,882	(119,943)
2027	00132311	CH 2027 VEHICLE REPLACEMENT PROGRAM	654,769	296,267	654,769	(358,502)
2027	00132314	DIX 2027 VEHICLE REPLACEMENT PROJEC	208,149	94,182	208,149	(113,967)
2025	00132315	ELA 2025 VEHICLE REPLACEMENT PROGRA	190,186	194,623	190,186	4,437
2027	00132316	ELA 2026 VEHICLE REPLACEMENT PROGRA	717,269	472,780	717,269	(244,489)
2027	00132317	ELA 2027 VEHICLE REPLACEMENT PROGRA	691,419	550,915	691,419	(140,504)
2025	00132318	CSS 2025 VEHICLE REPLACEMENT PROGRA	21,681	22,186	21,681	506
2026	00132319	CSS 2026 VEHICLE REPLACEMENT PROGRA	396,589	261,408	396,589	(135,181)
2027	00132320	CSS 2027 VEHICLE REPLACEMENT PROGRA	567,043	256,573	567,043	(310,470)
2026	00132322	KRV 2026 VEHICLE REPLACEMENT PROGRA	87,970	57,985	87,970	(29,986)
2026	00132325	KC 2026 VEHICLE REPLACEMENT PROGRAM	77,133	50,841	77,133	(26,291)
2027	00132326	KC 2027 VEHICLE REPLACEMENT PROGRAM	90,168	40,799	90,168	(49,369)
2025	00132327	LIV 2025 VEHICLE REPLACEMENT PROGRA	390,870	399,988	390,870	9,118
2026	00132328	LIV 2026 VEHICLE REPLACEMENT PROGRA	150,540	99,227	150,540	(51,313)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00132329	LIV 2027 VEHICLE REPLACEMENT PROGRA	300,849	136,127	300,849	(164,722)
2026	00132331	LAS 2026 VEHICLE REPLACEMENT PROGRA	77,133	50,841	77,133	(26,291)
2027	00132332	LAS 2027 VEHICLE REPLACEMENT PROGRA	386,566	174,912	386,566	(211,654)
2025	00132333	MRL 2025 VEHICLE REPLACEMENT PROGRA	188,577	192,977	188,577	4,399
2026	00132334	MRL 2026 VEHICLE REPLACEMENT PROGRA	71,625	47,211	71,625	(24,414)
2027	00132335	MRL 2027 VEHICLE REPLACEMENT PROGRA	39,369	17,814	39,369	(21,555)
2025	00132336	ORO 2025 VEHICLE REPLACEMENT PROGRA	171,650	175,654	171,650	4,004
2026	00132337	ORO 2026 VEHICLE REPLACEMENT PROGRA	87,970	57,985	87,970	(29,986)
2027	00132338	ORO 2027 VEHICLE REPLACEMENT PROGRA	180,335	81,597	180,335	(98,738)
2026	00132339	RD 2025 VEHICLE REPLACEMENT PROGRAM	1,193,755	1,221,603	1,193,755	27,848
2027	00132340	RD 2026 VEHICLE REPLACEMENT PROGRAM	1,142,058	752,776	1,142,058	(389,282)
2027	00132341	RD 2027 VEHICLE REPLACEMENT PROGRAM	1,228,608	555,915	1,228,608	(672,693)
2025	00132345	SLN 2025 VEHICLE REPLACEMENT PROGRA	549,914	562,743	549,914	12,828
2026	00132346	SLN 2026 VEHICLE REPLACEMENT PROGRA	71,860	47,365	71,860	(24,494)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00132347	SLN 2027 VEHICLE REPLACEMENT PROGRA	366,923	166,024	366,923	(200,899)
2026	00132348	SEL 2025 VEHICLE REPLACEMENT PROGRA	157,442	161,114	157,442	3,673
2025	00132351	STK 2025 VEHICLE REPLACEMENT PROGRA	263,069	269,206	263,069	6,137
2026	00132352	STK 2026 VEHICLE REPLACEMENT PROGRA	590,633	389,310	590,633	(201,324)
2027	00132353	STK 2027 VEHICLE REPLACEMENT PROGRA	386,566	174,912	386,566	(211,654)
2025	00132360	VIS 2025 Vehicle Replacment Progr	547,345	499,984	547,345	(47,361)
2026	00132362	VIS 2026 Vehicle Replacement Progr	351,882	231,939	351,882	(119,943)
2027	00132363	VIS 2027 Vehicle Replacement Progr	374,577	169,487	374,577	(205,090)
2025	00132364	TAFB 2025 Vehicle Replacement Progr	384,661	351,377	384,661	(33,284)
2026	00132368	TAFB 2026 Vehicle Replacement Progr	280,514	256,834	280,514	(23,681)
2027	00132442	ELA - ADDITIONAL LEAK TRUCKS	526,138	-	-	-
2026	00133346	ADDITIONAL VEHICLES	143,251	130,228	143,251	(13,023)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	-	-	-

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
		2025	3,703,561	5,369,363	3,703,561	
		2026	4,631,785	3,636,646	4,631,785	
		2027	11,455,954	4,113,219	10,929,815	
		Total Direct Cost	19,791,299	13,119,228	19,265,161	

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Advanced Metering Infrastructure Program

Issue: (Common Plant Project Justification Report, pp. 139-148; Testimony Book #3, Attachments E, F, and G)

Cal Water proposes implementation of Advanced Metering Infrastructure (AMI) across five ratemaking areas: Bay Area Region (Bayshore and Redwood Valley Districts), Bear Gulch District, Los Altos District, Los Angeles County Region (Antelope Valley and Palos Verdes Districts), and Westlake District. The initiative aims to enhance water management, reduce water loss, and improve customer conservation efforts by providing near real-time water usage data. The AMI system includes components such as water meters, registers, and radio endpoints, which transmit consumption data via a two-way telecommunications network. It highlights the inefficiencies and safety risks associated with manual meter reading, the benefits of AMI in addressing ongoing drought conditions, rising water costs, and upcoming conservation mandates. The recommended solution is to deploy AMI in the specified areas over a four-year period, leveraging cellular AMI technology to minimize personnel needs and environmental impact. AMI enables Cal Water and its customers to conserve water, improve customer service, increase operational efficiency, and reduce safety risks. The requested direct capital project costs for AMI implementation are $4,482,831 in 2026 and $32,721,122 in 2027. On the expense side, incremental annual AMI-related expenses of $141,511 will be offset by incremental annual expense savings of $1,749,778. (Cal Water Testimony Book #3 contains discussions of AMI-related expense costs and savings, deployment strategy, and ratemaking.)

Cal Advocates Position: (Menda, pp. 7-1 to 7-8; S. Ibrahim, p. 4-5)

Cal Advocates recommends that the Commission approve the implementation of AMI in the five ratemaking areas proposed by Cal Water, with partial cost recovery contingent on meeting specific performance standards listed in Section III.B of the testimony. Cal Advocates would allow the annual cost of standard meter replacement, as well as 50% of the remaining annual capital budget for AMI, into customer rates. For AMI-related expenses, 50% would similarly be allowed into rates annually. For both capital and expense costs, the amounts not in rates would only be recoverable if three performance criteria are met. Cal Advocates indicates that this approach ensures that the costs of the infrastructure project are shared equally between ratepayers and Cal Water. The performance criteria include implementing operations and maintenance (O&M) savings, ensuring customer engagement, and reducing water loss. Cal Advocates emphasizes the

importance of these criteria to ensure that Cal Water completes the projects as scheduled and achieves the stated customer benefits.

Witness Menda also recommends removing the 10% contingency for a subset of capital projects - the various AMI Initiative-Vehicles/Equipment projects as well as the CSS 2026 AMI Initiative-Information Technology (IT) INT/DEV project. Note however, that in separate testimony addressing CSS capital projects, Witness S. Ibrahim recommends full elimination of the 2026 IT project for AMI under the impression that such removal is consistent with Witness Menda's testimony.

Cal Water Rebuttal:

Cal Water's full rebuttal on the regulatory policy and ratemaking issues relating to Cal Advocates' AMI proposal is provided separately in Rebuttal Book #1. That rebuttal includes Cal Water's position on only putting a portion of AMI-related capital and expense costs into customer rates, how remaining expense costs and savings should be treated, and clarification of the proposed performance measures.

This rebuttal focuses on the specific capital projects proposed in the company's AMI initiative. First, or the reasons discussed in Cal Water's rebuttal on contingency factors (see Common Plant Rebuttal), the contingency costs included in all of Cal Water's proposed capital for AMI should be retained.

Second, after the GRC application was submitted, Cal Water identified corrections that were needed to Attachments A and B of the AMI testimony in the Common Plant PJ Book (pages 147-148). Cal Water proactively communicated these corrections to Cal Advocates during a virtual educational overview presentation[53] through a response to Data Request JMI-014. Cal Advocates' testimony therefore already reflects the corrections. The corrections are summarized here (and modified versions of the attachments are also provided as Attachment 1 to this discussion):

- Cal Water withdraws PID 00133627 which is an erroneous duplicate of PID 00133634.
- Three project ID numbers have been corrected (PIDs 133599,133627, and 133634).
- The projects for Vehicles and Equipment were erroneously listed for 2025 and have been moved to 2026.

[53] Cal Water's Response to JMI-014 is included in the Menda testimony as Attachment 7-1, pp.1-4.

Third, Cal Water would like to address Cal Advocates' inconsistent position on PID 133646, a CSS project for Information Technology (IT) software integration and development intended to support the entire AMI initiative. According to Witness Ibrahim the project should not be included in rates.[123] Mr. Ibrahim does not provide a justification for the recommended disallowance other than to indicate that its elimination is consistent with Witness Menda's testimony. As discussed above, however, Witness Menda recommends that standard meter replacement costs should go into rates, plus 50% of the remaining capital costs for AMI. He does not include PID 133646 or the vehicle/equipment projects in his proposal to put 50% of their costs in rates; nor does he recommend denying them entirely. Instead, he just recommends that any contingency costs in PID 133646 and the vehicle/equipment projects should be removed. Further, in Cal Advocates' RO Model, Mr. Menda allowed the vehicle /equipment projects to be reflected in full except for contingency. Taken together, these are strong indications that removal of 100% of the CSS IT project was an oversight.

However, in the event that Cal Advocates' position is truly to remove PID 133646 from rates entirely, Cal Water will address the importance of the project. Because the IT software integration and development activity in PID 133646 is a vital component of the AMI Initiative, its costs should be included in customer rates. Without the project, the AMI meters installed in the distribution systems will not provide their intended benefits to our customers and Cal Water. The project includes the software design and integration of the following components, Headend Setup (HE) and Provisioning, Meter Data Management System (MDMS) Setup and Provisioning, and Customer Portal Setup and Provisioning. The purpose of the HE system is to collect and record data from the AMI network. It has short-term data storage capabilities and provides data to downstream systems such as the MDMS and the customer portal. The MDMS component provides long-term storage of data, can provide basic analytics, and is the source for the customer portal data. Validation of the data (i.e. quality control for AMI data) also occurs in the MDMS. Accurate data is required for correct billing, providing our customers with the intended benefits to them through the customer portal such as proactive leak detection, granular water consumption history, and high bill projection. Additionally, accurate data is required to perform water loss analysis, establish District Metering Areas to enhance leak detection, and to enhance water conservation efforts. The customer portal component is an engagement platform that provides communication between Cal

Water and its customers. It provides visibility and transparency to customers on their detailed usage and allows them to set up proactive high consumption and leak alerts. The portal can also be used by Cal Water customer service representatives to resolve customer inquiries on the first call or to support field personnel while performing investigations.

In sum, PID 133646 is critical to the successful implementation of the AMI Initiative and the ability to realize its full benefits, so its costs should be included in rates. The importance of proceeding with integration and testing of the software before the AMI meter deployments begin in the districts cannot be overstated. Without the successful integration and development of the components identified above, the AMI meters deployed in the districts will not provide their intended benefits as the infrastructure to gather, compile, and analyze the transmitted AMI data will not be in place. Meters will be transmitting their data with nothing to receive, analyze, and utilize to provide customer benefits. It would be similar to making a cell phone call to communicate important information yet not having a recipient on the other end to receive it. Cal Water recommends allowing this critical integration project. Without it, the AMI Initiative will not be successful and provide its intended benefits to our customers.

Table 1: Advanced Metering Infrastructure

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00133593	BG - AMI INITIATIVE-VEHICLES/EQUIP	559,957	254,526	559,957	(305,431)
2026	00133597	LAS-AMI INITIATIVE-VEHICLES/EQUIP	474,132	215,515	474,132	(258,617)
2026	00133598	RDOM-AMI INITIATIVE-VEHICLES/EQUIP	559,957	254,526	559,957	(305,431)
2026	00133599	BSH-AMI INITIATIVE-VEHICLES/EQUIPM	1,048,689	476,677	1,048,689	(572,012)
2026	00133601	WLK-AMI INITIATIVE-VEHICLES/EQUIP	302,482	137,492	302,482	(164,990)
2027	00133610	WLK 2027 AMI INITIATIVE-METERS	2,188,453	1,152,240	1,152,240	0
2027	00133620	AV 2027 AMI INITIATIVE-METERS	219,663	117,099	117,099	0
2027	00133622	BG 2027 AMI INITIATIVE-METERS	5,109,121	2,712,532	2,712,532	(0)
2027	00133625	LAS 2027 AMI INITIATIVE-METERS	4,939,695	2,613,784	2,613,784	0
2027	00133627	MPS 2027 AMI INITIATIVE-METERS	9,189,163	4,819,073	4,819,073	(0)
2027	00133629	PV 2027 AMI INITIATIVE-METERS	6,281,129	3,384,112	3,384,112	0
2027	00133632	RDV 2027 AMI INITIATIVE-METERS	497,499	248,750	248,750	(0)
2027	00133634	SSF 2027 AMI INITIATIVE-METERS	4,296,428	2,259,615	2,259,615	(0)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00133646	CSS 2026 AMI INITIATIVE-IT INT/DEV	1,537,615	698,916	1,537,615	(838,699)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	-	-	-
	2025	2,945,216	-	-
	2026	1,537,615	2,037,650	4,482,831
	2027	32,721,152	17,307,205	17,307,205
	Total Direct Cost	37,203,983	19,344,856	21,790,036

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Chapter 2.

General Rebuttals

Section 1. Introduction

This chapter addresses General Rebuttals for Advanced Capital Budget (ACB) projects that Cal Advocates contested based on common themes or principles. Cal Water has prepared a unified rebuttal testimony addressing these common themes for ACB projects spanning various Cal Water districts. These projects are grouped in this chapter and are also repeatedly mentioned in the district chapters in Book 3 and Book 4.

Section 2. General Rebuttals

Nitrification (Tank and Mixing) Projects

Issue:

The issue of nitrification in the water systems of the East Los Angeles, Dominguez, and Livermore districts is being addressed through several capital projects. In East Los Angeles, PIDs 133068 and 133069 focus on installing tank mixers, chemical addition equipment, and continuous water quality monitoring to combat high nitrite concentrations and low chlorine residuals. Similarly, in the Dominguez district, PID 133047 aims to improve nitrification by implementing packaged mixing and disinfectant residual control systems, along with automated dosing of free ammonia and chlorine. In the Livermore district, PIDs 133111, 133113, and 133115 involve the installation of tank mixers, chemical addition equipment, and chemical storage tanks to adjust the chlorine to ammonia ratio and prevent nitrification. These projects collectively aim to maintain high water quality by preventing nitrification and ensuring continuous water quality sampling and monitoring across the affected district.

Cal Advocates Position:

Cal Advocates recommends that the Commission should not approve the requests for six projects, including funding for three new Chloramination systems and three mixing and dosing control systems in Livermore, Dominguez and East Los Angeles Districts based on the nitrate current levels in the system and Detection Limit for Purposes of Reporting (DLR). Their testimony also recommends a different approach to address the nitrification issue in the system.

Cal Water Rebuttal:

Cal Advocates' argument for canceling the projects due to nitrite concentrations being below the Maximum Contaminant Level (MCL) and detectable chlorine residuals reflects a misunderstanding of the project's goal. The project is not aimed at reducing nitrite levels below the MCL. Instead, the presence of nitrite and low chlorine levels are indicators of nitrification within the tank reservoirs. This nitrification issue is confirmed by the water quality data presented in the original project justification.

Preventative Strategies for Nitrification in Water Systems

It is important to emphasize that the proposed projects are aligned with industry standards and best practices, and a proactive approach to system improvements before nitrification begins. All six sites listed in Table 1 below use chloramine (combination of chlorine and ammonia) as a secondary disinfectant and is susceptible to nitrification.

Nitrite is measured as an indicator of nitrification. Nitrite at 0.01 mg/L is an indication of nitrification and a level at which action should be taken according to American Water Works Association (AWWA) manuals: (1) M56 Nitrification Prevention and Control in Drinking Water and (2) M68 Water Quality in Distribution Systems.

Nitrification can be minimized by maintaining adequate total chlorine residuals at the correct chlorine to ammonia ratios in the distribution system. According to AWWA's M56 Nitrification Prevention and Control in Drinking Water manual, total chlorine less than 1.5 mg/L and free ammonia greater than 0.1 mg/L are indicators of nitrification.

Although there is no primary MCL or secondary MCL for free ammonia, as chlorine decreases in the distribution system, free ammonia will remain in the system which can lead to nitrification. Nitrification is the microbially mediated conversion of ammonia to nitrite and then nitrate. Water Utilities commonly monitor for nitrite as an indicator of nitrification in the distribution system.

Nitrification normally does not result in regulatory violations. However, if nitrite is left unmanaged, our system can be negatively impacted as nitrification can result in bacteriological growth, low total chlorine residuals, odors, and discolored water. Distribution system flushing helps mitigate nitrification at dead ends of the water system but does not address nitrification at storage tanks. A detailed discussion on why flushing the distribution system will not yield in results claimed by Cal Advocates is provided under Nitrification Remediation and system flushing section right after this.

Cal Water monitors water quality parameters at susceptible areas within our distribution system and the storage tank is an ideal location to prevent nitrification before it starts by adjusting the chlorine to ammonia ratio; the most optimal way to do this is by installing tank mixers and chloramine dosing equipment.

Conclusion:

In conclusion, Cal Advocates' argument for cancelling the projects due to nitrite concentrations being below the Maximum Contaminant Level (MCL) and detectable chlorine residuals reflects a fundamental misunderstanding of the project's goal. The objective is not merely to reduce nitrite levels below the MCL but to address the presence of nitrite and low chlorine levels as indicators of nitrification within the tank. This nitrification issue is substantiated by the water quality data presented in the original justification.

The proposed projects are aligned with industry standards and best practices, representing a proactive approach to system improvements before nitrification begins. All six projects listed in the table uses chloramine as a secondary disinfectant and is susceptible to nitrification. By maintaining adequate total chlorine residuals and the correct chlorine to ammonia ratios, these projects aim to prevent nitrification effectively. The installation of tank mixers and chloramine dosing equipment is essential to control nitrification in reservoirs, ensuring the continued delivery of high-quality water to our customers. The Commission should therefore disregard Cal Advocates' assertions and support the implementation of these critical projects.

Table 1: Nitrification (Tank and Mixing) Projects

District	Project ID	Project Name
DOM	133047	DOM 232 Nitrification Improvement
ELA	133068	ELA-042-1 Tank Mixing and Dosing
ELA	133069	ELA-058-1 Nitrification Treatment
LIV	133111	LIV 022-T1 Chloramination
LIV	133113	LIV 025-T2 Chloramination
LIV	133115	LIV 29-T2 Chloramination

Nitrification Remediation and System Flushing

In Chapter 11 of Mr. Sorensen's testimony claims to present an analysis and recommendations on water quality for Cal Water's regulated service territories. However, as illustrated by his Summary of recommendations and in his supporting text, Mr. Sorensen's focus of this chapter is to compel Cal Water to increase its frequency of flushing, citing the efforts of a small municipality and drawing a loose connection with efforts made by another water utility. Mr. Sorensen recycles the same arguments presented in this chapter in his recommendations in Chapter 1 as to justify the denial of two tank mixing projects in East Los Angeles and again in Chapter 3 to justify denial of a mixing and dosing project in the South Bay Region. The Commission should disregard Cal Advocates' assertions as these projects are proposed to address nitrification of reservoirs, not the distribution system.

Cal Advocates' position that the commission should deny Cal Water's request to install mixing and dosing control systems displays a troubling lack of understanding of nitrification remediation. The insinuation that nitrification challenges in a storage tank can be solved solely by distribution system flushing is inaccurate. While Cal Water agrees with Cal Advocates that distribution system flushing is an accepted tool to alleviate water quality concerns at dead ends of the distribution system, tank mixing and dosing control systems are still required to control nitrification in reservoirs.

Cal Advocates incorrectly states that "adequately flushing the distribution system in not optional[54]." In fact, Cal Water conducts enhanced water quality monitoring and reporting to DDW in lieu of comprehensive flushing in several of its water systems per Title 22 Section 64449.5(b)[55]. Cal Water is vigilant in monitoring its water systems and has an excellent track record of maintaining good water quality. Mr. Sorensen acknowledges when he notes Cal Advocates does not dispute that

[54] Sorensen Testimony, p. 11-3.

[55] Title 22 Section 64449.5(b) states (b) If the State Board determines that a water system does not have sufficient data on physical water quality in the distribution system to make the determination required in paragraph (a), the water supplier shall collect samples for the following general physical analyses: color, odor, and turbidity. Samples shall be collected from representative points in the distribution system:
(1) For community water systems with 200 to 1,000 service connections: one sample per month.
(2) For community water systems with greater than 1,000 service connections: one sample for every four bacteriological samples required per month.
(3) For community water systems with less than 200 service connections: as established by the local health officer or the State Board.

Cal Water met every primary and secondary federal and state water quality standard in 2024[56]. Furthermore, Cal Water does flush proactively in specific areas of its systems as needed.

Cal Advocates supports its assertions that Cal Water should comprehensively flush all of its systems by introducing two weak analogies. First, Mr. Sorensen cites the City of Manhattan Beach, who in their 2021 Annual Report to DDW state that they programmatically flush their dead-ends every quarter[57]. However, in this same report just underneath the table that Mr. Sorensen cites to is a section titled "Comments on DEAD-END FLUSHING PROGRAM." In this box is a comment that states "Dead end flushing was removed due to the demolition and replacement of our Peck Reservoir Replacement Project." This comment suggests that the City of Manhattan Beach did not actually flush during the year that Cal Advocates refers to in their testimony. Furthermore, the City of Manhattan Beach is a smaller system, with 13,419 active connections and **18** dead-ends[58]. As noted by Mr. Sorensen, Cal Water's East Los Angeles system alone has over 660 dead-ends. While Cal Water applauds the City of Manhattan Beach for their flushing efforts and that proactive distribution system flushing is beneficial, Cal Water needs to balance flushing with all the other daily efforts needed to maintain the health of our distribution systems and the proof of our efforts are that we meet all federal and state water quality standards.

Mr. Sorensen next refers to Golden State Water Company's ("Golden State") utilization of NO-DES technology, which minimizes water waste when flushing by connecting two hydrants to a portable water treatment vessel that sits on a truck or trailer. However, Mr. Sorensen's argument falls short of providing any actual flushing data by Golden State to use as a comparison to the flushing performed by Cal Water. Cal Water is currently evaluating the use of NO-DES technology. While there is a clear benefit to minimizing water waste, there are also costs involved with utilizing this technology. This technology is still relatively new, the equipment is heavy and may require additional compliance efforts mandated by the Department of Transportation, and additional headcount would be required to perform the flushing. If Mr. Sorensen is truly advocating Cal Water to use this technology to flush every dead end in all of its systems Cal Water would need to

[56] Sorensen Testimony, p. 11-2.
[57] Sorensen Testimony, Attachment 8-3, City of Manhattan Beach 2021 Annual Report to DDW.
[58] Sorensen Testimony, Attachment 8-3, City of Manhattan Beach 2021 Annual Report to DDW.

purchase a whole fleet of these trucks and increase the number of employees in order to perform the recommended flushing.

In Summary, Mr. Sorensen uses his Water Quality discussion in an attempt to compel Cal Water to increase its frequency of flushing, citing the efforts of a small municipality and drawing a loose connection with efforts made by another water utility. Mr. Sorensen then uses this rationale when recommending the denial of several tank and mixing projects that are proposed to address water quality concerns that are completely unrelated to this issue. The Commission should disregard Cal Advocates' assertions to direct Cal Water to increase its cost by increase the frequency of its flushing presumably with No DES equipment to address potential water quality concerns in its distribution systems, especially since Cal Water currently meets all federal and state water quality standards.

Engineering & Planning Studies

Issue:

Engineering and planning studies provide a comprehensive analysis of the technical, economic, and operational aspects of water infrastructure, ensuring that utilities, like Cal Water, can effectively assess long-term needs, strategic goals, and regulatory requirements. These studies encompass a wide range of critical projects, including master plans, construction feasibility studies, water source evaluations, pilot treatment projects, wildfire impact assessments, and seismic resilience evaluations. Their value lies in delivering data-driven insights that enable Cal Water to make informed long-term capital investment and operational decisions, ensuring reliable, high-quality drinking water for customers. By proactively addressing future demand, regulatory compliance, and risk mitigation, these studies play a vital role in strengthening system resilience, optimizing resources, and safeguarding public health.

Cal Advocates Position:

Cal Advocates recommends that the Commission reject nearly all engineering and planning study projects from Cal Water's 2024 General Rate Case (GRC), arguing that these studies are speculative and do not provide immediate, tangible benefits to ratepayers.[59] Cal Advocates claims that including these studies in the rate base would unfairly burden ratepayers with costs, even if the studies do not result in actual construction projects.[60] Cal Advocates maintains that ratepayer funds should only support projects that are "used and useful," meaning those that deliver direct, immediate benefits within the GRC period.[61] Furthermore, they assert that if these studies lead to future infrastructure projects, Cal Water can seek cost recovery in a subsequent rate case rather than including them in the current one.[62]

Cal Water Rebuttal:

Cal Advocates' position reflects a fundamental misunderstanding of the purpose and value engineering and planning studies provide and is a significant departure from its past rate-making

[59] A.24-07-003. *Cal Advocates Report on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows, and Dixon, and Common Plant Issues*, pg. 5-2
[60] A.24-07-003. *Cal Advocates, Report on Plant for Bayshore, Bear Gulch, Los Altos, Redwood Valley Districts, & Multiple Common Plant Issues*, pg. 2-3
[61] *Id.,* pg. 1-4
[62] *Id.,* pg. 2-3

practices, even contradicting their own previous positions. Engineering and planning studies are necessary efforts that enhance Cal Water's resilience and provide the foundation for determining the most prudent future capital investments. Rejecting or delaying these studies would hinder Cal Water's ability to address emerging water quality and supply challenges, meet regulatory standards, and adapt to climate-related risks. The claim that these studies are speculative overlooks the fact that prudent infrastructure investment requires methodical, data-driven planning. Cal Water agrees that all capital investment must be justifiable and "used and useful," and a more in-depth look at any of the studies Cal Water proposed will demonstrate that all of these meet this standard. While some of the benefits may not be immediately tangible, these studies ultimately lower long-term costs by improving project execution, mitigating risks, and optimizing infrastructure spending. For these reasons, the Commission should approve funding for Cal Water's study projects as an essential component of responsible, forward-looking water system management.

Engineering & Planning Studies are an Industry Best Practice

Incorporating engineering and planning studies into a water utility's management strategy is widely recognized as an industry best practice. These types of studies provide a data-driven foundation for decision-making, allowing utilities like Cal Water to make effective and prudent investment decisions, which ultimately improves service to customers and directly benefits customers. Additionally, engineering studies play a critical role in regulatory compliance, ensuring that utilities meet environmental and public health standards while delivering safe and reliable drinking water to customers. Without these studies, as Cal Advocates recommends, Cal Water would be forced to blindly follow assumptions rather than data analysis, thereby increasing the risk of costly errors, inefficient spending, and infrastructure failures in the future.

The U.S. Environmental Protection Agency (USEPA) recognizes proactive planning as essential for an effectively managed utility and has long advocated for integrating engineering and planning studies into water infrastructure management. [63] Similarly, the American Water Works Association (AWWA), the largest association of public and private water utilities, states in its M50

[63] USEPA, *Planning for Sustainable Water Infrastructure*, Retrieved February 17, 2005 from: https://www.epa.gov/sustainable-water-infrastructure/augmented-alternative-analysis-planning-sustainable-water#building

Water Resources Planning Manual that "water supply reliability depends directly on planning and foresight in securing and maintaining water supply sources" and that "planning for future water needs is an ongoing process – not a one-time event."[64] To further support the integration of planning in the water sector, the USEPA issued the *Clean Water and Safe Drinking Water Infrastructure Sustainability Policy* in 2010, designed to help utilities sustainably plan and manage their infrastructure while adopting innovative practices for long-term resilience. This policy led to the development of the USEPA's sustainability handbook, which strongly emphasizes that engineering and planning studies should be conducted well before infrastructure solutions are designed and implemented.[65] The handbook further highlights that these planning activities are "relatively low-cost and can significantly reduce long-term infrastructure expenses."[66] By integrating engineering and planning studies into long-term asset management strategies, utilities can minimize capital and operational costs, maximize investment benefits, and improve their ability to evaluate a range of alternatives and emerging technologies. These practices not only enhance infrastructure longevity and resilience but also safeguard water quality and service reliability for communities now and in the future. Therefore, Cal Advocates' blanket dismissal of most of Cal Water's engineering and planning studies as not useful reflects a fundamental misunderstanding of their value, despite clear support from industry standards and regulatory agencies such as the USEPA and AWWA. These studies are widely recognized as essential for ensuring water system resilience, operational efficiency, and long-term cost savings, making their rejection inconsistent with best management practices in the water utility industry.

Cal Advocates Testimony Dismisses Regulatory Requirements

One of the studies rejected by Cal Advocates is the *Water Supply Facilities Master Plan* for the Salinas District (PID #133229). Cal Advocates argues that ratepayers should not fund the master plan in this GRC cycle because it is uncertain whether the study will lead to a necessary and "used and useful" project.[67] However, this position is fundamentally flawed as this study is not discretionary but is part of the Minimum Data Requirements (MDRs) required in each GRC application. In accordance with Decision D.07-05-062 *Opinion Adopting Revised Rate Case Plan*

[64] AWWA, *M50 Water Resource Planning* (2017), pg. 11
[65] USEPA, EPA-832-R-12-001, *Planning for Sustainability* (2012), pg. 1
[66] *Ibid.*
[67] A.24-07-003 Report and Recommendations on Plant for BK, KRV, KC, SLN, SEL, and VIS Districts and Rate Base, pg.4-2

for Class A Water Utilities, utilities filing a GRC on or after July 1, 2008, must submit a long-term, 6-10 year *Water Supply and Facilities Master Plan* to assess aging infrastructure needs. The decision explicitly states:

> *"Any water utility filing a GRC on or after July 1, 2008 must submit a long-term, 6-10 year Water Supply and Facilities Master Plan to identify and address aging infrastructure needs. The Plan should be consistent with the recommendations and elements of comprehensive asset management identified in the General Account Office's March 2004 Report, GAO04-461"*[68]

Thus, not only is this study "used and useful" but it is also a regulatory requirement and will provide Cal Water with long-term planning insights that will enable stakeholders, like Cal Advocates, to fully understand system needs. Cal Advocates' broad dismissal of this study, similar other planning studies, contradicts the Commission's efforts to encourage prudent water utility infrastructure planning and asset management. Therefore, Cal Advocates' testimony on this matter is inconsistent with Commission's policy and should be rejected.

Cal Advocates Testimony is Arbitrary and Inconsistent

Cal Advocates' recommendation to eliminate studies on the grounds that they do not benefit customers and may not directly lead to construction projects is applied inconsistently in the 2024 General Rate Case (GRC). Of the 30 engineering plans and studies that Cal Water proposed, totaling $10,381,411, 22 were rejected, yet 8 others went unaddressed despite having a similar scope and purpose.[69] This selective and inconsistent approach raises serious concerns about the credibility of Cal Advocates' recommendations. While some analysts strongly opposed certain studies, others failed to acknowledge or evaluate similar studies with comparable costs and objectives. Such inconsistent scrutiny demonstrates a lack of uniformity and rigor in Cal Advocates' assessment process, ultimately undermining the validity of its recommendations to the Commission.

Furthermore, Cal Advocates' testimony in the 2021 GRC contradicts its current position. In 2021, Cal Advocates recommended that the Commission require Cal Water to conduct more

[68] D.07-05-062, Appendix A, Attachment 1, p. A-28
[69] See Table 1 within this rebuttal for detailed list of all study projects submitted by Cal Water in the 2024 GRC

invasive pipeline condition assessments before replacing pipes in future rate cases.[70] While the Commission ultimately rejected this mandate, citing the high cost of the proposed inspections and Cal Water's existing multi-factored, condition-based replacement method as more than sufficient, there are times when a more invasive pipeline condition assessment may still be warranted. In line with Cal Advocates' 2021 testimony, Cal Water included the *Investigate Pipeline Condition* study in Bakersfield (PID #133190) as part of the 2024 GRC application to assess the lifespan of a highly critical, aging pipeline that may require replacement in the near future. Yet, despite advocating for such investigative studies in 2021, Cal Advocates now rejects this very approach claiming the study provides no immediate customer benefits and is speculative because it is "unknown whether the studies will result in a completed project that is necessary and used and useful."[71] This reversal highlights the arbitrary and ad hoc nature of Cal Advocates' position – first insisting on greater investigative studies in 2021, then dismissing them in 2024 when Cal Water propose a study in line with their original recommendation. Given these contradictions and inconsistencies, the Commission should reject Cal Advocates' position on engineering and planning studies, recognizing their essential role in proactive, data-driven water system management.

Cal Advocates Misinterprets the Commission's Decision (D.) 24-03-042

As part of the Commission's decision on Cal Water's 2021 General Rate Case (GRC), the Commission did not approve the work order for purchasing new land and constructing a new well in Livermore because the *Urban Water Management Plan* indicated that Cal Water had sufficient capacity and a *Water Supply Reliability Study*, submitted as part of the 2021 GRC, was not expected to be completed until 2023. Thus, the Commission stated:

> *"Until the Water Supply Reliability Study can be entered into the record, it is premature to determine whether a new well is needed. If the project is found to be needed by that study, Cal Water should resubmit this request in its next GRC."*[72]

Cal Advocates misinterprets the Commission statement incorrectly asserting that the Commission rejected both projects – the new land/well project and the *Water Supply Reliability*

[70] A.21-07-002, *Report on Allocations and Plant for CSS & RDOM District, Pipeline Replacement, and Physical Security*, pg. 4-1
[71] A.24-07-003 Report and Recommendations on Plant for BK, KRV, KC,SLN, SEL, VIS, and Rate Base, pg. 1-2
[72] D.24-03-042, pg.61

Study. Based on this flawed interpretation, Cal Advocates argues that "only when it is determined that a project is needed should Cal Water request funding for the [study]" and subsequently recommends removing almost all study costs from the 2024 GRC.[73] This reasoning is fundamentally flawed. The *Water Supply Reliability Study* was explicitly approved by the Commission in the 2021 GRC Decision, while only the land and well project was deferred pending study results.[74] Cal Advocates' recommendation to reject these studies based on the 2021 GRC decision is not only inconsistent but factually incorrect.

Cal Advocates Testimony Regarding the Benefits of Engineering and Planning Studies is Inconsistent with its Prior Testimony in Cal Water Rate Cases and Other Water Utility Filings

In Cal Water's 2015 General Rate Case (GRC) application, Cal Advocates explicitly supported multiple engineering and planning studies, recognizing their value in determining the most effective infrastructure solutions. For example, Cal Advocates agreed that "Cal Water will undertake a feasibility study to explore intake solutions that are less impacted by low water levels" in Kern River Valley.[75] In that same proceeding, Cal Advocates initially recommended removing certain projects because Cal Water had not conducted comprehensive study in advance to determine the most economical material for proposed building replacements. However, as part of the settlement agreement, Cal Advocates ultimately agreed to a pilot study project to assess two sites and "determine future, cost-effective replacement projects at other sites."[76] Additionally, Cal Advocates opposed a pressure improvement project, citing the lack of a pressure study to validate the need for improvements.[77] Even when initially opposing a Surface Water Supply Feasibility Study in Chico, Cal Advocates ultimately agreed in settlement to this project recognizing the need for a study to analyze potential costs, benefits, and effectiveness of a surface water supply.[78] In total, Cal Advocates approved six study projects for inclusion in rate base, acknowledging that such studies provide critical guidance for future investment decisions.

In Cal Water's 2018 GRC application, Cal Advocates agreed in settlement to fund more than nine reliability studies and 39 other engineering and planning studies, which further affirming

[73] A.24-07-003 Report and Recommendations on Plant for BK, KRV, KC,SLN, SEL, VIS, and Rate Base, pg. 1-3
[74] D.24-03-042, Appendix 3, Appendix W, pg. 36
[75] D.16-12-042, p.62
[76] *Id.*, p.180
[77] *Id.*, p.213
[78] *Id.*, p.223

the value of studies and benefit to customers.[79] In Cal Water's 2021 GRC, Cal Advocates did not dispute the need for most engineering and planning studies, objecting only to the inclusion of contingency cost factors to proposed studies. The Commission ultimately approved 62 specific engineering and planning studies, recognizing them as the most prudent investments for customers.[80]

Beyond Cal Water's applications, Cal Advocates has a well-documented history of supporting engineering and planning studies in other water utility cases. In San Gabriel's 2019 GRC application, the utility sought $2.5 million for a new office space. Rather than approving the project, Cal Advocates recommended funding only a $140,000 office space planning study, stating that it should include "an analysis of cost-benefit of various expansion alternatives and recommendations."[81] Ultimately, Cal Advocates and San Gabriel settled on $179,000 for the study, which was included in rate base. That same settlement also included approval of an Arc Flash Study and a Solar Power Generation Study – further demonstrating Cal Advocates' support for planning studies in past rate cases.[82,83] Most recently, in Golden State Water Company's 2023 GRC application, Cal Advocates agreed in settlement to fund eight engineering and planning studies, several of which were identical in scope to Cal Water's proposals – including new well studies, material pilot studies, and water quality alternative evaluations.[84] However, there was no discussion in the settlement explaining how or why these studies were deemed acceptable for inclusion in rate base while similar studies in Cal Water's 2024 GRC were rejected.

These examples highlight Cal Advocates' long-standing recognition of engineering and planning studies as essential tools for water utility management. Rather than dismissing these studies as not useful or lacking immediate customer benefits, Cal Advocates has recommended approval or even required utilities to complete such studies to determine the most prudent and cost-effective course of action. Furthermore, many of these previously recommended approved studies by Cal Advocates often did not have immediate identified construction projects – contradicting Cal Advocates' current rationale for rejecting Cal Water's studies. Therefore, Cal

[79] D.20-12-007, Attached 12
[80] D.24-03-042, p.37
[81] D.20-08-006, Appendix 1 pg.38
[82] *Id.,* pg. 39
[83] *Id.,* pg. 42 & 65
[84] D.25-01-036, Appendix D

Advocates' blanket rejection of almost all Cal Water's engineering and planning studies represents a significant departure from its past practices and contradicts its own long-standing position that these studies are vital to responsible water system planning.

Impacts of Failing to Properly Plan

Under the Commission's oversight, Cal Water is responsible for operating its system to deliver reliable, high-quality service to customers at a reasonable cost, while ensuring compliance with all drinking water regulations to protect public health. [85] However, Cal Advocates' broad disapproval of many of Cal Water's engineering and planning studies raises a critical question: What happens if a utility fails to conduct proactive engineering and planning studies before undertaking major projects and capital investments? History has shown that neglecting these essential studies can have devastating consequences, as evidenced by two real-world examples.

The Flint Water Crisis (2014 – 2019) is a clear demonstration of the catastrophic risks associated with failing to conduct proper engineering and water quality studies before making major infrastructure decisions. In 2014, the city of Flint, Michigan, switched its drinking water source from Detroit's Lake Huron supply to the Flint River as a cost-saving measure without conducting a corrosion study or implementing a proper corrosion-control plan. [86] The Flint River's water was far more corrosive than the city's previous supply, which caused lead to leach from aging pipes into the potable water supply. Within weeks, residents reported discolored, foul-smelling water, along with health issues such as skin rashes and elevated lead levels in children's blood. Despite mounting evidence of lead contamination, government officials downplayed concerns and failed to act swiftly, leading to a public health crisis and widespread distrust in local and state agencies. Additionally, the lack of proper water treatment led to bacterial contamination, including outbreaks of Legionnaires' disease, which resulted in multiple deaths. The Flint Water Advisory Task Force (FWATF) later confirmed that the crisis was entirely preventable, attributing it to regulatory failures, cost-cutting decisions, and government mismanagement at multiple levels. [87]

[85] CPUC, General Order 103-A § II.1.A &B, Cal. PUC § 451
[86] Masten, et. al, *Flint Water Crisis: What Happened and Why? Journal AWWA*, 108: pg 22-34
[87] LaFrance, *Flint – Guess What? It's International News*. Journal – AWWA, 108: pg.10

A second example of a failure to proactively assess risks through engineering studies is the 1993 Milwaukee Cryptosporidium outbreak, the largest waterborne disease outbreak in U.S. history, affecting over 400,000 residents and causing severe illness and at least 69 deaths.[88] The outbreak was linked to the Howard Avenue Water Treatment Plant, which failed to effectively filter out Cryptosporidium, a chlorine-resistant parasite. Investigators found that severe spring storms increased turbidity levels in Lake Michigan, causing a surge of particulates in the water supply. Despite these warning signs, the treatment plant lacked adequate monitoring systems, including functional turbidity sensors and Cryptosporidium testing protocols, which allowed contaminated water to enter the distribution system unnoticed. The failure to conduct proactive engineering studies and infrastructure assessments meant that no contingency plans were in place to respond to sudden water quality deterioration, and plant operators were unaware of the outbreak until widespread illness had already occurred. This disaster underscores the critical need for rigorous water quality assessments, continuous monitoring, and proactive engineering evaluations to prevent public health crises in water systems.

These two real-world failures illustrate why engineering and planning studies are not just theoretical exercises, but essential safeguards that protect public health, ensure regulatory compliance, and prevent costly disasters. The Commission should recognize the importance of these studies in maintaining the safety, efficiency, and resilience of water systems, rather than allowing short-sighted cost-cutting measures to compromise essential planning and risk mitigation efforts.

Individual Study Summary and Customer Benefits

Since Cal Advocates has falsely assumed that most of Cal Water's engineering and planning studies are speculative and provide no tangible benefits to customers, it is essential to clarify their individual value and purpose. Table 1 presents a summary of each engineering and planning study included in the 2024 GRC, followed by a more detailed explanation of each contested study project. These summaries highlight the critical role these studies play in supporting District staff and engineering teams, ensuring efficient infrastructure planning, regulatory compliance, and cost-effective decision-making. Furthermore, they underscore the

[88] Fox, et. al, *Milwaukee's Crypto Outbreak: Investigation and Recommendations*. Journal – AWWA, 88: pg. 87 - 94

direct benefits these studies provide to customers, including improved water quality, system reliability, and long-term cost savings.

Table1: List of Proposed Studies in the 2024 GRC and Cal Advocates Recommendations

PID	Description	Cal Water Proposed	Cal Advocates Recommended
116244	ELA Nitrification Study	30,954	0
132963	CSS Climate Change Study - 2025	445,252	445,252
132988	SSF 001 Cr-As Treatment Pilot Study	72,493	0
133011	Bay Area Water Transfer (BG)	270,565	0
133013	BG Brackish Aquifer Conductivity	571,553	0
133017	Water Restoration/Fire Prevention Study	182,038	0
133118	MRL Well Siting Study	203,715	0
133136	WLK WSFMP Update	191,969	175,358 [(a)]
133146	VIS Well Siting Study	165,350	0
133147	VIS Recharge Feasibility Study	186,282	0
133189	BK Low Zone Well Siting Study	185,653	0
133190	BK Railroad Main Replacement Study	502,223	0
133210	STK 018 Well Assessment	374,567	343,337 [(a)]
133211	STK Well Siting Study	291,320	266,161 [(a)]
133212	STK 036 Well Assessment	201,335	163,943 [(a)]
133213	STK 059 Well Assessment	348,729	318,554 [(a)]
133228	SLN Well Siting Study	164,138	0
133229	SLN WSFMP Update	292,539	0
133230	SLN Pipe Design 180 to 400 Zones	1,110,599	0
133267	RDV 205 ARM Well Siting Study	248,303	0
133269	COS Potable Reuse Study	204,768	0
133284	LAS Well Hardness Study	311,441	0
133285	LAS WSFMP Update	299,681	274,382 [(a)]
133474	SMTN 001 Well Improvement Study	345,747	0
133476	SOLA Well Siting Study	235,092	0
133513	TAB WS&F Master Plan	257,248	257,248
133584	CSS- STUDY TO RELOCATE GAS LINE	132,089	132,089
133837	LUC Seismic Mitigation Plan	102,630	0

134300	MPS 2025 Brackish Aquifer Conducti	1,143,105	0
134303	SSF 2025 Brackish Aquifer Conductivity	571,553	0
134794	Bay Area Water Transfer	769,434[(b)]	0

(a) Cal Advocates objected only to the contingency cost factor. For a detailed discussion on the necessity of contingency, please refer to Book #2, Chapter 1, Common Plant Rebuttals, contingency section.

(b) Cal Water requested updated costs of $769,434 for this project in response to DR JMI-015.[89] Cal Advocates only denied $134,794 in Menda Testimony, pp. 1-4. Cal Water is providing a rebuttal for $769,434, the estimated direct cost of this project, in the following section.

PID 116244 – ELA Nitrification Study

The Corona Environmental Study is critical to planning efforts aimed at preventing nitrification at several of Cal Water' s Southern California water systems. This study was needed to confirm nitrification was occurring in Cal Water systems. Preventing nitrification via system improvements improves water quality and protects public health, which is a direct benefit to customers. Doing nothing would result in degraded water quality in the distribution systems and compromise public health.

The study confirmed system wide nitrification is occurring and provided information on ways to mitigate using best management practices and capital improvements. The project was successfully completed per the original scope. As a result of the study, Cal Water defined multiple projects that allow the stations to address nitrification at the source, before distribution, to prevent system wide nitrification.

Furthermore, the ELA Nitrification Project was originally submitted in the 2018 GRC with the note that it would be "considered used and useful upon completion" in the ELA Project Justification book[90]. This project, as noted, was included in the 2018 GRC Settlement Agreement between Cal Water and Cal Advocates that was ultimately approved by the Commission.[91] Cal Advocates

[89] Engineering & Planning Studies Attachment-1, page 5
[90] 2018 ELA Project Justification Book pp. vii-viii
[91] 2018 GRC Settlement: D.20-12-007, Attachment 2

recommendation to disallow this project, after the fact, is essentially rejecting a project that was both previously approved by the Commission and completed by Cal Water.

PID 132988 – SSF 001 Cr-As Treatment Pilot Study

South San Francisco Station 1 is a critical groundwater treatment facility serving customers in South San Francisco system. Individual groundwater wells have elevated levels of hexavalent chromium and arsenic, although, South San Franscisco has not exceeded the arsenic MCL due to a DDW approved selective well blending configuration. Cal Water would like to remove the need for selective well blending in preparation for the State to lower the arsenic MCL below current State and Federal limit. As October 1, 2024, California reinstated the MCL for hexavalent chromium at 10 ug/L. Cal Water's number one goal is to protect public health by providing safe drinking water. In doing so, we proactively look for ways to improve our system before we exceed the State or Federal regulatory limits. Cal Water's historical practice is to start looking into treatment once concentrations reach 80% of the MCL. The potential for regulatory changes and the risk of future exceedances necessitates a proactive approach. The findings from the study will inform long-term investment decisions, support the design of effective treatment strategies, and reinforce Cal Water's commitment to delivering safe and high-water quality to our customers. Without this pilot study, Cal Water will not be able to make informed decisions regarding the feasibility, cost, and best operational improvements for treating arsenic and hexavalent chromium at Station 1, which will have a direct impact on the reliability of the system to protect customer health and meet water quality regulatory requirements.

PID 133011 – Bay Area Water Transfer (BG)

The Bay Area Water Transfer Study aims to evaluate the feasibility and benefits of a water transfer option that would enable Cal Water to purchase imported water supplies during drought conditions. This initiative is crucial as it allows for the acquisition of water from wholesalers or from State Water Project (SWP) and Central Valley Project (CVP) water rights holders outside the region. In times of supply shortages, this water would be transported through various water conveyance systems to Bay Area Cal Water districts (Bear Gulch and Bayshore), where it could either be stored in a groundwater basin or utilized immediately. The study will address the hydraulic, permitting, and cost challenges associated with the water transfer, as recommended by the Bay Area Water Supply Reliability Study to enhance water supply reliability. This project is essential for ensuring

that customers in the Bay Area have access to a dependable water supply, particularly during droughts, and the costs are being shared, with Bear Gulch contributing 25% and Bayshore (MPS/SSF) contributing 75%.

Implementing water transfers will significantly benefit customers by providing a reliable drought supply, as water will be purchased and stored during wet years for use in dry years. This strategy not only enhances the consistency of the water supply but also helps optimize California's water resources during critical periods. As demands are projected to rise due to growth and as Wholesaler supplies become more limited, it is imperative to prepare for future drought scenarios. The study will involve establishing collaborative partnerships between various water agencies and formalizing contracts well in advance of emergency conditions, such as droughts. This proactive approach ensures that all necessary agreements are in place, facilitating swift and efficient water transfers when needed. An additional and significant source of uncertainty is the status of the Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment) will be implemented and how it would affect the supply reliability of the Regional Water System (RWS). If implemented, the Bay-Delta Plan Amendment could significantly reduce water available from the Tuolumne River, which is the source of 85% of the water for the RWS. The introduction of water transfers will create a new source of supply outside the limitations of the Individual Supply Guarantee (ISG), thereby increasing the overall reliability of the water system. Failing to conduct this study could jeopardize the operational safety of the distribution system and lead to higher costs in both the short and long term, ultimately affecting customers' access to water.

PID 133013 – BG Brackish Aquifer Conductivity

The purpose of the Brackish Aquifer Conductivity Test for BG is crucial for California Water Service as it aims to develop local brackish groundwater production zones within the service area as well as providing production for MPS and SSF. This pilot study is aligned with the original justification, which emphasizes the need for a reliable water supply. This pilot study will confirm the findings from the Bay Area Water Supply and Conservation Agency (BAWSCA) report strategy, which included a feasibility assessment of desalination and the development of a Strategic Groundwater Model. By exploring the water quality available in the source aquifer, the study will

ensure that a reasonable and adequate supplemental supply can be provided to Bear Gulch and other Peninsula customers for the Bayshore District.

This study aligns with the State of California goal to "Expand brackish groundwater desalination production by 28,000 acre-feet per year by 2030 and 84,000 acre-feet per year by 2040 and help guide location of seawater desalination projects where they are cost effective and environmentally appropriate" as defined in the August 2022 report California's Water Supply Strategy Adapting to a Hotter, Drier Future.[92] The goal of increased brackish desalination production is also included in the 2020 Water Resilience Portfolio: In Response to the Executive Order N-10-19.[93]

The goals and objectives of this pilot study are not only to enhance water supply reliability, but also to directly benefit customers by ensuring a sustainable water source during drought conditions. With climate change leading to more frequent and severe droughts, having a reliable local water source becomes increasingly important. This project can help mitigate the effects of climate variability on water supply. Failing to conduct this study could have significant repercussions for customers, as it may lead to continued reliance on purchased water, which is limited by the Individual Supply Guarantee (ISG) with the San Francisco Public Utilities Commission (SFPUC). Any reduction in ISG during droughts or supply interruptions would adversely affect customer water supply and could compromise health and safety. An additional and significant source of uncertainty is the status of the Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment) will be implemented and how it would affect the supply reliability of the Regional Water System. If implemented, the Bay-Delta Plan Amendment could significantly reduce water available from the Tuolumne River, which is the source of 85% of the water for the RWS. Utilizing local brackish groundwater can lessen the strain on the existing SFPUC Regional Water System, promoting more sustainable water management practices. Therefore, investing in the BG Brackish Aquifer Conductivity Test is essential to mitigate these risks and ensure long-term water supply stability for the community.

[92] California's Water Supply Strategy Adapting to a Hotter, Drier Future, Aug 2022, pp. 4-5
[93] 2020 Water Resilience Portfolio: In Response to the Executive Order N-10-19

PID 133017 – Water Restoration / Fire Prevention Study

The Bear Gulch watershed is highly vulnerable to the release of large volumes of suspended solids and organic matter into the water supply in the event of a accidental or intentional wildfire. Cal Water's approach to managing Bear Gulch District's watershed places a primary focus on overseeing and maintaining the perimeter fencing encompassing its company-owned area to prevent trespassing. A Water Restoration/Fire Prevention Study is needed to confirm if additional watershed maintenance or other preventative measures can be taken to reduce the risk of wildfire that could affect their water supply.

Without this proposed study to determine the adequate level of maintenance and fire prevention measures for the watershed, the Bear Gulch District is at risk of being unprepared in the event of a wildfire. A lack of preparation may result in landslides that can disrupt the water supply and cause poor water quality for the Bear Gulch District and threaten the many adjacent customer homes and properties.

PID 133118 – Marysville Well Siting Study

The Marysville District is composed of a single pressure system which is entirely supplied by 7 active wells. Since the District is entirely supplied by local groundwater resources the long-term groundwater quality and its projected availability is paramount to the system. In 2020, Cal Water developed the Well Infrastructure Renewal Program (WIRP) report to proactively manage its groundwater assets. The WIRP found that, from siting study to drilling to equipping, constructing a well could take anywhere from 6-10 years. Table 5 is derived from the Cal Water's Well Desktop Condition Assessment.

Table 2: Remaining Useful Life of the District Wells in 2025

Active Well	Construction Year	Capacity (GPM)	Remaining Useful Life (yr)
07-02	1974	360	22
08-01	1948	900	7
09-01	1953	600	9
11-01	1960	900	14
12-01	1963	800	16
14-01	1979	800	26
15-01	1986	1000	30

As demonstrated in Table 5 well 08-01 and 09-01 have an estimated remaining useful life within the typical well project time frame and both wells represent a significant portion (28%) of the district's water supply. Given that conducting a well siting is the first step in constructing a well, delays in this step will only increase the already lengthy well construction process.

Cal Advocates does not dispute the need for conducting this study, only that the benefits of all study projects are speculative irrespective of its objective. This recommendation indicates a misunderstanding by Cal Advocates on the purpose of conducting a well siting study. The proposed project is not intended to study if new wells are needed but rather identify optimal well locations that maximize production capacity and minimize water quality risks. By denying the well siting projects, Cal Advocates are discouraging Cal Water's proactive approach to delivering critical projects on time. Ratepayers will directly benefit from informed projects that leverage information to enhance supply reliability.

Table 3: List of Projects that will use the Well Siting Study

PID	Description
00133119	MRL Well Land Acquisition

PID 133146 – VIS Well Siting Study

The Visalia District relies exclusively on ground water from 60 active wells to meet potable water demands. Aging groundwater well infrastructure is a major vulnerability for the district. Currently, the System is supported by 60 active wells, but within the next five years, 18 of these wells will reach the end of their operational lifespan and will require replacement. From well siting study to drilling to equipping, constructing a well could take anywhere from 6-10 years. Given that conducting a well siting is the first step in constructing a well, delays in this step will only increase the already lengthy well construction process and the time to address the Max Day Demand and Peak Hour Demand deficits.

Cal Advocates did not dispute the need for conducting this study, only that the benefits of all study projects are speculative irrespective of its objective. This recommendation indicates a misunderstanding by Cal Advocates on the purpose of conducting a well siting study. The proposed

project is not intended to study if new wells are needed but rather identify optimal well locations that maximize production capacity and minimize water quality risks. The district' near future Max Day Demand deficit and aging well infrastructure highlight the immediate need for new wells. By denying the well siting project, Cal Advocates are discouraging Cal Water's proactive approach to delivering critical projects on time. Ratepayers will directly benefit from informed projects that leverage information to enhance supply reliability.

Table 4: List of Projects that will use the Well Siting Study

PID	Description
133149	VIS Property Purchase 1
133150	VIS Property Purchase 2
133143	VIS New Well Station 1
133144	VIS New Well Station 2
133145	VIS New Well Station 3

PID 133147 – VIS Recharge Feasibility Study

The Cal Water Visalia District is made up of three water systems, two of which are located within the Kaweah Subbasin and one of which is located within the Tule Subbasin. The Visalia and Tulco water systems overlay the Kaweah Subbasin and the Mullen water system overlies the Tule Subbasin. The Kaweah Subbasin and Tule Subbasin have been identified by the California Department of Water Resources as critically overdrafted subbasins.[94] Through DWR's determination of critical overdraft for these subbasins, there is a recognition that the long-term supply of groundwater and health of the underlying groundwater aquifers are in jeopardy. Within the various Groundwater Sustainability Plans for the respective subbasins, groundwater recharge projects were identified as beneficial projects for protecting and enhancing groundwater levels and water supply. The purpose of the VIS Recharge Feasibility Study (PID #133147) is to evaluate the feasibility of groundwater recharge for the Visalia District and to identify suitable locations for new recharge basins.

By identifying locations for groundwater recharge, Cal Water will have more direction on where water can be recharged during wet seasons. This would benefit local groundwater levels,

[94] *Sustainable Groundwater Management Act 2019 Basin Prioritization, Pg. A-14*

help prevent subsidence, and result in more reliable groundwater supply in times of drought, which would directly benefit Cal Water customers. By not conducting this Study, there will be less knowledge of potential recharge opportunities for Cal Water within the subbasin. A threatened groundwater supply could impact Cal Water's ability to provide water supply for current and future water demands. Additionally, should groundwater supply be further threatened in these critically overdrafted subbasins, the cost of producing groundwater is likely to increase. Along with serving the best interest of Cal Water customers, the VIS Recharge Feasibility Study will also allow Cal Water to further align with the goals and objectives outlined in the respective Groundwater Sustainability Plans and with the Sustainable Groundwater Management Act.

PID 133189 – BK Low Zone Well Siting Study

The Bakersfield system currently operates 67 active groundwater wells, which are the primary source of water for potable demands. The average age of these wells is about 56 years, with approximately 43% (29 wells) exceeding the median useful life of 63 years by 2024, as shown in Figure 1 below. According to the District's latest Water Supply and Facilities Master Plan (WSFMP), completed in March 2024, aging groundwater infrastructure is a significant vulnerability, as the district heavily relies on groundwater to meet customer demand. To address this challenge, the WSFMP recommends that the district take more proactive steps to replace aging wells to ensure continued and long-term groundwater supply. Based on the current state of well infrastructure, it's estimated that four to five wells will need replacement each GRC cycle through 2050. See Figure 2 below for projections on system well capacity if well replacement is not undertaken.

Cal Advocates report suggests conducting a study to assess whether a new well project is needed before proceeding. This recommendation demonstrates a misunderstanding of the purpose of well siting studies. The district's aging well infrastructure, as outlined in the WSFMP, underscores the urgent need for new wells. The proposed siting study is not about determining if new wells are necessary, but rather about identifying optimal locations that maximize production capacity and minimize water quality risks. Well siting studies are an essential part of ensuring planned projects are both efficient and cost-effective, directly benefiting ratepayers by improving water reliability and enabling more accurate resource planning.

The proposed siting study directly facilitates the proposed property acquisition and well replacement projects proposed in this case, as outlined in Table 4 below, and supports the well infrastructure replacement needs identified in the WSFMP. By identifying optimal locations, these studies ensure land purchases are made in areas with the highest potential for successful groundwater production. This careful selection process guarantees that capital is spent wisely, ultimately protecting ratepayer investments through proper due diligence.

Additionally, siting studies help avoid costly errors by pinpointing unsuitable sites. Without these studies, there is a higher risk of drilling in areas with low production potential or contamination concerns, leading to unnecessary costs for ratepayers. Routine updates to these studies are critical, especially given the emergence of new regulations like TCP, PFAS, and Cr VI. Without up-to-date studies, the district risks unfairly burdening the rate base with higher costs that could have been avoided. Properly conducted siting studies ensure that only projects with a high probability of success move forward, reducing the financial risks to ratepayers from unsuccessful projects or costly operations and maintenance associated with treatment. The data provided by these studies increases the likelihood of constructing productive and reliable wells, further benefiting ratepayers.

These studies are not just a necessary step in addressing the district's water supply needs; they are also an investment in the long-term sustainability of the system. The information derived from these studies is immediately applicable to current and future well planning, and ratepayers should support funding these studies because they directly contribute to the development of reliable, high-quality water sources. Without this preliminary work, the utility risks facing delays and poor investments, which could ultimately drive up rates. Well siting studies ensure that projects proceed efficiently and effectively, providing long-term benefits to ratepayers.

As the need for new wells grows, it is increasingly important to consolidate well siting studies across the entire district, done in advance of individual well construction projects. This approach makes the process more efficient and ensures that the well construction phase stays on schedule. Should property acquisition be necessary, this upfront planning helps avoid significant delays and additional costs, allowing projects to proceed as planned.

In conclusion, well siting studies are crucial for ensuring the district's water supply projects are well-planned, cost-effective, and compliant with new regulations. These studies help identify

the best locations for new wells, minimize risks, and optimize resource allocation. By funding these studies, ratepayers benefit from more informed, efficient projects that enhance water reliability and reduce operational costs over the long term.

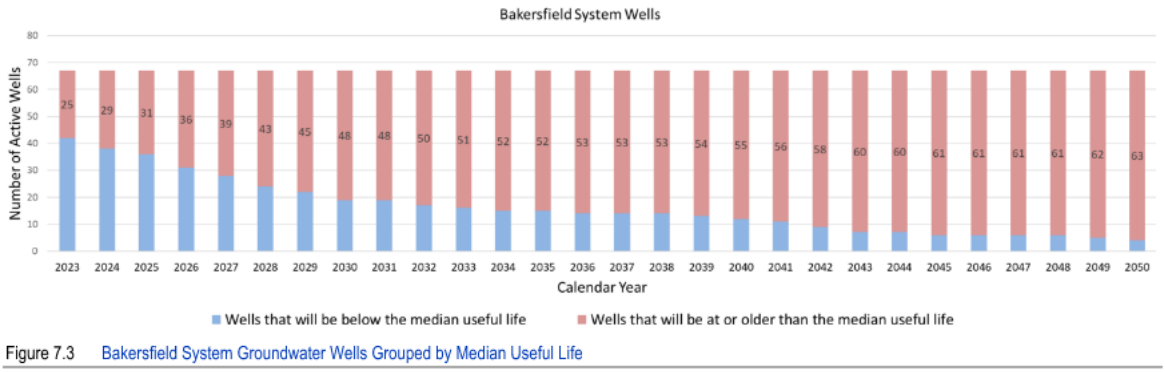


Figure 7.3 Bakersfield System Groundwater Wells Grouped by Median Useful Life

Figure 1 – BK System Groundwater Wells Grouped by Median Useful Life (Fig 7.3)

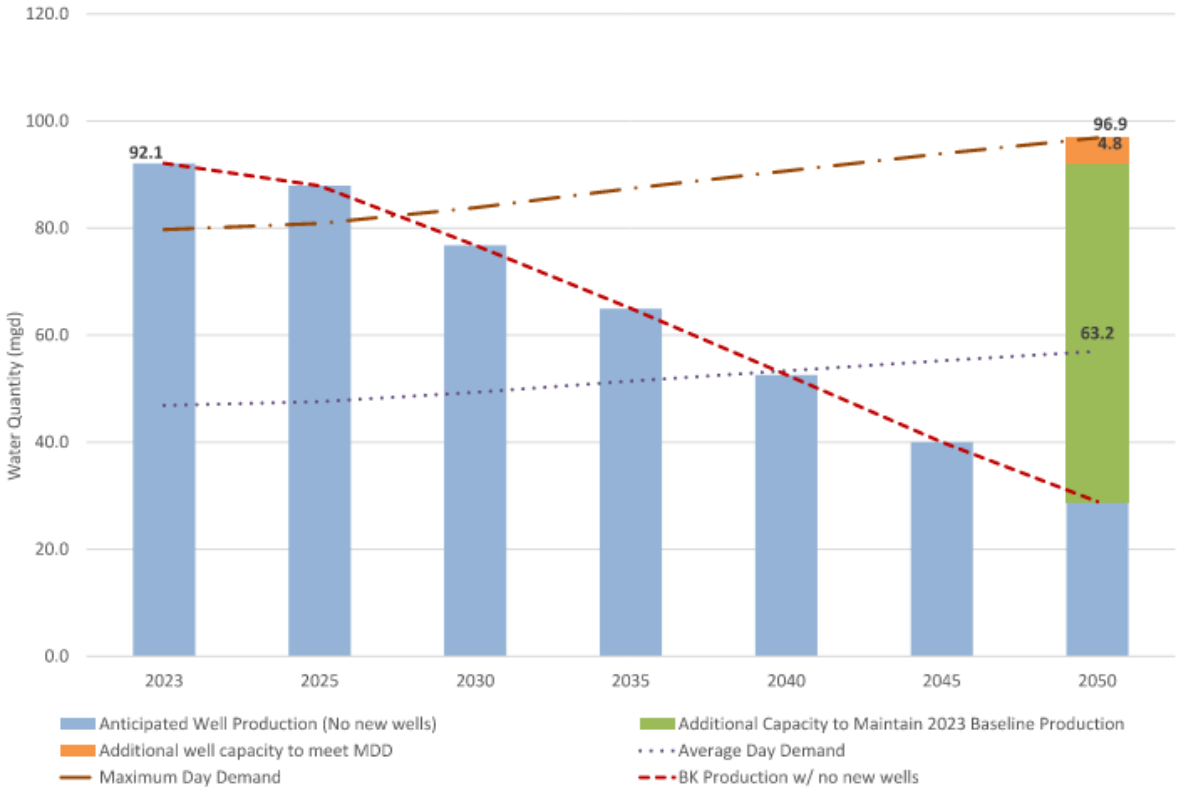


Figure 7.4 Bakersfield System Projected Well Capacity

Figure 2 – BK Projected Well Capacity from 2024 WSFMP (Fig 7.4)

Table 5: List of Projects Planned to Use Well Siting Study

PID	Description
133192	BK Low Zone Property Purchase
133838	Bk Well Replacement Program

PID 133190 – BK Railroad Main Replacement Study

The Railroad Main Replacement Study is a critical effort to assess the condition of an existing 9.15-miles of 24 to 36 inch diameter CCP transmission pipeline, which plays a central role in delivering water supply to multiple zones. The study aims to evaluate the pipeline's remaining useful life and identify potential alternative alignments for its replacement. Given that the pipeline is over 60 years old and subject to deterioration risks such as corrosion, ground movement, and pipeline damage, this study will allow the district to proactively plan for necessary infrastructure improvements and avoid costly and disruptive failures. Industry standards, such as those from the American Water Works Association (AWWA) and the National Association of Corrosion Engineers (NACE), emphasize the importance of conducting condition assessments for pipelines older than 50 years to prevent catastrophic failures and ensure long-term infrastructure reliability.

Failing to conduct this study poses significant risks to the reliability and safety of the distribution system. Without a thorough evaluation, the district may be caught unprepared for a sudden pipeline failure, which could disrupt water supply across several zones, including critical emergency supplies. Additionally, nearly 4-miles of the transmission main is within railroad right-of-way near an active rail line. Failure of the pipeline in this location poses a significant risk of damaging the rail infrastructure and disrupting operations. This could lead to substantial liability for any damage, including costly repairs, legal claims, and possible safety hazards for the public and railroad personnel. As outlined by AWWA and NACE guidelines, pipelines of this age, particularly those made from prestressed concrete cylinder pipe (CCP), are highly susceptible to unexpected failures, which can occur without warning due to the lack of visible leaks. Additionally, the study's findings will help assess the feasibility and cost-effectiveness of potential replacement routes, including considerations for right-of-way ownership changes and new permitting requirements, which could complicate in-place replacement. Not conducting this study increases the likelihood of unanticipated operational failures, higher emergency repair costs, and the potential for substantial delays in replacing the pipeline. Therefore, conducting the study now

ensures that the district can avoid future operational interruptions and costly reactive measures, directly benefiting customers by safeguarding reliable water delivery and minimizing disruptions.

PID 133228 – SLN Well Siting Study

The Salinas District relies exclusively on ground water from 23 active groundwater wells to meet potable water demands. Due to water quality concerns, seawater intrusion risk in the 180/400 subbasin aquifer, and well replacement needs, additional supply sources are needed in the district.

Aging groundwater well infrastructure is a significant vulnerability for the district. Based on the 2021 Well Infrastructure Renewal Program (WIRP) Report, the expected service life of the wells in the district is 53 years. Among ten wells of the Salinas system which serve the 155 Zone, six wells (60%) will exceed the expected service life in the next ten years. Considering the extended timeline required for well projects (including siting studies, property acquisition, design/permitting, and construction taking 6-9 years), new well installation is recommended to be initiated now to ensure long term supply reliability to meet customer demands. Proactive well replacement is essential given the system's exclusive dependence on supply from groundwater wells.

Additionally, the district is facing multiple water quality issues in their existing supply sources, with several wells recently taken offline due to elevated nitrate levels. The study helps meet regulatory compliance requirements, such as identifying risks of constituents like hexavalent chromium (Cr(VI)) and nitrates in the aquifer, ensuring the system operates in line with current water quality standards.

Given these needs, knowing where to best locate a new well that will help avoid the salt water intrusion risk and other water quality concerns, will allow new water supply to be put on-line more quickly, and will help avoid additional treatment costs.

Cal Advocates does not dispute the need for conducting this study, only that the benefits of all study projects are speculative irrespective of its objective. This recommendation indicates a misunderstanding by Cal Advocates on the purpose of conducting a well siting study. The District's current supply deficit and aging infrastructure, as shown in Figure 3 below, underscores the urgent need for new wells. The proposed siting study is not about determining if new wells are necessary,

but rather about identifying optimal locations that maximize production capacity and minimize water quality risks.

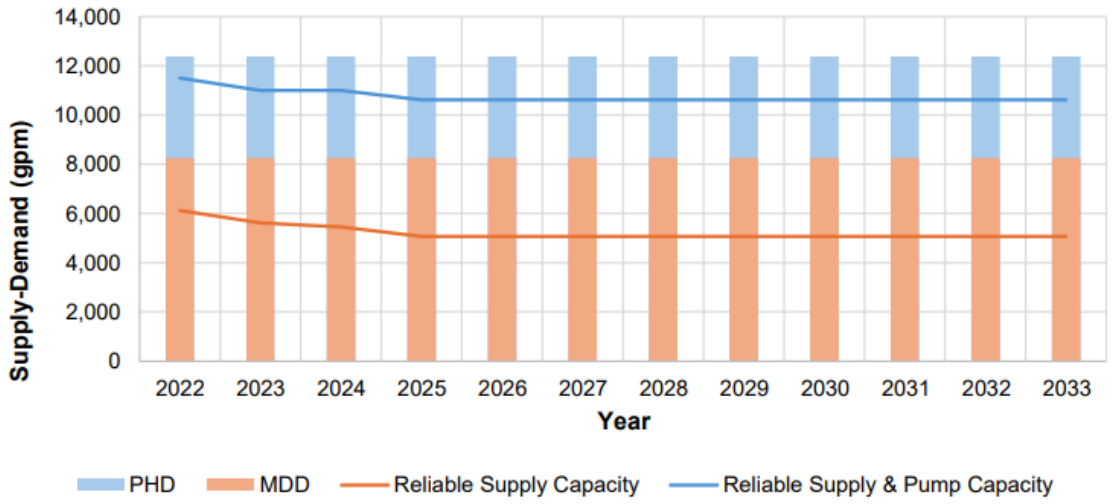


Figure 3. The Salinas 155 Zone Supply and Demand Projection without New Wells

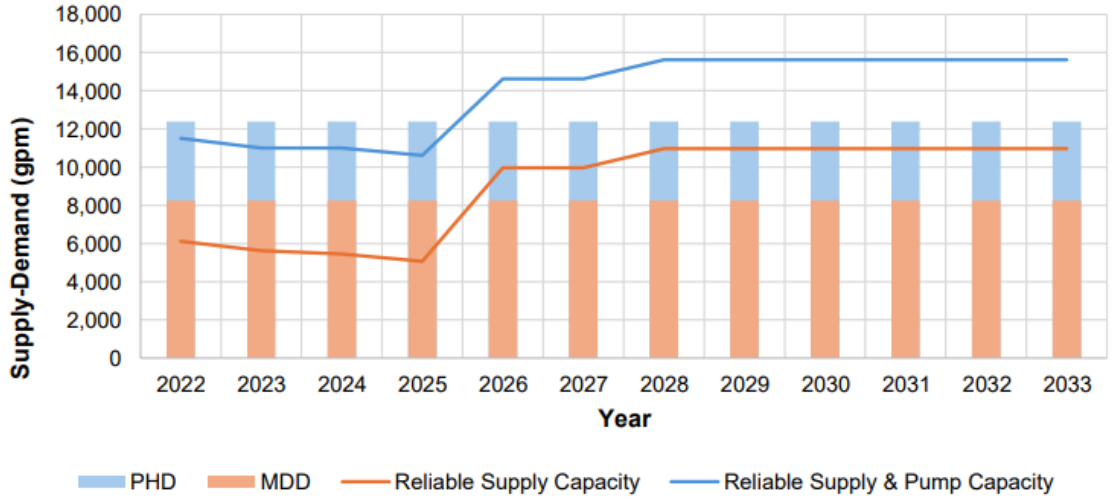


Figure 4. The Salinas 155 Zone Supply and Demand Projection with New Wells

Table 6: Summary of Recommendations for Salinas System

Pressure Zone	Pumping Capacity from Supply Sources Surplus (Deficit), gpm	Pumping Capacity for Peak Demands Surplus (Deficit), gpm	Storage Capacity Surplus (Deficit), kgal	Recommended Alternatives
Salinas System				
155	(1,485)	(5,356)	(345)	• Install additional pumping capacity, a portion of which should be from supply sources • Install backup power at additional groundwater wells to mitigate emergency storage capacity deficiency • Install additional reservoir storage capacity
180	50	8	1,214	• No improvements recommended
280	12	(614)	747	• Install additional pumping capacity
360	327	(1,727)	NA	• Install additional pumping capacity

PID 133229 – SLN Water Supply Facilities Master Plan Update

Cal Water is required by the California Public Utilities Commission (CPUC) to develop Water Supply and Facilities Master Plans (WSFMP) for each of its 24 districts every ten years. The SLN WSFMP evaluates demand and supply conditions for the next 20 plus years and outlines essential long-term and short-term capital improvement projects necessary for the maintenance and operation of each water system . It should be noted that Cal Advocates did not dispute the usefulness of other WSFMP study projects in this rate case filing such as WSFMP Update – Westlake (WLK) (PID# 133136) and WSFMP Update – Los Altos (LAS) (PID# 133285) and only recommended the removal of their contingency.

The recommended capital improvement projects identified in the WSFMP are crucial for water supply planning as they are based on evaluations that identify deficiencies in supply, storage, pumping, and backup power within the district's system. Implementing these projects is vital to meeting Cal Water's established performance criteria for water systems. Moreover, the WSFMP highlights high-priority projects, which are included in the budget for near-term General Rate Cases.

Studies like the SLN WSFMP provide critical direction and guidance for Cal Water, benefiting both customers and operations by ensuring that proper analysis has been completed, and that necessary and useful infrastructure investments align with long-term system needs. Without these studies, Cal Water would struggle to proactively plan for necessary improvements, potentially resulting in service disruptions and higher long-term costs.

PID 133230 – SLN Pipe Design 180 to 400 Zones

The Salinas Eastside Subbasin Pipeline Feasibility Study is an important initiative aimed at addressing the district's water supply challenges by evaluating the feasibility, scope, and budget for future pipeline infrastructure. This analysis is needed to sustainably reallocate groundwater supply from the impaired 180/400 subbasin to the Eastside subbasin. This study is proposed to strategically address well age, water quality challenges, seawater intrusion, and basin overdraft in the 180/400 subbasin by shifting future assets into the Eastside basin, which is not as impacted by seawater intrusion. The study will focus on determining the most feasible and cost-effective pipeline route for the proposed supply transmission infrastructure, providing essential data on pipeline alignment, elevation/topographical challenges, construction costs, and environmental or permitting challenges. This will allow the district to optimize its future infrastructure replacement programs through investments that secure a long-term, reliable water supply for our customers.

Without the insights gained from this study, the district would face uncertainty regarding source water supply and the pipeline scope, costs, permitting, and other challenges, necessary for the project to come to fruition. This will lead to significant delays, budget overruns, and complications during implementation as well as unnecessarily impact the long-term supply reliability for customers. Lack of action now could result in higher long-term costs, operational inefficiencies, and disruptions in water supply as the existing 180/400 supply challenges continue. The findings from this study will inform future investment decisions, guide the design of effective supply transmission facilities, and contribute to the planning of construction projects in the 2027 GRC, reinforcing the district's commitment to delivering safe, high-quality drinking water.

Cal Advocates does not dispute the need for conducting this study, only that the benefits of all study projects are speculative irrespective of its objective. Cal Water has clearly justified the benefits of the project in its original justification and here in the rebuttal. Therefore, Cal Advocates blanket denial of all study projects irrespective of their merit, is irresponsible and discourages proactive measures.

PID 133267 – RDV 205 ARM Well Siting Study

In 2020, Cal Water developed the Well Infrastructure Renewal Program (WIRP) report to proactively manage its groundwater assets. From siting study to drilling to equipping, constructing a well could take anywhere from 6-10 years. Of the two (2) active wells in the system, Well 001-01

has a remaining useful life of 11 years, which is near the typical well project time frame; this well represents a significant portion (57%) of the system's water supply.

Given that conducting a well siting is the first step in constructing a well, delays in this step will only increase the already lengthy well construction process and the time to address the Max Day Demand and Peak Hour Demand deficits.

Cal Advocates does not dispute the need for conducting this study, only that the benefits of all study projects are speculative irrespective of its objective. This recommendation indicates a misunderstanding by Cal Advocates on the purpose of conducting a well siting study. The proposed project is not intended to study if new wells are needed but rather identify optimal well locations that maximize production capacity and minimize water quality risks. By denying the well siting projects, Cal Advocates are discouraging Cal Water's proactive approach to delivering critical projects on time. Ratepayers will directly benefit from informed projects that leverage information to enhance supply reliability.

PID 133269 – COS Potable Reuse Study

The Coast Springs system in the Redwood Valley District is facing significant water supply challenges due to its dependence on groundwater wells, which are susceptible to drought and seasonal shortages. Additionally, these wells are near the coast, and have historically had lower yields. To ensure long-term reliability, Cal Water is proposing the COS Potable Reuse Study to evaluate the feasibility of supplementing the system's supply with treated wastewater.

Ensuring a reliable long-term water supply is a critical goal of this study. The Coast Springs system has already needed to truck in water during peak demand periods, highlighting the urgent need for alternative water sources. Additionally, the Coast Springs system is the only viable option for potable reuse in the Redwood Valley District. By proactively assessing potable reuse, Cal Water can develop a strategic response to drought conditions instead of relying on costly emergency measures.

Denying funding for this study would limit Cal Water's ability to explore cost-effective, sustainable solutions to the ongoing water supply challenges faced by Coast Springs. Studies like this have historically been funded through the rate base because they provide direct operational

and planning benefits. The potable reuse study will provide essential next steps into an alternative water supply that will reduce the reliance on costly emergency measures, benefiting both customers and the long-term supply needs of the system.

PID 133284 – LAS Well Hardness Study

Hard water, which contains high levels of calcium and magnesium, can lead to scaling in pipes, reduced efficiency of household appliances, and customer complaints regarding water quality. By conducting this study, the goal is to assess current hardness levels in Los Altos system's well water sources, analyze how effectively hardness could be removed with treatment, and determine potential improvements to optimize water quality.

By denying this study, Cal Advocates is discouraging Cal Water's proactive approach to ensuring high water quality to our customers while improving the system efficiency and infrastructure longevity. Delaying this study could result in continued customer dissatisfaction and potential regulatory scrutiny. If hardness issues persist, customers may seek costly individual solutions, such as home water softeners, which further erodes confidence in our water supply. Additionally, postponing the study will only extend the timeline for necessary improvements, leading to greater long-term costs and operational inefficiencies.

PID 133474 – Split Mountain Well Improvement Study

The Well Improvement Feasibility Study for Well SMTN-001-01 meets the fundamental goal of Cal Water's Asset management plan to balance level of service, cost to providing service and managing risk. It includes both a feasibility study and well rehabilitation, ensuring reduced costs, improved construction quality, and a reliable supply. This project directly benefits customers by improving the reliability of the water system by adding sources to the system through means other than constructing a new well.

PID 133476 – SOLA Well Siting Study

The District's Southlake system relies exclusively on groundwater from 4 active wells to meet potable water demands. Based on the District's Supply Demand report provided in the Project Justification books (Figure 5), the district has a current Max Day Demand deficit of approximately 47-gpm when using firm supply capacity (largest well out of service) per Title 22

requirements. Additionally, 2 of the 4 active wells are at or older than the median useful life for wells in the district. To address the Max Day Demand deficit and aging well infrastructure, the district proposes this study to help facilitate initial planning for new well project(s) to meet the immediate and long-term groundwater supply needs.

Cal Advocates report suggests conducting a study to assess whether a new well project is needed before proceeding. This recommendation indicates a misunderstanding by Cal Advocates on the purpose of conducting a well siting study. The proposed project is not intended to study if new wells are needed but rather identify optimal well locations that maximize production capacity and minimize water quality risks. The district's current Max Day Demand deficit and aging well infrastructure, Well Asset Plan, and Supply Demand analysis highlights the immediate need for new well(s) in this system.

Additionally, siting studies help reduce risk by pinpointing unsuitable locations for planned wells. Without these studies, there is a higher risk of drilling in areas with low production potential or contamination concerns, leading to additional costs for ratepayers. Without up-to-date studies, the district risks unfairly burdening the rate base with higher costs that could have been avoided. Properly conducted siting studies ensure that only projects with a high probability of success move forward, reducing the financial risks to ratepayers from unsuccessful projects or costly maintenance. The data provided by these studies increases the likelihood of constructing productive, reliable wells, further benefiting ratepayers.

CALIFORNIA WATER SERVICE
Operations Engineering 1720 North First Street
San Jose, CA 95112-4598

District-Wide Table Summary of Supply-Demand Analysis Report by System/Zone
Max Day Demand (MDD) and Peak Hour Demand (PHD) Levels Of Service (LOS)

District: 134-Kern River Valley

Date of Analysis: November-2022
Demand Data Used: 2021 MDD: (10-Year Analysis)
Production Data Used: Design Capacities
Consumption Allocation: Not Used

District Summary Table (gpm)

Sys	Zone	Max Month	Supply Capacity	Firm Supply Capacity	MDD	ADD/MDD Surplus (Deficit)	Firm Supply & Pump	PHD	PHD Surplus (Deficit)	Storage Needed (MG)	Storage Avail (MG)	Surplus (Deficit) (MG)	Notes
KERV	System	-	1,463	903	655	248	1,803	983	820	0.019	1.963	1.944	
LLAN	System	-	70	45	71	(26)	101	107	(6)	0.015	0.344	0.329	
LBOD	System	-	255	127	160	(33)	233	240	(7)	0.027	0.462	0.435	
ONYX	System	-	88	26	77	(51)	0	115	(115)	0.021	0.015	(0.006)	
SQSL	System	-	591	378	425	(47)	1,125	637	488	0.062	1.083	1.021	
SMTN	System	-	156	91	52	39	122	78	44	-	0.305	-	
UBOD	System	-	130	65	111	(46)	236	167	69	0.024	0.162	0.138	

Figure 5. Kern River Valley Water Supply-Demand Analysis Report, 2023[95]

PID 133837 – LUC Seismic Mitigation Plan

Cal Water conducted several geotechnical assessments at its water treatment plant in Lucerne to understand the seismic risk. This station is the sole supply source for the Lucerne system, and its location is highly susceptible to liquefaction due to underlying sediments. The study concluded that mitigation measures are necessary to address settlement and lateral spreading risks. Proposed measures include compaction grouting and installing mechanical flexibility in the plant's piping.

Cal Water recommends retaining a consultant to investigate potential solutions for mitigating seismic risk at the Lucerne Water Treatment plant, in order to keep water delivery from the plant to its customers, during and immediately following a seismic event. The consultant would conduct site visits, perform a geotechnical assessment, evaluate seismic vulnerability of the plant, develop a plan for a temporary bypass and outline emergency procedures. The information from this study would be compiled into a report or plan for use in recommending a Seismic Stabilization project in the 2027 GRC. This study will benefit Cal Water customers in the Lucerne district by

[95] Kern River Valley Project Justification Book, page 356

taking the first step to ensure their main source of supply can withstand a seismic event, and what measures should be taken in this type of situation.

PID 134300 – MPS Brackish Aquifer Conductivity

The purpose of the Brackish Aquifer Conductivity Test for MPS is crucial for Cal Water as it aims to develop local brackish groundwater production zones within the service area in order to provide addition production for Bear Gulch and South San Francisco customers. This pilot study is aligned with the original justification, which emphasizes the need for a reliable water supply. This pilot study will confirm the findings from the Bay Area Water Supply and Conservation Agency (BAWSCA) report strategy, which included a feasibility assessment of desalination and the development of a Strategic Groundwater Model. By exploring the water quality available in the source aquifer, the study will ensure that a reasonable and adequate supplemental supply can be provided to Mid-Peninsula and other Peninsula customers for the Bayshore and Bear Gulch Districts.

This study aligns with the State of California goal to "Expand brackish groundwater desalination production by 28,000 acre-feet per year by 2030 and 84,000 acre-feet per year by 2040 and help guide location of seawater desalination projects where they are cost effective and environmentally appropriate" as defined in the August 2022 report California's Water Supply Strategy Adapting to a Hotter, Drier Future.[96] The goal of increased brackish desalination production is also included in the 2020 Water Resilience Portfolio: In Response to the Executive Order N-10-19.[97]

The goals and objectives of this pilot study are not only to enhance water supply reliability, but also to directly benefit customers by ensuring a sustainable water source during drought conditions. With climate change leading to more frequent and severe droughts, having a reliable local water source becomes increasingly important. This project can help mitigate the effects of climate variability on water supply. Failing to conduct this study could have significant repercussions for customers, as it may lead to continued reliance on purchased water, which is limited by the Individual Supply Guarantee (ISG) with the San Francisco Public Utilities

[96] California's Water Supply Strategy Adapting to a Hotter, Drier Future, Aug 2022, pp. 4-5
[97] 2020 Water Resilience Portfolio: In Response to the Executive Order N-10-19

Commission (SFPUC). Any reduction in ISG during droughts or supply interruptions would adversely affect customer water supply and could compromise health and safety. An additional and significant source of uncertainty is the status of the Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment) will be implemented and how it would affect the supply reliability of the Regional Water System (RWS). If implemented, the Bay-Delta Plan Amendment could significantly reduce water available from the Tuolumne River, which is the source of 85% of the water for the RWS. Utilizing local brackish groundwater can lessen the strain on the existing SFPUC Regional Water System, promoting more sustainable water management practices. Therefore, investing in the BG Brackish Aquifer Conductivity Test is essential to mitigate these risks and ensure long-term water supply stability for the community.

PID 134303 – SSF Brackish Aquifer Conductivity

The purpose of the Brackish Aquifer Conductivity Test for SSF is crucial for California Water Service as it aims to develop local brackish groundwater production zones within the service area as well as providing production for BG and MPS. This pilot study is aligned with the original justification, which emphasizes the need for a reliable water supply. This pilot study will confirm the findings from the Bay Area Water Supply and Conservation Agency (BAWSCA) report strategy, which included a feasibility assessment of desalination and the development of a Strategic Groundwater Model. By exploring the water quality available in the source aquifer, the study will ensure that a reasonable and adequate supplemental supply can be provided to South San Francisco and other Peninsula customers for the Bayshore and Bear Gulch Districts.

This study aligns with the State of California goal to "Expand brackish groundwater desalination production by 28,000 acre-feet per year by 2030 and 84,000 acre-feet per year by 2040 and help guide location of seawater desalination projects where they are cost effective and environmentally appropriate" as defined in the August 2022 report California's Water Supply Strategy Adapting to a Hotter, Drier Future.[98] The goal of increased brackish desalination

[98] California's Water Supply Strategy Adapting to a Hotter, Drier Future, Aug 2022, pp. 4-5

production is also included in the 2020 Water Resilience Portfolio: In Response to the Executive Order N-10-19.[99]

The goals and objectives of this pilot study are not only to enhance water supply reliability, but also to directly benefit customers by ensuring a sustainable water source during drought conditions. With climate change leading to more frequent and severe droughts, having a reliable local water source becomes increasingly important. This project can help mitigate the effects of climate variability on water supply. Failing to conduct this study could have significant repercussions for customers, as it may lead to continued reliance on purchased water, which is limited by the Individual Supply Guarantee (ISG) with the San Francisco Public Utilities Commission (SFPUC). Any reduction in ISG during droughts or supply interruptions would adversely affect customer water supply and could compromise health and safety. An additional and significant source of uncertainty is the status of the Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment) will be implemented and how it would affect the supply reliability of the Regional Water System (RWS). If implemented, the Bay-Delta Plan Amendment could significantly reduce water available from the Tuolumne River, which is the source of 85% of the water for the RWS. Utilizing local brackish groundwater can lessen the strain on the existing SFPUC Regional Water System, promoting more sustainable water management practices. Therefore, investing in the BG Brackish Aquifer Conductivity Test is essential to mitigate these risks and ensure long-term water supply stability for the community.

PID 134794 - Bay Area Water Transfer Study

The Bay Area Water Transfer Study was unintentionally excluded from the ROM. In response to DR JMI-015, Cal Water has indicated that $769,434 will be added to the ROM as direct cost from this study.[100] This project aims to evaluate the feasibility and benefits of a water transfer option that would enable Cal Water to purchase imported water supplies during drought conditions. This initiative is crucial as it allows for the acquisition of water from wholesalers or from State Water Project (SWP) and Central Valley Project (CVP) water rights holders outside the region. In times of supply shortages, this water would be transported through various water conveyance systems to

[99] 2020 Water Resilience Portfolio: In Response to the Executive Order N-10-19
[100] Engineering & Planning Studies Attachment 1, page 5

Bay Area Cal Water districts (Bayshore and Bear Gulch), where it could either be stored in a groundwater basin or utilized immediately. The study will address the hydraulic, permitting, and cost challenges associated with the water transfer, as recommended by the Bay Area Water Supply Reliability Study to enhance water supply reliability. This project is essential for ensuring that customers in the Bay Area have access to a dependable water supply, particularly during droughts, and the costs are being shared, with Bear Gulch contributing 25% and Bayshore (MPS/SSF) contributing 75%.

Implementing water transfers will significantly benefit customers by providing a reliable drought supply, as water will be purchased and stored during wet years for use in dry years. This strategy not only enhances the consistency of the water supply but also helps optimize California's water resources during critical periods. As demands are projected to rise due to growth and as Wholesaler supplies become more limited, it is imperative to prepare for future drought scenarios. The study will involve establishing collaborative partnerships between various water agencies and formalizing contracts well in advance of emergency conditions, such as droughts. This proactive approach ensures that all necessary agreements are in place, facilitating swift and efficient water transfers when needed. An additional and significant source of uncertainty is the status of the Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment) will be implemented and how it would affect the supply reliability of the Regional Water System (RWS). If implemented, the Bay-Delta Plan Amendment could significantly reduce water available from the Tuolumne River, which is the source of 85% of the water of the RWS. The introduction of water transfers will create a new source of supply outside the limitations of the Individual Supply Guarantee (ISG), thereby increasing the overall reliability of the water system. Failing to conduct this study could jeopardize the operational safety of the distribution system and lead to higher costs in both the short and long term, ultimately affecting customers' access to water.

Conclusion:

Cal Advocates' recommendation to eliminate the majority of Cal Water's engineering and planning studies is based on a fundamental misunderstanding of their value to both the district and its customers, and it has been presented in a highly inconsistent and ad hoc manner. Their position is in direct contradiction to industry best practices, and, in some cases, the very studies they

recommend rejecting are either regulatory requirements or were scopes of work originally proposed previously by Cal Advocates. Furthermore, their blanket rejection of these projects is arbitrary and runs counter to their own past positions, both with Cal Water and other Class A water utilities, where they have consistently supported similar studies as necessary planning tools. Given the critical role these studies play in ensuring infrastructure resilience, regulatory compliance, and long-term cost-effective decision-making, the Commission should reject Cal Advocates' recommendations and approve all of these studies as Cal Water originally proposed. Doing so will ensure that customers continue receiving reliable, high-quality potable water, while also maintaining a proactive, data-driven approach to system management that prevents costly inefficiencies and service disruptions in the future.

Engineering & Planning Studies Attachment 1

RESPONSE TO DATA REQUEST

2024 GENERAL RATE CASE, A.24-07-003

To: **Public Advocates Office**

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Date: **November 20, 2024** Re: **JMI-015** Subj: **RO Model**	Request Received from CPUC: **November 13, 2024** Requested Due Date: **November 20, 2024**

Comments:

- **Full response attached.**
- **Response provided by Rates and Engineering.**
- **Does not contain confidential information.**
- **This response refers to the following attachments included separately:**
  - **JMI-015 Attachment #1 – Cost Estimate for PID 134794**
  - **JMI-015 Attachment #2 – Instructions for adding project estimate**

Data Requests and Responses

RO Model (All Districts):

1. For the Meter Replacement Program, some of the direct project costs shown in Cal Water's capital cost estimates[1] differ from the direct costs shown in the Common Plant Capital Project Justification, pp. 356-359, Attachment B (List of Projects and Assets to be Replaced) and RO model.[2] For each project shown in the table below, please confirm the correct direct project cost. If the direct project shown in Cal Water's capital cost estimate is incorrect, please provide the correct cost estimate in Excel format.

			Common Plant Project Justification	RO Model		CWS Response to DR JMI-001, Attachment		
District	PID	Year	Direct Cost	Direct Cost	Cell	Direct Cost	Tab	Attachment #
Antelope Valley	AVD0900	2025	$ 9,813.08	$ 9,813.08	AA1069	$13,863.32	AV	2
		2026	$ 10,058.41	$10,058.41	AB1070	$14,209.91		3
King City	KCD0900	2025	$ 19,180.75	$19,180.75	AA1091	$42,809.05	KC	2
		2026	$ 19,660.27	$19,660.27	AB1092	$43,879.27		3
		2027	$ 20,151.77	$20,151.77	AC1093	$44,976.25		4
Marysville	MRL0900	2025	$ 23,628.30	$23,628.30	AA1102	$39,988.24	MRL	2
		2026	$ 24,219.01	$24,219.01	AB1103	$40,987.94		3
		2027	$ 24,824.48	$24,824.48	AC1104	$42,012.64		4

Response: Cal Water's RO model erroneously included incorrect project direct cost for the projects referred in above table for Antelope Valley, King City, and Marysville. Cal Water will modify the project estimates with the correct estimates for the projects listed in the above table in RO model in its rebuttal testimony.

[1] CWS Response to DR JMI-001(Meter Replacement), JMI-001Attachment 2 (2025 Meter Replacement Cost Estimates), JMI-001Attachment 3 (2026 Meter Replacement Cost Estimates), and JMI-001Attachment 4 (2027 Meter Replacement Cost Estimates).
[2] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1."

1

2. For the Motor Control Centers (MCC)/Panelboard Replacement Program, the project year for some projects shown in the Common Plant Capital Project Justification, p. 423, Attachment B (List of Projects and Assets to be Replaced) differs from the project year shown in the RO model.[3] For each project shown in the table below, please confirm the correct project year.

District	Project Description	PID	Common Plant Project Justification	RO Model	
			Project Year	Project Year	Cell
Bayshore	BAY 2025- MCC Replacement	132499	2025	2027	D349
Bear Gulch	BG 2025- MCC Replacement	132508	2025	2027	D350
Chico	CH 2025- MCC Replacement	132513	2025	2027	D351
Kern River Valley	KRV 2025- MCC Replacement	132529	2025	2027	D353
Los Altos	LAS 2025- MCC Replacement	132534	2025	2027	D354
Marysville	MRL 2025- MCC Replacement	132539	2025	2027	D356
Salinas	SLN 2025- MCC Replacement	132546	2025	2027	D357
Stockton	STK 2026- MCC Replacement	132548	2026	2027	D358
Westlake	WLK 2025- MCC Replacement	132553	2025	2027	D359

Response: The project years included in RO Model are the correct completion year for the projects included in the above table.

[3] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1."

1

3. For the Flowmeter Replacement Program, the project year for some projects shown in the RO model[4] differs from the project year shown in the Common Plant Capital Project Justification, Attachments A (Breakdown per District) and B.5[5] For each project shown in the table below, please confirm the correct project year.

			Common Plant Project Justification			
			Project Year		RO Model	
District	Project Description	PID	Attachment A	Attachment B	Project Year	Cell
East Los Angeles	ELA 2025 Flowmeter Replacement	132084	2025	2025	2027	D141
Hermosa Redondo	HR 2026 Flowmeter Replacement	132062	2026	2026	2027	D111
Stockton	STK 2025 Flowmeter Replacement	132039	2025	2025	2027	D79

Response: The project years included in RO Model are the correct completion year for the projects included in the above table.

4. Regarding the San Mateo (SM) 017 Station Rebuild Construction Project (project ID (PID) 132998), the capital cost estimate in Bay Area Region Capital Project Justification, p. 85, shows a direct project cost of $1,077,281.14. However, Cal Water's RO Model shows a direct project cost of $1,003,081.32 for PID 132998.6 Please confirm the correct direct project cost. If the direct project shown in Cal Water's capital cost estimate is incorrect, please provide the correct cost estimate in Excel format.

Response: Cal Water's RO model erroneously included incorrect project direct cost of $1,003,081.32 for PID # 132998. Cal Water will modify the project estimate with the correct estimate in RO model in its rebuttal testimony.

[4] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1."
[5] Common Plant Capital Project Justification, pp. 154-156.
[6] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1," cell AC557.

5. Cal Water states that the costs of the Bay Area Water Transfer Study are being shared between the Bear Gulch and Bayshore districts.[7] The Bear Gulch portion (PID 133011) appears in Cal Water's RO model at line 569.[8] However, the Bayshore portion (PID 134794) does not appear in the RO model. Is this omission intentional? If not, please describe the best way to add a project line to the CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1." Please provide the appropriate Excel formulas and values for each column for PID 134794.

Response: This omission was not intentional. Please find JMI-001Attachment #1 for a cost estimate for PID 134794. To add the project to the file noted above, please enter the information noted in JMI-015 Attachment #2 into Row 4001 of the tab labelled *Budget (ACB) Adjustments WS-2.1*.

END RESPONSE

[7] Bay Area Region Capital Project Justification, p. 177.
[8] CWS RO model file "CH07_RO_RB_PLT," tab "Budget (ACB) Adjustments WS-2.1."

1

Land Held for Future Use

Issue:

In the 2024 General Rate Case (GRC), Cal Water proposes 11 specific land purchase projects as Plant Held for Future Use (PHFU) in rate base. Recognizing Cal Water's need for new land by authorizing these project in rates, ensures that essential infrastructure, such as wells, storage tanks, treatment plants, and pumping stations, can be developed in a cost-effective and timely manner.

Cal Advocates Position: (Katherine Do, pp. 12-1 to 12-3)

Cal Advocates opposes including any new or existing land assets in the 2025 GRC application that are not actively in service, arguing that only in-service land is beneficial to customers and including these land assets negatively impacts customers financially.[101] (For existing land that Cal Water has previously purchased but has yet to put into service, please see **Chapter 7** (Rate Base) of **CWS Rebuttal Book # 1** where this is discussed in detail. That chapter also discusses Cal Advocates' overestimation of the operating expense associated with maintaining such land.) .

Cal Water Rebuttal:

Cal Advocates' recommendation reflects a fundamental misunderstanding of both the necessity and customer benefits associated with acquiring land in advance for future infrastructure needs. Given the consistent increase in land values across California, proactive land purchases are essential to controlling costs and ensuring long-term project feasibility. Cal Advocates' approach would essentially discourage Cal Water from making timely acquisitions by only allowing them in rates only after a project has been completed. While attempting to put all up-front financial risk on the company, Cal Advocates does not see that this exposes customers to other, greater risks – risks that land costs will be higher later, that suitable sites may no longer be available when needed, and that the best-laid plans for timely construction and service delivery to customers are foiled if inadequate land is available. The long-term financial benefits to customers of securing land early far outweigh the short-term issues raised by Cal Advocates.

[101] A. 24-07-003. *Cal Advocates Report on Customer Service, ESJ Plan, Plant for Chico, Oroville, Marysville, Willows and Dixon, and Multiple Common Plant Issues*, pg. 12-1

Cal Advocates Has a Narrow View of Financial Impact on Customers

Cal Advocates' claim that land as PHFU in rates negatively impacts customers financially completely disregards the realities of the historical and ongoing escalation of land prices throughout California. According to the California Legislative Analyst's Office, the cost of a mid-tier home (including land) has increased more than 315% since 2000 – an average annual increase of 12.6%.[102] Similarly, farmland prices in the Central Valley have increased from $8,150 per acre in 2001 to $52,200 per acre in 2021, a 530% increase over that time. [103] This steady increase in real estate values has been similarly observed across all of Cal Water's Districts over the last 40 years. Purchasing land today at lower prices ultimately yields net benefits and cost savings for customers, compared with waiting until a project is fully designed and permitting in a future GRC , at which point land costs are likely to be significantly higher. Cal Advocates' arguments also overlooks the significant land availability constraints in many of Cal Water's highly urbanized districts. As of February 2025, the median number of days properties remained on the market in California was only 46 days, underscoring the rapid turnover of available land. [104] Assuming that suitable property will be available precisely when needed for California's utility infrastructure is completely unrealistic. Cal Advocates ignores the avoided costs that benefit customers when access to land no longer poses a barrier to project completion. Without proactive land acquisition, viable sites will be quickly purchased by other buyers, jeopardizing the feasibility of proposed projects and potentially forcing Cal Water to seek more costly or suboptimal solutions for customers.

It is helpful to analogize these land assets to materials and supplies that the Commission has long-authorized utilities to include in rate base. Cal Water makes investments in its materials and supplies inventory that it reasonably anticipates using. This allows the Company to ensure that it has what it needs on hand in order to rapidly respond to needs in its utility infrastructure.

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[102] LAO, *California Housing Affordability Tracker (4th Quarter 2024)*. Retrieved on March 17, 2025, from: https://lao.ca.gov/LAOEconTax/Article/Detail/793

[103] University of California, Irvine. *Real Estate Values and Agricultural Transitions in California's Central Valley*. Retrieved on March 17, 2025, from: https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=61838

[104] Federal Reserve Bank of St. Louis. Housing Inventory: Median Days on Market in California. Retrieved March 17, 2025, from: https://fred.stlouisfed.org/series/MEDDAYONMARCA

Maintaining a robust inventory of materials and supplies ahead of time (even if they are not necessarily needed immediately) also allows Cal Water to obtain the best pricing and terms, as opposed to waiting until there is an immediate and urgent need when options can be more limited. For land, it is similarly helpful for Cal Water to maintain an inventory of land that it can readily use in the future, thereby taking advantage of opportunities to purchase land when they arise, albeit in targeted areas for specific projects that are known as future needs. For example, a well is aging and needs to be replaced in the next 3 – 5 years. If a property in the area becomes available, it is better for Cal Water to buy it and effectively "put it in inventory" until the aging well is systematically replaced. And as explained above, it is tremendously difficult and time-consuming to obtain land in California, particularly in areas that are already well-developed.

Cal Advocates' recommendations ignore the unfair carrying costs that it would impose on Cal Water if the Company purchased land for the good of the system, but could not put it into rate base. It would discourage the Company from taking advantage of rare opportunities to acquire land at a good price. In order to benefit customers, it is critical that Cal Water make the most of opportunities to acquire land because they rarely line up with when critical projects need to be completed. In addition to challenges in acquiring land in California, there are carrying costs associated with holding the land until the project is designed, permitted, and built. If the Commission declines to allow land in rate base when purchased, one potential alternative to address the issue of carrying costs, while still encouraging Cal Water to acquire land, particularly in areas where property on the open market is a rare opportunity, is to allow the utility to put the land into rate base using the *fair market value* of the land *at the time the project is placed in service*. This compensates Cal Water for the carrying costs through the difference between the original cost (when it was purchased but withheld from rate base treatment) and the fair market value, and defers inclusion of such costs into rate base until the project is placed in service as recommended by Cal Advocates. Financially, this would be neutral for customers as compared to if Cal Water had waited to buy the land until closer to construction, and then paid fair market value. But customers would benefit from less tangible results, such as having projects be completed more quickly than otherwise because the land was available by virtue of being in Cal Water's virtual inventory.

In sum, Cal Advocates' claim that purchasing land in advance negatively impacts customers is not only inaccurate, but also fails to reflect the realities of California's real estate

market, the challenges of land availability, and the requirements for design and permitting projects.

Proactive Property Purchases Align with Industry Best Practices

The inclusion of land held for future use in rate base aligns with recognized industry best practices for utility planning and asset management. Organizations such as the American Water Works Association (AWWA) and the U.S. Environmental Protection Agency (USEPA) emphasize the importance of long-term strategic planning to ensure the sustainability, reliability, and affordability of water systems. The USEPA's *Clean Water and Safe Drinking Water Infrastructure Sustainability Policy* advocates for water utilities to develop comprehensive planning and asset management strategies which anticipate future infrastructure needs and minimize unnecessary capital cost and maximize benefit to customers. Securing land in advance of infrastructure development is a logical and prudent application of these principles, allowing utilities to avoid last-minute acquisitions at inflated costs, prevent project delays due to land unavailability, and facilitate a smoother regulatory approval process. The Commission should in fact be facilitating Cal Water's ability to secure land by authorizing advance property purchases in rate base; the alternative is a reactive, short-term approach that could expose customers to higher financial risks in the long run. A proactive planning approach, as encouraged by industry best practices, ensures that infrastructure investments remain cost-efficient and strategically positioned to meet long-term service demands.

Summary of Projects with Land Purchases and Additional Discussion

Table 1 presents a list of property purchase projects proposed in the 2024 GRC that are contested by Cal Advocates, including one in-progress land purchase. Furthermore, the following discussion addresses additional Cal Advocates' concerns regarding specific projects to underscore the value these projects have in supporting District staff and engineering teams effectively deliver the project and service to customers.

Table 1 – List of Proposed Land Projects and Cal Advocates' Recommendations

PID	Description	District	Cal Water Proposed	Cal Advocates Recommended
124112	ELA - Land Purchase	ELA	$627,136	$0
133119	Well Property Acquisition	MRL	$614,396	$0
133149	VIS Property Purchase	VIS	$865,686	$0

133192	BK Low Zone Property Purchase	BK	$545,083	$0
133194	BK NG Property Purchase	BK	$551,276	$0
133199	BK Property Purchase (Office)	BK	$3,500,000	$0
133216	Stockton Property Purchase 1	STK	$762,450	$0
133217	STK Land Purchase 2	STK	$787,097	$0
133235	SLNH Property Purchase	SLN	$791,998	$0
133249	SEL New Well 2 Land Purchase	SEL	$352,894	$0
133287	LAS New Well Property Purchase	LAS	$4,786,474	$0

BK Low Zone Property Purchase & BK NG Property Purchase (PID #133192 & #133194)

Cal Advocates states that it is impossible to determine if these well property purchases are necessary at this time due to incomplete well siting studies. This reflects Cal Advocates fundamental misunderstanding of the purpose of a well siting study. Conducting a study prior to a land purchase is to identify the optimal location for the well not to determine if the well property purchases are necessary. Please refer to Book #3, Rebuttal Testimony on Capital Projects, Chapter 2, Bakersfield District for a detailed rebuttal for PIDs #133192 and #133194.

Stockton Property Purchase 1 & STK Land Purchase 2 (PID #133216 & #133216)

The Stockton district faces significant water supply risks due to aging infrastructure and unscheduled interruptions to purchased water supply from the Stockton East Water District (SEWD), which has occurred in the past. Without new wells as a secondary source for when Stockton East water is not available, the District will be unable to meet system demands and will leave customers vulnerable to potential water shortages and service disruptions.

In their testimony, Cal Advocates raised concerns regarding the groundwater basin being overdrawn.[105] While concerns about overdrafted groundwater in the Stockton district are valid for the basin as a whole, they should not deter the proposed well project. Cal Water is actively working with the Eastern San Joaquin Groundwater Authority and the requirements of the Groundwater Sustainability Plan regarding safe pumping yields. Municipal pumping is not the primary cause of the basin overdraft, and represents less than 10% of the overall basin pumping. The new wells are part of a comprehensive strategy to enhance water supply reliability by providing a secondary

[105] A.24-07-003. *Cal Advocates Report and Recommendations on Percentage Cost Adders, Previously Funded Incomplete Projects, Common Plant, Customer Support Services and Rancho Dominguez, Four Factor Allocation, Livermore District, Stockton District, and Travis District*, pg. 6-7 & 6-8

supply source when SEWD is not available. The risk of not acquiring land now—such as potential project delays and increased costs—far outweighs the minimal investment required to secure the property today. Thus, funding the land purchase is a prudent decision that minimizes risks for ratepayers and ensures the long-term reliability of the district's water supply system.

LAS New Well Property Purchase (PID# 133287)

Cal Advocates states that the existing land purchase project in Los Altos from 2021 GRC has been delayed and thus the Commission should exclude the new land purchase project. It is true that acquiring land in Los Altos has been challenging. Through our diligent efforts, we identified several promising leads. Although some opportunities did not come to fruition, the process provided us with invaluable insights. Moreover, the efforts to secure land previously were significantly hampered by the uncertainty associated with the late 2021 rate case decision. Given the magnitude of the capital investment at risk for non-recovery and the stagnant customer rates, Cal Water had to prioritize the use of its resources. This resulted in hiring delays and project start delays, which negatively impacted projects like this one. To address this, Cal Water is hiring a dedicated property acquisition manager to actively pursue such projects, ensuring we now have the necessary resources.

Conclusion:

Cal Advocates' recommendation to discourage the proactive purchase of land by putting all risk on the company is short-sighted, inconsistent with past Commission decisions, and contrary to industry best practices. Their position overlooks the financial benefits of proactive planning, the permitting and design necessity of acquiring land early, and the long-term cost savings this approach provides to customers. The Commission has previously recognized that advanced land acquisition is appropriate when it serves the best interest of customers and supports future infrastructure needs. Given the continued escalation of land prices across California, discouraging land purchases by excluding them from forecasted capital budgets ultimately increase project costs, introduce unnecessary delays, and create significant risks related to project siting, permitting, and delivery that will be borne by customers.

For these reasons, Cal Water strongly urges the Commission to reject Cal Advocates' recommendation and approve the inclusion of land projects in the capital forecast as proposed in the 2024 GRC. Doing so will allow Cal Water to continue delivery cost-effective, well-planned

infrastructure investments that uphold system reliability, ensure service quality, and protect long-term affordability for customers.

Design and Permitting-Only Projects

Issue:

Cal Water has proposed a two-phased delivery approach for a limited number of complex projects in the 2024 General Rate Case (GRC) to ensure that these projects are cost-effective, technically sound, and efficiently executed. The traditional method of proposing an entire project scope in a single rate case is not always suitable, as financial risks to customers. A phased approach allows for greater adaptability, more informed decision-making, and improved budget management. In the first phase, comprehensive assessments are conducted to fully understand the project challenges and requirements. This includes hydraulic and geotechnical evaluations and an analysis of all available alternatives to determine the most cost-effective and technically feasible solution. Additionally, this phase includes design completion and obtaining necessary permits, such as environmental and conditional use permits, which helps prevent delays and ensures compliance with regulatory requirements. Once the design is finalized and all regulatory approvals are in place, the second phase moves forward with final permitting and construction. This structured process prevents costly mid-project revisions and avoids inefficiencies caused by premature commitments to incomplete project scopes. By basing projects on real-world data and thorough preliminary analysis, this approach reduces the risk of impractical solutions, prolonged project timelines, and budget overruns.

By implementing this phased approach, Cal Water ensures that each project is tailored to its unique challenges, optimizing costs and efficiency while maintaining accountability and transparency for customers. This method is particularly valuable for projects with significant unknowns, allowing for a more strategic, data-driven investment in critical infrastructure.

Cal Advocates Position (Justin Menda, pp. 10-1 to 10-6):

Cal Advocates opposes the inclusion of design and permitting costs in rate base, arguing that customers should not fund projects that do not provide beneficial service during the rate-setting

period. [106] Instead, they propose that Cal Water capitalize these costs, including interest during construction, and only recover them once the project is completed in a future GRC. Additionally, Cal Advocates claims that project cost uncertainty presents a risk to customers, arguing that design and permitting projects transfer project management risks onto customers.

Cal Water Rebuttal:

In the last GRC decision, the Commission limited review of two-phased project delivery to only those select cases where the necessity and reasonableness of the project warrant it. [107] In line with this decision, and as part of the 2024 GRC application, Cal Water has submitted a small subset of highly complex projects that necessitate a two-phased project approval based on their unique challenges. This targeted and deliberate application of the two-phased project methodology allows for a more thorough assessment of the scope of work to determine the most cost-effective and efficient solutions. This method is especially valuable when potential solutions vary significantly, requiring in-depth evaluation before finalizing the project scope to avoid unnecessary expenditures. Additionally, projects with complex regulatory requirements benefit from a dedicated design phase to streamline the permitting process. Lastly, projects in challenging terrain or areas with constructability concerns gain from a phased approach, ensuring a well-defined scope that minimizes risks and supports successful execution.

Phased Project Delivery Optimizes Project Planning and Execution for Complex Projects

At the strategic planning level, when system deficiencies are identified, multiple alternative solutions are analyzed before final recommendations are made. However, some solutions require additional time for thorough review to ensure that the best and most cost-effective option is selected. For example, PID 133009 aims to mitigate a single point failure in the Skyline system of Bear Gulch (BG) District. The acquisition of the Skylonda system by the BG District presents a unique opportunity to connect the two systems, providing a second supply source. However, determining the optimal location for the pump station and pipeline alignment requires careful assessment of operational needs, cost efficiency, and regulatory constraints.

While Cal Advocates argues that the complexity and long duration of these projects present a project management risk, the phased approach instead provides certainty by confirming both the

[106] A.24-07-003. *Cal Advocates Report on Plant for Bayshore, Bear Gulch, Los Altos, Redwood Valley Districts, & Multiple Common Plant Issues*, pg. 10-13
[107] D.24-03-42, pg. 31

project schedule and cost estimate ahead of construction. This structured planning ensures that both design and construction phases are completed on time and as planned.

Phased Project Delivery Improves Cost Estimation for Complex Projects

Cal Advocates highlights wide project cost ranges, arguing that this demonstrates risk to customers. However, this further supports Cal Water's recommendation of a two-phased approach, particularly for high-cost variability projects. Without a dedicated design phase, cost estimates cannot be accurately determined, exposing customers to greater financial risk. The design and permitting approach enables Cal Water to conduct essential investigations, such as topographical surveys and geotechnical studies, that identify and mitigate cost uncertainties before full construction begins. For example, without a defined project scope, costs for certain projects may range from $10 million to $20 million. A two-step approach refines cost estimates, reducing the likelihood of cost overruns and ensuring customers are not burdened with inflated costs due to incomplete early estimates.

Phased Project Delivery Mitigates Risk Associated with Unique Permitting Challenges

Cal Advocates correctly notes that Cal Water is well-versed in the permitting requirements for the communities it serves. However, certain projects, such as PID 133836 – LUC Intake Extension Design, present unique challenges that are unfamiliar to Cal Water's expertise. For example, this project requires California Department of Fish and Wildlife (CDFW) permits due to the presence of species of concern, a consideration not typically encountered in Cal Water's standard utility projects. Attempting to define the project scope without fully understanding these specific regulatory requirements would be imprudent. This is why Cal Water has proposed a dedicated two-phase approach for such projects. This approach aligns with the Commission's stance of reserving separate design phases for projects that truly require them, rather than applying a blanket approach. Cal Water emphasizes that these projects are proposed to address identified system deficiencies, as outlined in each project justification. The greater risk for customers lies in leaving these issues unresolved.

Past Commission Support Two Phased Project Delivery

The issue of projects extending beyond a single rate cycle is not new, though Cal Advocates has increasingly opposed it in recent GRC proceedings. The Commission's decision on Cal Water's 2021 GRC application clarified that design and permitting projects cannot be approved as a blanket program, but is applicable in select cases.[108] In fact, in the Commission's most recent decision on San Jose Water Company's 2024 GRC application (D.24-12-077), the Commission noted that "Cal Advocates' witness incorrectly applied or misinterpreted several prior Commission decisions where

[108] D.24-03-42, pg. 31

it unreasonably wanted to ignore projects which would be under construction during this rate cycle but would not be completed until a later rate cycled."[109] Rather than a complete dismissal of all projects not scheduled to be completed within the applied GRC cycle, as Cal Advocates had presumed, the Commission clarified that it is within its purview to review the reasonableness and necessity of any project crossing over more than one rate cycle.[110] Additionally, the Commission's comments underscored the importance of making timely findings on the appropriate rate recover mechanism for these type of two-phased projects. Consistent with these decisions, the Commission has a history of approving two-phased projects on a case-by-case basis. In a decision on California American Water Company's (Cal-Am) 2016 GRC application, the Commission approved Cal-Am's request for design and permitting funding for replacement of its Operations Center and for initial design and permitting of a 20-inch transmission pipeline , even when construction was not scheduled within the same rate cycle.[111] In that same proceeding, it was also Cal Advocates (then ORA) who recommended the Commission approve only design phase costs, arguing that this approach would "minimize uncertainties related to the design and permitting phase of the project."[112] The Commission applied this same two-phased approach in decisions involving Golden State Water and San Jose Water Company, concluding that it is preferable to include only planning and design costs in one GRC while deferring construction cost recovery to a future cycle.[113, 114] The Commission also approved a design and permitting only project in Cal Water's 2021 GRC Decision for Palos Verdes District, D-500 Main Replacement Preliminary Design Report (PID 124230).[115] This examples demonstrate that the Commission recognizes the need for a phased delivery approach in unique and complex projects, and that these project phases provide tangible benefits to customers and warrant cost recovery, contrary to Cal Advocates' claims.

Cal Advocates Did Not Challenge the Merit of Any Two Phased Project

While Cal Advocates recommends dismissing the two-phased project approach based on the simplistic argument that these projects will not be completed within the current rate cycle, they do not dispute the merits, unique circumstances, or challenges associated with each project in this

[109] D.24-12-077, pg. 15
[110] *Ibid*.
[111] D.18-12-021 pg. 190, 194
[112] D.18-12-021 pg. 189
[113] D.16-12-067, pg. 58-60 and 74
[114] D.09-11-032, pg. 22-25
[115] D.24-03-042, pg.69

GRC. As previously noted, the Commission has not issued a blanket rejection of two-phased projects; rather, each project must be evaluated individually for its "reasonableness and necessity." However, Cal Advocates has failed to acknowledge these factors. Therefore, Cal Water urges the Commission to reject Cal Advocates' unreasonable blanket dismissal and instead review and assess each project on its own merits. Approving these projects is in the best interest of customers, as it will lead to better-informed decisions and improved budget management.

Individual Study Summary and Customer Benefits: Since Cal Advocates has erroneously assumed that all Cal Water's Design and Permitting projects are a risk to customers, it is essential to clarify their individual value and purpose. Table 1 presents a list of each design and permitting only projects included in the 2024 GRC, followed by a more detailed explanation of each. These summaries highlight the reason why a two-phase approach was specifically chosen for these projects, ensuring accurate cost estimate and timely project completions by providing a comprehensive assessment in identifying system deficiencies and finalizing the project scope.

Table 1 – List of Design and Permitting Projects

PID	Project Name
132983	Preliminary Design for SSF 008 Tank
133009	BG Skylonda to Skyline Main Connection
133012	BG Station 036 New 125K Gallon Tank
133014	Kings Mountain Tanks Farm Station Rebuild
133016	BG 053 Tank Design and Permitting
133022	BG Operations Building Design
133125	ORO-015 Sedimentation Basin Pipeline Improvement
133266	Noel Heights Stations 201 Plant Redesign
133416	Visalia Building Upgrades Design
133798	MPS 006 Design Only
133836	LUC Intake Extension (Design)

PID# 132983 – Preliminary Design for SSF 008 Tank

Cal Water requests the Commission to approve this project to allow this preliminary design evaluation for tank retrofit or replacement of Reservoir 1 at South San Francisco Station 8 in the Bayshore District. This is necessary due to its age, lack of information about partially buried concrete structure and foundation, absence of seismic retrofits and the need to replace interior and exterior coating. The 1.5 MG Reservoir is over 100 years old and thus indicates it does not adhere to current California seismic codes and regulations. Completing a preliminary design for South San Francisco Station 8 tank allows Cal Water to complete a preliminary review of alternatives.

Reasons for Design only project

This project was chosen as a Design and Permitting only project based on the unique nature of this project (age of tank, lack of information on the tank, and challenging site conditions) that requires detailed planning, evaluation, and design to find out the most comprehensive solution.

Cal Water is proposing to explore the options of repairing and retrofitting the existing storage tank, as well as complete replacement of the tank. In order to proceed with the first option consisting of repair and retrofit, a feasibility study needs to be done to determine the possibility of meeting current California seismic codes and regulations. The second option entails performing a single tank replacement or two tank replacement to accommodate for future maintenance and inspection. As shown in BAR PJ Book PID 132983 Attachment B, there is limited space onsite, and the proposed new tank(s) will need to be located in the same location as the existing tank location. Based on the findings of the feasibility study, an evaluation can be completed that analyzes both options with respect to construction and maintenance costs over the tank's lifespan of the replacement versus retrofit including associated appurtenances. Completing the design separately will enable Cal Water to best uncover the project constraints, phasing to serve customers during the future retrofit or replacement and develop the reasonable and appropriate cost to complete the project.

PID# 133009 BG Skylonda to Skyline Main Connection

The proposed project aims to design a booster pump station and related pipeline to bring water from the Skylonda System up to the Water Tank at Cal Water Station 41 (Pressure Zone 2370), improving system reliability and enhancing fire flow capacity in Bear Gulch's Skyline system. This also will provide back-up to Station 40, the existing single source of supply to Skyline system.

Reasons for Design only project

Addressing Unknowns:

- The final location of the project is still undecided, with multiple options to consider. Each potential site has its own set of pros and cons that need thorough evaluation. Also, any additional land acquisition will depend on the chosen site, and property negotiations can take time. A phased project delivery allows time to make informed decisions and secure the best possible location.
- The design of the station and the alignment of the pipeline will vary based on the selected location. A phased approach ensures that proper planning and designs are prepared for the specific site selected so that the scope and costs can be accurately defined and presented as part of the second phase.

Single Point Failure: The project addresses a critical issue with the Bear Gulch district's Skyline system supply via Station 40, which currently has a single point of failure. This acquisition presents a unique opportunity to connect two existing hydraulic zones through the Skylonda system, allowing for pumping in the reverse direction and enhancing system reliability. Proposing project construction without a thorough analysis of all options and an understanding of the site-specific needs will result in significant scope and cost.

High Potential Cost: With the construction project estimated to be in the range of $10M - $20M, it is crucial to allow this design scope as a phase one so that a thorough analysis can be completed that assesses the most cost-effective way to achieve project objectives and accurately establish scope schedule and cost.

This project needs to be completed as a design only project based on the expected time needed to complete the first phase of this project under PID# 133009 which will include an evaluation of several proposed booster station sites, hydraulic analysis of each booster station and pipeline alternative, impacts to local community, permitting, and a recommendation of the preferred booster station site.

PID# 133012 – BG 036 New 125K Gal Tank

This project is proposed as Design and permitting project based on the unique nature of this project (limited site available area, steep slope in area and need for investigation of geotechnical area to determine best option and if easement/adjacent property is needed to locate new tank) that requires detailed planning, evaluation, and design to find out the most comprehensive solution.

Reasons for Design only project

As described in the justification, a feasibility study must be first conducted to determine necessary requirements for the project to move forward because a geotechnical evaluation and site assessment needs to be completed to determine whether additional adjacent property is needed (new easement) to construct the tank, identify vegetation removal that is needed, and slope grading, and stabilization needed to construct a new tank. After the feasibility study is completed, a preliminary design and permitting (Conditional Use Permit Application) will be completed. Completing the design separately will enable Cal Water to best uncover the project constraints and to identify the reasonable and appropriate cost to complete the project. Accordingly, Cal Water requests the commission to approve this project.

PID# 133014 – Kings Mountain Tanks Farm Station Rebuild

The proposed project aims to rebuild the station to include two new 50,000-gallon welded steel tanks, two new booster pumps, a panelboard, and an emergency generator, at the Kings Mountain Tanks farm in Bear Gulch District.

Reasons for Design only project

Addressing Unknowns: The Kings Mountain system was just acquired in 2024 and is not a typical Cal Water station. It includes four tanks situated on a property with significant constraints, as part of the land is largely unbuildable due to a steep slope. The slope stability issues need to be addressed during design. The design must be unique to ensure maximum space utilization given steep slope (geotechnical assessment needed to develop design) without significantly reducing the current storage capacity. The project will need to bring the station up to Cal Water standards in addition to adding more facilities such as pressure tanks, pumps, panelboard to operate the pumps, and a generator into an already tight site.

Project Criticality:

- The tanks are in need of replacement because they are mounted on wooden supports which have deteriorated. The existing welded steel storage tanks are in poor condition and lack seismic retrofits, as described in the project justification, with various issues such as holes in access

hatches due to a lack of maintenance by the previous owners. Addressing these issues is necessary to maintain system reliability.

- This acquisition presents an opportunity to improve pumping efficiency of the high-pressure booster pump station at Station 40 and add storage to the Skyline system which will enhance the overall system performance and improve reliability.

In conclusion, Cal Water recommends this project be authorized due to the unique scope of the project, existing substandard facilities, and the need to integrate the station into the Skyline system. These complexities warrant a phased delivery and authorization of this design project, with the expectation that the Construction project will be proposed in the 2027 GRC.

PID# 133016 – Station 053 Tank Design and Permitting

The proposed project aims to replace the existing tanks with a single 125,000-gallon welded steel tank, improving operational and emergency storage reliability at Station 53 in Bear Gulch District.

Reasons for Design only project

Addressing Unknowns:

- This is not a typical Cal Water station. It includes two existing redwood tanks (21,000 gallon and 60,000-gallon tanks) located on a very small property. The proposed replacement is to replace it with a single larger tank to meet storage needs. The small footprint is unique to ensure maximum space utilization while bringing the system up to Cal Water standards.
- The project requires additional easement from a neighboring property, and negotiations for this can take time. The easement that is obtained will determine the tank size that can be built and thus help define the cost estimate. A phased delivery approach allows for these negotiations to be conducted thoroughly and effectively.

Project Criticality:

- The tanks are in need of replacement based on poor condition, maintenance challenges, lack of seismic and safety retrofits, as detailed in the project justification. There is a significant risk of the redwood tanks structurally failing during a seismic event, which could result in the discharge

of 123,000 gallons of water into nearby residential homes, causing property damage and potential loss.

- This station is crucial as it enables the connection of the Skyline system to Bear Gulch's system via Skylonda, providing a backup to a section of the Skyline system. Currently, Skyline system has only one source of supply through high pressure booster pump station at Station 40, leading to a risk of single point of failure.

PID# 133022 – BG Operations Building Design

Over the last three rate cases, a project to develop full architectural and engineering plans for a new building has been considered. However, other capital improvements were determined to be a higher priority and of greater benefit to our customers. Nonetheless, the building deficiencies have reached a critical point and cannot be delayed any longer. The engineering and design of a new building needs to be initiated immediately to be completed during this GRC cycle to bring this much-needed new district building to fruition within the next cycle.

Reasons for Design only project

Design Approach - There are unique design and engineering details that must be addressed to ensure this project's success due to the building's proximity to the on-site reservoir. This approach to complete the necessary geotechnical, engineering, and design first will facilitate development of an accurate construction cost estimate and construction timeframe to avoid an in-progress project.

Long-Term Planning & Cost Efficiency – Further delays in commencing the design will perpetuate the safety concerns and result in higher costs in future GRC cycles due to increasing construction and materials costs. This first step will take more time as it must include civil surveys and geotechnical studies and engineering to effectively develop a fully designed safe, compliant work environment to submit to the Town of Atherton for planning review, then through permitting.

Safety - This site serves as an emergency operation center, but existing buildings are not adequate to support the district in a significant earthquake. They are metal frame with tilt up construction, built in the 1980s and do not meet California Seismic Standards. With 31 employees and 39 fleet vehicles, as well as mobile emergency equipment stored on site, parking is congested, and traffic flow becomes challenging for larger vehicles and generally unsafe.

Staff Consolidation - District staff are dispersed in multiple structures on the operations site and in a leased office space located 2 miles away. An 800 square foot trailer was added on the site in 2023 to provide two private offices, a meeting room, small break area and an all-gender restroom to help address some of the immediate operational needs.

Proposed Solution - To fulfill the current day-to-day and emergency facility needs, it is estimated the district will require a 12,000 to 14,000 square foot building. The scope of work includes a site civil survey and geotechnical investigation. Upon completion of the civil survey and geotechnical investigation, the final design building footprint sizing and placement can be addressed to meet current and future needs, including parking, storage, electric vehicle charging, and safe traffic flow through the site.

Operational & Regulatory Preparedness – The design process is critical to ensure the new space delivers a solution for the district to support operational functions and enable the employees to safely continue their customer-focused work for the long term.

PID# 133125 – ORO 015 Sedimentation Basin Pipeline Improvement

Cal Advocates incorrectly included this project as part of the Design and Permitting Projects in Menda testimony (Table 10-1: Design and Permitting Only Projects) while it is not a design only project and the scope also includes the construction of the pipeline. The detailed rebuttal for this project can be referenced in Book 4 in Chapter 6. Oroville District.

PID# 133266 – NOH 201 Plant Redesign

Noel Heights Station 201 is on the edge of Pocket Canyon Creek and experiences annual flooding, causing structural damage and staff safety hazards. The proposed project is to rebuild the station on adjacent land, raising the structure above the floodplain.

Reasons for Design only project

Unknowns and Design Constraints: The station's proximity to the creek and its flood-prone location introduce significant complexities to the design. The design requirements must be developed in consultation with regulatory agencies to manage flood risks. This means the determination of the final grade for well pads, new building design, and driveway will be unique and non-standard, making it prudent to propose a D&P only project in this General Rate Case (GRC). Proposing project construction without a thorough design analysis and an understanding of the site-specific needs will result in significant scope and cost deviations.

Adequate Timing for Negotiations and Permitting: Additional time is necessary to negotiate with the current landowner for station relocation, secure permits for building in a floodplain, and develop the most cost-effective design for the new building and treatment system. This includes pre-filtration vessels, membrane filtration, UV radiation/hypochlorination for disinfection, aeration for pH adjustment, and orthophosphate inhibitors for corrosion control and manganese sequestration.

NOH 201 well is the only source of water for Noel Heights and the station must be kept operational during the entire construction time frame. By proposing a phased delivery approach, we are ensuring that the project is planned and executed responsibly and efficiently.

PID# 133416 – VIS Building Upgrades Design

This project is not a Design and Permitting only project. Cal Water made a mistake including the word 'design' in the description of this office improvement project. This project's scope will consist of immediate physical improvements to the building and will not include any design or study activities.

Please refer to Rebuttal Book #4, Visalia District chapter for further discussion on the need for the VIS Building Upgrades Design project.

PID# 133798 – MPS 006 Design Only

Cal Water recommends the Commission to approve this project to allow this needed station rebuild design of Station 6 in the Bayshore Mid-Peninsula District to increase the operational capabilities of the station. The concrete tank was replaced as part of the 2012 General Rate Case under PIDs 63753 and 63772. The existing station building, booster suction cans, and piping near the building were not part of the tank replacement project and have been in service for 49 years. The rebuild scope proposed is the second phase for Station 6 improvements to optimize tank utilization. Replacing specific equipment such as the booster pumps and installing deeper suction cans will improve supply and emergency reliability through the entire San Mateo system.

Reasons for Design only project

Managing Unknowns: The variability in design and project scope, which could range from replacing all station piping to just deepening the suction can. The existing booster pumps and suction cans are housed within the current pump building, so the design will explore the feasibility of replacing them within the building, considering its condition, useful life, and available construction methods.

Alternative options include placing the pumps outside within acoustic shelters, which would require new piping and electrical connections, or within a new station building. Additionally, the station grade slopes to the northwest away from the tank and building, limiting the usable station area. Proposing project construction without a thorough analysis of all options and an understanding of the site-specific needs will result in significant scope and cost deviations.

Addressing Project Constraints: Constructability issues, and constraints related to existing piping, and electrical equipment at this site can be complex. Completing the design separately will enable Cal Water to best uncover the project constraints, phasing to serve customers during the future installation.

Controlling Construction Cost Variability: Construction costs can vary significantly based on the project scope, especially since the scope has not been finalized. This variability makes it challenging to provide accurate cost estimates at this stage. Phased delivery approach enables more defined cost estimates as the project progresses, protecting customers from potential cost overruns.

Allowing Adequate Timing: Completing the necessary analysis and design takes time. Based on our experience with similar projects, we are aware of the permitting time required by local agencies. This approach minimizes the risk of permit-related delays and associated costs.

PID# 133836 – LUC Intake Extension Design

The Lucerne water treatment plant draws raw water from Clear Lake. During droughts and low lake levels, the existing raw water intake pumps are close to not being able to pump water due to insufficient submergence. The proposed project is to extend the intake to ensure reliable water supply during low lake levels. The project involves preliminary design, permitting, and contract documents, with construction planned for a later GRC.

Reasons for Design only project

Unknown Scope: To mitigate the trending low water level in Clear Lake involves varied solutions such as vertical turbines in suction cans onshore or submersible turbines installed on the lake bottom. Evaluating the pros and cons of these alternatives is necessary to find the most cost-effective solution. Identifying contractors who can work within Clear Lake, a specialty service with limited availability, is crucial. Proposing project construction without a thorough analysis of all

options and an understanding of the site-specific needs will result in significant scope and cost deviations.

Unknown Costs: The cost of the construction scope depends upon the design alternative chosen. This variability makes it challenging to provide accurate cost estimates at this stage. The phased delivery approach enables more defined cost estimates as the project progresses, protecting ratepayers from potential cost overruns.

Permitting Requirements: The identification of California Division of Fish and Wildlife (CDFW) permitting requirements will impact on the proposed solution due to the presence of species of concern, such as the California Hitch fish, in the lake. Additionally, local permitting requirements for construction in or adjacent to Clear Lake need to be thoroughly evaluated.

Conclusion:

Cal Water's proposal for a two-phased project delivery approach is a targeted, strategic method designed specifically for selecting complex projects that require in-depth evaluation and phased implementation. This approach is not a broad, blanket program but rather a carefully considered framework aligned with past Commission decisions and policies. By conducting thorough assessments, refining cost estimates, and addressing project-specific challenges before full-scale construction, Cal Water ensures that projects are executed efficiently, cost-effectively, and with minimal risk to customers. Dismissing this approach, as proposed by Cal Advocates, disregards the critical benefits of early-stage planning, regulatory compliance, and informed decision-making. The phased approach mitigates cost uncertainties, prevents mid-project disruptions, and enhances budget accuracy—key factors in delivering infrastructure projects that are both technically and financially sound. Moreover, Cal Advocates have not challenged the necessity or merit of the individual projects, further underscoring the reasonableness of Cal Water's proposal. Rejecting these projects based solely on their completion timeline, rather than evaluating their substantive justification and long-term benefits, would be shortsighted. Instead, the Commission should uphold its established precedent of reviewing projects on a case-by-case basis, ensuring that cost recovery mechanisms align with project complexity and necessity. Approving these projects will result in better financial planning, optimized infrastructure investment, and enhanced service reliability for customers.

For these reasons, Cal Water urges the Commission to reject Cal Advocates' blanket opposition and approve the proposed two-phased project delivery approach, recognizing its role in advancing well-planned, fiscally responsible infrastructure improvements that directly benefit customers.

Multi-GRC Projects

Issue:

In 2024 GRC application, Cal Water identifies 60 projects that need to be started in the current GRC cycle but will extend into the subsequent GRC for completion. For each of these Multi-GRC projects, Cal Water has provided comprehensive project scopes, justifications, and cost estimates for the Commission's review. They are not included in the rates proposed for the 2024 GRC cycle. Instead, capital projects scheduled for completion in 2028, 2029, and 2030 will be proposed in the 2027 GRC cycle to establish rates for 2029, 2030, and 2031.

The urbanization of the districts served by Cal Water, along with numerous regulations and permits, has significantly extended the duration of construction projects. Large projects do not fit within the three-year GRC cycle due to their duration and/or start year. This approach requires Cal Water to proactively commence projects prior to the GRC in which they will be completed so that Cal Water can begin addressing risks associated with identified system deficiencies. As the regulatory environment has become more stringent — with increased local permitting requirements, environmental permitting requirements, and water quality regulations — the time required to complete projects has extended beyond the three-year rate case cycle.

Cal Advocates Position: (Menda Testimony, pp.10-19 – 10-13) (Sorenson Testimony, 1-2 – 1-3)

Cal Advocates not only declines to review the information provided about the 60 Multi-GRC projects, Cal Advocates objects to their very submission. For Mr. Sorenson, the fact that the capital test years in this proceeding are only 2026 and 2027 means that Cal Water should only submit two years of capital projects.[116] Mr. Menda describes Cal Water's submission as asking for "approval," stating that such approval is not only unnecessary, but "harmful to ratepayers" because "If the Commission pre-approves a CWS project, then it will be the ratepayers rather than shareholders

[116] Sorenson Testimony, p. 1-3 ("Cal Water should adhere to the guidelines outlined in the Revised Rate Case Plan and only propose projects for the two test years in this GRC…."). Taken literally, as Cal Advocates appears to do, this means the Commission would have no oversight of one year out of every three-year period.

who will incur the risk.[117] Cal Advocates also discourages the use of advice letters for these projects because they "caus[e] an unscheduled yet significant burden to the Commission." While describing the projects as "highly speculative" and "complex," Cal Advocates says that they "warrant a thorough examination in a GRC proceeding where the projects are expected to be used and useful for the period during which the GRC is setting customer rates."[118]

Cal Water Rebuttal:

Cal Advocates' position is in stark contrast to the Commission's recent decision in San Jose Water Company's (SJWC's) GRC[119], where the Commission stated as follows:

> We find that Cal Advocates' witnesses incorrectly applied or misinterpreted several prior Commission decisions where it unreasonably wanted to ignore projects which would be under construction during this rate cycle but would not be completed until a later rate cycle. The Commission must address the reasonableness of San Jose Water pursuing any project crossing over more than one rate cycle in order to make timely findings on the reasonableness and necessity of those projects. Additionally, the Commission must make timely findings on the appropriate rate recovery mechanism for those projects.[120]

If Cal Advocates declines to review these Multi-GRC projects in this proceeding, Cal Water will have to invest resources in the interim and project plans they will be much further down the road when discussed in Cal Water's next GRC, greatly impairing the Commission's ability to provide meaningful feedback and conduct the "thorough examination" Cal Advocates demands.

Cal Water has done its part by giving the Commission and Cal Advocates the opportunity to evaluate the "reasonableness and necessity" of these Multi-GRC projects in this rate case. In turn, Cal Advocates should meet its obligations to the public by reviewing them for prudency to enable Cal Water to use its resources efficiently. Unfortunately, Cal Advocates is declining to use its expertise for this oversight.

Cal Advocates gives an example of unforeseen and unplanned project that is typically submitted for rate recovery following its completion, suggesting that Cal Water should adopt this approach for Multi-GRC projects. That Cal Water was, in the past, allowed rate recovery for

[117] Menda Testimony, p. 10-12.
[118] Menda Testimony, p. 10-12 to 10-13.
[119] D.24-12-077, pp. 15-16
[120] D.24-12-077, p. 15.

unanticipated projects upon completion should not be the basis for withholding review of future planned projects. This is an inappropriate reference especially when Cal Water is proactively aiming to provide the Commission with an opportunity to review and comment on anticipated and planned projects. On one hand, Cal Advocates asserts that Cal Water possesses extensive experience in the water utility industry. However, it is evident that their recommendations are to restrict our ability to implement recommendations derived from our substantial expertise to adopt optimal delivery approaches to reduce risks to the customers.

Cal Advocates wrongly assert that approving projects that extend beyond the rate case cycle shifts the risk of project completion to ratepayers and thus it is harmful to them. This is untrue. Firstly, Cal Water has fully justified the scope and provided the schedule and budget for all projects including Multi-GRC projects. Thus, it is unclear what Cal Advocates intends to convey when it refers to the risk of project completion in its argument. Secondly, there is no increased risk to customers merely because these projects go beyond the rate case period. And as a practical matter Cal Advocates needs to understand that gone are the days of quick project construction.

There are several reasons why a project schedule extends beyond the 3 year rate case cycle:

- A schedule template for a typical well project is illustrated in Table 2. This demonstrates the various project phases incorporated into the delivery process, resulting in the project's completion extending beyond the three-year rate cycle. This schedule shows an ideal scenario, and the reality is far from it. Historically, well equipping and construction takes 5+ years to complete, and this doesn't include well siting study, land purchase and treatment installation
- All projects do not start in the first year of the rate case cycle. The start dates for projects are allocated throughout the three-year cycle according to the priority assigned to each project and to level the resource requirement to avoid peak labor needs. Operational issues must drive the construction schedule for utility water projects. Starting all projects in the first year is not practical. Consequently, considering the project's start year, the end date may extend beyond the rate case.

Cal Advocates further states that Cal Water should not be allowed for recovery through advice letter filings because Multi-GRC projects are highly speculative and complex, thus warrant examination in a GRC proceeding. This argument simply does not make sense, as these projects are presently submitted in a GRC proceeding for examination, and Cal advocates are suggesting

that they not be reviewed. Thus, they are contradicting their own stance that these projects require evaluation while simultaneously refusing to conduct one. Advice letter treatment of a project benefits customers in two ways: the costs of the project are not included in rates, but the company can still move the project forward. In addition, rates will only be allowed to increase, up to the dollar cap recognized in the GRC proceeding, if and when the project is completed.

Additionally, Cal Advocates fail to provide any data that would support characterizing Multi-GRC projects as speculative and complex. The delivery of capital projects is becoming increasingly complex and time-consuming, however there is nothing particular about Multi-GRC projects that would distinguish them as more speculative or complex than others in its scope, they just take longer.

In Conclusion, Cal Water does not seek immediate cost recovery for any of the Multi-GRC projects. Instead, Cal Water seeks acknowledgment by the Commission that these projects with longer lead times are appropriate. The Commission can review the full justifications for the proposed Multi-GRC projects, which were provided in the Project Justification Books with Cal Water's Application. Table 1 below lists all Multi-GRC projects.

Table 1 - List of Multi-GRC Projects

PID	Multi- GRC Project Names	District
133784	ARD 009 Station Rebuild	KRV
132512	BK 187, BK 007 Panelboards	BK
133838	BK 2024 Well Replacement Program	BK
133183	BK 209 New Storage Tank	BK
132697	BK 219 GAC Vessel Replacement	BK
133180	BK 304 CV001 Panel Upgrade	BK
133184	BK 87 Rebuild Design and Construct	BK
132515	CH 030, CH 034, CH 029 Panelboards Overhauls	NVR
133054	DOM 298 Station Rebuild	DOM
133048	DOM New Well	DOM
133045	DOM Well 277 Replacement	DOM
133085	DOM/HR Consolidation Study	HR
133066	ELA 062 New Generator	ELA
133793	ELA New Well and Treatment	ELA
133081	HR 023 Booster Pump Vault Design	HR
133084	HR 029 New Chemical Building	HR
133482	KRV 2nd Intake	KRV
132536	LAS Panelboard Overhauls	LAS

PID	Multi- GRC Project Names	District
133477	LBOD 013 Well Replacement	KRV
132967	LHUG-001 Portable Generator	AV
133480	ONYX STA 001 Corrosion Control	KRV
133226	Portable Booster Connection at Forest Song Drive	SLN
133126	PV-004 Portable Generator Connection	PV
133250	SEL New Well Design and Equip	SEL
132547	SLN 023, 303 Panelboard Overhauls	SVR
133234	SLNH New Well Station #3	SLN
133789	SMTN 005 Station Rebuild	KRV
133481	SOLA STA 008 Corrosion Control	KRV
132507	SSF 007 and SSF 001 Panelboard Replacement	BAR
133020	Station 052 Treatment Recommission	BG
133021	Station 055 Treatment Recommission	BG
133208	Station rebuild 063	STK
133214	Stockton New Well Station 1	STK
133215	Stockton New Well Station 2	STK
132552	VIS 033 Panelboard Overhauls	VIS
132966	VIS 049 Main Extension	VIS
132553	VIS 057 Panelboard Overhauls	VIS
132554	VIS 060 Panelboard Overhauls	VIS
132965	VIS 097 Main Extension	VIS
132551	VIS 201 Panelboard Overhauls	VIS
132550	VIS 300 Panelboard Overhauls	VIS
133155	VIS New Storage Tank	VIS
133143	VIS New Well Station #1	VIS
133144	VIS New Well Station #2	VIS
133145	VIS New Well Station #3	VIS
133150	VIS Property Purchase #2	VIS
133138	WIL New Well CrVI Treatment	WIL

Note: Cal Water inadvertently used CH Panelboard Overhaul PID #132515 in LAS Project Justification Book and Common Plant. Correct PID for LAS Panelboard project is PID#132536.

Table 2: Typical Well Delivery Schedule

WBS	Name	Duration	Start Date	Finish Date
0		1011 days	January 4, 2022 8:00 AM	January 16, 2026 5:00 PM
1	Preliminary Design	282 days	January 4, 2022 8:00 AM	February 17, 2023 5:00 PM
2	Final Design	258 days	July 20, 2023 8:00 AM	July 30, 2024 5:00 PM
3	Final Permitting	365 days	August 29, 2023 8:00 AM	February 14, 2025 5:00 PM
4	Bidding and Procurement	718 days	June 14, 2022 8:00 AM	April 28, 2025 5:00 PM
5	Construction	685 days	February 21, 2023 8:00 AM	November 12, 2025 5:00 PM
6	Startup and Testing	26 days	November 13, 2025 8:00 AM	December 22, 2025 5:00 PM
7	Final Close-Out	18 days	December 23, 2025 8:00 AM	January 16, 2026 5:00 PM

Chapter 3.

CSS & RDOM

Section 1. Introduction

Chapter Overview

This chapter presents the rebuttal and supporting analysis for Plant in Service for the Customer Support Services and Rancho Dominguez District. It provides a detailed analysis and summary of Cal Water's rebuttal. At the end of this chapter, Cal Water has summarized project budgets in tabular form.

Specific Advance Capital Budget Schedule

The two "test years" for capital projects in this 2024 GRC are calendar years 2025 and 2026. For the revenue requirement of the third (and final) year in the GRC cycle, calendar year 2027, the authorized capital budget will be determined using a calculation based upon the approved capital budgets for the 2025 and 2026 test years.

In each GRC, Cal Water proposes an "advance capital budget" (ACB) for the one year immediately preceding the capital test years, as well as for the two test years themselves. In this GRC, the ACB under consideration consists of capital projects that will close in the calendar years 2025, 2026, and 2027.

2025-2027 Specific Advance Capital Budget Projects

The following discussion presents analysis and rebuttal to the specific projects Cal Advocates objected or discussed in their testimony presented January 28, 2025. However, specific projects challenged only on Common Plant programmatic issues (e.g., contingencies, construction management and special inspections, and design and permitting), are presented with the associated Cal Water Common Plant rebuttal in Book 2 – Rebuttal Testimony on Common Plant, CSS & RDOM.

1

Section 2. CSS/RDOM Rebuttals

PID# 133646

AMI Initiative – IT INT/DEV

Issue: (Customer Support Services & Rancho Dominguez Justification Book, p. 353)

CSS 2026 AMI Initiative – IT INT/DEV is a critical component and represents the Information Technology (IT) software integration and development to support the overall AMI Initiative.

Cal Advocates Position: (Ibrahim Testimony, p. 4-5)

Cal Advocates recommends the Commission should not approve the $1,537,615 requested for IT related AMI spending. Consistent with Cal Advocates' recommendation regarding further AMI spending, the CSS AMI-related projects should not be included in rates. For discussion regarding AMI spending, please refer to witness Justin Menda's testimony.

Cal Water Rebuttal:

Please reference the Advanced Metering Infrastructure Program rebuttal discussion in Chapter 1 of this book for this specific project.

PID# 134646

CSS - Vehicles For New Complements

Cal Water Rebuttal:

Cal Water requests authorization for three vehicles for new employees (new complement). Please refer to Rebuttal Book #1, Chapter 6 for further discussion on the transportation expenses associated with new employees.

PID # 132210

Microsoft Projects Online

Issue: (CSS/RDOM Project Justification Report, pp. **311-348)**

Cal Water's Capital Program is growing and requires a comprehensive Project Management Information System (PMIS) to improve project, program, and portfolio management. The initial implementation of Microsoft Project Online (MSPO) improved resource allocation but faced challenges in expanding to other teams due to process differences. To address these issues, Cal Water plans to implement the recommendations from the "Microsoft Project Online Enterprise Transformation Strategy" roadmap, which includes integrating Project for the Web (PFW) for better project management and reporting.

Cal Advocates Position: (Ibrahim Testimony, **pp. 1-2)**

Cal Advocate does not refute the need for this project. It only recommends removing contingency dollars from the total cost.

Cal Water Rebuttal:

The Commission should approve Cal Water's request for $936,320 in direct costs since Cal Advocates did not contest the merit of the project. Cal Water accidentally transposed two lines in its project justification Attachment A[121]. The attachment in the original justification reflects 100% of the base cost as contingency and vice versa. Therefore, the base cost of the project should be $851,200 and the 10% contingency is $85,120. Cal Water believes Cal Advocates intended to only remove $85,120, making their correct position $851,200. However, the commission should still approve the full request. Cal Water's defense of contingency as a integral part of forecasting the true cost of capital work is presented in the Common Plant section entitled "Contingency".

[121] CSS-RDOM PJ Book, p. 315

PID# 132575, 132576, 132577

PC & Device Replacement 2025, 2026, 2027

Issue: (Customer Support Services & Rancho Dominguez Project Justification Book, pp. 13-33)

Cal Water has over 4,000 technological devices such as desktops, laptops, monitors, and mobile devices to support its employees in completing their daily duties. These devices enable employees to complete engineering drawings, define the schedule for water quality sample collections, communicate with other employees and city agencies, and monitor the status of water distribution and treatment systems. The equipment plays a critical role in daily operation and is expected to have 100% uptime. Failure of these devices can result in water quality violations, tank overflows, degradation of customer service, delays in emergency response, etc. It is imperative that Cal Water follows the standard hardware replacement cycle. Computer equipment is not designed to be repaired beyond its useful life due to rapid technological improvements and the limited supplies of older parts. Additionally, older hardware does not work with current software versions due to compatibility issues. It is the industry's best practice to replace technology hardware on a routine basis to achieve Cal Water's mission of providing safe, reliable water and excellent service.

The recommended solution is to replace the hardware routinely on a four-year basis – replacing 25% of the devices every year. Standard manufacturer warranties normally range from one to three years. To obtain additional maintenance support beyond year three incurs significantly more cost and replacing a few failed components of a computer can become more expensive than replacing the whole computer. Cal Water strongly feels the option to replace the hardware routinely on a four-year basis is the best solution. The proposed minimum project cost is $700,000.00 per year. The estimated yearly total cost for replacement is about $724,017.00 per year. With escalation the project costs are estimated at $744,630, $753,823, and $772,651 for 2025, 2026, and 2027 respectively.

Cal Advocates Position: (Ibrahim Testimony, pp. 4-1 to 4-2)

Cal Advocates recommends the Commission should exclude $735,437 in 2025, $753,823 in 2026, and $772,651 in 2027 for the PC & Device Replacement projects because Cal Water has

not provided any analysis to support the need to replace so many devices. The justification provided by Cal Water is based on hypotheticals and does not align with its heavy investment into cloud computing, which outsources the physical aspect of information technology. Cal Advocate also asserts that Cal Water has $1,277,572.20 in leftover budget from the last GRC for PC & Device replacement/refresh.

Cal Water Rebuttal:

The proposed project PID's 132575, 1325576, and 132577 for Personal Computers (PC) & Device Replacement, are essential for maintaining operational efficiency and ensuring compliance with regulatory standards. The project involves the routine replacement of 25% of devices annually at an estimated yearly direct cost of $735,437, $753,823, and $772,651 for the years 2025, 2026, and 2027, respectively.

Cal Advocates witness misunderstands the nature of this request. The company still needs physical hardware devices in order for employees to access software that is in a cloud environment. The need for this project is also underscored by the fact that standard manufacturer warranties for devices typically range from one to three years. Beyond this period, obtaining additional maintenance support incurs significantly higher costs, and replacing individual failed components can become more expensive than replacing the entire device.

It is a *critical* best practice for companies to replace their end user devices periodically to ensure employees maintain productivity and avoid issues related to outdated hardware and software, which can lead to inefficiencies and security vulnerabilities. If the PC's & Devices our employees use are not updated regularly, the modern-day rapid update of applications and operating systems will erode employee operational efficiency and impact our customers. Therefore, Cal Water strongly advocates for the routine replacement of hardware on a four-year basis to ensure cost-effectiveness and operational reliability. PCs and mobile devices remain the primary tools for employees to interact with the applications both cloud-based solutions and other software. Whether employees are in the office, in the [122]field or working remotely, they rely on their

[122] Our field service technicians perform many field activities (FA's) on their mobile devices. Examples of frequent FA's are customer specific work orders (turn meter on/off, high bill investigations, meter reads, re-reads, etc), fire hydrant maintenance & annual inspection work orders, regular valve exercising work orders (turning valves off/on), underground service alert work orders aka Dig-Alerts, leak investigation and repair

devices to access customer information and provide essential services to both internal and external stakeholders. A lack of functional devices can severely hinder productivity, customer service, and, ultimately, business performance.

Devices that are aging or damaged can introduce significant risks. Slow performance, crashes, and compatibility issues can disrupt workflows and delay access to critical applications. Furthermore, hardware failures can lead to costly downtime, which impacts employee efficiency and can affect customer satisfaction. At Cal Water and the Commission[123], customer service is a top priority and these interruptions can hinder the quality of service we provide to our customers.

Maintaining up-to-date PCs and mobile devices is crucial to sustaining productivity, providing high-quality customer service, and avoiding potential disruptions that can negatively impact the business.

Regarding Cal Advocates assertion that "Cal Water has $1,277,572.20 in PC & Device replacement/refresh budget leftover from the last GRC," this is based on data which is out of date. The total forecasted amount from the last GRC for the years 2022-2024 was $2,110,295. There were some delays due to the late GRC decision[124], but the total actual cost Cal Water has incurred for those prior projects is $2,120,123, roughly $10,000 more than originally forecast. D.24-03-042 requires Cal Water to "...show in its testimony in the next general rate case a comparison between its forecast and actual costs in both dollars and units of equipment as a part of its overall justification for any further funding in the next GRC." At the time of the application filing mid-year 2024, Cal Water did not have the completed data for the entirety of 2024. Cal Water is now able to show this requested information per the below tables (data as of February 7, 2025):

work orders, discharge of water work orders. We estimate processing 390K field activities across 830 field service technicians in 2025.

[123] CPUC General Order 103-A, Rules Governing Water Service, Including Minimum Standards for Operation, Maintenance, Design and Construction, effective September 10, 2009, Appendix E Customer Service and Reporting Standards for Class A and B Utilities.

[124] D.24-03-042 Decision Approving a Partial Settlement Agreement and Adopting Rates for California Water Service Company's Test Year 2023 General Rate Case. The late decision was approved on March 7, 2024, 27 months into the 36 month GRC cycle for capital years 2022-2024.

Table 1: PC & Device Replacement

PID	Description	Forecast Year	D.24-03-042 (Forecasted Total Cost)	Actual Costs	Estimated Unit #	Actual Unit #
00124543	CSS PC Refresh 2022	2022	$343,520	$607,206.97	29 iPhone 34 iPad 110 desktop 48 laptop 7 Rugged LP 170 monitors	64 iPhone 49 iPad 131 desktop 160 laptop 12 Rugged LP 174 monitors
00124544	CSS PC Refresh 2023	2023	$1,290,477	$636,162.81	110 iPhone 130 iPad 421 desktop 183 laptop 26 Rugged LP 650 monitors	66 iPhone 51 iPad 135 desktop 165 laptop 13 Rugged LP 180 monitors
00124545	CSS PC Refresh 2024	2024	$ 476,298	$876,753.62	41 iPhone 49 iPad 159 desktop 69 laptop 10 Rugged LP 245 monitors	90 iPhone 70 iPad 185 desktop 226 laptop 17 Rugged LP 246 monitors

		Total	**$2,110,295**	**$2,120,123.40**	**2,491 Total**	**2,034 Total**

In conclusion, based upon the information presented in this rebuttal, the Commission should approve the requested PC & Device refresh projects as requested in our application. Keeping our PC & Devices up to date is a critical practice that ultimately benefits our customers.

PID# 132815

Digital Twin Ops Optimization

Issue: (CSS/RDOM Project Justification Report, pp. 151-158)

Cal Water proposes the implementation of a Digital Twin for operations optimization at larger scale treatment plants, such as those in the Bakersfield, Lucerne, and Oroville districts. The Digital Twin will provide a high-fidelity virtual replica of existing operations, enabling management to model unique scenarios, run simulations, create data visualizations, and refine calculations. This will improve water quality, enhance operator performance, ensure compliance with state regulations, and increase customer satisfaction.

The Digital Twin will optimize coagulant operations, reducing the risk of plant shutdowns due to incorrect dosage levels during turbidity spikes. It will also provide benefits such as higher quality water, less water loss, freed-up personnel hours, and improved safety for operators. The estimated cost for implementing the Digital Twin project is $1,137,370[1].[125]

Cal Advocates Position: (Ibrahim Testimony, pp. 4-4)

Cal Advocates recommends the Commission should not approve the $1,137,370 requested for the Digital Twin Ops Optimization project. While the project promises significant efficiency improvements and cost savings, Cal Water does not project any savings related to the Digital Twin into rates. Without the associated cost savings, the budget associated with the Digital Twin should not be included in rates.[126]

Cal Water Rebuttal:

The Digital Twin Operations Optimization project (PID 132815) is a pivotal initiative for California Water Service (Cal Water) aimed at enhancing operational efficiency, regulatory compliance, and customer satisfaction. This project involves the implementation of a digital twin system to optimize water system operations, improve decision-making, and ensure the reliability and safety of water services. The project is expected to be completed by the end of 2026.[125]

[125] CSS-RDOM PJ Book, p. 154
[126] A2407003 Public Advocates Office Report on Percentage Cost Adders - CONFIDENTIAL

It is challenging to quantify cost savings at such an early stage. There are a number of scenarios and variables that can transpire when there are treatment plant problems. Any estimate would have a high likelihood of large variability and error. Further, as noted above, the completion of the project is not scheduled until the end of the 2026 test year. When the project goes live in 2027, it will take several months to ramp up the operation of the new tool, train resources, and become proficient in its use. Therefore, any savings from efficiencies that can be attributed to the project will likely not begin until 2028, the last year of this GRC cycle. It is not unreasonable when implementing a new technology to acknowledge that it will take time to leverage and acclimate new tools into operations. As the tool is used and experience is gained, the savings can then be expected to be utilized. Cal Advocates recommendation to reject the project in its entirety just because savings are not immediately identified for this GRC period is shortsighted. As with many capital projects, the benefits are anticipated to occur over a long-term horizon that will extend past this current GRC period once Cal Water becomes proficient in the use of the new tool.

With respect to the Public Advocates Office's concerns regarding the cost savings with the Digital Twin Operations Optimization project, Cal Water is providing these relevant industry case studies to provide the technology overview and to support what the resulting savings could potentially look like:

Overview references

- Digital Twin Consortium - The Infrastructure Digital Twin: https://www.digitaltwinconsortium.org/2023/02/when-it-comes-to-sustainable-and-resilient-infrastructure-digital-twins-are-the-sharpest-tools-in-the-shed/
    - *According to the Center for Strategic & International Studies, clean water infrastructure is considered "a critical aspect of the water agenda" set by the G7 Build Back Better World Partnership (B3W), and digital twin technology is poised to take on the challenges of water scarcity and sanitation on a global scale.*
- *At the National Oceanic and Atmospheric Administration, National Climatic Data Center scientists use historical rainfall data from digital twins to virtually test the operation of existing stormwater systems. They can then* ***forecast data to model the impact of a major storm event and see the impact*** *that it would have on any present or future stormwater infrastructure designs. Water infrastructure projects mapped with digital twins are addressing outdated stormwater systems that are buckling under the stress of heavier rainfall and increased flooding caused by climate change.* AVEVA Hydrocarbon Engineering 3D Observability Case Study: https://discover.aveva.com/paid-search-design-and-build/case-study-landt-hydrocarbon-engineering

    - According to the Engineering Head at L&T Hydrocarbon, "We have now got a scalable, multi-source data application, which is a major advantage for a customer. As it's not vendor-specific, it readily accepts data from all sources via the different Gateways, which can be customized. It's also noninvasive, so it does not affect the source data in any way. And being able to perform powerful searching and reporting on data of known quality, using only a standard web browser, makes it an invaluable solution for engineering, operations and maintenance tasks."
- CIO Magazine - Various DT Case Studies: https://www.cio.com/article/189121/digital-twins-4-success-stories.html
    - "Humans have always gathered data to better understand the physical world around us. Today, companies are increasingly seeking to meld the digital world of data with the physical world through digital twins. Digital twins serve as a bridge between the two domains, providing a real-time virtual representation of physical objects and processes. These virtual clones of physical operations can help organizations simulate scenarios that would be too time-consuming or expensive to test with physical assets. They can help organizations monitor operations, perform predictive maintenance, and provide insight for capital purchase decisions, creating long-range business plans, identifying new inventions, and improving processes."

- AVEVA Large Facility 3D Safety Case Study: https://discover.aveva.com/paid-search-design-and-build/successstory-bp-video

Projected savings references

- AVEVA DT summary and generalized ROI: https://discover.aveva.com/paid-search-design-and-build/whitepaper-embracing-digital-twin-technology-engineering-assets

See page 4: AVEVA suggests 10% increased staff productivity and 30% or more reduction in unplanned downtime by implementing a DT.

- Unity and Sitowise - Smart City Case Study: https://unity.com/case-study/sitowise
    - "Sitowise needed digital twin solutions that could offer a highly visual and intuitive user interface for observing and understanding both static and dynamic data within the built environment. With tools specifically designed and engineered for the architecture, engineering, and construction (AEC) industry, Sitowise turned to Unity's real-time 3D development platform to create solutions like Aura, a virtual 3D environment for visualization, data management, and collaboration. The results:
        - Increased efficiency of up to 15–20% by using digital data management and visualization, and in some cases, the efficiency rate may be even higher

    - Enabled cost-effective virtual testing and functionality before committing to high-priced real-world investments
    - Optimized building service systems operations to improve maintenance and environmental costs”

- NVIDIA and BMD - Smart Factory: https://www.youtube.com/watch?v=g78YHYXXils

PID# 133533

CSS Rooftop Solar

Issue: (CSS/RDOM Project Justification Report, pp. 206-208)

California Water Service (Cal Water) proposes the installation and maintenance of a 228.25-kilowatt direct current (kW DC) onsite solar photovoltaic (PV) energy generation facility at the Customer Support Services (CSS) Headquarters, to be constructed by the end of 2026 (CSS Rooftop Solar project). The project is expected to generate substantial customer savings through Cal Water's generation of its own electricity to partially cover the energy needs for its Headquarters facility and reduce greenhouse gas (GHG) emissions in line with California's target to reach carbon neutrality by 2045.

Cal Advocates Position: (Ibrahim Testimony, pp. 4-3)

Cal Advocates recommends the Commission should not approve the $3,600,000 requested for the CSS Rooftop Solar project. Per Cal Advocates, the project does not provide a direct cost benefit to customers, as the energy received already comes from a majority of green sources. Cal Water

Cal Water Rebuttal:

The CSS Rooftop Solar project (PID 133533) is an important initiative for Cal Water aimed at providing long-term cost savings to customers and reducing GHG emissions. At the time of filing the application, Cal Water's initial estimate for the project was a direct cost of $3.7 million. Since then, Cal Water has received updated bids for construction of the system that reduced the upfront investment and optimized the system size and design, decreasing the system size from up to 400 kW as originally proposed to 228.25 kW DC. With this updated system size, the anticipated investment has decreased substantially after requesting additional bids from local contractors and is now estimated at a direct cost of approximately $800,000, a reduction of approximately $2.9 million from the initial assessment. Based on modeling submitted by the developer that was refined with utility specific assumptions, Cal Water anticipates that the project will pay for itself in about 7 years and generate over $1.4 million in long-term customer savings over the thirty-year project lifetime. In the first two years of service (forecasted in 2027 and 2028) after project

completion in 2026, the project will save customers approximately $80,000 per year in power costs. Additionally, rate base will be reduced by approximately $354,000 through a thirty-year amortization from investment tax credits (ITC). . At the time of filing, Cal Water did not have these figures available but is reflecting them in the rebuttal submittal[127]. The increasing impacts of climate change underscore the need for this project. The Intergovernmental Panel on Climate Change (IPCC) has highlighted the adverse effects of human-caused climate change, including extreme weather events and rising temperatures[128]. California's target to reach carbon neutrality by 2045, as well as recent legislative measures such as Senate Bill (SB) 253 (Climate Corporate Data Accountability Act) and SB 261 (Climate-Related Financial Risk Disclosure), further emphasize the importance of corporate climate action. In addition to generating customer savings, this project is expected to reduce Cal Water's operational GHG emissions footprint by an estimated 161 metric tons of carbon dioxide equivalent (MTCO2e) annually based on the first year of project operation per the location-based GHG emissions calculation methodology. Cal Advocates indicates that the City of San Jose Clean Energy program provides three tiers of power delivery [1]. The third tier, with 100% renewable sources, is only available at a cost premium[129]. In contrast, the CSS Rooftop Solar project provides customer cost savings while also generating 100% renewable energy for a portion of the CSS total energy consumption. By implementing the CSS Rooftop Solar project, Cal Water proactively addresses these policies and stakeholder interests in climate mitigation efforts. As a leading water supplier, customers expect us to make climate mitigation a priority. If the CSS Rooftop Solar project were not approved, Cal Water would continue to rely entirely on grid-supplied energy. Commercial electricity rates have gone up 65% in the last 10 years, and without this project, Cal Water will continue to experience exposure to these rate increases at its CSS facility.

The project has already completed 37% of its pre-design and project initiation and planning pre-construction phases, with the RFP and vendor selection process concluded and contract negotiations currently underway. In response to the Public Advocates Office's concerns regarding the necessity and cost-effectiveness of the CSS Rooftop Solar project, it is important to emphasize

[127] Details for the power cost adjustments are explained in Rebuttal Book #1, O&M Expenses Chapter, Production Related Expenses (Purchased Power), and Purchases Services (Transmission and Distribution), Solar Project Adjustment sections. For details on the ITC adjustment, please reference Rebuttal Book #1, Rate Base, Investment Tax Credit section.
[128] CSS-RDOM PJ Book, p. 206
[129] Your Choices - San Jose Clean Energy https://sanjosecleanenergy.org/your-choices/#totalgreen

that the project has been identified as a viable opportunity for onsite solar generation by expert consultancy Trio Advisory (formerly Edison Energy), based on a comprehensive analysis of Cal Water's facilities, policies, economics, available incentives, energy demand, load profile, land availability, and roof condition[130]. The alternatives analysis conducted by Cal Water further supports the recommended solution, as other options such as offsite renewable energy procurement were found to be cost-additive and failed to reduce Cal Water's exposure to future electric rate increases at its CSS facility130.

The CSS Rooftop Solar project is a strategic investment that addresses the critical need for long-term cost savings to customers and climate mitigation. The project supports a local business and will provide the apprentices working on the project with additional experience. The project's technical, financial, and regulatory merits, supported by comprehensive evidence and detailed analysis, make a compelling case for its approval and implementation.

[130] CSS-RDOM PJ Book, p. 207

PID# 133661

30 Mobile Power Generators

Issue: (Customer Support Services & Rancho Dominguez Justification Book, pp. 211-309)

Cal Water recommends purchasing 30 mobile power generators. 20 of these will be the larger 150 kw generators capable of powering most Cal Water sites. 10 of these will be smaller 36 kw generators to allow for optimization at small sites and not tie up the larger generators. This is a reasonable solution to offset high rental expenses while providing more reliability across the State. CSS & RDOM - 215 The cost for the final alternative is $3,273,407, which is presented in more detail in the attached Budget Estimate and supporting documentation.

Cal Advocates Position: (Ibrahim Testimony, p. 4-5)

Cal Advocates witness S. Ibrahim recommends the Commission should not approve the $2,889,219 requested for purchasing portable generators and refers to Cal Advocates witness K. Do's testimony for further discussion. Witness Do's testimony recommends Cal Water take advantage of Resolution ESRB-8 by collaborating with electric IOU's to evaluate the need for portable generators prior to purchasing.

Cal Water Rebuttal:

Ms. Do argues that the Commission should deny all permanent generators stating that they are not as cost effective and versatile solution to power outages as portable generators. Yet, Cal Advocates' recommendation is to deny purchase of portable generators. This shows the conflicting and inconsistent nature of Cal Advocates testimony. Cal Water concurs with Cal Advocates' assertion that having portable generators is beneficial due to their mobility and cost. Portable generators are useful as they allow flexibility to be moved to facilities without permanent generators.

The application of portable and stationary generators depends upon the requirements of the water system and the essential facilities it needs to power. As proposed in this rate case, Cal Water recommends installing permanent generators at essential station facilities to provide continuous service to our customers during normal and emergency situations. However, it is not economical to

install permanent generators at all station facilities. That is why portable generators are proposed to give district flexibility in utilizing them to be moved to station facilities that do not have stationary generators and may face power outage.

PSPS events that occur with advanced notice and assuming the water system has facilities such as storage tanks may afford Cal Water time to respond in a limited scale, but in a widespread event, the ability to mobilize efficiently is crucial.

Cal Advocates' testimony references CPUC's Resolution ESRB-8, stating that IOUs must help critical facility customers evaluate their backup power needs and determine if additional equipment, like mobile generators, is necessary. However, it fails to recognize that the same resolution removed the requirement to provide generators by the IOUs in its final version. The resolution states, "The requirement to provide generators and/or batteries to critical facilities was removed since most critical facilities are required to have their own back-up power resources." It also states, "IOUs may provide generators to critical facilities that are not well prepared for a power shut off."

Cal Water's goal is to ensure preparedness and supply during emergency events. Therefore, the program proposed by Cal Water to have portable generators readily aligns with the CPUC’s ESRB resolution. In fact, it fulfills the resolution's intent by ensuring critical facilities are equipped with necessary backup power. Cal Advocates' selective quoting of the resolution is incomplete and misleading. Our proposal is a proactive measure to ensure public safety and reliability during emergencies.

PID# 135805

Salesforce CRM Project

Since the filing of Cal Water's rate case, it has been determined that the Customer Relationship Management (CRM) system being developed for the conservation program includes capital components. To reflect this, Cal Water is incorporating an additional Customer Support Services capital project with a direct cost of $2,216,159. Cal Water identified the need for this project shortly after its filing. Therefore, it was not included with the application Project Justification Books. Cal Advocates has not reviewed this specific project but much of the scope pertains directly to what is being done in Cal Water's conservation outreach efforts. It's important to note that the Administrative/Research budget in operations and maintenance expense is being reduced by the equivalent of the added revenue requirement from the proposed capital to maintain revenue neutrality[131].

The CRM project will provide increased customer data security and increased efficiency for conservation program management and reporting. The system is intended to streamline program administration, improve customer service, and strengthen compliance with state conservation mandates. The system aims to enhance customer experience by streamlining rebate and program application processes, improving customer support capabilities through automated status updates of applications/requests and customized program recommendations, and increasing efficiency in both the administration and marketing of conservation programs. These improvements will directly support compliance with the Conservation Regulations adopted by the State Water Resources Control Board.

Cal Water has considered pausing the project as an alternative. However, this increases the risk of non-compliance with regulatory requirements and creates inefficiencies in program management. Customers would also not benefit from the significant improvement in customer experience generated from the project.

[131] Revenue requirement estimate of $460,058 based on $2.254 million total capital recovery at 7.46% rate of return, plus related taxes and depreciation over the nine-year useful life of software capital projects. The expense budget is reduced by this same amount.

Please refer to the M.Cubed Rebuttal on Conservation attached to Rebuttal Book #1 for further discussion.

Table 2: Project Estimate

	Statement of Work (SOW)	Capital Ratio	Capital Allocation
Phase 1 & 2[1]	$ 867,000	70%	$ 606,900
Phase 3	$ 1,979,000	83%	$ 1,642,570
Total	$ 2,846,000		$ 2,249,470
1) SOW - $967,000 less $100,000 charged to Corporate Communications. The remainder is allocated to the Conservation program.			

For the detailed statements of work (Phase 1&2, Phase 3, and Phase 3 change order #5), please refer to Confidential Rebuttal Book #5.

Table 3: Customer Support Services Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00132210	MSPO Configuration/Upgrades	936,320	85,120	936,320	(851,200)
2025	00132211	Workday Modification/Configuration	181,500	165,000	181,500	(16,500)
2025	00132318	CSS 2025 VEHICLE REPLACEMENT PROGRA	21,681	22,186	21,681	506
2026	00132319	CSS 2026 VEHICLE REPLACEMENT PROGRA	396,589	261,408	396,589	(135,181)
2027	00132320	CSS 2027 VEHICLE REPLACEMENT PROGRA	567,043	256,573	567,043	(310,470)
2025	00132445	CSS 2025 Midsize Pickup W/4WD	40,095	36,086	-	36,086
2025	00132446	CSS 2025 SUV	43,916	40,116	43,916	(3,800)
2025	00132448	CSS 2025 Sedan	43,916	40,116	43,916	(3,800)
2026	00132575	2025 PC & Device Replacement	735,437	-	735,437	(735,437)
2026	00132576	2026 PC & Device Replacement	753,823	-	753,823	(753,823)
2027	00132577	2027 PC & Device Replacement	772,651	-	772,651	(772,651)
2027	00132578	IT Equipment for new headcounts	129,252	129,252	129,252	-
2025	00132579	Windows 11 Upgrade	210,125	210,125	210,125	-
2025	00132580	Replace Mitel Phone system	315,187	315,187	315,187	-

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00132582	Service desk upgrade	323,067	323,067	323,067	-
2027	00132626	Replace EOL MFP	377,250	377,250	377,250	-
2027	00132627	ZTA - Data Pillar	992,365	992,365	992,365	(0)
2027	00132628	ZTA - Identity Pillar	1,479,074	1,479,074	1,479,074	-
2026	00132630	ZTA - Network Pillar	2,541,462	2,541,462	2,541,462	-
2027	00132631	Workday Ongoing Enhancements	525,415	525,415	525,415	-
2027	00132666	Audit and Compliance Management App	134,638	134,638	134,638	-
2027	00132667	ImageQuest Upgrade	33,626	33,626	33,626	-
2027	00132668	PowerPlan Upgrade	1,786,411	1,786,411	1,786,411	-
2026	00132673	Upgrade/ Redesign CalWater.com 2026	107,689	107,689	107,689	(0)
2025	00132788	2025 Network Hardware Replacement	320,843	320,843	320,843	-
2025	00132789	2025 SCADA Server & Network Repl.	335,118	335,118	335,118	-
2025	00132790	2025 SAN Storage Upgrade	367,719	367,719	367,719	(0)
2025	00132791	2025 UPS Replacement	160,000	160,000	160,000	-
2027	00132800	GIS Modernization	807,826	807,826	807,826	-

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00132801	EAM Decision support	807,826	807,826	807,826	-
2027	00132802	LIMS Upgrade	430,840	430,840	430,840	-
2027	00132804	Integrate HIS with LIMS	269,275	269,275	269,275	-
2025	00132809	Virtal Reality Safety / Ops Modules	231,138	211,138	231,138	(20,000)
2026	00132815	Digital Twin Ops Optimization	1,137,370	-	1,137,370	(1,137,370)
2027	00132890	PowerPlan Tax Module Upgrade	323,130	323,130	323,130	-
2025	00132924	Workstations (4) for future staff	38,099	38,099	38,099	-
2025	00132925	Workstations (4) for future staff	40,028	40,028	40,028	-
2025	00132926	Office Furnishing for Manager	11,550	11,550	11,550	-
2025	00132927	Office Furnishings for Manager	12,135	12,135	12,135	-
2026	00132957	2025 UWMP Development	968,501	968,501	968,501	(0)
2025	00132962	Demand Model Update	125,762	125,762	125,762	-
2027	00132963	CSS Climate Change Study - 2025	445,252	445,252	445,252	-
2025	00133317	Design Electrical Service Expansion	279,539	279,539	279,539	-
2025	00133318	REPLACE BLDG ROOF SHINGLE AND CARPO	304,117	304,117	304,117	-

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00133319	CSS- DESIGN NEW 4TH ST ENTRY	268,582	268,582	268,582	-
2025	00133490	CSS 2025 Asset Mgmt Large Tools	101,150	92,398	101,150	(8,752)
2026	00133491	CSS 2026 Asset Mgmt Large Tools	106,790	97,775	106,790	(9,015)
2027	00133492	CSS 2027 Asset Mgmt Large Tools	112,740	103,455	112,740	(9,285)
2025	00133493	ROV for Asset Condition Assessment	134,868	123,198	134,868	(11,670)
2026	00133533	CSS Rooftop Solar	3,600,000	-	777,405	(777,405)
2025	00133538	Halo Acetic Acids analytical tester	455,328	415,929	455,328	(39,399)
2027	00133544	High perf PC's + CSSmonitors	10,400	9,500	10,400	(900)
2027	00133578	Network Hardware Replacement_2027	345,505	345,505	345,505	-
2026	00133579	Network Hardware Replacement 2026	337,086	337,086	337,086	(0)
2025	00133584	CSS- STUDY TO RELOCATE GAS LINE	132,089	132,089	132,089	-
2025	00133585	CSS-RDOM 2ND FL. REDESIGN	97,858	97,858	97,858	-
2025	00133596	CSS 2025 mobile water stations	77,011	77,011	77,011	-
2026	00133602	CSS 2026 RO Model Improvements	266,530	244,030	266,530	(22,500)
2026	00133646	CSS 2026 AMI INITIATIVE-IT INT/DEV	1,537,615	698,916	1,537,615	(838,699)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00133654	SCADA Server & Network Repl. 2026	343,496	343,496	343,496	-
2027	00133655	SCADA Server & Network Repl. 2027	352,075	352,075	352,075	-
2025	00133658	Upgrade CalWater.com 2025	105,062	105,062	105,062	-
2027	00133659	Upgrade CalWater.com 2027	110,379	110,379	110,379	(0)
2025	00133661	30 Mobile Power Generators	2,889,219	-	2,889,219	(2,889,219)
2025	00133709	ICP-MS	240,309	219,515	240,309	(20,794)
2027	00133714	Workforce Mgt & Integration	538,550	538,550	538,550	-
2026	00134646	CSS - VEHICLES FOR NEW COMPLEMENTS	118,107	-	118,107	(118,107)
2025	330-NON-SP	330- General Office Non-specific	1,200,700	-	1,200,700	(1,200,700)
2026	330-NON-SP	330- General Office Non-specific	1,230,800	-	1,230,800	(1,230,800)
2027	330-NON-SP	330- General Office Non-specific	1,261,500	-	1,261,500	(1,261,500)
2024	00124693	CSS CC&B Cloud Upgrade	13,383,247	-	13,383,247	(13,383,247)
2026	00124692	CSS EAM-Work Digitization,Analytics	1,895,735	-	1,895,735	(1,895,735)
2025	00124702	CSS Op. Data Management System	1,706,161	-	1,706,161	(1,706,161)
2027	00116566	Person Down Radio Solution	805,687	805,687	805,687	(0)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00124669	CSS EAM GIS Modernization	1,107,240	-	1,107,240	(1,107,240)
2024	00124544	CSS PC Refresh 2023	568,720	568,720	568,720	0
2027	00124691	CSS EWWM-Buildout of Integration	1,137,441	-	1,137,441	(1,137,441)
2025	00115880	Supplier Invoice Process Automation	616,114	-	616,114	(616,114)
2025	00124485	CSS Integrate Data- Dashboard Tool	568,720	-	568,720	(568,720)
2027	00115787	2021 Vehicle Replacement Program	539,124	-	539,124	(539,124)
2026	00124699	CSS Customer Feedback Mngmt. System	549,763	-	549,763	(549,763)
2025	00124545	CSS PC Refresh 2024	708,852	-	708,852	(708,852)
2027	00124815	CSS OPEN OFFICE ACOUSTICS	584,307	-	584,307	(584,307)
2026	00124978	CSS Energy Management System	299,163	299,163	299,163	(0)
2025	00124968	CSS-SC RCC PHASE 2 OFFICE SP. BUILD	412,889	-	412,889	(412,889)
2024	00124805	CSS Next Generation Vulnerab. Scan	312,796	-	312,796	(312,796)
2024	00124609	CSS 2023 SCADA Server Replacement	325,118	325,119	325,118	0
2024	00124605	CSS SCADA Server & Network Replace	331,754	331,754	331,754	0
2026	00124576	CSS 2023 Network Hardware Replacmt.	350,711	350,711	350,711	(0)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	00123737	CSS 2023 Vehicle Replacemnt Program	1,043,404	-	1,043,404	(1,043,404)
2025	00124473	CSS Automate HR Bidding Process	293,839	-	293,839	(293,839)
2024	00124703	CSS LIMS Software Enhancements	280,763	-	280,763	(280,763)
2026	00124817	CSS ADDITIONAL EV CHARGERS	324,680	-	324,680	(324,680)
2025	00124667	CSS Meter Reading Handheld Replace	355,450	355,450	355,450	(0)
2025	00124483	CSS Digitize Hist. Personnel Rec.	234,597	-	234,597	(234,597)
2025	00124856	CSS Replace Building Eaves	297,671	-	297,671	(297,671)
2024	00124492	CSS SCADA security system	236,967	236,967	236,967	(0)
2026	00116215	ENERGY EFFICIENCY IMPROVEMENTS	223,629	223,629	223,629	0
2025	00124857	CSS Access Control System	244,272	-	244,272	(244,272)
2026	00124682	CSS Cust. Serv. Analytics Software	206,635	-	206,635	(206,635)
2024	00124633	CSS Portable Booster Pumps	105,734	-	105,734	(105,734)
2024	00125065	CSS GPS Basestations	154,143	154,143	154,143	(0)
2026	00123739	CSS 2024 Vehicle Replacement Progrm	412,974	-	412,974	(412,974)
2024	00124754	CSS Recycled Water Strategic Plan	136,305	-	136,305	(136,305)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2024	00124552	CSS 2024 Website Enhancements	104,265	-	104,265	(104,265)
2024	00124700	CSS Compliance Monitorng Analytics	104,015	-	104,015	(104,015)
2024	00124409	CSS 2024 AM Large Tools	101,383	-	101,383	(101,383)
2024	00124406	CSS 2023 AM Large Tools	98,911	98,911	98,911	0
2024	00124888	LIV Portable Booster Pump	94,286	-	94,286	(94,286)
2025	00123734	CSS 2022 Vehicle Replacemnt Program	834,123	834,123	680,201	153,922
2024	00125068	CSS Three Dimensl. (3D) GIS - Pilot	54,597	-	54,597	(54,597)
2024	00124855	CSS Media Center - Furniture	50,479	-	50,479	(50,479)
2024	00125041	CSS AutoCAD AECC Subscriptions	37,938	-	37,938	(37,938)
2024	00125327	CSS Survey Equipment for Eng South	30,332	-	30,332	(30,332)
2024	00115909	2019 Power Quality Analyzers	13,128	13,128	13,128	(0)
2024	00114960	WQ-VOC GC/MS	189,060	189,060	189,060	(0)
2024	00115207	SGMA support & review	199,387	199,387	199,387	(0)
2024	00115225	Cloud Access Security Broker	266,798	266,798	266,798	(0)
2024	00116003	Portable Booster Pump	52,057	-	52,057	(52,057)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2025	00116011	GIS Development for Valley District	225,837	225,837	225,837	-
2024	00116883	Groundwater Banking Study	6,780	-	6,780	(6,780)
2025	00116896	CSI Technical Specs	4,485	4,485	4,485	0
2024	00116910	ADDITIONAL CONF. ROOM -RDOM	43,882	43,882	43,882	0
2025	00117587	REPLACE - DATA CENTER A/C	4,421	-	4,421	(4,421)
2024	00118564	RENOVATE HR AREA	54,852	54,852	54,852	(0)
2024	00118570	RECONFIG ENG/ACCTG	559,613	559,613	559,613	(0)
2025	00118571	RECONFIGURE IT/ ADDITIONAL TRAILER	78,897	-	78,897	(78,897)
2024	00118572	REPURPOSE FOUNTAIN AREA	371,980	371,980	371,980	(0)
2025	00124273	CSS PeopleSoft FS&PeopleTools Upgr.	542,180	-	542,180	(542,180)
2025	00124488	CSS Procurement Process Improvm.	807,431	-	807,431	(807,431)
2025	00124489	CSS Inventory Management System	531,336	-	531,336	(531,336)
2026	00124496	CSS Zoom Video Conference	539,016	-	539,016	(539,016)
2025	00124853	CSS Energy Efficiency - HVAC	792,522	792,522	792,522	0
2026	00124910	CSS-WATER QUALITY SATELLITE LAB	2,870,664	-	2,870,664	(2,870,664)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2024	00122697	Plotter for BK Engineering office	23,218	23,218	23,218	0
2024	00124611	CSS 2024 SCADA Server Replacement	303,100	-	303,100	(303,100)
2024	00124601	CSS 2024 Network Hardware Replacem.	300,547	-	300,547	(300,547)
2024	00125088	CSS RO Model Improvements	278,460	-	278,460	(278,460)
2024	00125030	CSS Dist. System Integrity Tools	75,753	-	75,753	(75,753)
2024	00124612	CSS UPS and Storage Replacement	517,774	-	517,774	(517,774)
2024	00125100	CSS 2024 Portable Large Test Meter	32,379	-	32,379	(32,379)
2024	00125099	CSS 2023 Portable Large Test Meter	32,379	-	32,379	(32,379)
2024	00125096	CSS 2022 Portable Large Test Meter	32,379	-	32,379	(32,379)
2024	00125105	CSS Install high volume printer	14,087	-	14,087	(14,087)
2027	00131989	TIME TRACKING IMPROVEMENT PHASE 2	353,923	-	353,923	(353,923)
2024	00132895	Office Supplies - IT Field Techn	9,668	-	9,668	(9,668)
2024	00119073	PowerPlan Budget Forecasting	259,693	-	259,693	(259,693)
2024	00126076	Enterprise AMI Feasibility Study	265,823	265,823	265,823	0
2027	00131496	MSPO Roadmap	206,751	206,751	206,751	0

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2024	00129198	BLDG A - OFFICE UPDATES	189,873	189,873	189,873	(0)
2025	00128042	GRC 2021 Rev Rec Project	379,147	379,147	379,147	(0)
2024	330-NON-SP	330- General Office Non-specific	1,915,087	-	1,915,087	(1,915,087)
2026	00135805	Salesforce CRM Project	-	-	2,216,159	(2,216,159)

Summary	Year	Cal Water Application	Public Advocates Office Report	Cal Water Rebuttal
	2024	22,519,511	3,893,226	22,519,511
	2025	19,198,408	6,889,487	19,004,391
	2026	22,177,333	6,796,933	21,570,897
	2027	18,552,397	11,624,357	18,552,397
Total Direct Cost		82,447,649	29,204,003	81,647,196

1

Table 4: Rancho Dominguez Rebuttal

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2026	00132339	RD 2025 VEHICLE REPLACEMENT PROGRAM	1,193,755	1,221,603	1,193,755	27,848
2027	00132340	RD 2026 VEHICLE REPLACEMENT PROGRAM	1,142,058	752,776	1,142,058	(389,282)
2027	00132341	RD 2027 VEHICLE REPLACEMENT PROGRAM	1,228,608	555,915	1,228,608	(672,693)
2025	00133580	RDOM Replace Media Ctr Furniture	79,754	72,853	79,754	(6,901)
2026	00133598	RDOM-AMI INITIATIVE-VEHICLES/EQUIP	559,957	254,526	559,957	(305,431)
2027	00133605	RDOM Replace Office Furniture	82,106	75,176	82,106	(6,930)
2025	00133606	RDOM Replace Stairwell Carpet	86,677	79,177	86,677	(7,500)
2026	00133607	RDOM Replace Pergola	88,844	81,344	88,844	(7,500)
2026	00133608	RDOM LED Light Fixture Retrofit	321,495	294,355	321,495	(27,140)
2027	00133609	RDOM Updated First Floor Space Plan	97,954	89,687	97,954	(8,268)
2025	151-NON-SP	151- Rancho Dom Reg Non-specific	269,800	-	269,800	(269,800)
2026	151-NON-SP	151- Rancho Dom Reg Non-specific	276,600	-	276,600	(276,600)
2027	151-NON-SP	151- Rancho Dom Reg Non-specific	283,500	-	283,500	(283,500)
2024	00123882	RD 2022 CARB Vehicle Replacement	706,505	706,505	706,505	(0)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2027	00115826	2020 Vehicle Replacement Program	521,327	521,327	521,327	(0)
2025	00123766	RD 2023 Vehicle Replacement Program	360,190	-	360,190	(360,190)
2026	00123768	RD 2024 Vehicle Replacement Program	265,887	-	265,887	(265,887)
2024	00123765	RD 2022 Vehicle Replacement Program	178,361	-	178,361	(178,361)
2024	00125543	RD Refurbish/Replace Clarifier	57,384	57,384	57,384	0
2024	00125171	Install Cover Over Spoils/Dump Area	56,810	-	56,810	(56,810)
2024	00125186	RD Purch. Meter Reading Handhelds	63,810	-	63,810	(63,810)
2024	00124312	RD Replace Signage	37,329	-	37,329	(37,329)
2024	00125170	Car Port/Cover For Vehicle Maint.	37,873	-	37,873	(37,873)
2024	00125200	RD 2024 Air Tools	28,436	-	28,436	(28,436)
2024	00125199	RD 2023 Air Tools	28,436	-	28,436	(28,436)
2024	00125198	RD 2022 Air Tools	28,436	-	28,436	(28,436)
2024	00124260	RD Slurry /Re-Stripe Back Park. Lot	20,608	-	20,608	(20,608)
2024	00125532	RD New Copier For Operations	21,270	21,270	21,270	(0)
2024	00124228	RD Office Improvements 2024	16,318	-	16,318	(16,318)

Year (Rebuttal)	PID	Description	Direct Cost			Difference (Advocates minus Cal Water)
			Cal Water Application	Cal Advocates	Cal Water Rebuttal	
2024	00124224	RD Office Improvements 2023	16,318	-	16,318	(16,318)
2024	00124137	RD Office Improvements 2022	17,975	-	17,975	(17,975)
2024	00125490	RD Replace 1st floor bathrooms	13,924	-	13,924	(13,924)
2024	00125197	RD 2024 Hand Tools	9,479	-	9,479	(9,479)
2024	00125196	RD 2023 Hand Tools	9,479	-	9,479	(9,479)
2024	00125195	RD 2022 Hand Tools	7,109	7,109	7,109	0
2024	00133305	RDOM Digital Signage Hardware	11,754	-	11,754	(11,754)
2024	151-NON-SP	151- Rancho Dom Reg Non-specific	154,738	-	154,738	(154,738)

Summary	Year	CWS Application	Public Advocates Office Report	CWS Rebuttal
	2024	1,522,353	792,268	1,522,353
	2025	1,356,377	1,373,632	796,420
	2026	2,146,580	1,383,000	2,706,537
	2027	3,355,554	1,242,105	3,355,554
	Total Direct Cost	8,380,864	4,791,005	8,380,864

California Water Service Company

BOOK 2 – REBUTTAL TESTIMONY ON COMMON PLANT, CSS & RDOM

2024 General Rate Case

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